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중앙선 도담~영천 복선전철 제5공구(시공10공구) 노반 기본 및 실시설계

구 조 계 산 서 (19/20)

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2015. 4.

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노반 기본 및 실시설계

구 조 계 산 서 (19/20)

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중앙선 도담~영천 복선전철 제5공구 노반 기본 및 실시설계

C·O·N·T·E·N·T·S

구조계산서 1권

제1장 탑 리 제 1 교

1. 탑리제1교 ····· 1
1.1 상부공 ····· 3
1.1.1 PRECOM ····· 5
1.2 교대공 ····· 219
1.2.1 A1 ····· 221
1.2.2 A2 ····· 297
1.3 교각공 ····· 373
1.3.1 P1(P2) ····· 375
1.4 내진해석 ····· 489
1.5 가시설공 ····· 511
1.5.1 A1 버팀보 사보강 ····· 513
1.5.2 P1 버팀보 사보강 ····· 537
1.5.3 P2 버팀보 사보강 ····· 561
1.5.4 A2 버팀보 사보강 ····· 585

구조계산서 2권

제2장 탑 리 제 2 교

2. 탑리제2교 ····· 1
2.1 상부공 ····· 3
2.1.1 PSC ····· 5
2.2 교대공 ····· 131
2.2.1 A1 ····· 133
2.2.2 A2 ····· 227
2.3 교각공 ····· 321
2.3.1 P1(P2) ····· 323
2.3.2 P4(P3) ····· 437
2.4 내진해석 ····· 551
2.5 가시설공 ····· 571
2.5.1 P1,P2 버팀보 사보강 ····· 573

구조계산서 3권

제3장 탑 리 제 3 교

3. 탑리제3교 ····· 1
3.1 라멘공 ····· 3
3.2 옹벽공 ····· 369
3.2.1 A1(H=5.5m) 좌우측 ····· 371
3.2.2 A2(H=3.5m) 좌측 ····· 391
3.2.3 A2(H=3.0m) 우측 ····· 411
3.3 가시설공 ····· 431
3.3.1 A1 버팀보 ····· 433
3.3.2 A1 버팀보 사보강 ····· 457
3.3.3 A2 버팀보 ····· 481
3.3.4 A2 버팀보 사보강 ····· 505

구조계산서 4권

제4장 탑 리 제 4 교

4. 탑리제4교 ····· 1
4.1 상부공 ····· 3
4.1.1 WPC ····· 5
4.2 교대공 ····· 97
4.2.1 A1 ····· 99
4.2.2 A2 ····· 193
4.3 옹벽공 ····· 287
4.3.1 A1,A2(H=4.0m) ····· 289

제5장 산 운 교

5. 산운교 ····· 309
5.1 상부공 ····· 311
5.1.1 PSC ····· 313
5.1.2 SCP ····· 439

중앙선 도담~영천 복선전철 제5공구 노반 기본 및 실시설계

C·O·N·T·E·N·T·S

구조계산서 5권

5.2 교대공 ····· 3
5.2.1 A1 ····· 5
5.2.2 A2 ····· 81
5.3 교각공 ····· 157
5.3.1 P1 ····· 159
5.3.2 P3(P2~P4) ····· 271
5.3.3 P5 ····· 383
5.3.4 P6 ····· 495

구조계산서 6권

5.4 내진해석 ····· 3
5.5 가시설공 ····· 23
5.5.1 P1~P3,P5 버팀보 사보강 ····· 25
5.5.2 P4 버팀보 사보강 ····· 49

제6장 순 호 교

6. 순호교 ····· 73
6.1 상부공 ····· 75
6.1.1 PSC ····· 77
6.1.2 PSC-e ····· 203
6.2 교대공 ····· 383
6.2.1 A1 ····· 385
6.2.2 A2 ····· 461

구조계산서 7권

6.3 교각공 ····· 3
6.3.1 P2 ····· 5
6.3.1 P3(P4) ····· 119
6.3.1 P5(P1) ····· 233
6.4 내진해석 ····· 347
6.5 가시설공 ····· 367
6.5.1 P1,P2 버팀보 사보강 ····· 369
6.5.2 P5 버팀보 사보강 ····· 393

제7장 수 북 교

7. 수북교 ····· 417
7.1 상부공 ····· 419
7.1.1 PSC ····· 421

구조계산서 8권

7.2 교대공 ····· 3
7.2.1 A1 ····· 5
7.2.2 A2 ····· 81
7.3 교각공 ····· 157
7.3.1 P2(P1) ····· 159
7.4 내진해석 ····· 273
7.5 가시설공 ····· 293
7.5.1 P2 버팀보 사보강 ····· 295

제8장 파 전 제 1 교

8. 파전제1교 ····· 319
8.1 상부공 ····· 321
8.1.1 IPC ····· 323
8.1.2 RPF ····· 449

구조계산서 9권

8.1.3 PSC ····· 3
8.2 교대공 ····· 129
8.2.1 A1 ····· 131
8.2.2 A2 ····· 225
8.3 교각공 ····· 319
8.3.1 P2 ····· 321
8.3.1 P3(P1) ····· 433

중앙선 도담~영천 복선전철 제5공구 노반 기본 및 실시설계

C·O·N·T·E·N·T·S

구조계산서 10권

8.3.1 P4 ····3
8.3.1 P5 ····115
8.3.1 P6 ····227
8.4 내진해석 ····339
8.5 가시설공 ····359
8.5.1 P1,P2 버팀보 사보강 ····361
8.5.2 P3 버팀보 사보강 ····385
8.5.3 P4,P6 버팀보 사보강 ····409
8.5.4 P6 버팀보 사보강 ····433

구조계산서 11권

제9장 파 전 제 2 교

9. 파전제2교 ····1
9.1 상부공 ····3
9.1.1 PSC ····5
9.1.2 RPF ····131
9.2 교대공 ····289
9.2.1 A1 ····291
9.2.2 A2 ····385
9.3 교각공 ····479
9.3.1 P1 ····481

구조계산서 12권

9.3.2 P2 ····3
9.4 내진해석 ····115
9.5 가시설공 ····135
9.5.1 P1,P2 버팀보 사보강 ····137

제10장 파 전 제 3 교

10. 파전제3교 ····161
10.1 상부공 ····163
10.1.1 PSC(S1~S3) ····165
10.1.2 PSC(S4~S5,S7~S8) ····287

구조계산서 13권

10.1.3 RPF ····3
10.2 교대공 ····123
10.2.1 A1 ····125
10.2.2 A2 ····221
10.3 교각공 ····317
10.3.1 P1(P2) ····319
10.3.2 P3 ····419
10.3.3 P5 ····517

구조계산서 14권

10.3.4 P6 ····3
10.3.5 P7(P4) ····105
10.4 내진해석 ····205
10.5 가시설공 ····233
10.5.1 P4 버팀보 ····235
10.5.2 P4 버팀보 사보강 ····259
10.5.3 P5 버팀보 ····283
10.5.4 P5 버팀보 사보강 ····307
10.5.5 P7 버팀보 ····331
10.5.6 P7 버팀보 사보강 ····355

제11장 교 량 기 초

11. 교량기초 ····379
11.1 직접기초 연직지지력, 연직침하량(풍화대) ····381

구조계산서 15권

11.2 직접기초 연직지지력, 연직침하량(연 · 경암) ····3

중앙선 도담~영천 복선전철 제5공구 노반 기본 및 실시설계

C·O·N·T·E·N·T·S

11.3 말뚝기초 연직지지력, 연직침하량(풍화대) ……221
11.4 말뚝기초 연직지지력, 연직침하량(연 · 경암) …241
11.5 말뚝기초 수평지지력, 수평변위 ……285
11.6 교대 활동 검토 ……451

구조계산서 16권

제12장 구 교

12.1 학미 제3 ……3
12.2 학미 제4 ……147
12.3 탑리 제1 ……239
12.4 탑리 제2 ……331
12.5 탑리 제3 ……435

구조계산서 17권

12.6 탑리 제4 ……3
12.7 탑리 제5 ……117
12.8 탑리 제6 ……221
12.9 탑리 제7 ……335
12.10 산운 제1 ……439
12.11 산운 제2 ……553

구조계산서 18권

12.12 산운 제3 ……3
12.13 산운 제4 ……95
12.14 산운 제5 ……187
12.15 순호 제1 ……301
12.16 순호 제2 ……415

구조계산서 19권

12.17 파전 제1 ……3
12.18 파전 제2 ……117
12.19 파전 제3 ……231
12.20 파전 제4 ……345
12.21 파전 제5 ……459

구조계산서 20권

제13장 B(함)

13.1 B(함)산운제1 ……3
13.2 B(함)산운제2 ……299
13.3 B(함)산운제3~5 ……385
13.4 B(함)파전 ……471
13.5 B(함)연계, 탑리 ……631

제12장 구 교

중앙선 도담~영천 복선전철 제5공구 노반 기본 및 실시설계

12.1	C(함)학미	제 3	12.12	C(함)산운	제 3
12.2	C(함)학미	제 4	12.13	C(함)산운	제 4
12.3	C(함)탑리	제 1	12.14	C(함)산운	제 5
12.4	C(함)탑리	제 2	12.15	C(함)순호	제 1
12.5	C(함)탑리	제 3	12.16	C(함)순호	제 2
12.6	C(함)탑리	제 4	12.17	C(함)파전	제 1
12.7	C(함)탑리	제 5	12.18	C(함)파전	제 2
12.8	C(함)탑리	제 6	12.19	C(함)파전	제 3
12.9	C(함)탑리	제 7	12.20	C(함)파전	제 4
12.10	C(함)산운	제 1	12.21	C(함)파전	제 5
12.11	C(함)산운	제 2			

C(함) 파전제1

- 2.0 x 2.00 x 1
- 토피 = 8.4m 이하

1. 설 계 조 건
2. 단 면 가 정
3. 해석모델 및 단면제원
4. 하중산정
5. 하중재하도
6. 하중계수 및 하중조합
7. INPUT DATA
8. OUTPUT
9. 단면력요약
10. 단 면 력 도
11. 단 면 검 토
12. 우각부 검토
13. 배력철근 검토
14. 사용성 검토
15. 기초지지력 검토
16. 주철근조립도
17. 날개벽 설계

1. 설계 조건

1) 구조물명 : c (함)

2) 구조형식 : 철근 콘크리트 구조

3) 설계하중 : KRL2012 (복 선)

4) 재료중량

- 철근 콘크리트(γ_c)	=	24.5	kN/m^3
- 무근 콘크리트(γ_{con})	=	23.0	kN/m^3
- 뒷채움 토사(γ_t)	=	20.0	kN/m^3
- 뒷채움 토사(γ_{sub})	=	11.0	kN/m^3
- 지하수(γ_w)	=	10.0	kN/m^3

5) 사용재료의 성질

- 콘크리트 설계기준 강도(fck)	=	30.0	MPa
- 콘크리트 탄성계수(Ec)	=	27537	MPa
- 철근의 항복강도(fy)	=	400.0	MPa
- 철근의 탄성계수(Es)	=	200000	MPa

6) 토 사

- 흙의 내부마찰각 (ϕ)	=	35.0	°
- 정지 토압계수 (Ko)	=	0.426	

7) 기 초 형 식 : 직접기초

8) 사 각(Skew) : 78.00 ° 연 장 (L) : 41.00 m

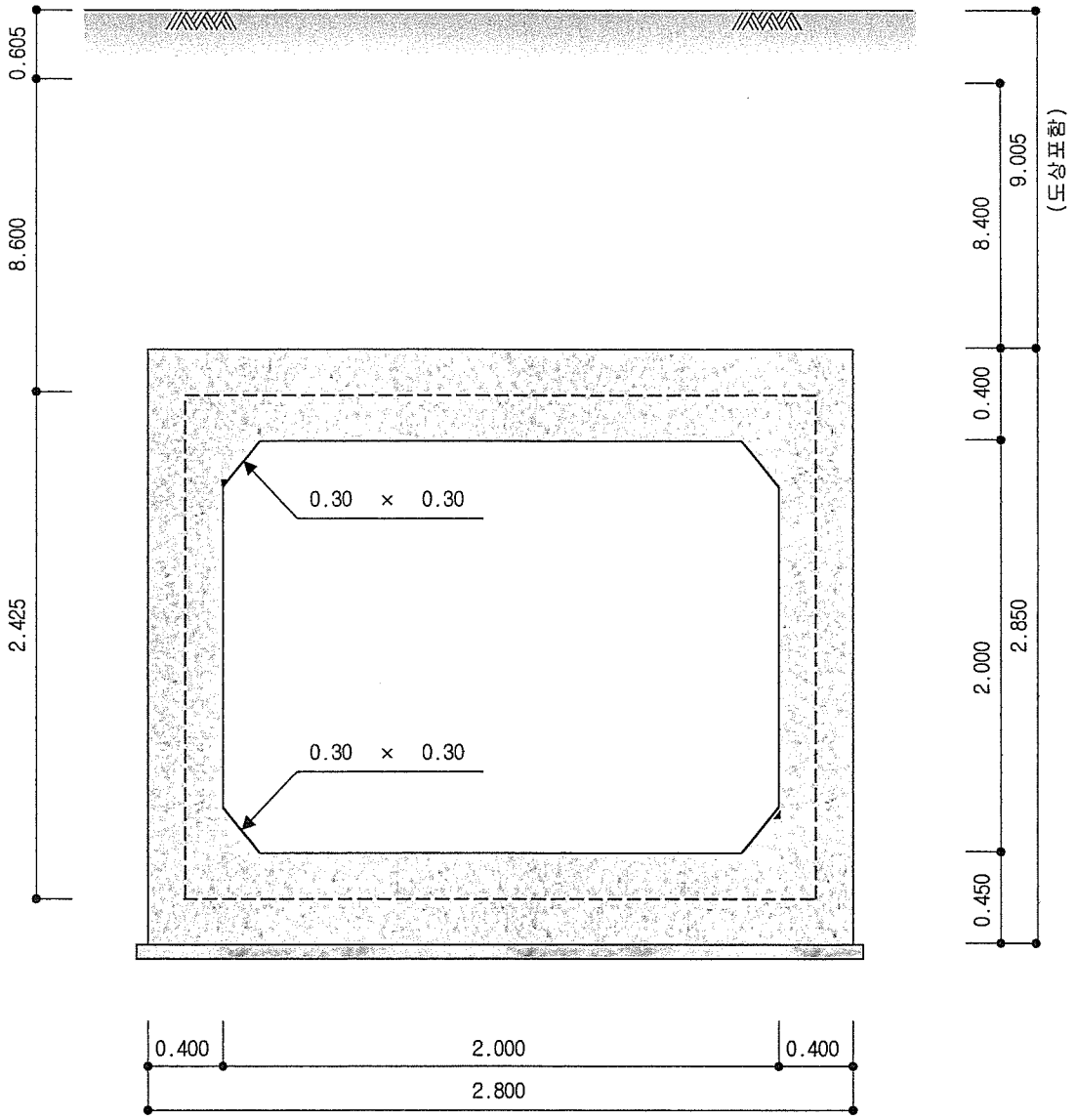
9) 설계방법

- 강도 설계법 : 부재 단면검토(슬래브, 벽체, 보, 기둥 등)
- 허용응력 설계법 : 사용성 검토(처짐, 균열, 우각부 검토)

10) 참고문헌

- 철도설계기준(노반편), 국토해양부, 2013
- 콘크리트 구조설계기준해설, 한국콘크리트 학회, 2012

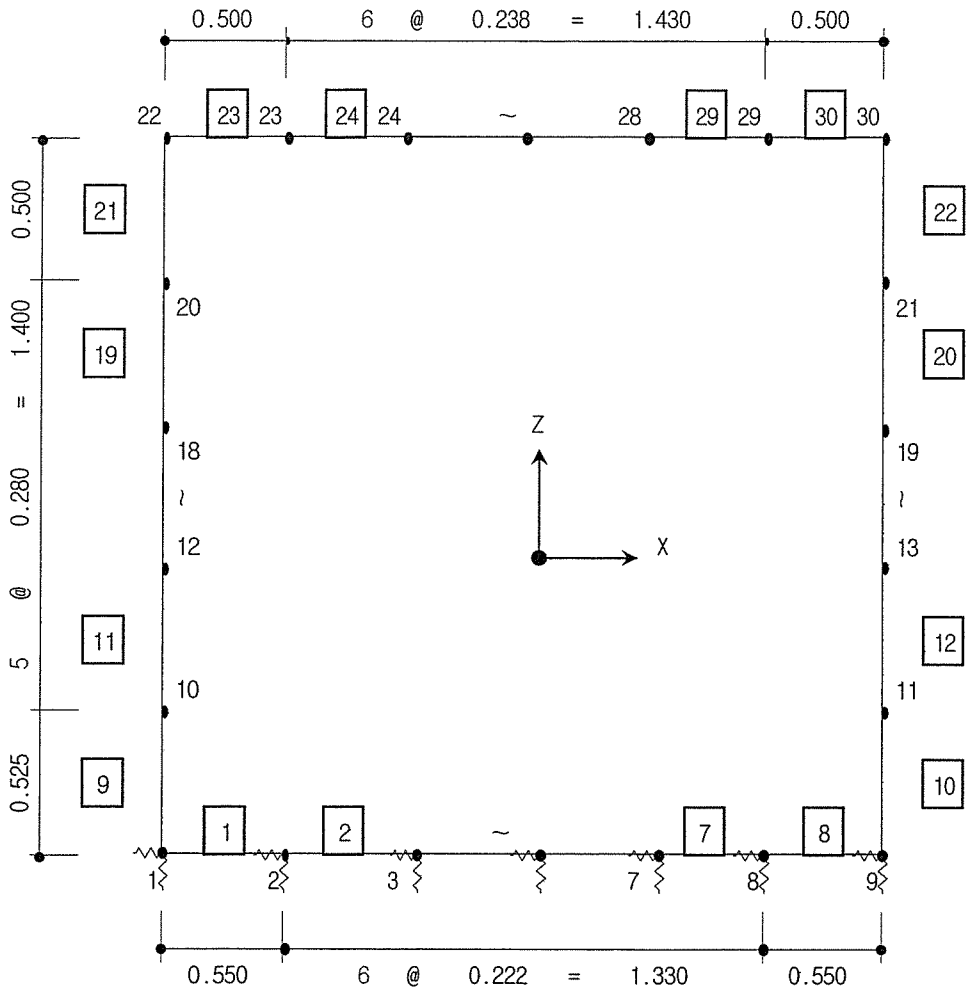
2. 단면 가정



※ 유효경간

Skew =	78.0	°					
Ln =	2.400	m					
Ls =	2.454	m					
Ls/B =	2.454	/	18.000	=	0.136	<	1.500
L =	2.430	m					

3. 해석모델 및 단면제원



1) 절점 좌표

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
1	0.000	0.000	0.000	13	2.430	0.000	0.805
2	0.550	0.000	0.000	14	0.000	0.000	1.085
3	0.772	0.000	0.000	15	2.430	0.000	1.085
4	0.993	0.000	0.000	16	0.000	0.000	1.365
5	1.215	0.000	0.000	17	2.430	0.000	1.365
6	1.437	0.000	0.000	18	0.000	0.000	1.645
7	1.658	0.000	0.000	19	2.430	0.000	1.645
8	1.880	0.000	0.000	20	0.000	0.000	1.925
9	2.430	0.000	0.000	21	2.430	0.000	1.925
10	0.000	0.000	0.525	22	0.000	0.000	2.425
11	2.430	0.000	0.525	23	0.500	0.000	2.425
12	0.000	0.000	0.805	24	0.738	0.000	2.425

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
25	0.977	0.000	2.425	28	1.692	0.000	2.425
26	1.215	0.000	2.425	29	1.930	0.000	2.425
27	1.453	0.000	2.425	30	2.430	0.000	2.425

2) 경계 조건

joint	spring계수 (kN/m²)		joint	spring계수 (kN/m²)	
	z방향(수직)	x방향(수평)		z방향(수직)	x방향(수평)
1 . 9	5540		3 ~ 7	2585	
2 . 8	4500				

3) 단면제원

Element	두께	폭	비 고
23 ~ 30	0.400	1.000	상부슬래브
1 ~ 8	0.450	1.000	하부슬래브
9 ~ 22	0.400	1.000	벽 체

4) 강역설정

(1) 강역설정기준(콘크리트구조설계기준 2012)

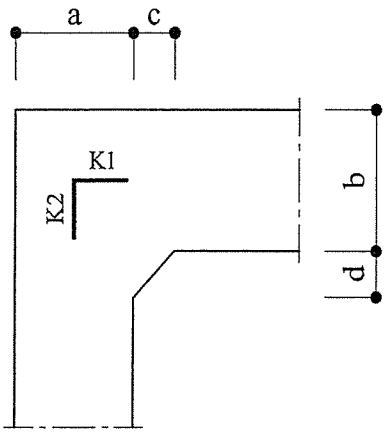
CASE 1 : 부재단부가 다른 부재와 접합할 때는 부재단에서 부재두께의 1/4 안쪽점에서 절점까지

CASE 2 : 부재가 그 축선에 대해 25° 이상 60° 미만인 경사진 헌치를 갖는 경우에는 부재두께가 1.5배가 되는 점에서 부터 절점까지

CASE 3 : 헌치의 경사가 60° 이상의 경우는 헌치의 시점에서 부재두께의 1/4 안쪽 점에서부터 절점까지

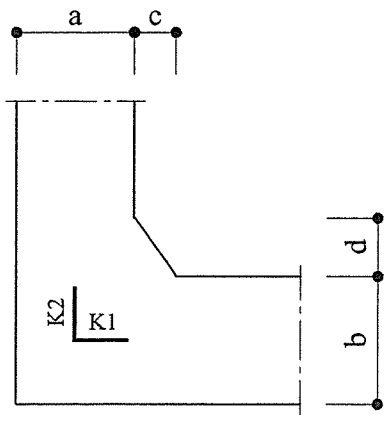
(2) 강역설정

- 절점 22 , 30



a =	400	mm	c =	300	mm
b =	400	mm	d =	300	mm
K1 =	300	mm	K2 =	300	mm

- 절점 1 , 9

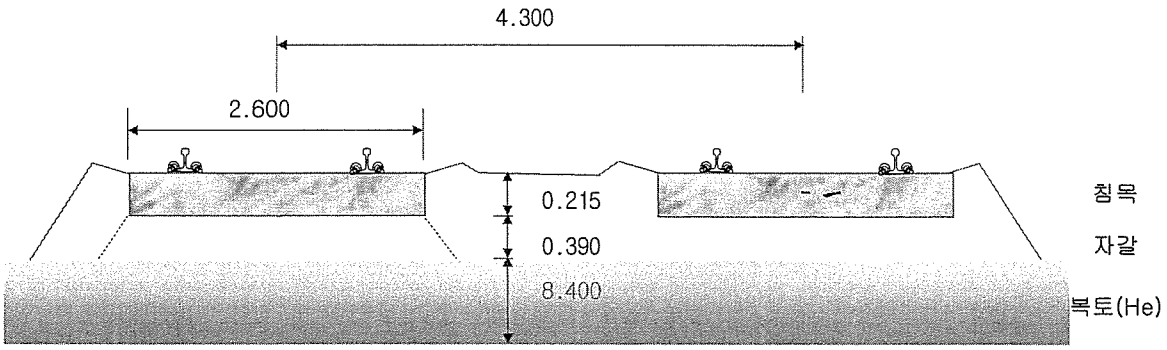


a =	400	mm	c =	300	mm
b =	450	mm	d =	300	mm
K1 =	275	mm	K2 =	325	mm

4. 하중산정

4.1 상시

1) 상부 고정하중(지하수 無)



① 하중 분포폭 산정 (b')

① He < 0.5m 경우 : b + d

b_1 = 2.600 + 0.390 = 2.990 m

② He ≥ 0.5m 경우 : c + b + (d + He)

b_2 = 4.300 + 2.600 + (0.390 + 8.400) = 14.590 m

여기서, He : 시공기면에서의 토피고(m)

a : 동륜간 축간거리(m) c : 복선선로 중심간격(m)

b : 침목길이(m) d : 침목하면의 도상두께(m)

H : 상부슬래브 두께

He ≥ 0.5 m

∴ b' = 14.590 m

② 구조물 자중 : 프로그램 상에서 Self Weight 기능을 이용하여 자동 고려

③ 궤도 중량

- 레일 : 레일당 1.5kN/m를 적용

q_1 = 4 × 1.500 / 14.590 = 0.411 kN/㎡

- 침목 : 고속철도용 5.0kN/m

q_2 = 5.000 × 2 / 14.590 = 0.685 kN/㎡

= 1.096 kN/㎡

④ 도상 (q_2)

TCL = 0.215 × 19.000 × 1.3 = 5.311 kN/㎡

HSB = 0.390 × 19.000 × 1.3 = 9.633 kN/㎡

= 14.944 kN/㎡

⑤ 복토하중 (q_3) = 20.000 × 8.400 = 168.000 kN/㎡

∴ $q_1 + q_2 + q_3$ = 1.096 + 14.944 + 168.000 = 184.040 kN/㎡

2) 활하중

① 활하중 산정 : KRL 2012

$$W_{HL} = \frac{2P}{a \times b'} = \frac{2\times(220+80x3)}{3.000 \times 14.590} = 21.019 \text{ kN/㎡}$$

∴ W = 21.019 kN/㎡

② 충격계수

1) 단선 (i_0) (철도설계기준 노반편(2013) p.5-7)

지 간 L (m)	0	5	10	20	30	40	50	70	100
충격계수 (i)	0.60	0.48	0.43	0.37	0.34	0.32	0.30	0.27	0.24

* 상기표에 없는 지간의 충격 계수는 보간법으로 구한다.

지 간 L (m) = 2.430 m

따라서 i_0 = 0.542 (보간법에 의하여 산정된 충격계수)

2) 구조물 상면의 복토높이에 따른 충격 계수

H ≥ 1.0일 경우 $i = io \cdot \{(2.5 - H)/1.5\}$

여기서, H ≤ 1.0 m 에서는 $i = i_o$

H ≥ 2.5 m 에서는 i = 0

따라서, 본 구조물의 H = 9.005 m i = 0.000

W_L = 21.019 ×(1 + 0.000) = 21.019 kN/㎡

③ 활하중에 의한 측압 (충격비고려)(철도설계기준 노반편(2013) p.5-6)

W_{LH} = 21.019 × 0.4 = 8.408 kN/㎡

3) 토 압

- 지하수가 없는 경우 작용 토압

q_1 = 0.426 ×(16.040 + 20.000 × 8.600) = 80.105 kN/㎡

q_2 = 80.105 + 0.426 ×(20.000 × 0.500) = 84.365 kN/㎡

q_3 = 84.365 + 0.426 ×(20.000 × 0.280) = 86.751 kN/㎡

q_4 = 86.751 + 0.426 ×(20.000 × 0.280) = 89.137 kN/㎡

q_5 = 89.137 + 0.426 ×(20.000 × 0.280) = 91.523 kN/㎡

q_6 = 91.523 + 0.426 ×(20.000 × 0.280) = 93.909 kN/㎡

q_7 = 93.909 + 0.426 ×(20.000 × 0.280) = 96.295 kN/㎡

q_8 = 96.295 + 0.426 ×(20.000 × 0.525) = 100.768 kN/㎡

- 시공중 편토압 산정 (지하수가 없는 경우 작용 토압)

q_1 = 0.426 × (0.000 + 20.000 × 0.200) = 1.704 kN/㎡

q_2 = 1.704 + 0.426 × (20.000 × 0.500) = 5.964 kN/㎡

q_3 = 5.964 + 0.426 × (20.000 × 0.280) = 8.350 kN/㎡

q_4 = 8.350 + 0.426 × (20.000 × 0.280) = 10.736 kN/㎡

q_5 = 10.736 + 0.426 × (20.000 × 0.280) = 13.122 kN/㎡

q_6 = 13.122 + 0.426 × (20.000 × 0.280) = 15.508 kN/㎡

q_7 = 15.508 + 0.426 × (20.000 × 0.280) = 17.894 kN/㎡

q_8 = 17.894 + 0.426 × (20.000 × 0.525) = 22.367 kN/㎡

4) 온도하중

토피가 1.0m 이상일 경우에는 온도변화를 고려치 않으며, 토피가 1.0m 이하일 경우에는 다음식을 따른다.

$t = a \times t_0$ = 0.000 × 15.0 = 0.000 ℃

t : 박스 구조물의 상부 슬래브에 작용하는 온도변화

a : 토피심도(m)에 따른 저감률 $a=1-h_0$ (h_0:토피심도)

t_0 : 지표면에서의 기본온도 변화

상부슬래브의 두께가 700mm 이상인 경우 $t_0 = \pm 10$℃

상부슬래브의 두께가 700mm 미만인 경우 $t_0 = \pm 15$℃

토피고 H > 1.0m 이므로 온도변화는 고려하지 않는다.

5) 건조수축

$$\Delta Tx = \frac{\varepsilon}{\alpha} = \frac{-0.00015}{0.00001} = -15\ ^{\circ}C$$

6) 장대레일 하중

장대레일 종하중은 필요시에 고려하여야 하며, 1궤도당 10 kN/m로 하고 작용위치는 상부슬래브 축선으로 한다. (단, 토피가 1.0m 이상인 경우는 이를 무시한다.)

토피가 9.005 m 이므로 장대레일 하중을 무시한다.

H_r = 0.000 × 4 / 14.590 = 0.000 kN/㎡

7) 상시 지반반력 계수

지지 지반 N치 = 6

Eo = 2800 × N = 2800 × 6 = 16800

Kvo = 1 / 0.3 x α x Eo = 1 / 0.3 × 1 x 16800 = 56000

Bv = √ Av = √ (2.430 × 2.430) = 2.430

Kv = Kvo (Bv/0.3)^-3/4 = 11663 kN/㎡

11663 × (0.400 / 2 + 0.550 / 2) = 5540 kN/㎡ - 저판 단부 스프링

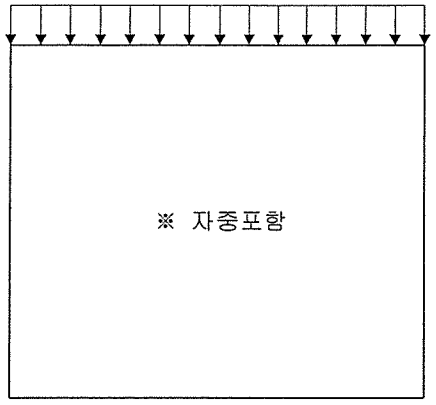
11663 × (0.550 / 2 + 0.222 / 2) = 4500 kN/㎡ - 저판 전단검토위치

11663 × (0.222 / 2 + 0.222 / 2) = 2585 kN/㎡ - 저판 중앙부 스프링

5. 하중재하도

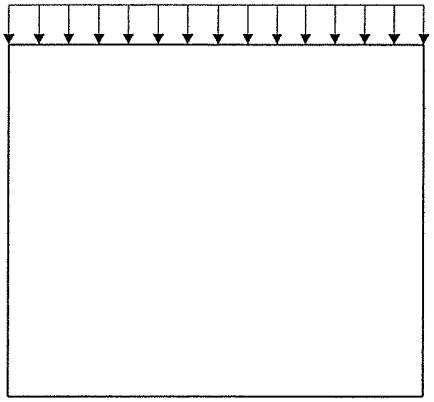
① 고정하중

W_D = 184.040 kN/㎡



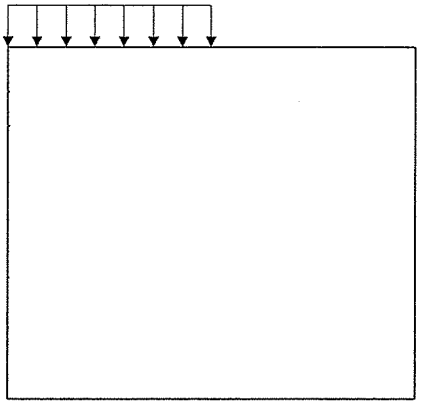
② 활하중(만재하)

W_L = 21.019 kN/㎡



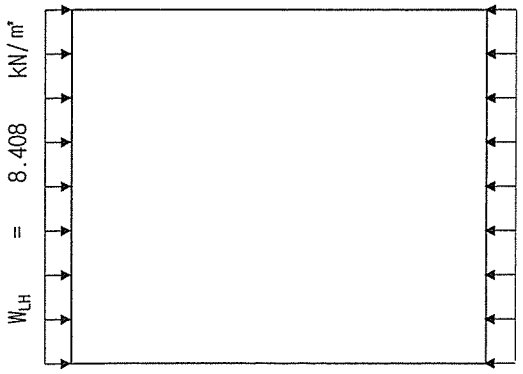
③ 활하중(편재하)

W_L = 21.019 kN/㎡



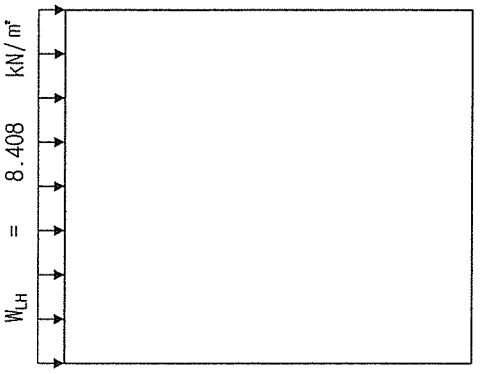
④ 활하중에 의한 측압(만재하)

W_{LH} = 8.408 kN/㎡

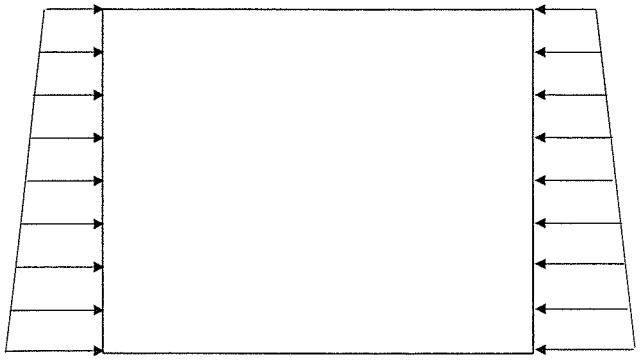


⑤ 활하중에 의한 측압(편재하)

W_{LH} = 8.408 kN/㎡



⑥ 수평토압(지하수 없는 경우)

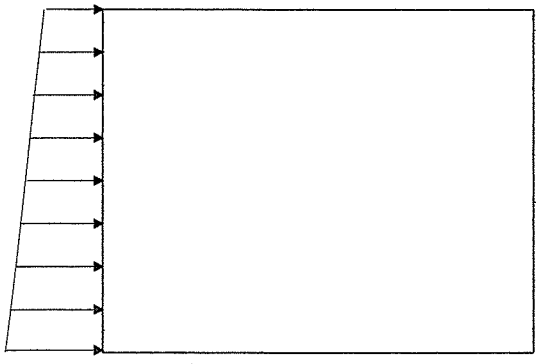


q_1 = 80.105 kN/㎡

q_7 = 100.768 kN/㎡

⑦ 편측토압(지하수 없는 경우)

q_1 = 1.704 kN/㎡



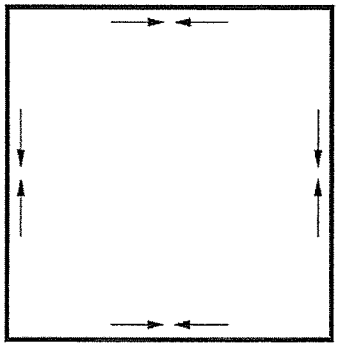
q_7 = 22.367 kN/㎡

⑧ 온도하중

△T = 0 °

⑨ 건조수축

△T = -15 °



⑩ 장대레일 종하중

Hr = 0.000 kN/m^2

6. 하중계수 및 하중조합

1) 극한하중 검토시

구분	고정하중	활하중		활하중 측압		수평토압 (지하수無)		온도하중		건조수축	장대레일	비고
				양측재하	편측재하	양측재하	편측재하					
		전경간	1/2	수평	수평	수평	수평	온도상승	온도하강			
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11	
1	1.35	1.85		1.85		1.6						
2	1.35	1.85		1.85		0.6						
3	1.35		1.85		1.85	1.6						
4	1.35		1.85		1.85	0.6						
5	1.6	1.60		1.60		1.6						
6	1.6	1.60		1.60		0.6						
7	1.6		1.6		1.6	1.6						
8	1.6		1.6		1.6	0.6						
9	1.35	1.40		1.40		1.6		1.35		1.35		
10	1.35	1.40		1.40		0.6		1.35		1.35		
11	1.35	1.40		1.40		1.6			1.35	1.35	1.40	
12	1.35	1.40		1.40		0.6			1.35	1.35	1.40	
13	1.35		1.40		1.40	1.6		1.35		1.35		
14	1.35		1.40		1.40	0.6		1.35		1.35		
15	1.35		1.40		1.40	1.6			1.35	1.35	1.4	
16	1.35		1.40		1.40	0.6			1.35	1.35	1.4	
17	1.35		1.85		1.85		1.60					
18	1.35		1.85		1.85		0.60					
19	1.60		1.60		1.60		1.60					
20	1.60		1.60		1.60		0.60					

2) 사용하중 검토시

구분	고정하중	활하중		활하중 측압		수평토압 (지하수無)		온도하중		건조수축	장대레일	비고
				양측재하	편측재하	양측재하	편측재하					
		전경간	1/2	수평	수평	수평	수평	온도상승	온도하강			
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11	
21	1.0	1.0		1.0		1.0						
22	1.0	1.0		1.0		0.5						
23	1.0		1.0		1.0	1.0						
24	1.0		1.0		1.0	0.5						
25	1.0	1.0		1.0		1.0		1.0			1.0	
26	1.0	1.0		1.0		0.5		1.0			1.0	
27	1.0	1.0		1.0		1.0			1.0	1.0	1.0	
28	1.0	1.0		1.0		0.5			1.0	1.0	1.0	
29	1.0		1.0		1.0	1.0		1.0			1.0	
30	1.0		1.0		1.0	0.5		1.0			1.0	
31	1.0		1.0		1.0	1.0			1.0	1.0	1.0	
32	1.0		1.0		1.0	0.5			1.0	1.0	1.0	
33	1.0					1.0						
34	1.0		1.0		1.0		1.0					
35	1.0		1.0		1.0		0.5					

7. INPUT DATA

```
*VERSION
   8.3.1

*UNIT    ; Unit System
; FORCE, LENGTH, HEAT, TEMPER
   KN   , M, J, C

*STRUCTYPE    ; Structure Type
; iSTYP, iMASS, iSMAS, bMASSOFFSET, bSELFWEIGHT, GRAV, TEMPER, bALIGNBEAM, bALIGNSLAB, bROTRIGID
     1, 1, 1, NO, YES, 9.806, 0, NO, NO, NO

*REBAR-MATL-CODE    ; Rebar Material Code
; CONC_CODE, CONC_MDB, SRC_CODE, SRC_MDB
 KS01-Civil(RC), SD300, KS01-Civil(RC), SD300

*NODE    ; Nodes
; iNO, X, Y, Z
     1, 0, 0, 0
     2, 0.55, 0, 0
     3, 0.78, 0, 0
     4, 1.01, 0, 0
     5, 1.24, 0, 0
     6, 1.47, 0, 0
     7, 1.7, 0, 0
     8, 1.93, 0, 0
     9, 2.48, 0, 0
    10, 0, 0, 0.525
    11, 2.48, 0, 0.525
    12, 0, 0, 0.805
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    15, 2.48, 0, 1.085
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    17, 2.48, 0, 1.365
    18, 0, 0, 1.645
    19, 2.48, 0, 1.645
    20, 0, 0, 1.925
    21, 2.48, 0, 1.925
    22, 0, 0, 2.425
    23, 0.5, 0, 2.425
    24, 0.747, 0, 2.425
    25, 0.993, 0, 2.425
    26, 1.24, 0, 2.425
    27, 1.487, 0, 2.425
    28, 1.733, 0, 2.425
    29, 1.98, 0, 2.425
    30, 2.48, 0, 2.425

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; iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, EXVAL2, bLMT ; Comp/Tens Truss
; iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iSUB, iWID             ; Planar Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iN5, iN6, iN7, iN8     ; Solid  Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, REF, RPX, RPY, RPZ, iSUB, EXVAL  ; Frame(Ref. Point)
     1, BEAM  ,    2,    2,    1,    2,  180
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     7, BEAM  ,    2,    2,    7,    8,  180
     8, BEAM  ,    2,    2,    8,    9,  180
     9, BEAM  ,    2,    3,    1,   10,  180
    10, BEAM  ,    2,    3,    9,   11,    0
    11, BEAM  ,    2,    3,   10,   12,  180
    12, BEAM  ,    2,    3,   11,   13,    0
    13, BEAM  ,    2,    3,   12,   14,  180
    14, BEAM  ,    2,    3,   13,   15,    0
    15, BEAM  ,    2,    3,   14,   16,  180
    16, BEAM  ,    2,    3,   15,   17,    0
    17, BEAM  ,    2,    3,   16,   18,  180
    18, BEAM  ,    2,    3,   17,   19,    0
    19, BEAM  ,    2,    3,   18,   20,  180
    20, BEAM  ,    2,    3,   19,   21,    0
    21, BEAM  ,    2,    3,   20,   22,  180
    22, BEAM  ,    2,    3,   21,   30,    0
    23, BEAM  ,    2,    1,   22,   23,    0
    24, BEAM  ,    2,    1,   23,   24,    0
    25, BEAM  ,    2,    1,   24,   25,    0
    26, BEAM  ,    2,    1,   25,   26,    0
    27, BEAM  ,    2,    1,   26,   27,    0
    28, BEAM  ,    2,    1,   27,   28,    0
    29, BEAM  ,    2,    1,   28,   29,    0
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    30, BEAM  ,    2,     1,    29,    30,     0

*MATERIAL    ; Material
; iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, DAMPRATIO, [DATA1]          ; STEEL, CONC, USER
; iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, DAMPRATIO, [DATA2], [DATA2] ; SRC
; [DATA1] : 1, DB, NAME, CODE
; [DATA1] : 2, ELAST, POISN, THERMAL, DEN, MASS
; [DATA1] : 3, Ex, Ey, Ez, Tx, Ty, Tz, Sxy, Sxz, Syz, Pxy, Pxz, Pyz, DEN, MASS   ; Orthotropic
; [DATA2] : 1, DB, NAME, CODE or 2, ELAST, POISN, THERMAL, DEN, MASS
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; iMAT, W_R, W_G, W_B, HF_R, HF_G, HF_B, HE_R, HE_G, HE_B, bBLEND, FACT
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    2, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5


*SECTION    ; Section
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2]                    ; 1st line - DB/USER
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL              ; 1st line - VALUE
;       AREA, ASy, ASz, Ixx, Iyy, Izz                                         ; 2nd line
;       CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz               ; 3rd line
;       Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz                              ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF          ; 1st line - SRC
;       D1, D2, [SRC]                                                         ; 2nd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2         ; 1st line - COMBINED
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24
; iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, iyVAR, izVAR, STYPE                ; 1st line - TAPERED
;       DB, NAME1, NAME2                                                      ; 2nd line(STYPE=DB)
;       [DIM1], [DIM2]                                                        ; 2nd line(STYPE=USER)
;       D11, D12, D13, D14, D15, D16, D17, D18                                ; 2nd line(STYPE=VALUE)
;       AREA1, ASy1, ASz1, Ixx1, Iyy1, Izz1                                   ; 3rd line(STYPE=VALUE)
;       CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1     ; 4th line(STYPE=VALUE)
;       Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2                    ; 5th line(STYPE=VALUE)
;       D21, D22, D23, D24, D25, D26, D27, D28                                ; 6th line(STYPE=VALUE)
;       AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2                                   ; 7th line(STYPE=VALUE)
;       CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2     ; 8th line(STYPE=VALUE)
;       Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2                    ; 9th line(STYPE=VALUE)
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line(STYPE=PSC)
;       ELAST, DEN, POIS, POIC                                                ; 2nd line(STYPE=PSC-CMPW)
;       bSHEARCHK, [SCHK-I], [SCHK-J], [WT-I], [WT-J], WI, WJ, bSYM, bSIDEHOLE ; 3rd line(STYPE=PSC)
;       bSHEARCHK, bSYM, bHUNCH, [CMPWEB-I], [CMPWEB-J]                       ; 3rd line(STYPE=PSC-CMPW)
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF-I], [STIFF-J]       ; 4th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 5th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 6th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 7th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 8th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 9th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 10th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 11th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 12th line(STYPE=PSC)
;       GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMULTI, EsEc-L, EsEc-S       ; 2nd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 3rd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 4th line(STYPE=CMP-B/I)
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 5th line(STYPE=CMP-B)
;       GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb, bSYM, SW_i, SW_i       ; 2nd line(STYPE=CMP-CI/CT)
;       OPT1, OPT2, [JOINT]                                                   ; 3rd line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 4th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 5th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 6th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 7th line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 11th line(STYPE=CMP-CI/CT)
; iSEC, TYPE, SNAME, [OFFSET], bSD, STYPE1, STYPE2                            ; 1st line - CONSTRUCT
;       SHAPE, ...(same with other type data from shape)                      ; Before (STYPE1)
;       SHAPE, ...(same with other type data from shape)                      ; After  (STYPE2)
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SB
;       Hw, tw, B, Bf1, tf1, B2, Bf2, tf2                                     ; 2nd line
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 3rd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SI
;       Hw, tw, B, tf1, B2, tf2                                               ; 2nd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 3rd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-CI/CT
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line
;       [SIZE-A]                                                              ; 3rd line
;       [SIZE-B]                                                              ; 4th line
;       [SIZE-C]                                                              ; 5th line
;       [SIZE-D]                                                              ; 6th line
;       SW, GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb                     ; 7th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - PSC
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line
;       bSHEARCHK, [SCHK], [WT], WIDTH, bSYM, bSIDEHOLE                       ; 3rd line
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF]                    ; 4th line
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```
;       [SIZE-A]                                                                ; 5th line
;       [SIZE-B]                                                                ; 6th line
;       [SIZE-C]                                                                ; 7th line
;       [SIZE-D]                                                                ; 8th line
; [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10
; [DATA2] : CCSHAPE or iCEL or iN1, iN2
; [SRC]  : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2
; [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8
; [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER
; [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ
; [JOINT]  :  8(1CELL, 2CELL), 13(3CELL),  9(PSCM),  8(PSCH), 9(PSCT),  2(PSCB), 0(nCELL),  2(nCEL2)
; [SIZE-A] :  6(1CELL, 2CELL), 10(3CELL), 10(PSCM),  6(PSCH), 8(PSCT), 10(PSCB), 5(nCELL), 11(nCEL2)
; [SIZE-B] :  6(1CELL, 2CELL), 12(3CELL),  6(PSCM),  6(PSCH), 8(PSCT),  6(PSCB), 8(nCELL), 18(nCEL2)
; [SIZE-C] : 10(1CELL, 2CELL), 13(3CELL),  9(PSCM), 10(PSCH), 7(PSCT),  8(PSCB), 0(nCELL), 11(nCEL2)
; [SIZE-D] :  8(1CELL, 2CELL), 13(3CELL),  6(PSCM),  7(PSCH), 8(PSCT),  5(PSCB), 0(nCELL), 18(nCEL2)
; [STIFF]  : AREA, ASy, ASz, Ixx, Iyy, Izz
; [SCHK]   : bAUTO_Z1, Z1, bAUTO_Z3, Z3
; [WT]     : bAUTO_TOR, TOR, bAUTO_SHR1, SHR1, bAUTO_SHR2, SHR2, bAUTO_SHR3, SHR3
; [CMPWEB] : EFD, LRF, A, B, H, T
   1, DBUSER    , TOPSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.45, 1, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL             , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0

*SECT-COLOR
; iSEC, W_R, W_G, W_B, HF_R, HF_G, HF_B, HE_R, HE_G, HE_B, bBLEND, FACT
   1, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
   2, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
   3, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5

*DGN-SECT
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2]                    ; 1st line - DB/USER
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL             ; 1st line - VALUE
;       AREA, ASy, ASz, Ixx, Iyy, Izz                                         ; 2nd line
;       CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz               ; 3rd line
;       Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz                              ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF         ; 1st line - SRC
;       D1, D2, [SRC]                                                         ; 2nd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2        ; 1st line - COMBINED
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24
; iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, iyVAR, izVAR, STYPE               ; 1st line - TAPERED
;       DB, NAME1, NAME2                                                      ; 2nd line(STYPE=DB)
;       [DIM1], [DIM2]                                                        ; 2nd line(STYPE=USER)
;       D11, D12, D13, D14, D15, D16, D17, D18                                ; 2nd line(STYPE=VALUE)
;       AREA1, ASy1, ASz1, Ixx1, Iyy1, Izz1                                   ; 3rd line(STYPE=VALUE)
;       CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1     ; 4th line(STYPE=VALUE)
;       Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2                    ; 5th line(STYPE=VALUE)
;       D21, D22, D23, D24, D25, D26, D27, D28                                ; 6th line(STYPE=VALUE)
;       AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2                                   ; 7th line(STYPE=VALUE)
;       CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2     ; 8th line(STYPE=VALUE)
;       Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2                    ; 9th line(STYPE=VALUE)
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line(STYPE=PSC)
;       ELAST, DEN, POIS, POIC                                                ; 2nd line(STYPE=PSC-CMPW)
;       bSHEARCHK, [SCHK-I], [SCHK-J], [WT-I], [WT-J], WI, WJ, bSYM, bSIDEHOLE ; 3rd line(STYPE=PSC)
;       bSHEARCHK, bSYM, bHUNCH, [CMPWEB-I], [CMPWEB-J]                       ; 3rd line(STYPE=PSC-CMPW)
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF-I], [STIFF-J]       ; 4th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 5th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 6th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 7th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 8th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 9th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 10th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 11th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 12th line(STYPE=PSC)
;       GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMULTI, EsEc-L, EsEc-S       ; 2nd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 3rd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 4th line(STYPE=CMP-B/I)
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 5th line(STYPE=CMP-B)
;       GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb, bSYM, SW_i, SW_i       ; 2nd line(STYPE=CMP-CI/CT)
;       OPT1, OPT2, [JOINT]                                                   ; 3rd line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 4th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 5th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 6th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 7th line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 11th line(STYPE=CMP-CI/CT)
; iSEC, TYPE, SNAME, [OFFSET], bSD, STYPE1, STYPE2                            ; 1st line - CONSTRUCT
;       SHAPE, ...(same with other type data from shape)                      ; Before (STYPE1)
;       SHAPE, ...(same with other type data from shape)                      ; After  (STYPE2)
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SB
;       Hw, tw, B, Bf1, tf1, B2, Bf2, tf2                                     ; 2nd line
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 3rd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SI
;       Hw, tw, B, tf1, B2, tf2                                               ; 2nd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 3rd line
```

```
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                    ; 1st line - COMPOSITE-CI/CT
;       OPT1, OPT2, [JOINT]                                                  ; 2nd line
;       [SIZE-A]                                                             ; 3rd line
;       [SIZE-B]                                                             ; 4th line
;       [SIZE-C]                                                             ; 5th line
;       [SIZE-D]                                                             ; 6th line
;       SW, GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb                    ; 7th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                    ; 1st line - PSC
;       OPT1, OPT2, [JOINT]                                                  ; 2nd line
;       bSHEARCHK, [SCHK], [WT], WIDTH, bSYM, bSIDEHOLE                      ; 3rd line
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF]                   ; 4th line
;       [SIZE-A]                                                             ; 5th line
;       [SIZE-B]                                                             ; 6th line
;       [SIZE-C]                                                             ; 7th line
;       [SIZE-D]                                                             ; 8th line
; [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10
; [DATA2] : CCSHAPE or iCEL or iN1, iN2
; [SRC]  : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2
; [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8
; [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER
; [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ
; [JOINT]  :  8(1CELL, 2CELL), 13(3CELL),  9(PSCM),  8(PSCH), 9(PSCT),  2(PSCB), 0(nCELL),  2(nCEL2)
; [SIZE-A] :  6(1CELL, 2CELL), 10(3CELL), 10(PSCM),  6(PSCH), 8(PSCT), 10(PSCB), 5(nCELL), 11(nCEL2)
; [SIZE-B] :  6(1CELL, 2CELL), 12(3CELL),  6(PSCM),  6(PSCH), 8(PSCT),  6(PSCB), 8(nCELL), 18(nCEL2)
; [SIZE-C] : 10(1CELL, 2CELL), 13(3CELL),  9(PSCM), 10(PSCH), 7(PSCT),  8(PSCB), 0(nCELL), 11(nCEL2)
; [SIZE-D] :  8(1CELL, 2CELL), 13(3CELL),  6(PSCM),  7(PSCH), 8(PSCT),  5(PSCB), 0(nCELL), 18(nCEL2)
; [STIFF]  : AREA, ASy, ASz, Ixx, Iyy, Izz
; [SCHK]   : bAUTO_Z1, Z1, bAUTO_Z3, Z3
; [WT]     : bAUTO_TOR, TOR, bAUTO_SHR1, SHR1, bAUTO_SHR2, SHR2, bAUTO_SHR3, SHR3
; [CMPWEB] : EFD, LRF, A, B, H, T
   1, DBUSER    , TOPSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.45, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL             , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0


*STLDCASE    ; Static Load Cases
; LCNAME, LCTYPE, DESC
   LC1  , USER,
   LC2  , USER,
   LC3  , USER,
   LC4  , USER,
   LC5  , USER,
   LC6  , USER,
   LC7  , USER,
   LC8  , USER,
   LC9  , USER,
   LC10 , USER,
   LC11 , USER,
   NCOMB1, USER,
   NCOMB2, USER,
   NCOMB3, USER,
   NCOMB4, USER,
   NCOMB5, USER,
   NCOMB6, USER,
   NCOMB7, USER,
   NCOMB8, USER,
   NCOMB9, USER,
   NCOMB10, USER,
   NCOMB11, USER,
   NCOMB12, USER,
   NCOMB13, USER,
   NCOMB14, USER,
   NCOMB15, USER,
   NCOMB16, USER,
   NCOMB17, USER,
   NCOMB18, USER,
   NCOMB19, USER,
   NCOMB20, USER,
   NCOMB21, USER,
   NCOMB22, USER,
   NCOMB23, USER,
   NCOMB24, USER,
   NCOMB25, USER,
   NCOMB26, USER,
   NCOMB27, USER,
   NCOMB28, USER,
   NCOMB29, USER,
   NCOMB30, USER,
   NCOMB31, USER,
   NCOMB32, USER,
   NCOMB33, USER,
   NCOMB34, USER,
   NCOMB35, USER,


*SPRING    ; Point Spring Supports
; NODE_LIST, Type, SDx, SDy, SDz, SRx, SRy, SRz, GROUP, FROMTYPE, EFFAREA, Kx, Ky, Kz
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; NODE_LIST, Type, Direction, Vx, Vy, Vz, Stiffness, GROUP, FROMTYPE, EFFAREA
; NODE_LIST, Type, Multi-Linear Type, Direction, Vx, Vy, Vz, ax, ay, bx, by, cx, cy, dx, dy, ex, ey, fx, fy, GROUP, FROMTYPE, EFFAREA
   2 8, COMP  ,  5, 0, 0, 0, 4480, , 0, 0, 0, 0, 0
   3to7, COMP  ,  5, 0, 0, 0, 2642, , 0, 0, 0, 0, 0
   1, LINEAR, 1e+014, 0, 0, 0, 0, 0, NO, 0, 0, 0, 0, 0, 0, 0, , 0, 0, 0, 0, 0
   1 9, COMP  ,  5, 0, 0, 0, 5456, , 0, 0, 0, 0, 0

*OFFSET    ; Beam End Offsets
; ELEM_LIST, TYPE, RGDXi, RGDYi, RGDZi, RGDXi, RGDYi, RGDZi, GROUP  ; TYPE=GLOBAL
; ELEM_LIST, TYPE, RGDi, RGDi, GROUP                                ; TYPE=ELEMENT
     1, ELEMENT, 0.275, 0,
     8, ELEMENT, 0, 0.275,
     9, ELEMENT, 0.325, 0,
    10, ELEMENT, 0.325, 0,
    21, ELEMENT, 0, 0.3,
    22, ELEMENT, 0, 0.3,
    23, ELEMENT, 0.3, 0,
    30, ELEMENT, 0, 0.3,

*USE-STLD, LC1

; *SELFWEIGHT, X, Y, Z, GROUP
*SELFWEIGHT, 0, 0, -1,

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC1] ------------------------

*USE-STLD, LC2

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC2] ------------------------

*USE-STLD, LC3

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC3] ------------------------

*USE-STLD, LC4

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
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    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC4] ----------

*USE-STLD, LC5

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC5] ----------

*USE-STLD, LC6

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 111.427, 1, 106.954, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -111.427, 1, -106.954, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 106.954, 1, 104.568, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -106.954, 1, -104.568, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 104.568, 1, 102.182, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -104.568, 1, -102.182, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 102.182, 1, 99.796, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -102.182, 1, -99.796, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 99.796, 1, 97.41, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -99.796, 1, -97.41, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 97.41, 1, 95.024, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -97.41, 1, -95.024, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 95.024, 1, 90.764, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -95.024, 1, -90.764, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC6] ----------

*USE-STLD, LC7

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 22.367, 1, 17.894, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 17.894, 1, 15.508, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 15.508, 1, 13.122, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 13.122, 1, 10.736, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 10.736, 1, 8.35, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.35, 1, 5.964, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 5.964, 1, 1.704, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC7] ----------

*USE-STLD, LC10

*ELTEMPER    ; Element Temperatures
; ELEM LIST, TEMPER, GROUP
     1, -15.
     2, -15.
     3, -15.
     4, -15.
     5, -15.
     6, -15.
     7, -15.
     8, -15.
     9, -15.
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    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [LC10] ------------------------

*USE-STLD. NCOMB1

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB1] ------------------------

*USE-STLD. NCOMB2

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.
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*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB2] ------------------------

*USE-STLD. NCOMB3

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB3] ------------------------

*USE-STLD. NCOMB4

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB4] ------------------------

*USE-STLD. NCOMB5

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. N(
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. N(
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
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    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB5] ----------------------------

*USE-STLD. NCOMB6

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
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; End of data for load case [NCOMB6] ------------------------

*USE-STLD. NCOMB7

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB7] ------------------------

*USE-STLD. NCOMB8

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB8] ------------------------

*USE-STLD. NCOMB9

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. N(
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. N(
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. N(
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. N(
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB9] ------------------------

*USE-STLD. NCOMB10

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
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    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB10] ----------------------

*USE-STLD. NCOMB11

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
```

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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB11] ------------------------

*USE-STLD. NCOMB12

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB12] ------------------------

*USE-STLD. NCOMB13

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB13] ------------------------

*USE-STLD. NCOMB14

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB14] ------------------------

*USE-STLD. NCOMB15

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. N(
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB15] ------------------------

*USE-STLD. NCOMB16

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB16] ------------------------

*USE-STLD. NCOMB17

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 28.6304. 1. 24.8128. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.8128. 1. 20.9952. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 20.9952. 1. 17.1776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.1776. 1. 13.36. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.36. 1. 9.5424. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.5424. 1. 2.7264. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB17] ------------------------

*USE-STLD. NCOMB18

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
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; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4202. 1. 10.7364. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.7364. 1. 9.3048. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.3048. 1. 7.8732. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.8732. 1. 6.4416. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.4416. 1. 5.01. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.01. 1. 3.5784. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 3.5784. 1. 1.0224. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB18] ----------

*USE-STLD. NCOMB19

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 28.6304. 1. 24.8128. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.8128. 1. 20.9952. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 20.9952. 1. 17.1776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.1776. 1. 13.36. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.36. 1. 9.5424. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.5424. 1. 2.7264. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB19] ----------

*USE-STLD. NCOMB20

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4202. 1. 10.7364. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.7364. 1. 9.3048. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
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    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.3048. 1. 7.8732. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.8732. 1. 6.4416. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.4416. 1. 5.01. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.01. 1. 3.5784. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 3.5784. 1. 1.0224. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB20] ------------------------

*USE-STLD. NCOMB21

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB21] ------------------------

*USE-STLD. NCOMB22

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.
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*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB22] ------------------------

*USE-STLD. NCOMB23

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
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    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB23] ------------------------

*USE-STLD. NCOMB24

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB24] ------------------------

*USE-STLD. NCOMB25

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
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    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB25] ------------------------

*USE-STLD. NCOMB26

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
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; End of data for load case [NCOMB26] ------------------------

*USE-STLD. NCOMB27

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
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    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB27] ------------------------

*USE-STLD. NCOMB28

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
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     23. -15.
     24. -15.
     25. -15.
     26. -15.
     27. -15.
     28. -15.
     29. -15.
     30. -15.

; End of data for load case [NCOMB28] ------------------------

*USE-STLD. NCOMB29

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB29] ------------------------

*USE-STLD. NCOMB30

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
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    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB30] ------------------------

*USE-STLD. NCOMB31

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
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    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB31] ------------------------

*USE-STLD. NCOMB32

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
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    30. -15.

; End of data for load case 'NCOMB32' ------------------------

*USE-STLD. NCOMB33

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. 'ECCEN'. 'VALUE'. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. 'ECCEN'. 'VALUE'. GROUP
; 'VALUE'       : D1. P1. D2. P2. D3. P3. D4. P4
; 'ECCEN'       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; 'ADDITIONAL'  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case 'NCOMB33' ------------------------

*USE-STLD. NCOMB34

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. 'ECCEN'. 'VALUE'. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. 'ECCEN'. 'VALUE'. GROUP
; 'VALUE'       : D1. P1. D2. P2. D3. P3. D4. P4
; 'ECCEN'       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; 'ADDITIONAL'  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 22.367. 1. 17.894. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.894. 1. 15.508. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.508. 1. 13.122. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.122. 1. 10.736. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.736. 1. 8.35. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.35. 1. 5.964. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.964. 1. 1.704. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case 'NCOMB34' ------------------------

*USE-STLD. NCOMB35

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. 'ECCEN'. 'VALUE'. GROUP
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; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.1835. 1. 8.947. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.947. 1. 7.754. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.754. 1. 6.561. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.561. 1. 5.368. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.368. 1. 4.175. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 4.175. 1. 2.982. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 2.982. 1. 0.852. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB35] ----------------------------


*LOADCOMB    ; Combinations
; NAME=NAME. KIND. ACTIVE. bES. iTYPE. DESC. iSERV-TYPE. nLCOMTYPE   ; line 1
;      ANAL1. LCNAME1. FACT1. ...                                    ; from line 2
  NAME=COMB1. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC2. 1.85. ST. LC4. 1.85. ST. LC6. 1.6
  NAME=COMB2. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC2. 1.85. ST. LC4. 1.85. ST. LC6. 0.6
  NAME=COMB3. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC6. 1.6
  NAME=COMB4. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC6. 0.6
  NAME=COMB5. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.6. ST. LC2. 1.6. ST. LC4. 1.6. ST. LC6. 1.6
  NAME=COMB6. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.6. ST. LC2. 1.6. ST. LC4. 1.6. ST. LC6. 0.6
  NAME=COMB7. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC6. 1.6
  NAME=COMB8. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC6. 0.6
  NAME=COMB9. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 1.6. ST. LC8. 1.35
       ST. LC11. 1.35
  NAME=COMB10. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 0.6. ST. LC8. 1.35
       ST. LC11. 1.35
  NAME=COMB11. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 1.6. ST. LC9. 1.35
       ST. LC10. 1.35. ST. LC11. 1.4
  NAME=COMB12. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 0.6. ST. LC9. 1.35
       ST. LC10. 1.35. ST. LC11. 1.4
  NAME=COMB13. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 1.6. ST. LC8. 1.35
       ST. LC11. 1.35
  NAME=COMB14. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 0.6. ST. LC8. 1.35
       ST. LC11. 1.35
  NAME=COMB15. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 1.6. ST. LC9. 1.35
       ST. LC10. 1.35. ST. LC11. 1.4
  NAME=COMB16. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 0.6. ST. LC9. 1.35
       ST. LC10. 1.35. ST. LC11. 1.4
  NAME=COMB17. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC7. 1.6
  NAME=COMB18. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC7. 0.6
  NAME=COMB19. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC7. 1.6
  NAME=COMB20. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC7. 0.6
  NAME=COMB21. GEN. INACTIVE. 0. 0. . 0. 0
       ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1
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NAME=COMB22. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5
NAME=COMB23. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1
NAME=COMB24. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5
NAME=COMB25. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1. ST. LC8. 1. ST. LC11. 1
NAME=COMB26. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5. ST. LC8. 1
     ST. LC11. 1
NAME=COMB27. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1. ST. LC9. 1. ST. LC10. 1
     ST. LC11. 1
NAME=COMB28. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5. ST. LC9. 1
     ST. LC10. 1. ST. LC11. 1
NAME=COMB29. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1. ST. LC8. 1. ST. LC11. 1
NAME=COMB30. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5. ST. LC8. 1
     ST. LC11. 1
NAME=COMB31. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1. ST. LC9. 1. ST. LC10. 1
     ST. LC11. 1
NAME=COMB32. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5. ST. LC9. 1
     ST. LC10. 1. ST. LC11. 1
NAME=COMB33. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC6. 1
NAME=COMB34. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC7. 1
NAME=COMB35. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC7. 0.5
NAME=USD. GEN. ACTIVE. 0. 1. . 0. 0
     ST. NCOMB1. 1. ST. NCOMB2. 1. ST. NCOMB3. 1. ST. NCOMB4. 1
     ST. NCOMB5. 1. ST. NCOMB6. 1. ST. NCOMB7. 1. ST. NCOMB8. 1
     ST. NCOMB9. 1. ST. NCOMB10. 1. ST. NCOMB11. 1. ST. NCOMB12. 1
     ST. NCOMB13. 1. ST. NCOMB14. 1. ST. NCOMB15. 1. ST. NCOMB16. 1
     ST. NCOMB17. 1. ST. NCOMB18. 1. ST. NCOMB19. 1. ST. NCOMB20. 1
NAME=WSD. GEN. ACTIVE. 0. 1. . 0. 0
     ST. NCOMB21. 1. ST. NCOMB22. 1. ST. NCOMB23. 1. ST. NCOMB24. 1
     ST. NCOMB25. 1. ST. NCOMB26. 1. ST. NCOMB27. 1. ST. NCOMB28. 1
     ST. NCOMB29. 1. ST. NCOMB30. 1. ST. NCOMB31. 1. ST. NCOMB32. 1
     ST. NCOMB33. 1. ST. NCOMB34. 1. ST. NCOMB35. 1
NAME=NCOMB1. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB1. 1
NAME=NCOMB2. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB2. 1
NAME=NCOMB3. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB3. 1
NAME=NCOMB4. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB4. 1
NAME=NCOMB5. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB5. 1
NAME=NCOMB6. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB6. 1
NAME=NCOMB7. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB7. 1
NAME=NCOMB8. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB8. 1
NAME=NCOMB9. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB9. 1
NAME=NCOMB10. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB10. 1
NAME=NCOMB11. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB11. 1
NAME=NCOMB12. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB12. 1
NAME=NCOMB13. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB13. 1
NAME=NCOMB14. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB14. 1
NAME=NCOMB15. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB15. 1
NAME=NCOMB16. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB16. 1
NAME=NCOMB17. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB17. 1
NAME=NCOMB18. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB18. 1
NAME=NCOMB19. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB19. 1
NAME=NCOMB20. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB20. 1
NAME=NCOMB21. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB21. 1
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   NAME=NCOMB22. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB22. 1
   NAME=NCOMB23. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB23. 1
   NAME=NCOMB24. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB24. 1
   NAME=NCOMB25. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB25. 1
   NAME=NCOMB26. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB26. 1
   NAME=NCOMB27. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB27. 1
   NAME=NCOMB28. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB28. 1
   NAME=NCOMB29. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB29. 1
   NAME=NCOMB30. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB30. 1
   NAME=NCOMB31. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB31. 1
   NAME=NCOMB32. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB32. 1
   NAME=NCOMB33. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB33. 1
   NAME=NCOMB34. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB34. 1
   NAME=NCOMB35. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB35. 1

*LOADCONST    ; Load Constribution for Nonlinear Load Case
; NAME=STLDCASE. DESC                                          ; 1st line
;      LCNAME1. LCTYPE1. FACTOR1. LCNAME2. LCTYPE2. FACTOR2. ...   ; from line 2
   NAME=NCOMB1.
        LC1. ST. 1.35. LC2. ST. 1.85. LC4. ST. 1.85. LC6. ST. 1.6
   NAME=NCOMB2.
        LC1. ST. 1.35. LC2. ST. 1.85. LC4. ST. 1.85. LC6. ST. 0.6
   NAME=NCOMB3.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC6. ST. 1.6
   NAME=NCOMB4.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC6. ST. 0.6
   NAME=NCOMB5.
        LC1. ST. 1.6. LC2. ST. 1.6. LC4. ST. 1.6. LC6. ST. 1.6
   NAME=NCOMB6.
        LC1. ST. 1.6. LC2. ST. 1.6. LC4. ST. 1.6. LC6. ST. 0.6
   NAME=NCOMB7.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC6. ST. 1.6
   NAME=NCOMB8.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC6. ST. 0.6
   NAME=NCOMB9.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 1.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB10.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 0.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB11.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 1.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB12.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 0.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB13.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 1.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB14.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 0.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB15.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 1.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB16.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 0.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB17.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC7. ST. 1.6
   NAME=NCOMB18.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC7. ST. 0.6
   NAME=NCOMB19.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC7. ST. 1.6
   NAME=NCOMB20.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC7. ST. 0.6
   NAME=NCOMB21.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1
   NAME=NCOMB22.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5
   NAME=NCOMB23.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1
   NAME=NCOMB24.
```

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        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 0.5
    NAME=NCOMB25.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1. LC8. ST. 1. LC11. ST. 1
    NAME=NCOMB26.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5. LC8. ST. 1
        LC11. ST. 1
    NAME=NCOMB27.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1. LC9. ST. 1. LC10. ST. 1
        LC11. ST. 1
    NAME=NCOMB28.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5. LC9. ST. 1
        LC10. ST. 1. LC11. ST. 1
    NAME=NCOMB29.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1. LC8. ST. 1. LC11. ST. 1
    NAME=NCOMB30.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 0.5. LC8. ST. 1
        LC11. ST. 1
    NAME=NCOMB31.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1. LC9. ST. 1. LC10. ST. 1
        LC11. ST. 1
    NAME=NCOMB32.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 0.5. LC9. ST. 1
        LC10. ST. 1. LC11. ST. 1
    NAME=NCOMB33.
        LC1. ST. 1. LC6. ST. 1
    NAME=NCOMB34.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC7. ST. 1
    NAME=NCOMB35.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC7. ST. 0.5

*LC-COLOR     ; Diagram Color for Load Case
; ANAL. LCNAME. iR1(ALL). iG1(ALL). iB1(ALL). iR2(MIN). iG2(MIN). iB2(MIN). iR3(MAX). iG2(MAX). iB2(MAX)
 CB. COMB1. 85. 0. 192. 255. 255. 87. 146. 0. 255
 CB. COMB2. 192. 72. 0. 0. 128. 128. 93. 255. 87
 CB. COMB3. 255. 87. 128. 255. 192. 87. 160. 255. 255
 CB. COMB4. 255. 160. 255. 255. 192. 87. 163. 160. 255
 CB. COMB5. 0. 192. 192. 85. 0. 192. 85. 192. 0
 CB. COMB6. 0. 128. 255. 160. 255. 255. 192. 72. 0
 CB. COMB7. 255. 192. 160. 192. 0. 128. 192. 192. 192
 CB. COMB8. 255. 87. 128. 160. 255. 255. 192. 128. 0
 CB. COMB9. 255. 160. 255. 192. 0. 128. 255. 192. 87
 CB. COMB10. 163. 160. 255. 255. 255. 87. 255. 192. 160
 CB. COMB11. 192. 0. 128. 255. 192. 160. 255. 160. 255
 CB. COMB12. 255. 128. 0. 192. 0. 128. 210. 210. 210
 CB. COMB13. 192. 192. 192. 85. 192. 0. 212. 160. 255
 CB. COMB14. 255. 192. 160. 0. 157. 192. 255. 192. 87
 CB. COMB15. 0. 157. 192. 192. 192. 192. 160. 255. 255
 CB. COMB16. 0. 128. 128. 160. 255. 255. 255. 87. 87
 CB. COMB17. 255. 0. 192. 78. 0. 255. 255. 128. 0
 CB. COMB18. 85. 192. 0. 255. 192. 160. 255. 192. 87
 CB. COMB19. 160. 255. 255. 255. 128. 0. 0. 192. 192
 CB. COMB20. 192. 192. 0. 160. 255. 255. 255. 87. 87
 CB. COMB21. 192. 192. 192. 192. 192. 192. 85. 0. 192
 CB. COMB22. 255. 192. 87. 192. 128. 0. 212. 160. 255
 CB. COMB23. 255. 255. 255. 0. 128. 128. 192. 128. 0
 CB. COMB24. 192. 192. 0. 85. 0. 192. 255. 0. 192
 CB. COMB25. 128. 192. 0. 210. 210. 210. 255. 255. 255
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*ANAL-CTRL
; bARDC. bANRC. iITER. TOL. bCSECF. bTRS. bCRBAR. bTPF. bCSO. bSCS. bCLATS
   YES. YES. 20. 0.001. YES. YES. YES. NO. NO. NO. NO


*ENDDATA
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8.OUPUT

FRAME ELEMENT FORCES

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
1	USD(max)	I[1]	35.110	0.000	-284.790	0.00E+00	-8.350	0.000
1	USD(max)	1/4	35.110	0.000	-285.810	0.00E+00	15.020	0.000
1	USD(max)	2/4	35.110	0.000	-286.830	0.00E+00	38.480	0.000
1	USD(max)	3/4	35.110	0.000	-287.860	0.00E+00	62.020	0.000
1	USD(max)	J[2]	35.110	0.000	-288.880	0.00E+00	85.650	0.000
1	USD(min)	I[1]	-210.270	0.000	-344.440	0.00E+00	-64.950	0.000
1	USD(min)	1/4	-210.270	0.000	-345.660	0.00E+00	-44.850	0.000
1	USD(min)	2/4	-210.270	0.000	-346.870	0.00E+00	-24.680	0.000
1	USD(min)	3/4	-210.270	0.000	-348.080	0.00E+00	-4.440	0.000
1	USD(min)	J[2]	-210.270	0.000	-349.300	0.00E+00	15.870	0.000
1	WSD(max)	I[1]	21.940	0.000	-195.770	0.00E+00	-6.520	0.000
1	WSD(max)	1/4	21.940	0.000	-196.530	0.00E+00	8.130	0.000
1	WSD(max)	2/4	21.940	0.000	-197.280	0.00E+00	22.830	0.000
1	WSD(max)	3/4	21.940	0.000	-198.040	0.00E+00	37.590	0.000
1	WSD(max)	J[2]	21.940	0.000	-198.800	0.00E+00	52.400	0.000
1	WSD(min)	I[1]	-128.190	0.000	-215.280	0.00E+00	-38.250	0.000
1	WSD(min)	1/4	-128.190	0.000	-216.040	0.00E+00	-23.740	0.000
1	WSD(min)	2/4	-128.190	0.000	-216.790	0.00E+00	-9.180	0.000
1	WSD(min)	3/4	-128.190	0.000	-217.550	0.00E+00	5.430	0.000
1	WSD(min)	J[2]	-128.190	0.000	-218.310	0.00E+00	20.090	0.000
2	USD(max)	I[2]	35.110	0.000	-169.800	0.00E+00	85.650	0.000
2	USD(max)	1/4	35.110	0.000	-170.660	0.00E+00	97.690	0.000
2	USD(max)	2/4	35.110	0.000	-171.510	0.00E+00	109.790	0.000
2	USD(max)	3/4	35.110	0.000	-172.370	0.00E+00	121.950	0.000
2	USD(max)	J[3]	35.110	0.000	-173.220	0.00E+00	134.170	0.000
2	USD(min)	I[2]	-210.270	0.000	-217.420	0.00E+00	15.870	0.000
2	USD(min)	1/4	-210.270	0.000	-218.440	0.00E+00	26.170	0.000
2	USD(min)	2/4	-210.270	0.000	-219.450	0.00E+00	36.520	0.000
2	USD(min)	3/4	-210.270	0.000	-220.470	0.00E+00	46.920	0.000
2	USD(min)	J[3]	-210.270	0.000	-221.480	0.00E+00	57.370	0.000
2	WSD(max)	I[2]	21.940	0.000	-115.210	0.00E+00	52.400	0.000
2	WSD(max)	1/4	21.940	0.000	-115.850	0.00E+00	59.990	0.000
2	WSD(max)	2/4	21.940	0.000	-116.480	0.00E+00	67.610	0.000
2	WSD(max)	3/4	21.940	0.000	-117.110	0.00E+00	75.270	0.000
2	WSD(max)	J[3]	21.940	0.000	-117.750	0.00E+00	82.970	0.000
2	WSD(min)	I[2]	-128.190	0.000	-135.890	0.00E+00	20.090	0.000
2	WSD(min)	1/4	-128.190	0.000	-136.520	0.00E+00	27.450	0.000
2	WSD(min)	2/4	-128.190	0.000	-137.160	0.00E+00	34.850	0.000
2	WSD(min)	3/4	-128.190	0.000	-137.790	0.00E+00	42.280	0.000
2	WSD(min)	J[3]	-128.190	0.000	-138.420	0.00E+00	49.750	0.000
3	USD(max)	I[3]	35.110	0.000	-101.100	0.00E+00	134.170	0.000
3	USD(max)	1/4	35.110	0.000	-101.960	0.00E+00	141.830	0.000
3	USD(max)	2/4	35.110	0.000	-102.810	0.00E+00	149.540	0.000
3	USD(max)	3/4	35.110	0.000	-103.670	0.00E+00	157.320	0.000
3	USD(max)	J[4]	35.110	0.000	-104.520	0.00E+00	165.150	0.000
3	USD(min)	I[3]	-210.270	0.000	-142.530	0.00E+00	57.370	0.000
3	USD(min)	1/4	-210.270	0.000	-143.550	0.00E+00	63.880	0.000
3	USD(min)	2/4	-210.270	0.000	-144.560	0.00E+00	70.420	0.000
3	USD(min)	3/4	-210.270	0.000	-145.580	0.00E+00	76.740	0.000
3	USD(min)	J[4]	-210.270	0.000	-146.590	0.00E+00	83.120	0.000
3	WSD(max)	I[3]	21.940	0.000	-68.570	0.00E+00	82.970	0.000
3	WSD(max)	1/4	21.940	0.000	-69.200	0.00E+00	87.830	0.000
3	WSD(max)	2/4	21.940	0.000	-69.840	0.00E+00	92.720	0.000
3	WSD(max)	3/4	21.940	0.000	-70.470	0.00E+00	97.650	0.000
3	WSD(max)	J[4]	21.940	0.000	-71.100	0.00E+00	102.620	0.000
3	WSD(min)	I[3]	-128.190	0.000	-89.080	0.00E+00	49.750	0.000
3	WSD(min)	1/4	-128.190	0.000	-89.720	0.00E+00	54.340	0.000
3	WSD(min)	2/4	-128.190	0.000	-90.350	0.00E+00	58.930	0.000
3	WSD(min)	3/4	-128.190	0.000	-90.980	0.00E+00	62.960	0.000
3	WSD(min)	J[4]	-128.190	0.000	-91.620	0.00E+00	67.030	0.000
4	USD(max)	I[4]	35.110	0.000	-32.540	0.00E+00	165.150	0.000
4	USD(max)	1/4	35.110	0.000	-33.400	0.00E+00	168.390	0.000
4	USD(max)	2/4	35.110	0.000	-34.250	0.00E+00	171.690	0.000
4	USD(max)	3/4	35.110	0.000	-35.110	0.00E+00	175.050	0.000
4	USD(max)	J[5]	35.110	0.000	-35.970	0.00E+00	178.460	0.000
4	USD(min)	I[4]	-210.270	0.000	-66.370	0.00E+00	83.120	0.000
4	USD(min)	1/4	-210.270	0.000	-67.390	0.00E+00	85.580	0.000
4	USD(min)	2/4	-210.270	0.000	-68.400	0.00E+00	88.090	0.000
4	USD(min)	3/4	-210.270	0.000	-69.410	0.00E+00	90.650	0.000
4	USD(min)	J[5]	-210.270	0.000	-70.430	0.00E+00	93.250	0.000
4	WSD(max)	I[4]	21.940	0.000	-22.000	0.00E+00	102.620	0.000
4	WSD(max)	1/4	21.940	0.000	-22.640	0.00E+00	104.720	0.000
4	WSD(max)	2/4	21.940	0.000	-23.270	0.00E+00	106.850	0.000
4	WSD(max)	3/4	21.940	0.000	-23.900	0.00E+00	109.030	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
4	WSD(max)	J[5]	21.940	0.000	-24.540	0.00E+00	111.240	0.000
4	WSD(min)	I[4]	-128.190	0.000	-41.480	0.00E+00	67.030	0.000
4	WSD(min)	1/4	-128.190	0.000	-42.120	0.00E+00	68.320	0.000
4	WSD(min)	2/4	-128.190	0.000	-42.750	0.00E+00	69.640	0.000
4	WSD(min)	3/4	-128.190	0.000	-43.380	0.00E+00	70.990	0.000
4	WSD(min)	J[5]	-128.190	0.000	-44.020	0.00E+00	72.390	0.000
5	USD(max)	I[5]	35.110	0.000	42.570	0.00E+00	178.460	0.000
5	USD(max)	1/4	35.110	0.000	41.560	0.00E+00	177.240	0.000
5	USD(max)	2/4	35.110	0.000	40.540	0.00E+00	176.080	0.000
5	USD(max)	3/4	35.110	0.000	39.530	0.00E+00	174.980	0.000
5	USD(max)	J[6]	35.110	0.000	38.510	0.00E+00	173.960	0.000
5	USD(min)	I[5]	-210.270	0.000	3.320	0.00E+00	93.250	0.000
5	USD(min)	1/4	-210.270	0.000	2.470	0.00E+00	91.930	0.000
5	USD(min)	2/4	-210.270	0.000	1.610	0.00E+00	90.660	0.000
5	USD(min)	3/4	-210.270	0.000	0.750	0.00E+00	89.440	0.000
5	USD(min)	J[6]	-210.270	0.000	-0.100	0.00E+00	88.270	0.000
5	WSD(max)	I[5]	21.940	0.000	26.610	0.00E+00	111.240	0.000
5	WSD(max)	1/4	21.940	0.000	25.970	0.00E+00	110.550	0.000
5	WSD(max)	2/4	21.940	0.000	25.340	0.00E+00	109.900	0.000
5	WSD(max)	3/4	21.940	0.000	24.710	0.00E+00	109.290	0.000
5	WSD(max)	J[6]	21.940	0.000	24.070	0.00E+00	108.730	0.000
5	WSD(min)	I[5]	-128.190	0.000	6.990	0.00E+00	72.390	0.000
5	WSD(min)	1/4	-128.190	0.000	6.350	0.00E+00	70.990	0.000
5	WSD(min)	2/4	-128.190	0.000	5.720	0.00E+00	69.640	0.000
5	WSD(min)	3/4	-128.190	0.000	5.080	0.00E+00	68.320	0.000
5	WSD(min)	J[6]	-128.190	0.000	4.450	0.00E+00	67.030	0.000
6	USD(max)	I[6]	35.110	0.000	123.700	0.00E+00	173.960	0.000
6	USD(max)	1/4	35.110	0.000	122.690	0.00E+00	168.800	0.000
6	USD(max)	2/4	35.110	0.000	121.670	0.00E+00	163.700	0.000
6	USD(max)	3/4	35.110	0.000	120.660	0.00E+00	158.660	0.000
6	USD(max)	J[7]	35.110	0.000	119.650	0.00E+00	153.670	0.000
6	USD(min)	I[6]	-210.270	0.000	71.350	0.00E+00	88.270	0.000
6	USD(min)	1/4	-210.270	0.000	70.490	0.00E+00	83.140	0.000
6	USD(min)	2/4	-210.270	0.000	69.640	0.00E+00	78.070	0.000
6	USD(min)	3/4	-210.270	0.000	68.780	0.00E+00	72.400	0.000
6	USD(min)	J[7]	-210.270	0.000	67.930	0.00E+00	66.550	0.000
6	WSD(max)	I[6]	21.940	0.000	77.310	0.00E+00	108.730	0.000
6	WSD(max)	1/4	21.940	0.000	76.680	0.00E+00	105.500	0.000
6	WSD(max)	2/4	21.940	0.000	76.050	0.00E+00	102.310	0.000
6	WSD(max)	3/4	21.940	0.000	75.410	0.00E+00	99.160	0.000
6	WSD(max)	J[7]	21.940	0.000	74.780	0.00E+00	96.050	0.000
6	WSD(min)	I[6]	-128.190	0.000	56.400	0.00E+00	67.030	0.000
6	WSD(min)	1/4	-128.190	0.000	55.760	0.00E+00	62.960	0.000
6	WSD(min)	2/4	-128.190	0.000	55.130	0.00E+00	58.930	0.000
6	WSD(min)	3/4	-128.190	0.000	54.500	0.00E+00	54.930	0.000
6	WSD(min)	J[7]	-128.190	0.000	53.860	0.00E+00	50.970	0.000
7	USD(max)	I[7]	35.110	0.000	204.970	0.00E+00	153.670	0.000
7	USD(max)	1/4	35.110	0.000	203.960	0.00E+00	143.870	0.000
7	USD(max)	2/4	35.110	0.000	202.940	0.00E+00	134.130	0.000
7	USD(max)	3/4	35.110	0.000	201.930	0.00E+00	124.450	0.000
7	USD(max)	J[8]	35.110	0.000	200.910	0.00E+00	114.820	0.000
7	USD(min)	I[7]	-210.270	0.000	141.050	0.00E+00	66.550	0.000
7	USD(min)	1/4	-210.270	0.000	140.190	0.00E+00	56.600	0.000
7	USD(min)	2/4	-210.270	0.000	139.340	0.00E+00	46.690	0.000
7	USD(min)	3/4	-210.270	0.000	138.480	0.00E+00	36.840	0.000
7	USD(min)	J[8]	-210.270	0.000	137.620	0.00E+00	27.030	0.000
7	WSD(max)	I[7]	21.940	0.000	128.110	0.00E+00	96.050	0.000
7	WSD(max)	1/4	21.940	0.000	127.470	0.00E+00	89.920	0.000
7	WSD(max)	2/4	21.940	0.000	126.840	0.00E+00	83.830	0.000
7	WSD(max)	3/4	21.940	0.000	126.200	0.00E+00	77.780	0.000
7	WSD(max)	J[8]	21.940	0.000	125.570	0.00E+00	71.760	0.000
7	WSD(min)	I[7]	-128.190	0.000	106.840	0.00E+00	50.970	0.000
7	WSD(min)	1/4	-128.190	0.000	106.200	0.00E+00	44.220	0.000
7	WSD(min)	2/4	-128.190	0.000	105.570	0.00E+00	37.500	0.000
7	WSD(min)	3/4	-128.190	0.000	104.930	0.00E+00	30.820	0.000
7	WSD(min)	J[8]	-128.190	0.000	104.300	0.00E+00	24.180	0.000
8	USD(max)	I[8]	35.110	0.000	345.940	0.00E+00	114.820	0.000
8	USD(max)	1/4	35.110	0.000	344.730	0.00E+00	93.310	0.000
8	USD(max)	2/4	35.110	0.000	343.520	0.00E+00	71.870	0.000
8	USD(max)	3/4	35.110	0.000	342.300	0.00E+00	50.530	0.000
8	USD(max)	J[9]	35.110	0.000	341.090	0.00E+00	29.260	0.000
8	USD(min)	I[8]	-210.270	0.000	264.610	0.00E+00	27.030	0.000
8	USD(min)	1/4	-210.270	0.000	263.580	0.00E+00	6.930	0.000
8	USD(min)	2/4	-210.270	0.000	262.560	0.00E+00	-13.090	0.000
8	USD(min)	3/4	-210.270	0.000	261.540	0.00E+00	-33.510	0.000
8	USD(min)	J[9]	-210.270	0.000	260.510	0.00E+00	-53.940	0.000
8	WSD(max)	I[8]	21.940	0.000	216.210	0.00E+00	71.760	0.000
8	WSD(max)	1/4	21.940	0.000	215.460	0.00E+00	58.320	0.000
8	WSD(max)	2/4	21.940	0.000	214.700	0.00E+00	44.920	0.000
8	WSD(max)	3/4	21.940	0.000	213.940	0.00E+00	31.580	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
8	WSD(max)	J[9]	21.940	0.000	213.180	0.00E+00	18.290	0.000
8	WSD(min)	I[8]	-128.190	0.000	195.980	0.00E+00	24.180	0.000
8	WSD(min)	1/4	-128.190	0.000	195.220	0.00E+00	10.540	0.000
8	WSD(min)	2/4	-128.190	0.000	194.460	0.00E+00	-3.050	0.000
8	WSD(min)	3/4	-128.190	0.000	193.710	0.00E+00	-17.610	0.000
8	WSD(min)	J[9]	-128.190	0.000	192.950	0.00E+00	-32.290	0.000
9	USD(max)	I[1]	-421.670	0.000	-11.380	0.00E+00	-74.310	0.000
9	USD(max)	1/4	-419.940	0.000	-10.130	0.00E+00	-67.720	0.000
9	USD(max)	2/4	-418.200	0.000	-8.880	0.00E+00	-61.160	0.000
9	USD(max)	3/4	-416.460	0.000	-7.660	0.00E+00	-55.060	0.000
9	USD(max)	J[10]	-414.730	0.000	-6.440	0.00E+00	-49.420	0.000
9	USD(min)	I[1]	-513.940	0.000	-158.500	0.00E+00	-100.990	0.000
9	USD(min)	1/4	-511.890	0.000	-149.050	0.00E+00	-99.600	0.000
9	USD(min)	2/4	-509.830	0.000	-139.630	0.00E+00	-98.320	0.000
9	USD(min)	3/4	-507.770	0.000	-130.240	0.00E+00	-97.140	0.000
9	USD(min)	J[10]	-505.710	0.000	-120.890	0.00E+00	-96.080	0.000
9	WSD(max)	I[1]	-295.150	0.000	-9.310	0.00E+00	-50.630	0.000
9	WSD(max)	1/4	-293.870	0.000	-8.400	0.00E+00	-46.600	0.000
9	WSD(max)	2/4	-292.580	0.000	-7.510	0.00E+00	-42.850	0.000
9	WSD(max)	3/4	-291.290	0.000	-6.620	0.00E+00	-39.360	0.000
9	WSD(max)	J[10]	-290.010	0.000	-5.750	0.00E+00	-36.140	0.000
9	WSD(min)	I[1]	-321.210	0.000	-95.370	0.00E+00	-63.120	0.000
9	WSD(min)	1/4	-319.930	0.000	-89.530	0.00E+00	-62.250	0.000
9	WSD(min)	2/4	-318.640	0.000	-83.710	0.00E+00	-61.450	0.000
9	WSD(min)	3/4	-317.360	0.000	-77.910	0.00E+00	-60.710	0.000
9	WSD(min)	J[10]	-316.070	0.000	-72.130	0.00E+00	-60.050	0.000
10	USD(max)	I[9]	-411.730	0.000	35.110	0.00E+00	-53.010	0.000
10	USD(max)	1/4	-409.990	0.000	35.110	0.00E+00	-54.690	0.000
10	USD(max)	2/4	-408.250	0.000	35.110	0.00E+00	-50.640	0.000
10	USD(max)	3/4	-406.520	0.000	35.110	0.00E+00	-45.430	0.000
10	USD(max)	J[11]	-404.780	0.000	35.110	0.00E+00	-40.650	0.000
10	USD(min)	I[9]	-513.940	0.000	-147.990	0.00E+00	-88.190	0.000
10	USD(min)	1/4	-511.890	0.000	-138.540	0.00E+00	-85.420	0.000
10	USD(min)	2/4	-509.830	0.000	-129.120	0.00E+00	-83.290	0.000
10	USD(min)	3/4	-507.770	0.000	-119.730	0.00E+00	-81.340	0.000
10	USD(min)	J[11]	-505.710	0.000	-110.380	0.00E+00	-79.590	0.000
10	WSD(max)	I[9]	-295.150	0.000	21.940	0.00E+00	-41.490	0.000
10	WSD(max)	1/4	-293.870	0.000	21.940	0.00E+00	-42.580	0.000
10	WSD(max)	2/4	-292.580	0.000	21.940	0.00E+00	-40.100	0.000
10	WSD(max)	3/4	-291.290	0.000	21.940	0.00E+00	-36.890	0.000
10	WSD(max)	J[11]	-290.010	0.000	21.940	0.00E+00	-33.950	0.000
10	WSD(min)	I[9]	-321.210	0.000	-89.690	0.00E+00	-55.120	0.000
10	WSD(min)	1/4	-319.930	0.000	-83.850	0.00E+00	-52.870	0.000
10	WSD(min)	2/4	-318.640	0.000	-78.030	0.00E+00	-50.990	0.000
10	WSD(min)	3/4	-317.360	0.000	-72.230	0.00E+00	-49.270	0.000
10	WSD(min)	J[11]	-316.070	0.000	-66.450	0.00E+00	-48.100	0.000
11	USD(max)	I[10]	-414.730	0.000	-6.440	0.00E+00	-49.420	0.000
11	USD(max)	1/4	-413.800	0.000	-4.760	0.00E+00	-42.290	0.000
11	USD(max)	2/4	-412.870	0.000	-3.100	0.00E+00	-36.050	0.000
11	USD(max)	3/4	-411.950	0.000	-1.470	0.00E+00	-30.700	0.000
11	USD(max)	J[12]	-411.020	0.000	0.130	0.00E+00	-26.220	0.000
11	USD(min)	I[10]	-505.710	0.000	-120.890	0.00E+00	-96.080	0.000
11	USD(min)	1/4	-504.610	0.000	-107.860	0.00E+00	-94.760	0.000
11	USD(min)	2/4	-503.520	0.000	-94.890	0.00E+00	-93.650	0.000
11	USD(min)	3/4	-502.420	0.000	-81.990	0.00E+00	-93.350	0.000
11	USD(min)	J[12]	-501.320	0.000	-69.150	0.00E+00	-93.310	0.000
11	WSD(max)	I[10]	-290.010	0.000	-5.750	0.00E+00	-36.140	0.000
11	WSD(max)	1/4	-289.320	0.000	-4.550	0.00E+00	-32.080	0.000
11	WSD(max)	2/4	-288.630	0.000	-3.360	0.00E+00	-28.540	0.000
11	WSD(max)	3/4	-287.950	0.000	-2.200	0.00E+00	-25.520	0.000
11	WSD(max)	J[12]	-287.260	0.000	-1.060	0.00E+00	-23.010	0.000
11	WSD(min)	I[10]	-316.070	0.000	-72.130	0.00E+00	-60.050	0.000
11	WSD(min)	1/4	-315.380	0.000	-64.070	0.00E+00	-59.230	0.000
11	WSD(min)	2/4	-314.700	0.000	-56.060	0.00E+00	-58.530	0.000
11	WSD(min)	3/4	-314.010	0.000	-48.090	0.00E+00	-58.270	0.000
11	WSD(min)	J[12]	-313.330	0.000	-40.160	0.00E+00	-58.150	0.000
12	USD(max)	I[11]	-404.780	0.000	35.110	0.00E+00	-40.650	0.000
12	USD(max)	1/4	-403.850	0.000	35.110	0.00E+00	-34.670	0.000
12	USD(max)	2/4	-402.930	0.000	35.110	0.00E+00	-29.530	0.000
12	USD(max)	3/4	-402.000	0.000	35.110	0.00E+00	-25.220	0.000
12	USD(max)	J[13]	-401.080	0.000	35.110	0.00E+00	-21.730	0.000
12	USD(min)	I[11]	-505.710	0.000	-110.380	0.00E+00	-79.590	0.000
12	USD(min)	1/4	-504.610	0.000	-97.350	0.00E+00	-79.970	0.000
12	USD(min)	2/4	-503.520	0.000	-84.380	0.00E+00	-82.090	0.000
12	USD(min)	3/4	-502.420	0.000	-71.480	0.00E+00	-84.210	0.000
12	USD(min)	J[13]	-501.320	0.000	-58.640	0.00E+00	-86.330	0.000
12	WSD(max)	I[11]	-290.010	0.000	21.940	0.00E+00	-33.950	0.000
12	WSD(max)	1/4	-289.320	0.000	21.940	0.00E+00	-30.280	0.000
12	WSD(max)	2/4	-288.630	0.000	21.940	0.00E+00	-27.140	0.000
12	WSD(max)	3/4	-287.950	0.000	21.940	0.00E+00	-24.510	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
12	WSD(max)	J[13]	-287.260	0.000	21.940	0.00E+00	-22.390	0.000
12	WSD(min)	I[11]	-316.070	0.000	-66.450	0.00E+00	-48.100	0.000
12	WSD(min)	1/4	-315.380	0.000	-58.390	0.00E+00	-49.470	0.000
12	WSD(min)	2/4	-314.700	0.000	-50.380	0.00E+00	-50.840	0.000
12	WSD(min)	3/4	-314.010	0.000	-42.410	0.00E+00	-52.200	0.000
12	WSD(min)	J[13]	-313.330	0.000	-34.480	0.00E+00	-53.570	0.000
13	USD(max)	I[12]	-411.020	0.000	0.130	0.00E+00	-26.220	0.000
13	USD(max)	1/4	-410.100	0.000	1.710	0.00E+00	-22.630	0.000
13	USD(max)	2/4	-409.170	0.000	3.270	0.00E+00	-19.740	0.000
13	USD(max)	3/4	-408.240	0.000	4.800	0.00E+00	-17.330	0.000
13	USD(max)	J[14]	-407.320	0.000	9.630	0.00E+00	-15.790	0.000
13	USD(min)	I[12]	-501.320	0.000	-69.150	0.00E+00	-93.310	0.000
13	USD(min)	1/4	-500.220	0.000	-56.390	0.00E+00	-93.370	0.000
13	USD(min)	2/4	-499.130	0.000	-43.690	0.00E+00	-93.550	0.000
13	USD(min)	3/4	-498.030	0.000	-31.050	0.00E+00	-93.830	0.000
13	USD(min)	J[14]	-496.930	0.000	-18.490	0.00E+00	-94.220	0.000
13	WSD(max)	I[12]	-287.260	0.000	-1.060	0.00E+00	-23.010	0.000
13	WSD(max)	1/4	-286.580	0.000	0.060	0.00E+00	-21.020	0.000
13	WSD(max)	2/4	-285.890	0.000	1.160	0.00E+00	-19.540	0.000
13	WSD(max)	3/4	-285.200	0.000	2.240	0.00E+00	-18.560	0.000
13	WSD(max)	J[14]	-284.520	0.000	4.180	0.00E+00	-18.090	0.000
13	WSD(min)	I[12]	-313.330	0.000	-40.160	0.00E+00	-58.150	0.000
13	WSD(min)	1/4	-312.640	0.000	-32.270	0.00E+00	-58.120	0.000
13	WSD(min)	2/4	-311.950	0.000	-24.430	0.00E+00	-58.160	0.000
13	WSD(min)	3/4	-311.270	0.000	-16.620	0.00E+00	-58.280	0.000
13	WSD(min)	J[14]	-310.580	0.000	-8.860	0.00E+00	-58.480	0.000
14	USD(max)	I[13]	-401.080	0.000	35.110	0.00E+00	-21.730	0.000
14	USD(max)	1/4	-400.150	0.000	35.110	0.00E+00	-19.070	0.000
14	USD(max)	2/4	-399.220	0.000	35.110	0.00E+00	-17.140	0.000
14	USD(max)	3/4	-398.300	0.000	35.110	0.00E+00	-15.920	0.000
14	USD(max)	J[15]	-397.370	0.000	35.110	0.00E+00	-15.510	0.000
14	USD(min)	I[13]	-501.320	0.000	-58.640	0.00E+00	-86.330	0.000
14	USD(min)	1/4	-500.220	0.000	-45.880	0.00E+00	-88.450	0.000
14	USD(min)	2/4	-499.130	0.000	-33.180	0.00E+00	-90.570	0.000
14	USD(min)	3/4	-498.030	0.000	-20.540	0.00E+00	-92.690	0.000
14	USD(min)	J[15]	-496.930	0.000	-7.980	0.00E+00	-94.810	0.000
14	WSD(max)	I[13]	-287.260	0.000	21.940	0.00E+00	-22.390	0.000
14	WSD(max)	1/4	-286.580	0.000	21.940	0.00E+00	-20.790	0.000
14	WSD(max)	2/4	-285.890	0.000	21.940	0.00E+00	-19.540	0.000
14	WSD(max)	3/4	-285.200	0.000	21.940	0.00E+00	-18.560	0.000
14	WSD(max)	J[15]	-284.520	0.000	21.940	0.00E+00	-18.090	0.000
14	WSD(min)	I[13]	-313.330	0.000	-34.480	0.00E+00	-53.570	0.000
14	WSD(min)	1/4	-312.640	0.000	-26.590	0.00E+00	-54.940	0.000
14	WSD(min)	2/4	-311.950	0.000	-18.750	0.00E+00	-56.300	0.000
14	WSD(min)	3/4	-311.270	0.000	-10.940	0.00E+00	-57.670	0.000
14	WSD(min)	J[15]	-310.580	0.000	-3.180	0.00E+00	-59.040	0.000
15	USD(max)	I[14]	-407.320	0.000	9.630	0.00E+00	-15.790	0.000
15	USD(max)	1/4	-406.390	0.000	14.850	0.00E+00	-15.100	0.000
15	USD(max)	2/4	-405.460	0.000	20.050	0.00E+00	-15.270	0.000
15	USD(max)	3/4	-404.540	0.000	31.770	0.00E+00	-16.290	0.000
15	USD(max)	J[16]	-403.610	0.000	43.920	0.00E+00	-18.090	0.000
15	USD(min)	I[14]	-496.930	0.000	-18.490	0.00E+00	-94.220	0.000
15	USD(min)	1/4	-495.830	0.000	-5.990	0.00E+00	-94.710	0.000
15	USD(min)	2/4	-494.740	0.000	1.860	0.00E+00	-95.310	0.000
15	USD(min)	3/4	-493.640	0.000	4.250	0.00E+00	-96.000	0.000
15	USD(min)	J[16]	-492.540	0.000	6.580	0.00E+00	-96.800	0.000
15	WSD(max)	I[14]	-284.520	0.000	4.180	0.00E+00	-18.090	0.000
15	WSD(max)	1/4	-283.830	0.000	8.340	0.00E+00	-18.120	0.000
15	WSD(max)	2/4	-283.150	0.000	12.470	0.00E+00	-18.640	0.000
15	WSD(max)	3/4	-282.460	0.000	19.860	0.00E+00	-19.660	0.000
15	WSD(max)	J[16]	-281.770	0.000	27.450	0.00E+00	-21.050	0.000
15	WSD(min)	I[14]	-310.580	0.000	-8.860	0.00E+00	-58.480	0.000
15	WSD(min)	1/4	-309.900	0.000	-1.140	0.00E+00	-58.740	0.000
15	WSD(min)	2/4	-309.210	0.000	3.670	0.00E+00	-59.080	0.000
15	WSD(min)	3/4	-308.520	0.000	5.070	0.00E+00	-59.490	0.000
15	WSD(min)	J[16]	-307.840	0.000	6.440	0.00E+00	-59.970	0.000
16	USD(max)	I[15]	-397.370	0.000	35.110	0.00E+00	-15.510	0.000
16	USD(max)	1/4	-396.450	0.000	35.110	0.00E+00	-15.900	0.000
16	USD(max)	2/4	-395.520	0.000	35.110	0.00E+00	-17.090	0.000
16	USD(max)	3/4	-394.590	0.000	37.880	0.00E+00	-19.060	0.000
16	USD(max)	J[17]	-393.670	0.000	49.090	0.00E+00	-21.660	0.000
16	USD(min)	I[15]	-496.930	0.000	-7.980	0.00E+00	-94.810	0.000
16	USD(min)	1/4	-495.830	0.000	4.260	0.00E+00	-96.930	0.000
16	USD(min)	2/4	-494.740	0.000	16.430	0.00E+00	-99.050	0.000
16	USD(min)	3/4	-493.640	0.000	21.980	0.00E+00	-101.180	0.000
16	USD(min)	J[17]	-492.540	0.000	27.010	0.00E+00	-103.300	0.000
16	WSD(max)	I[15]	-284.520	0.000	21.940	0.00E+00	-18.090	0.000
16	WSD(max)	1/4	-283.830	0.000	21.940	0.00E+00	-18.120	0.000
16	WSD(max)	2/4	-283.150	0.000	21.940	0.00E+00	-18.640	0.000
16	WSD(max)	3/4	-282.460	0.000	23.680	0.00E+00	-19.660	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
16	WSD(max)	J[17]	-281.770	0.000	30.680	0.00E+00	-21.170	0.000
16	WSD(min)	I[15]	-310.580	0.000	-3.180	0.00E+00	-59.040	0.000
16	WSD(min)	1/4	-309.900	0.000	3.960	0.00E+00	-60.410	0.000
16	WSD(min)	2/4	-309.210	0.000	11.050	0.00E+00	-61.770	0.000
16	WSD(min)	3/4	-308.520	0.000	16.580	0.00E+00	-63.140	0.000
16	WSD(min)	J[17]	-307.840	0.000	19.530	0.00E+00	-64.510	0.000
17	USD(max)	I[16]	-403.610	0.000	43.920	0.00E+00	-18.090	0.000
17	USD(max)	1/4	-402.690	0.000	56.010	0.00E+00	-20.700	0.000
17	USD(max)	2/4	-401.760	0.000	68.030	0.00E+00	-24.160	0.000
17	USD(max)	3/4	-400.830	0.000	79.980	0.00E+00	-28.470	0.000
17	USD(max)	J[18]	-399.910	0.000	91.860	0.00E+00	-33.620	0.000
17	USD(min)	I[16]	-492.540	0.000	6.580	0.00E+00	-96.800	0.000
17	USD(min)	1/4	-491.440	0.000	8.830	0.00E+00	-97.690	0.000
17	USD(min)	2/4	-490.350	0.000	11.020	0.00E+00	-98.680	0.000
17	USD(min)	3/4	-489.250	0.000	12.860	0.00E+00	-99.770	0.000
17	USD(min)	J[18]	-488.150	0.000	14.310	0.00E+00	-100.940	0.000
17	WSD(max)	I[16]	-281.770	0.000	27.450	0.00E+00	-21.050	0.000
17	WSD(max)	1/4	-281.090	0.000	35.000	0.00E+00	-22.840	0.000
17	WSD(max)	2/4	-280.400	0.000	42.520	0.00E+00	-25.150	0.000
17	WSD(max)	3/4	-279.720	0.000	49.990	0.00E+00	-27.990	0.000
17	WSD(max)	J[18]	-279.030	0.000	57.410	0.00E+00	-31.350	0.000
17	WSD(min)	I[16]	-307.840	0.000	6.440	0.00E+00	-59.970	0.000
17	WSD(min)	1/4	-307.150	0.000	7.750	0.00E+00	-60.520	0.000
17	WSD(min)	2/4	-306.470	0.000	9.030	0.00E+00	-61.130	0.000
17	WSD(min)	3/4	-305.780	0.000	10.120	0.00E+00	-61.810	0.000
17	WSD(min)	J[18]	-305.090	0.000	11.010	0.00E+00	-62.550	0.000
18	USD(max)	I[17]	-393.670	0.000	49.090	0.00E+00	-21.660	0.000
18	USD(max)	1/4	-392.740	0.000	60.240	0.00E+00	-24.920	0.000
18	USD(max)	2/4	-391.820	0.000	71.310	0.00E+00	-29.010	0.000
18	USD(max)	3/4	-390.890	0.000	82.320	0.00E+00	-33.940	0.000
18	USD(max)	J[19]	-389.960	0.000	93.270	0.00E+00	-39.690	0.000
18	USD(min)	I[17]	-492.540	0.000	27.010	0.00E+00	-103.300	0.000
18	USD(min)	1/4	-491.440	0.000	28.800	0.00E+00	-105.420	0.000
18	USD(min)	2/4	-490.350	0.000	28.800	0.00E+00	-107.800	0.000
18	USD(min)	3/4	-489.250	0.000	28.800	0.00E+00	-110.260	0.000
18	USD(min)	J[19]	-488.150	0.000	28.800	0.00E+00	-112.720	0.000
18	WSD(max)	I[17]	-281.770	0.000	30.680	0.00E+00	-21.170	0.000
18	WSD(max)	1/4	-281.090	0.000	37.650	0.00E+00	-23.180	0.000
18	WSD(max)	2/4	-280.400	0.000	44.570	0.00E+00	-25.660	0.000
18	WSD(max)	3/4	-279.720	0.000	51.450	0.00E+00	-28.630	0.000
18	WSD(max)	J[19]	-279.030	0.000	58.290	0.00E+00	-32.080	0.000
18	WSD(min)	I[17]	-307.840	0.000	19.530	0.00E+00	-64.510	0.000
18	WSD(min)	1/4	-307.150	0.000	19.530	0.00E+00	-65.880	0.000
18	WSD(min)	2/4	-306.470	0.000	19.530	0.00E+00	-67.380	0.000
18	WSD(min)	3/4	-305.780	0.000	19.530	0.00E+00	-68.910	0.000
18	WSD(min)	J[19]	-305.090	0.000	19.530	0.00E+00	-70.450	0.000
19	USD(max)	I[18]	-399.910	0.000	91.860	0.00E+00	-33.620	0.000
19	USD(max)	1/4	-398.980	0.000	103.680	0.00E+00	-39.620	0.000
19	USD(max)	2/4	-398.060	0.000	115.430	0.00E+00	-46.450	0.000
19	USD(max)	3/4	-397.130	0.000	127.120	0.00E+00	-54.110	0.000
19	USD(max)	J[20]	-396.200	0.000	138.740	0.00E+00	-62.590	0.000
19	USD(min)	I[18]	-488.150	0.000	14.310	0.00E+00	-100.940	0.000
19	USD(min)	1/4	-487.050	0.000	15.740	0.00E+00	-102.210	0.000
19	USD(min)	2/4	-485.960	0.000	17.140	0.00E+00	-103.560	0.000
19	USD(min)	3/4	-484.860	0.000	18.520	0.00E+00	-105.010	0.000
19	USD(min)	J[20]	-483.760	0.000	19.870	0.00E+00	-107.080	0.000
19	WSD(max)	I[18]	-279.030	0.000	57.410	0.00E+00	-31.350	0.000
19	WSD(max)	1/4	-278.340	0.000	64.800	0.00E+00	-35.230	0.000
19	WSD(max)	2/4	-277.660	0.000	72.150	0.00E+00	-39.630	0.000
19	WSD(max)	3/4	-276.970	0.000	79.450	0.00E+00	-44.540	0.000
19	WSD(max)	J[20]	-276.290	0.000	86.710	0.00E+00	-49.960	0.000
19	WSD(min)	I[18]	-305.090	0.000	11.010	0.00E+00	-62.550	0.000
19	WSD(min)	1/4	-304.410	0.000	11.890	0.00E+00	-63.350	0.000
19	WSD(min)	2/4	-303.720	0.000	12.730	0.00E+00	-64.210	0.000
19	WSD(min)	3/4	-303.040	0.000	13.560	0.00E+00	-65.130	0.000
19	WSD(min)	J[20]	-302.350	0.000	14.370	0.00E+00	-66.110	0.000
20	USD(max)	I[19]	-389.960	0.000	93.270	0.00E+00	-39.690	0.000
20	USD(max)	1/4	-389.040	0.000	104.140	0.00E+00	-46.260	0.000
20	USD(max)	2/4	-388.110	0.000	115.430	0.00E+00	-53.650	0.000
20	USD(max)	3/4	-387.180	0.000	127.120	0.00E+00	-61.850	0.000
20	USD(max)	J[21]	-386.260	0.000	138.740	0.00E+00	-70.860	0.000
20	USD(min)	I[19]	-488.150	0.000	28.800	0.00E+00	-112.720	0.000
20	USD(min)	1/4	-487.050	0.000	28.800	0.00E+00	-115.180	0.000
20	USD(min)	2/4	-485.960	0.000	28.800	0.00E+00	-117.630	0.000
20	USD(min)	3/4	-484.860	0.000	28.800	0.00E+00	-120.090	0.000
20	USD(min)	J[21]	-483.760	0.000	28.800	0.00E+00	-122.550	0.000
20	WSD(max)	I[19]	-279.030	0.000	58.290	0.00E+00	-32.080	0.000
20	WSD(max)	1/4	-278.340	0.000	65.090	0.00E+00	-36.010	0.000
20	WSD(max)	2/4	-277.660	0.000	72.150	0.00E+00	-40.410	0.000
20	WSD(max)	3/4	-276.970	0.000	79.450	0.00E+00	-45.290	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
20	WSD(max)	J[21]	-276.290	0.000	86.710	0.00E+00	-50.630	0.000
20	WSD(min)	I[19]	-305.090	0.000	19.530	0.00E+00	-70.450	0.000
20	WSD(min)	1/4	-304.410	0.000	19.530	0.00E+00	-71.990	0.000
20	WSD(min)	2/4	-303.720	0.000	19.530	0.00E+00	-73.520	0.000
20	WSD(min)	3/4	-303.040	0.000	19.530	0.00E+00	-75.060	0.000
20	WSD(min)	J[21]	-302.350	0.000	19.530	0.00E+00	-76.590	0.000
21	USD(max)	I[20]	-396.200	0.000	138.740	0.00E+00	-62.590	0.000
21	USD(max)	1/4	-394.550	0.000	146.990	0.00E+00	-69.160	0.000
21	USD(max)	2/4	-392.900	0.000	155.220	0.00E+00	-76.140	0.000
21	USD(max)	3/4	-391.240	0.000	163.410	0.00E+00	-83.540	0.000
21	USD(max)	J[22]	-389.590	0.000	171.560	0.00E+00	-90.440	0.000
21	USD(min)	I[20]	-483.760	0.000	19.870	0.00E+00	-107.080	0.000
21	USD(min)	1/4	-481.800	0.000	20.820	0.00E+00	-110.700	0.000
21	USD(min)	2/4	-479.840	0.000	21.760	0.00E+00	-114.490	0.000
21	USD(min)	3/4	-477.880	0.000	22.680	0.00E+00	-118.460	0.000
21	USD(min)	J[22]	-475.920	0.000	23.600	0.00E+00	-122.610	0.000
21	WSD(max)	I[20]	-276.290	0.000	86.710	0.00E+00	-49.960	0.000
21	WSD(max)	1/4	-275.060	0.000	91.870	0.00E+00	-54.140	0.000
21	WSD(max)	2/4	-273.840	0.000	97.010	0.00E+00	-58.580	0.000
21	WSD(max)	3/4	-272.610	0.000	102.130	0.00E+00	-63.270	0.000
21	WSD(max)	J[22]	-271.390	0.000	107.230	0.00E+00	-67.660	0.000
21	WSD(min)	I[20]	-302.350	0.000	14.370	0.00E+00	-66.110	0.000
21	WSD(min)	1/4	-301.120	0.000	14.940	0.00E+00	-67.370	0.000
21	WSD(min)	2/4	-299.900	0.000	15.490	0.00E+00	-70.210	0.000
21	WSD(min)	3/4	-298.670	0.000	16.030	0.00E+00	-73.190	0.000
21	WSD(min)	J[22]	-297.450	0.000	16.560	0.00E+00	-76.310	0.000
22	USD(max)	I[21]	-386.260	0.000	138.740	0.00E+00	-70.860	0.000
22	USD(max)	1/4	-384.600	0.000	146.990	0.00E+00	-77.790	0.000
22	USD(max)	2/4	-382.950	0.000	155.220	0.00E+00	-85.120	0.000
22	USD(max)	3/4	-381.300	0.000	163.410	0.00E+00	-92.860	0.000
22	USD(max)	J[30]	-379.640	0.000	171.560	0.00E+00	-101.010	0.000
22	USD(min)	I[21]	-483.760	0.000	28.800	0.00E+00	-122.550	0.000
22	USD(min)	1/4	-481.800	0.000	28.800	0.00E+00	-124.300	0.000
22	USD(min)	2/4	-479.840	0.000	28.800	0.00E+00	-126.060	0.000
22	USD(min)	3/4	-477.880	0.000	28.800	0.00E+00	-127.810	0.000
22	USD(min)	J[30]	-475.920	0.000	28.800	0.00E+00	-129.570	0.000
22	WSD(max)	I[21]	-276.290	0.000	86.710	0.00E+00	-50.630	0.000
22	WSD(max)	1/4	-275.060	0.000	91.870	0.00E+00	-54.730	0.000
22	WSD(max)	2/4	-273.840	0.000	97.010	0.00E+00	-59.070	0.000
22	WSD(max)	3/4	-272.610	0.000	102.130	0.00E+00	-63.640	0.000
22	WSD(max)	J[30]	-271.390	0.000	107.230	0.00E+00	-68.450	0.000
22	WSD(min)	I[21]	-302.350	0.000	19.530	0.00E+00	-76.590	0.000
22	WSD(min)	1/4	-301.120	0.000	19.530	0.00E+00	-77.690	0.000
22	WSD(min)	2/4	-299.900	0.000	19.530	0.00E+00	-78.790	0.000
22	WSD(min)	3/4	-298.670	0.000	19.530	0.00E+00	-79.880	0.000
22	WSD(min)	J[30]	-297.450	0.000	19.530	0.00E+00	-80.980	0.000
23	USD(max)	I[22]	-28.800	0.000	-292.120	0.00E+00	3.170	0.000
23	USD(max)	1/4	-28.800	0.000	-275.860	0.00E+00	18.300	0.000
23	USD(max)	2/4	-28.800	0.000	-259.140	0.00E+00	33.940	0.000
23	USD(max)	3/4	-28.800	0.000	-242.420	0.00E+00	48.610	0.000
23	USD(max)	J[23]	-28.800	0.000	-225.710	0.00E+00	62.320	0.000
23	USD(min)	I[22]	-219.780	0.000	-360.780	0.00E+00	-53.300	0.000
23	USD(min)	1/4	-219.780	0.000	-341.590	0.00E+00	-37.960	0.000
23	USD(min)	2/4	-219.780	0.000	-322.400	0.00E+00	-23.500	0.000
23	USD(min)	3/4	-219.780	0.000	-303.210	0.00E+00	-9.880	0.000
23	USD(min)	J[23]	-219.780	0.000	-284.020	0.00E+00	2.550	0.000
23	WSD(max)	I[22]	-19.530	0.000	-205.730	0.00E+00	1.070	0.000
23	WSD(max)	1/4	-19.530	0.000	-194.790	0.00E+00	11.440	0.000
23	WSD(max)	2/4	-19.530	0.000	-183.840	0.00E+00	21.210	0.000
23	WSD(max)	3/4	-19.530	0.000	-172.900	0.00E+00	30.380	0.000
23	WSD(max)	J[23]	-19.530	0.000	-161.960	0.00E+00	38.950	0.000
23	WSD(min)	I[22]	-137.360	0.000	-225.490	0.00E+00	-33.310	0.000
23	WSD(min)	1/4	-137.360	0.000	-213.490	0.00E+00	-22.340	0.000
23	WSD(min)	2/4	-137.360	0.000	-201.500	0.00E+00	-11.960	0.000
23	WSD(min)	3/4	-137.360	0.000	-189.500	0.00E+00	-2.190	0.000
23	WSD(min)	J[23]	-137.360	0.000	-177.510	0.00E+00	6.180	0.000
24	USD(max)	I[23]	-28.800	0.000	-225.710	0.00E+00	62.320	0.000
24	USD(max)	1/4	-28.800	0.000	-205.060	0.00E+00	77.940	0.000
24	USD(max)	2/4	-28.800	0.000	-184.410	0.00E+00	92.080	0.000
24	USD(max)	3/4	-28.800	0.000	-163.770	0.00E+00	104.780	0.000
24	USD(max)	J[24]	-28.800	0.000	-143.120	0.00E+00	116.170	0.000
24	USD(min)	I[23]	-219.780	0.000	-284.020	0.00E+00	2.550	0.000
24	USD(min)	1/4	-219.780	0.000	-260.320	0.00E+00	16.770	0.000
24	USD(min)	2/4	-219.780	0.000	-236.620	0.00E+00	29.760	0.000
24	USD(min)	3/4	-219.780	0.000	-212.920	0.00E+00	41.510	0.000
24	USD(min)	J[24]	-219.780	0.000	-189.220	0.00E+00	52.020	0.000
24	WSD(max)	I[23]	-19.530	0.000	-161.960	0.00E+00	38.950	0.000
24	WSD(max)	1/4	-19.530	0.000	-148.440	0.00E+00	48.710	0.000
24	WSD(max)	2/4	-19.530	0.000	-134.930	0.00E+00	57.550	0.000
24	WSD(max)	3/4	-19.530	0.000	-120.980	0.00E+00	65.490	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
24	WSD(max)	J[24]	-19.530	0.000	-106.170	0.00E+00	72.580	0.000
24	WSD(min)	I[23]	-137.360	0.000	-177.510	0.00E+00	6.180	0.000
24	WSD(min)	1/4	-137.360	0.000	-162.700	0.00E+00	15.760	0.000
24	WSD(min)	2/4	-137.360	0.000	-147.890	0.00E+00	24.510	0.000
24	WSD(min)	3/4	-137.360	0.000	-133.070	0.00E+00	32.420	0.000
24	WSD(min)	J[24]	-137.360	0.000	-118.260	0.00E+00	39.500	0.000
25	USD(max)	I[24]	-28.800	0.000	-143.120	0.00E+00	116.170	0.000
25	USD(max)	1/4	-28.800	0.000	-122.560	0.00E+00	126.050	0.000
25	USD(max)	2/4	-28.800	0.000	-102.000	0.00E+00	134.480	0.000
25	USD(max)	3/4	-28.800	0.000	-81.430	0.00E+00	141.460	0.000
25	USD(max)	J[25]	-28.800	0.000	-60.870	0.00E+00	146.990	0.000
25	USD(min)	I[24]	-219.780	0.000	-189.220	0.00E+00	52.020	0.000
25	USD(min)	1/4	-219.780	0.000	-165.610	0.00E+00	61.260	0.000
25	USD(min)	2/4	-219.780	0.000	-142.010	0.00E+00	69.260	0.000
25	USD(min)	3/4	-219.780	0.000	-118.400	0.00E+00	75.620	0.000
25	USD(min)	J[25]	-219.780	0.000	-94.800	0.00E+00	80.350	0.000
25	WSD(max)	I[24]	-19.530	0.000	-106.170	0.00E+00	72.580	0.000
25	WSD(max)	1/4	-19.530	0.000	-91.420	0.00E+00	78.740	0.000
25	WSD(max)	2/4	-19.530	0.000	-76.670	0.00E+00	83.990	0.000
25	WSD(max)	3/4	-19.530	0.000	-61.910	0.00E+00	88.330	0.000
25	WSD(max)	J[25]	-19.530	0.000	-47.160	0.00E+00	91.760	0.000
25	WSD(min)	I[24]	-137.360	0.000	-118.260	0.00E+00	39.500	0.000
25	WSD(min)	1/4	-137.360	0.000	-103.510	0.00E+00	45.730	0.000
25	WSD(min)	2/4	-137.360	0.000	-88.760	0.00E+00	51.120	0.000
25	WSD(min)	3/4	-137.360	0.000	-74.000	0.00E+00	55.690	0.000
25	WSD(min)	J[25]	-137.360	0.000	-59.250	0.00E+00	59.430	0.000
26	USD(max)	I[25]	-28.800	0.000	-60.870	0.00E+00	146.990	0.000
26	USD(max)	1/4	-28.800	0.000	-40.230	0.00E+00	151.070	0.000
26	USD(max)	2/4	-28.800	0.000	-19.580	0.00E+00	153.700	0.000
26	USD(max)	3/4	-28.800	0.000	1.070	0.00E+00	154.860	0.000
26	USD(max)	J[26]	-28.800	0.000	21.710	0.00E+00	154.560	0.000
26	USD(min)	I[25]	-219.780	0.000	-94.800	0.00E+00	80.350	0.000
26	USD(min)	1/4	-219.780	0.000	-71.100	0.00E+00	83.870	0.000
26	USD(min)	2/4	-219.780	0.000	-47.400	0.00E+00	86.150	0.000
26	USD(min)	3/4	-219.780	0.000	-23.700	0.00E+00	87.190	0.000
26	USD(min)	J[26]	-219.780	0.000	0.000	0.00E+00	86.990	0.000
26	WSD(max)	I[25]	-19.530	0.000	-47.160	0.00E+00	91.760	0.000
26	WSD(max)	1/4	-19.530	0.000	-32.350	0.00E+00	94.300	0.000
26	WSD(max)	2/4	-19.530	0.000	-17.540	0.00E+00	95.920	0.000
26	WSD(max)	3/4	-19.530	0.000	-2.720	0.00E+00	96.630	0.000
26	WSD(max)	J[26]	-19.530	0.000	12.090	0.00E+00	96.420	0.000
26	WSD(min)	I[25]	-137.360	0.000	-59.250	0.00E+00	59.430	0.000
26	WSD(min)	1/4	-137.360	0.000	-44.440	0.00E+00	62.350	0.000
26	WSD(min)	2/4	-137.360	0.000	-29.630	0.00E+00	64.430	0.000
26	WSD(min)	3/4	-137.360	0.000	-14.810	0.00E+00	65.680	0.000
26	WSD(min)	J[26]	-137.360	0.000	0.000	0.00E+00	66.100	0.000
27	USD(max)	I[26]	-28.800	0.000	21.710	0.00E+00	154.560	0.000
27	USD(max)	1/4	-28.800	0.000	40.960	0.00E+00	152.860	0.000
27	USD(max)	2/4	-28.800	0.000	62.590	0.00E+00	149.820	0.000
27	USD(max)	3/4	-28.800	0.000	84.210	0.00E+00	145.450	0.000
27	USD(max)	J[27]	-28.800	0.000	105.830	0.00E+00	139.750	0.000
27	USD(min)	I[26]	-219.780	0.000	0.000	0.00E+00	86.990	0.000
27	USD(min)	1/4	-219.780	0.000	20.060	0.00E+00	85.600	0.000
27	USD(min)	2/4	-219.780	0.000	40.120	0.00E+00	83.090	0.000
27	USD(min)	3/4	-219.780	0.000	60.190	0.00E+00	79.460	0.000
27	USD(min)	J[27]	-219.780	0.000	80.250	0.00E+00	74.700	0.000
27	WSD(max)	I[26]	-19.530	0.000	12.090	0.00E+00	96.420	0.000
27	WSD(max)	1/4	-19.530	0.000	25.600	0.00E+00	95.330	0.000
27	WSD(max)	2/4	-19.530	0.000	39.120	0.00E+00	93.420	0.000
27	WSD(max)	3/4	-19.530	0.000	52.630	0.00E+00	90.660	0.000
27	WSD(max)	J[27]	-19.530	0.000	66.150	0.00E+00	87.080	0.000
27	WSD(min)	I[26]	-137.360	0.000	0.000	0.00E+00	66.100	0.000
27	WSD(min)	1/4	-137.360	0.000	13.510	0.00E+00	65.680	0.000
27	WSD(min)	2/4	-137.360	0.000	27.030	0.00E+00	64.430	0.000
27	WSD(min)	3/4	-137.360	0.000	40.540	0.00E+00	62.350	0.000
27	WSD(min)	J[27]	-137.360	0.000	54.060	0.00E+00	59.430	0.000
28	USD(max)	I[27]	-28.800	0.000	105.830	0.00E+00	139.750	0.000
28	USD(max)	1/4	-28.800	0.000	127.370	0.00E+00	132.730	0.000
28	USD(max)	2/4	-28.800	0.000	148.910	0.00E+00	124.400	0.000
28	USD(max)	3/4	-28.800	0.000	170.440	0.00E+00	114.740	0.000
28	USD(max)	J[28]	-28.800	0.000	191.980	0.00E+00	103.760	0.000
28	USD(min)	I[27]	-219.780	0.000	80.250	0.00E+00	74.700	0.000
28	USD(min)	1/4	-219.780	0.000	100.230	0.00E+00	68.830	0.000
28	USD(min)	2/4	-219.780	0.000	120.210	0.00E+00	61.780	0.000
28	USD(min)	3/4	-219.780	0.000	140.190	0.00E+00	53.420	0.000
28	USD(min)	J[28]	-219.780	0.000	158.930	0.00E+00	43.940	0.000
28	WSD(max)	I[27]	-19.530	0.000	66.150	0.00E+00	87.080	0.000
28	WSD(max)	1/4	-19.530	0.000	79.610	0.00E+00	82.680	0.000
28	WSD(max)	2/4	-19.530	0.000	93.070	0.00E+00	77.450	0.000
28	WSD(max)	3/4	-19.530	0.000	106.530	0.00E+00	71.390	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
28	WSD(max)	J[28]	-19.530	0.000	119.990	0.00E+00	64.500	0.000
28	WSD(min)	I[27]	-137.360	0.000	54.060	0.00E+00	59.430	0.000
28	WSD(min)	1/4	-137.360	0.000	67.520	0.00E+00	55.690	0.000
28	WSD(min)	2/4	-137.360	0.000	80.980	0.00E+00	50.950	0.000
28	WSD(min)	3/4	-137.360	0.000	94.440	0.00E+00	44.980	0.000
28	WSD(min)	J[28]	-137.360	0.000	107.900	0.00E+00	38.170	0.000
29	USD(max)	I[28]	-28.800	0.000	191.980	0.00E+00	103.760	0.000
29	USD(max)	1/4	-28.800	0.000	213.600	0.00E+00	91.390	0.000
29	USD(max)	2/4	-28.800	0.000	236.620	0.00E+00	77.700	0.000
29	USD(max)	3/4	-28.800	0.000	260.320	0.00E+00	62.670	0.000
29	USD(max)	J[29]	-28.800	0.000	284.020	0.00E+00	46.300	0.000
29	USD(min)	I[28]	-219.780	0.000	158.930	0.00E+00	43.940	0.000
29	USD(min)	1/4	-219.780	0.000	177.180	0.00E+00	33.300	0.000
29	USD(min)	2/4	-219.780	0.000	195.420	0.00E+00	21.530	0.000
29	USD(min)	3/4	-219.780	0.000	213.670	0.00E+00	8.630	0.000
29	USD(min)	J[29]	-219.780	0.000	231.910	0.00E+00	-5.390	0.000
29	WSD(max)	I[28]	-19.530	0.000	119.990	0.00E+00	64.500	0.000
29	WSD(max)	1/4	-19.530	0.000	133.500	0.00E+00	56.760	0.000
29	WSD(max)	2/4	-19.530	0.000	147.890	0.00E+00	48.180	0.000
29	WSD(max)	3/4	-19.530	0.000	162.700	0.00E+00	38.760	0.000
29	WSD(max)	J[29]	-19.530	0.000	177.510	0.00E+00	28.510	0.000
29	WSD(min)	I[28]	-137.360	0.000	107.900	0.00E+00	38.170	0.000
29	WSD(min)	1/4	-137.360	0.000	121.410	0.00E+00	30.510	0.000
29	WSD(min)	2/4	-137.360	0.000	134.930	0.00E+00	22.010	0.000
29	WSD(min)	3/4	-137.360	0.000	148.440	0.00E+00	12.670	0.000
29	WSD(min)	J[29]	-137.360	0.000	161.960	0.00E+00	2.500	0.000
30	USD(max)	I[29]	-28.800	0.000	284.020	0.00E+00	46.300	0.000
30	USD(max)	1/4	-28.800	0.000	303.210	0.00E+00	32.070	0.000
30	USD(max)	2/4	-28.800	0.000	322.400	0.00E+00	16.960	0.000
30	USD(max)	3/4	-28.800	0.000	341.590	0.00E+00	0.980	0.000
30	USD(max)	J[30]	-28.800	0.000	360.780	0.00E+00	-15.880	0.000
30	USD(min)	I[29]	-219.780	0.000	231.910	0.00E+00	-5.390	0.000
30	USD(min)	1/4	-219.780	0.000	246.690	0.00E+00	-17.560	0.000
30	USD(min)	2/4	-219.780	0.000	261.460	0.00E+00	-30.480	0.000
30	USD(min)	3/4	-219.780	0.000	276.230	0.00E+00	-44.140	0.000
30	USD(min)	J[30]	-219.780	0.000	291.010	0.00E+00	-58.530	0.000
30	WSD(max)	I[29]	-19.530	0.000	177.510	0.00E+00	28.510	0.000
30	WSD(max)	1/4	-19.530	0.000	189.500	0.00E+00	19.600	0.000
30	WSD(max)	2/4	-19.530	0.000	201.500	0.00E+00	10.140	0.000
30	WSD(max)	3/4	-19.530	0.000	213.490	0.00E+00	0.140	0.000
30	WSD(max)	J[30]	-19.530	0.000	225.490	0.00E+00	-10.410	0.000
30	WSD(min)	I[29]	-137.360	0.000	161.960	0.00E+00	2.500	0.000
30	WSD(min)	1/4	-137.360	0.000	172.900	0.00E+00	-6.340	0.000
30	WSD(min)	2/4	-137.360	0.000	183.840	0.00E+00	-15.740	0.000
30	WSD(min)	3/4	-137.360	0.000	194.790	0.00E+00	-25.680	0.000
30	WSD(min)	J[30]	-137.360	0.000	205.730	0.00E+00	-36.160	0.000

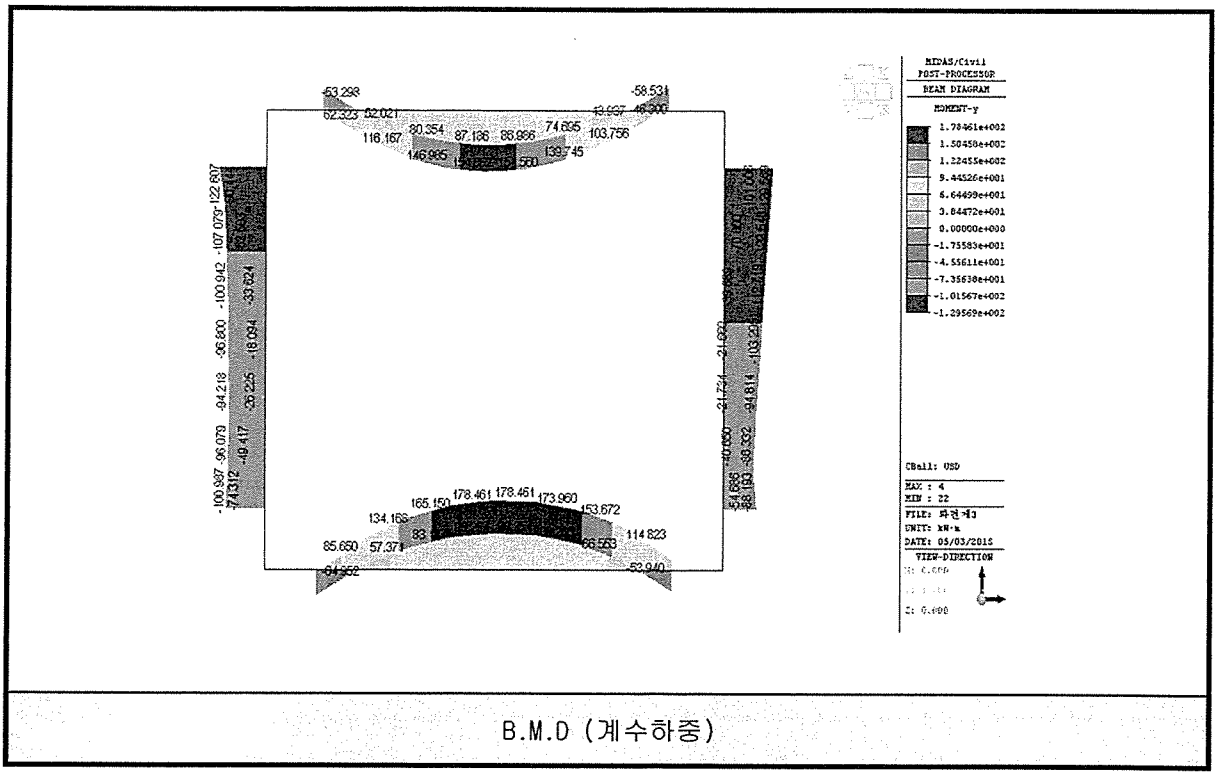
9. 단면력 요약

구분	위치	부재	극한하중			사용하중	비고
			Mu(kN · m)	Su(kN)	Pu(kN)	M(kN · m)	
상부슬래브	단부	23,30	-58.53	360.78	-	-36.16	
	중앙부	26,27	154.86	105.83	-	96.63	
벽체	상단부 (축력최대)	21.22	-89.03	171.56	-483.76	-49.96	
	상단부 (모멘트최대)	21,22	-129.57	171.56	-453.56	-80.98	
	중앙부 (축력최대)	15,16	-32.23	49.09	-496.93	-18.09	
	중앙부 (모멘트최대)	15,16	-103.30	-18.49	-467.57	-64.51	
	하단부 (축력최대)	9,10	-88.19	-158.50	-513.94	-33.95	
	하단부 (모멘트최대)	9,10	-100.99	-158.50	-494.60	-63.12	
하부슬래브	단부	1.8	-64.95	349.30	-	-38.25	
	중앙부	4,5	178.46	70.43	-	111.24	

-'전단력과 사용하중 상태에서의 모멘트는 선택 부재에서의 최대값 적용

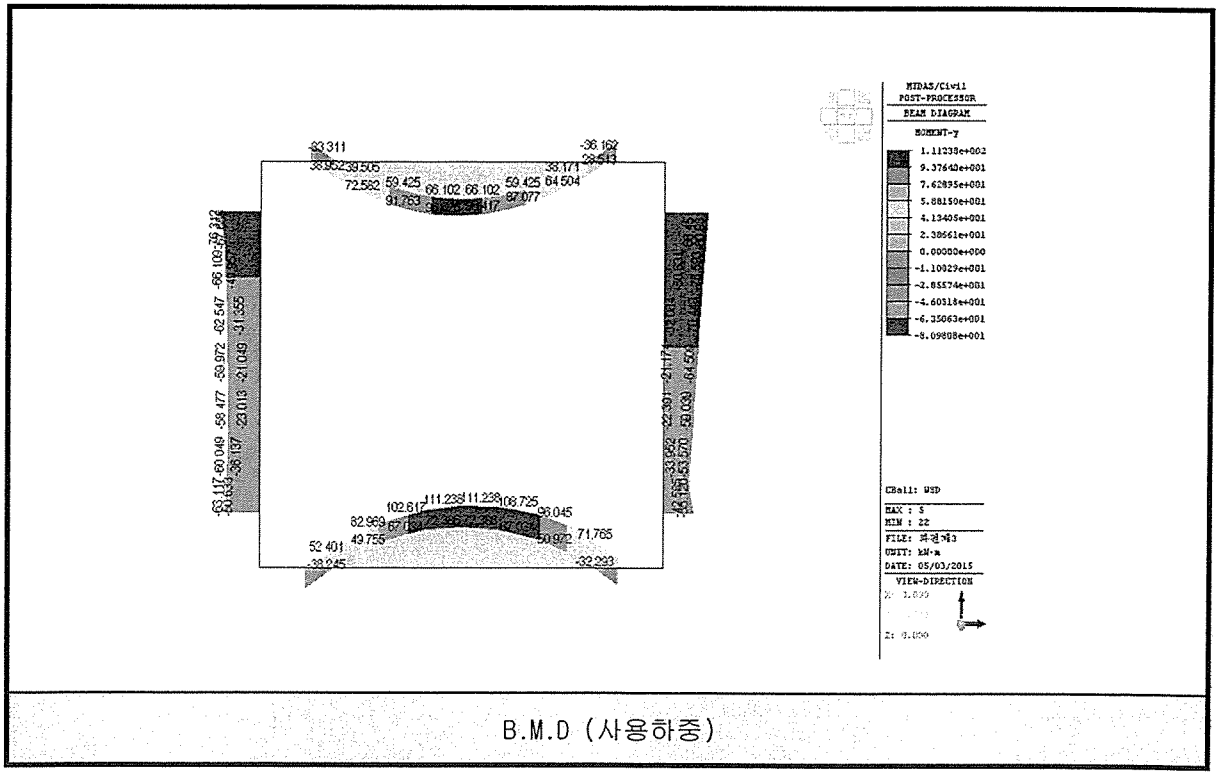
10. 단면력도

(1) 극한하중 모멘트도



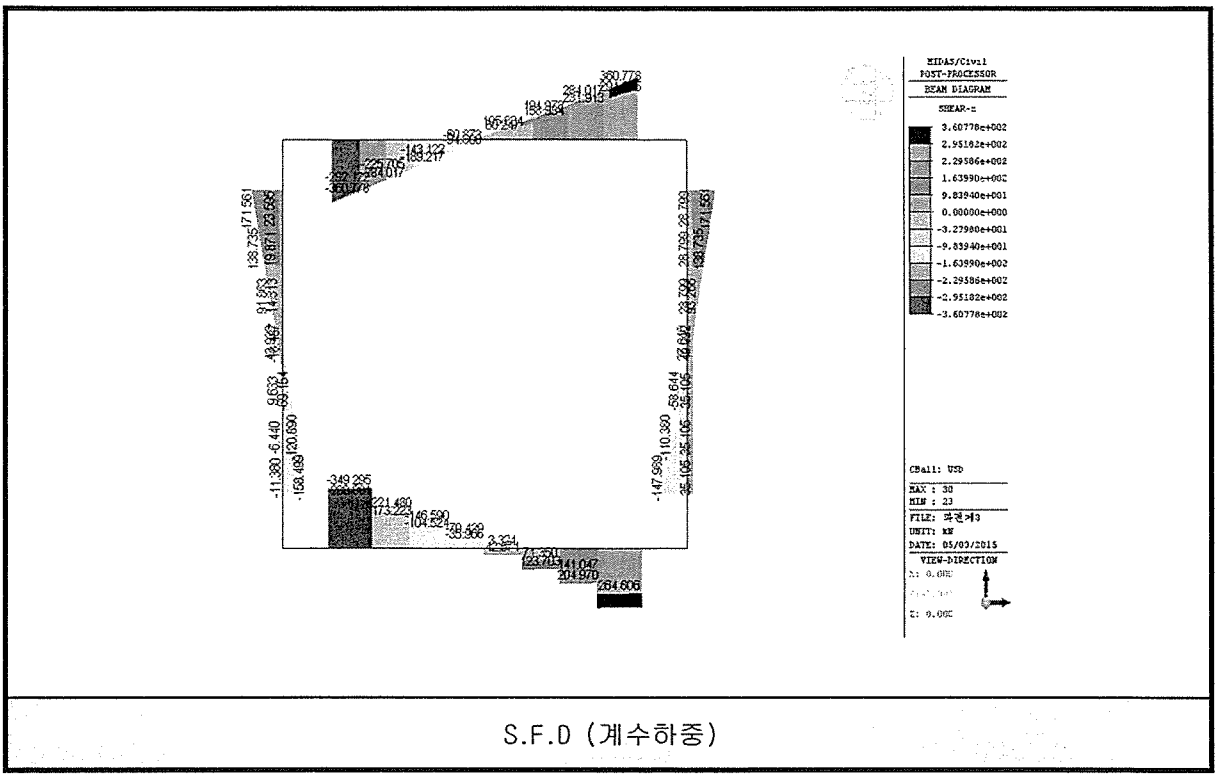
B.M.D (계수하중)

(2) 사용하중 모멘트도



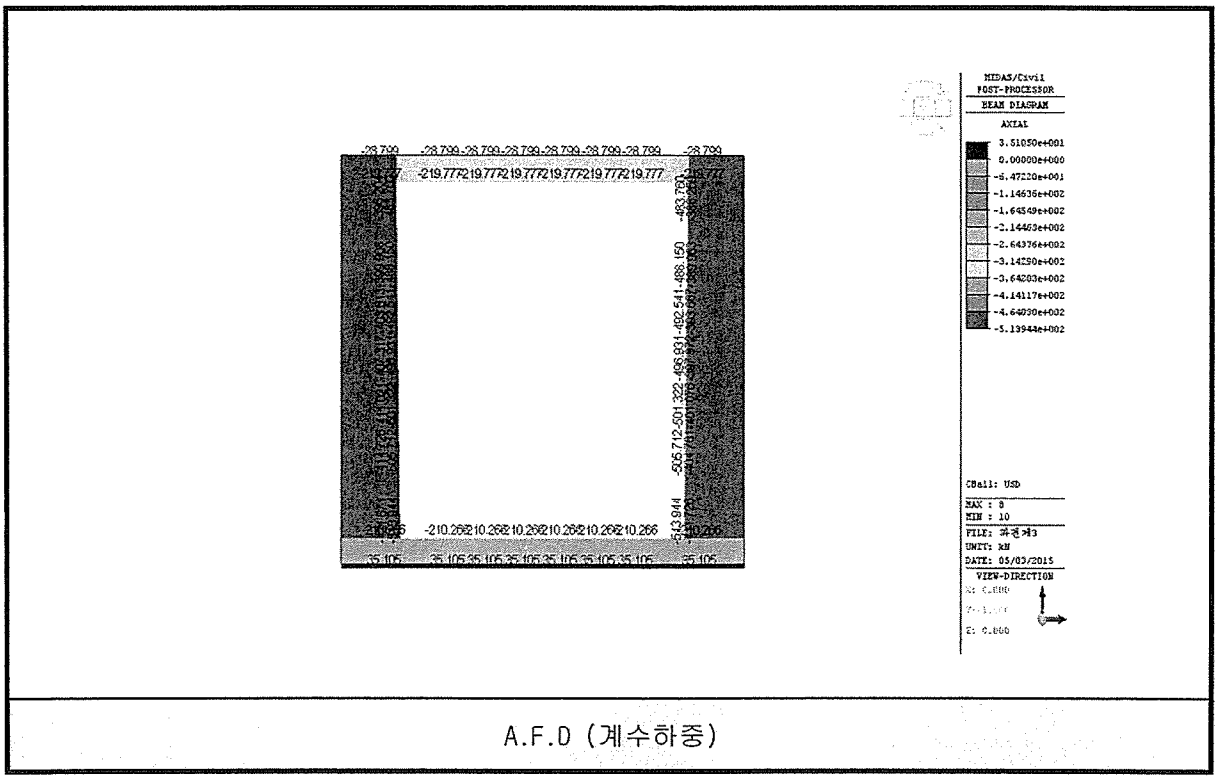
B.M.D (사용하중)

(3) 극한하중 전단력도



S.F.D (계수하중)

(4) 극한하중 축력도



A.F.D (계수하중)

11. 단면검토

① 상부 슬래브 단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	36.160
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Su (kN)
1000.0	500.0	400.0	100.0	58.530	360.780

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K.

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ———————— (1)

a = As×fy / (0.85×fck×b) ———————— (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 409.750 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 409.750 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 546.334 mm^2 ※ As = 546.334 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 58.530 kN · m ----- ∴ O.K. [사용률 = 3.787]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (360.8 - 232.782)×10³ ×150.0 / (400.0×300.0×0.85)

= 188.232 ㎟

Use Av = 253.400 ㎟ (H13×2 EA, 간격 s = 150.0 mm)

Øv · As = Øv · Av · fy · D / (s × B) = 172.312 kN

s = 150.0 mm ≥ Min (600, 0.5D) = 150.0 mm ------ ∴ O.K.

Øv · Vn = Øv · Vc + Øv · Vs = 405.094 kN > Vu ------ ∴ O.K.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 36.16 × 1000000 / [1588.8×(400 - 83.857/3)]

= 61.173 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 61.173) - 2.5 × 92 = 1057.330 mm

300 x (210 / fs) = 300 × (210 / 61.173) = 1029.864 mm

Sa는 작은 값인 1029.864 mm 를 적용

S = 125.00 ≤ Sa (= 1029.864 mm) ----- ∴ O.K.

② 상부슬래브 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	96.630
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	154.860	105.830

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.02719 ≥ 0.004 ----- ∴ O.K.

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 1492.094 mm^2

사용철근비 : Puse = As / (B × D) = 0.00530

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 1492.094 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1989.459 mm^2 ※ As = 1492.094 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 164463107 N · mm

= 164.463 kN · m > 154.860 kN · m ----- ∴ O.K. [사용률 = 1.062]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 96.63 × 1000000 / [1588.8×(300 - 71.32/3)]

= 220.180 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 220.18) - 2.5 × 92 = 127.662 mm

300 x (210 / fs) = 300 × (210 / 220.18) = 286.130 mm

Sa는 작은 값인 127.662 mm 를 적용

S = 125.00 ≤ Sa (= 127.662 mm) ----- ∴ O.K.

③ 하부슬래브 단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	38.250
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	550.0	450.0	100.0	64.950	349.300

전단설계시 단면의 유효높이 ds = 350.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.04229 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 403.767 mm^2

사용철근비 : Puse = As / (B × D) = 0.00353

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 403.767 mm^2 As(min) = 1575.000 mm^2

4/3×As(req) = 538.356 mm^2 ※ As = 538.356 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 250258307 N · mm

= 250.258 kN · m > 64.950 kN · m ----- ∴ O.K [사용률 = 3.853]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 271.579 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (349.3 - 271.579)×10³ ×150.0 / (400.0×350.0×0.85)

= 97.968 ㎟

Use Av = 253.400 ㎟ (H13×2 EA, 간격 s = 150.0 mm)

Øv · As = Øv · Av · fy · D / (s × B) = 201.031 kN

s = 150.0 mm < Min (600, 0.5D) = 175.0 mm ----- ∴ O.K

Øv · Vn = Øv · Vc + Øv · Vs = 472.610 kN > Vu ----- ∴ O.K

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 38.25 × 1000000 / [1588.8×(450 - 89.542/3)]

= 57.300 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×450/(7×1588.8)]

= 89.542 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 57.3) - 2.5 × 92 = 1144.344 mm

300 x (210 / fs) = 300 × (210 / 57.3) = 1099.475 mm

Sa는 작은 값인 1099.475 mm 를 적용

S = 125.00 ≤ Sa (= 1099.475 mm) ----- ∴ O.K.

④ 하부슬래브 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	111.240
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	450.0	350.0	100.0	178.460	70.430

전단설계시 단면의 유효높이 ds = 350.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03222 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ———————— (1)

a = As×fy / (0.85×fck×b) ———————— (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 1464.405 mm^2

사용철근비 : Puse = As / (B × D) = 0.00454

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 1464.405 mm^2 As(min) = 1225.000 mm^2

4/3×As(req) = 1952.540 mm^2 ※ As = 1464.405 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 193061507 N · mm

= 193.062 kN · m > 178.460 kN · m ----- ∴ O.K [사용률 = 1.082]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 271.579 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 111.24 × 1000000 / [1588.8×(350 - 77.81/3)]

= 216.054 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×350/(7×1588.8)]

= 77.810 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 216.054) - 2.5 × 92 = 134.493 mm

300 x (210 / fs) = 300 × (210 / 216.054) = 291.594 mm

Sa는 작은 값인 134.493 mm 를 적용

S = 125.00 ≤ Sa (= 134.493 mm) ----- ∴ O.K.

⑤ 벽체 상단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	80.980
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	129.570	171.560

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 916.253 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 916.253 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 1221.670 mm^2 ※ As = 1221.670 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 129.570 kN · m ----- ∴ O.K [사용률 = 1.711]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

1/2 x Φv x Vc = 116.391 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 80.98 × 1000000 / [1588.8×(400 - 83.857/3)]

= 136.997 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 ㎜

사용철근량 = 1588.800 $㎜^2$ (철근도심 : 100 ㎜)

1단 H16 @ 125 (= 1588.8 $㎟$)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 ㎜

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(㎜)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 136.997) - 2.5 × 92 = 344.831 ㎜

300 x (210 / fs) = 300 × (210 / 136.997) = 459.865 ㎜

Sa는 작은 값인 344.831 ㎜ 를 적용

S = 125.00 ≤ Sa (= 344.831 ㎜) ----- ∴ O.K.

⑥ 벽체 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	64.510
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	103.300	18.490

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.02719 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 981.676 mm^2

사용철근비 : Puse = As / (B × D) = 0.00530

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 981.676 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1308.901 mm^2 ※ As = 1050.000 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 164463107 N · mm

= 164.463 kN · m > 103.300 kN · m ----- ∴ O.K [사용률 = 1.592]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 64.51 × 1000000 / [1588.8×(300 - 71.32/3)]

= 146.992 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 146.992) - 2.5 × 92 = 305.745 mm

300 x (210 / fs) = 300 × (210 / 146.992) = 428.596 mm

Sa는 작은 값인 305.745 mm 를 적용

S = 125.00 ≤ Sa (= 305.745 mm) ----- ∴ O.K.

⑦ 벽체 하단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	63.120
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	100.990	158.500

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 711.238 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 711.238 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 948.318 mm^2 ※ As = 948.318 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 100.990 kN · m ----- ∴ O.K [사용률 = 2.195]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

1/2 x Φv x Vc = 116.391 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 63.12 × 1000000 / [1588.8×(400 - 83.857/3)]

= 106.782 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 106.782) - 2.5 × 92 = 507.482 mm

300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 mm

Sa는 작은 값인 507.482 mm 를 적용

S = 125.00 ≤ Sa (= 507.482 mm) ----- ∴ O.K.

⑤ 벽체 상단부 - Pmax 일 경우

설계축력	:	Pu	=	483.76	(kN) ,	설계모멘트	:	Mu	=	89.03	(kN·m)	
설계전단력	:	Vu	=	171.56	(kN) ,	사용 모멘트	:	M	=	49.96	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	184.04 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 249.482 mm , a = k1 x c = 208.567 mm 사용

fs = 600 x (400.000 - 249.482) / 249.482 = 361.9917 Mpa (fs ≤ fy)

fs' = 600 x (249.482 - 100.000) / 249.482 = 359.5021 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 208.567 x 1000 = 5230867.543 N

Cs = 794.400 x (359.502 - 0.836 x 30) = 265664.895 N

Ts = 1588.800 x 361.992 = 575132.425 N

Pn = 5230867.543 + 265664.895 - 575132.425 = 4921400.013 N

Mn' = 5230867.543 x (400.0 - 208.567 / 2) + 265664.895 x (400.0 - 100.0)

= 1626552561.153 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 330.505114 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4921400.013

ΦPn = 3444980.009 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4921400.013 = 3444.980 kN ≥ Pu = 483.760 kN ------- O.K!!!

ΦMn = ΦPn x 184.038 = 634.006 kN.m ≥ Mu = 89.030 kN.m ------- O.K!!!

○ 전단력 검토

ϕVc = 0.85 × 1/6 × (1 + Pu / (14 x Ag)) x √fck × bo × d = 248869.324 N

여기서 , 1/2ϕVc< Vu ≤ ϕVc 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 49.96 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 84.519 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc : 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 84.519) - 2.5 × 92 = 701.742 mm

300 x (210 / fs) = 300 × (210 / 84.519) = 745.394 mm

Sa는 작은 값인 701.742 mm 를 적용

S = 125.00 ≤ Sa (= 701.742 mm) ------ ∴ O.K.

⑥ 벽체 상단부 - Mmax 일 경우

설계축력	:	Pu	=	453.56	(kN) ,	설계모멘트	:	Mu	=	129.57	(kN · m)	
설계전단력	:	Vu	=	171.56	(kN) ,	사용 모멘트	:	M	=	80.98	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	285.67 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 138.006 mm , a = k1 x c = 115.373 mm 사용

fs = 600 x (400.000 - 138.006) / 138.006 = 400 Mpa (fs ≤ fy)

fs' = 600 x (138.006 - 100.000) / 138.006 = 165.235 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 115.373 x 1000 = 2893546.855 N

Cs = 794.400 x (165.235 - 0.836 x 30) = 111339.159 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2893546.855 + 111339.159 - 635520.000 = 2369366.013 N

Mn' = 2893546.855 x (400.0 - 115.373 / 2) + 111339.159 x (400.0 - 100.0)

= 1023902359.529 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 432.140915 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 2369366.013

ΦPn = 1658556.209 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2369366.013 = 1658.556 kN ≥ Pu = 453.560 kN ------ O.K!!!

ΦMn = ΦPn x 285.673 = 473.805 kN.m ≥ Mu = 129.570 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 247865.036 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 cm^2 O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 80.98 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 136.997 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 136.997) - 2.5 × 92 = 344.831 mm

300 x (210 / fs) = 300 × (210 / 136.997) = 459.865 mm

Sa는 작은 값인 344.831 mm 를 적용

S = 125.00 ≤ Sa (= 344.831 mm) ----- ∴ O.K.

⑦ 벽체 중앙부 - Pmax 일 경우

설계축력	:	Pu	=	496.93	(kN) ,	설계모멘트	:	Mu	=	32.23	(kN · m)
설계전단력	:	Vu	=	49.09	(kN) ,	사용 모멘트	:	M	=	18.09	(kN.m)
부 재 높 이	:	H	=	400.0	(mm) ,	f_y	=	400	MPa	f_{ck} =	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v =	0.85
유효높이(휨)	:	d	=	300.0	(mm) ,	d'	=	100	(mm),	ϕc =	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e =	64.86 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

$\sum$ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0060) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 400.00 x 1000.00 = 10032000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (10032000.00 x 200.0 + 635520.0 x 100.0 + 317760.0 x 300.0) / 10985280.000

= 197.107 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 180.000 mm, ab = k1 x cb = 150.480 mm

fs' = 600 x (180.000 - 100.0) / 180.0(= 266.6667 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 150.480 x 1000 = 3774038.400 N

Cs = As' x (fs' - 0.9 x fck) = 190391.200 N

Ts = As x fs = 635520.000 N

Pb = 3774038.400 + 190391.200 - 635520.000 = 3328909.600 N

Mb = 3774038.400x(300.0-150.480/2)+190391.200x(300.0-100.0)-3328909.600x(197.107-100.0)

= 563069348.351 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 169.145 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 329.377 mm , a = k1 x c = 275.359 mm 사용

fs = 600 x (300.000 - 329.377) / 329.377 = -53.5139 Mpa (fs ≤ fy)

fs' = 600 x (329.377 - 100.000) / 329.377 = 400 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 275.359 x 1000 = 6906010.130 N

Cs = 794.400 x (400.000 - 0.836 x 30) = 297836.448 N

Ts = 1588.800 x -53.514 = -85022.917 N

Pn = 6906010.130 + 297836.448 - -85022.917 = 7288869.496 N

Mn' = 6906010.130 x (300.0 - 275.359 / 2) + 297836.448 x (300.0 - 100.0)

= 1180553424.391 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 161.965631 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 7288869.496

ΦPn = 5102208.647 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 7288869.496 = 5102.209 kN ≥ Pu = 496.930 kN ——— O.K!!!

ΦMn = ΦPn x 64.858 = 330.920 kN.m ≥ Mu = 32.230 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 253438.587 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 18.09 × 1000000 / [1588.8×(300 - 71.32/3)]

= 41.220 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2\times 1000\times 300/(7\times 1588.8)]}$

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 41.22) - 2.5 × 92 = 1680.50 mm

300 x (210 / fs) = 300 × (210 / 41.22) = 1528.40 mm

Sa는 작은 값인 1528.40 mm 를 적용

S = 125.00 ≤ Sa (= 1528.399 mm) ----- ∴ O.K.

⑧ 벽체 중앙부 - Mmax 일 경우

설계축력	:	Pu	=	467.57	(kN) ,	설계모멘트	:	Mu	=	103.30	(kN · m)	
설계전단력	:	Vu	=	18.49	(kN) ,	사용 모멘트	:	M	=	64.51	(kN.m)	
부 재 높 이	:	H	=	400.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	300.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	220.93 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0060) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 400.00 x 1000.00 = 10032000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (10032000.00 x 200.0 + 635520.0 x 100.0 + 317760.0 x 300.0) / 10985280.000

= 197.107 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 180.000 mm, ab = k1 x cb = 150.480 mm

fs' = 600 x (180.000 - 100.0) / 180.0(= 266.6667 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 150.480 x 1000 = 3774038.400 N

Cs = As' x (fs' - 0.9 x fck) = 190391.200 N

Ts = As x fs = 635520.000 N

Pb = 3774038.400 + 190391.200 - 635520.000 = 3328909.600 N

Mb = 3774038.400x(300.0-150.480/2)+190391.200x(300.0-100.0)-3328909.600x(197.107-100.0)

= 563069348.351 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 169.145 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 128.055 mm , a = k1 x c = 107.054 mm 사용

fs = 600 x (300.000 - 128.055) / 128.055 = 400 Mpa (fs ≤ fy)

fs' = 600 x (128.055 - 100.000) / 128.055 = 131.451 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 107.054 x 1000 = 2684911.722 N

Cs = 794.400 x (131.451 - 0.836 x 30) = 84501.093 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2684911.722 + 84501.093 - 635520.000 = 2133892.815 N

Mn' = 2684911.722 x (300.0 - 107.054 / 2) + 84501.093 x (300.0 - 100.0)

= 678658604.562 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 318.036888 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 2133892.815

ΦPn = 1493724.971 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2133892.815 = 1493.725 kN ≥ Pu = 467.570 kN ------- O.K!!!

ΦMn = ΦPn x 220.929 = 330.008 kN.m ≥ Mu = 103.300 kN.m ------- O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 252218.144 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 64.51 × 1000000 / [1588.8×(300 - 71.32/3)]

= 146.992 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2\times 1000\times 300/(7\times 1588.8)]}$

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 146.992) - 2.5 × 92 = 305.75 mm

300 x (210 / fs) = 300 × (210 / 146.992) = 428.60 mm

Sa는 작은 값인 305.75 mm 를 적용

S = 125.00 ≤ Sa (= 305.745 mm) ------ ∴ O.K.

⑨ 벽체 하단부 - Pmax 일 경우

설계축력	:	Pu	=	513.94	(kN) ,	설계모멘트	:	Mu	=	88.19	(kN · m)
설계전단력	:	Vu	=	158.50	(kN) ,	사용 모멘트	:	M	=	33.95	(kN.m)
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck} =	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v =	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc =	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e =	171.60 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 262.694 mm , a = k1 x c = 219.612 mm 사용

fs = 600 x (400.000 - 262.694) / 262.694 = 313.6105 Mpa (fs ≤ fy)

fs' = 600 x (262.694 - 100.000) / 262.694 = 371.5974 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 219.612 x 1000 = 5507873.575 N

Cs = 794.400 x (371.597 - 0.836 x 30) = 275273.400 N

Ts = 1588.800 x 313.611 = 498264.382 N

Pn = 5507873.575 + 275273.400 - 498264.382 = 5284882.592 N

Mn' = 5507873.575 x (400.0 - 219.612 / 2) + 275273.400 x (400.0 - 100.0)

= 1680933377.477 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 318.063481 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 5284882.592

ΦPn = 3699417.815 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 5284882.592 = 3699.418 kN ≥ Pu = 513.940 kN ——— O.K!!!

ΦMn = ΦPn x 171.596 = 634.805 kN.m ≥ Mu = 88.190 kN.m ——— O.K!!!

○ 전단력 검토

ϕVc = 0.85 × 1/6 × (1 + Pu / (14 x Ag)) x √fck × bo × d = 249872.948 N

여기서 , 1/2ϕVc< Vu ≤ ϕVc 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 33.95 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

$= 57.434$ Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

$= 83.857$ mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc : 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 57.434) - 2.5 × 92 = 1141.13 mm

300 x (210 / fs) = 300 × (210 / 57.434) = 1096.90 mm

Sa는 작은 값인 1096.90 mm 를 적용

S = 125.00 ≤ Sa (= 1096.904 mm) ----- ∴ O.K.

⑩ 벽체 하단부 - Mmax 일 경우

설계축력	:	Pu	=	494.60	(kN) ,	설계모멘트	:	Mu	=	100.99	(kN · m)
설계전단력	:	Vu	=	158.50	(kN) ,	사용 모멘트	:	M	=	63.12	(kN.m)
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	= 30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	= 0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	= 0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	= 204.19 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

$\sum$ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 224.848 mm , a = k1 x c = 187.973 mm 사용

fs = 600 x (400.000 - 224.848) / 224.848 = 400 Mpa (fs ≤ fy)

fs' = 600 x (224.848 - 100.000) / 224.848 = 333.1534 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 187.973 x 1000 = 4714366.276 N

Cs = 794.400 x (333.153 - 0.836 x 30) = 244733.477 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 4714366.276 + 244733.477 - 635520.000 = 4323579.753 N

Mn' = 4714366.276 x (400.0 - 187.973 / 2) + 244733.477 x (400.0 - 100.0)

= 1516079444.633 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 350.652775 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4323579.753

ΦPn = 3026505.827 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4323579.753 = 3026.506 kN ≥ Pu = 494.600 kN ------ O.K!!!

ΦMn = ΦPn x 204.185 = 617.968 kN.m ≥ Mu = 100.990 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 249229.804 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 cm^2 O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 63.12 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 106.782 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 106.782) - 2.5 × 92 = 507.482 mm

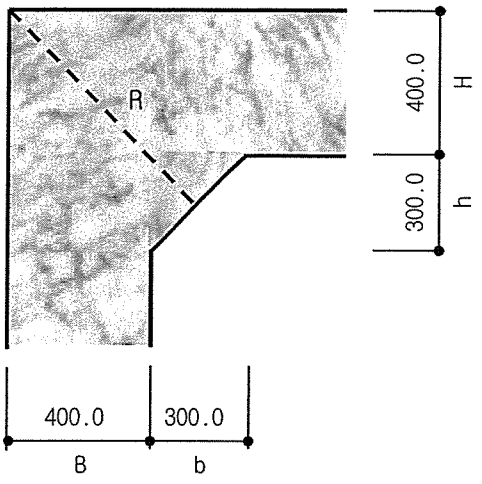
300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 mm

Sa는 작은 값인 507.482 mm 를 적용

S = 125.00 ≤ Sa (= 507.482 mm) ------ ∴ O.K.

12. 우각부 검토

1) 상부 슬래브



CON'C 설계기준강도(fck) : 30.0 MPa

CON'C 허용휨인장응력(fta) = 0.13√fck Mpa : 0.712 MPa

철근 항복강도(fy) : 400.0 MPa

철근 허용응력 : 180.0 MPa

사용 모멘트 Mo : 80.98 kN·m

$R = \sqrt{2} \times b / (b+h) \times [B + h + (H \times h/b)]$

$= 777.82$ mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 80980000}{777.82^2 \times 1000.0} = 0.669 \text{ MPa}$$

$f_{tmax} =$ 0.669 MPa < $f_{ta} =$ 0.712 MPa 이므로 보강철근 필요없음.

② 소요 철근량

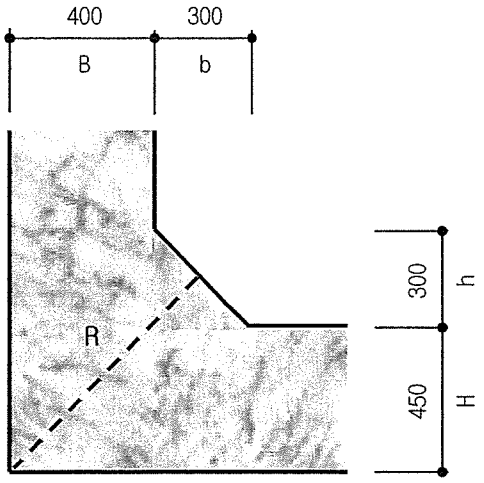
외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 0}{777.82 \times 180.0} = 0.00 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 0.00 - 794.4 = -794.40 ㎟

------ 우각부 보강철근 필요없음

2) 하부 슬래브



CON'C 설계기준강도(fck)	:	30.0	MPa
CON'C 허용휨인장응력(fta) = 0.13√fck Mpa			
	:	0.712	MPa
철근 항복강도(fy)	:	400.0	MPa
철근 허용응력	:	180.0	MPa
사용 모멘트 Mo	:	63.12	kN·m

R = √ (B2 + H2) = 602.08 mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 63120000}{602.08^{\,2} \times 1000.0} = 0.871 \text{ MPa}$$

f_{tmax} = 0.871 MPa > f_{ta} = 0.712 MPa 이므로 보강철근 필요.

② 소요 철근량

외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 63120000}{602.08 \times 180.0} = 1164.85 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 1164.85 - 794.4 = 370.45 ㎟

----- 우각부 보강철근 필요

외측인장에 대한 보강 사용철근량(As)

As = H16 @ 250 - 1 단 = 794.40 ㎟

Asf = 370.45 ㎟ < As = 794.40 ㎟ ----- ∴ O.K.

13. 배력철근 검토

1) 구조상세 - 철도설계기준(노반편) p.5-19

다. 종방향으로 영향을 받는 경우로써 상부슬래브, 하부슬래브와 벽체에 있어서 종방향 최소철근량은 복토의 깊이가 3.0 m 이하인 경우에는 콘크리트 단면적의 0.4%, 복토가 3.0m 이상인 경우에는 복토 깊이가 30m인 경우의 사용량인 1.0%를 기준으로 선형변화량을 사용하되, 종방향 철근량은 주철근량 미만이어야 한다.

라. 단단한 지반 위에 놓인 경우와 말뚝기초로 지지되는 경우로써 종방향 부등침하가 우려되지 않은 경우에는 다.항의 기준을 적용하지 않는다. 따라서 어느 정도 견고한 지반위에 놓이는 일반적인 구교로써 적적한 신축이음매가 설치되어 상세한 종방향해석이 필요하지 않다고 판단되는 경우 종방향 철근량은 슬래브의 경우 콘크리트단면적의 0.25%, 벽체의 경우 0.3%를 적용한다.

마. 배력철근은 단위폭주변의 인장 주철근량의 1/5 이상으로 하여 종단방향에 계산외의 응력이 발생하는 것을 고려하여야 한다.

2) 배력철근의 최소 철근비

슬래브의 배력 철근비 = 0.25 %　　벽체의 배력 철근비 = 0.30 %

① 상부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 400.0 × 0.25 = 1000.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1000.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

② 하부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 450.0 × 0.25 = 1125.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1125.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

③ 벽체

배력철근 최소 철근비 (Asreq) = 1,000.0 × 400.0 × 0.30 = 1200.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1200.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

14. 사용성검토

1) 상부슬래브 최소 두께

1.2(L+3)/30 = 1.2 ×(2.430 + 3) / 30 = 217.2 mm

상부슬래브 두께 = 400.0 mm

Tuse = 400.0 mm > Tmin = 217.2 mm ----- ∴ O.K.

2) 철근 피로검토

피로응력한계 : 사용하중하에서 활하중과 충격에 의해 야기되는 직선철근의 최대 인장응력과 최소 응력 상이의 범위는 다음 값을 초과할수 없다.

$f_f = 165 - 0.33fmin$

여기서, f_f : 응력범위(Mpa)

fmin : 최소응력 수준으로 인장은 정(+), 압축은 부(-)의 값(Mpa)

① 상부슬래브 단부

2.43 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 3.053 kN ·m Mmin = -0.562 kN ·m

- 사용철근량 = H16 × 8ea = 1588.800 ㎟

n = 7

p = As / bd = 1588.80 / (1000 × 400) = 0.00397

$K = -np + \sqrt{\{(np)^2 + 2np\}}$

$= -7 \times 0.00397 + \sqrt{\{ (7 \times 0.00397)^2 + 2 \times 7 \times 0.00397 \}}$

= 0.210

J = 1 - K / 3 = 1 - 0.210 / 3 = 0.930

$$fs\ max = \frac{M}{As \times j \times d} = \frac{3.053 \times 10^6}{1588.80 \times 0.930 \times 400} = 5.160 \text{ Mpa}$$

$$fs\ min = \frac{-0.562 \times 10^6}{1588.80 \times 0.930 \times 400} = -1 \text{ Mpa}$$

Δf = fs max - fs min = 6.111 Mpa

$f_f = 165 - 0.33fmin$

= 165 - 0.33 × -0.95 = 165.314 Mpa > 6.111 Mpa O.K.

② 상부슬래브 중앙부

2.43 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 9.123 kN · m Mmin = 8.451 kN · m

- 사용철근량 = H16 × 8ea = 1588.800 ㎟

n = 7

p = As / bd = 1588.80 / (1000 × 300) = 0.00530

$K = -np + \sqrt{\{(np)^2 + 2np\}}$

$= -7 \times 0.0053 + \sqrt{\{ (7 \times 0.0053)^2 + 2 \times 7 \times 0.0053 \}}$

= 0.238

J = 1 - K / 3 = 1 - 0.238 / 3 = 0.921

$$fs\ max = \frac{M}{As \times j \times d} = \frac{9.123 \times 10^6}{1588.80 \times 0.921 \times 300} = 20.790\ Mpa$$

$$fs\ min = \frac{8.451 \times 10^6}{1588.80 \times 0.921 \times 300} = 19\ Mpa$$

Δf = fs max - fs min = 1.534 Mpa

$f_f = 165 - 0.33fmin$

= 165 - 0.33 × 19.26 = 158.645 Mpa > 1.534 Mpa O.K.

15. 기초지지력 검토

1) 구체자중

-	2.800	x	0.450	x	24.500				=	30.870	kN/m
-	2.800	x	0.400	x	24.500				=	27.440	kN/m
-	2.000	x	0.400	x	24.500				=	19.600	kN/m
-	2.000	x	0.400	x	24.500				=	19.600	kN/m
-	0.300	x	0.300	x	1/2	x	4	x 24.500	=	4.410	kN/m
								∴ Total	=	101.920	kN/m

101.920 / 2.800 = 36.400 kN/m²

2) 상부연직하중

= 184.04 kN/m²

3) 활하중

= 21.019 kN/m²

4) 최대 지반 반력

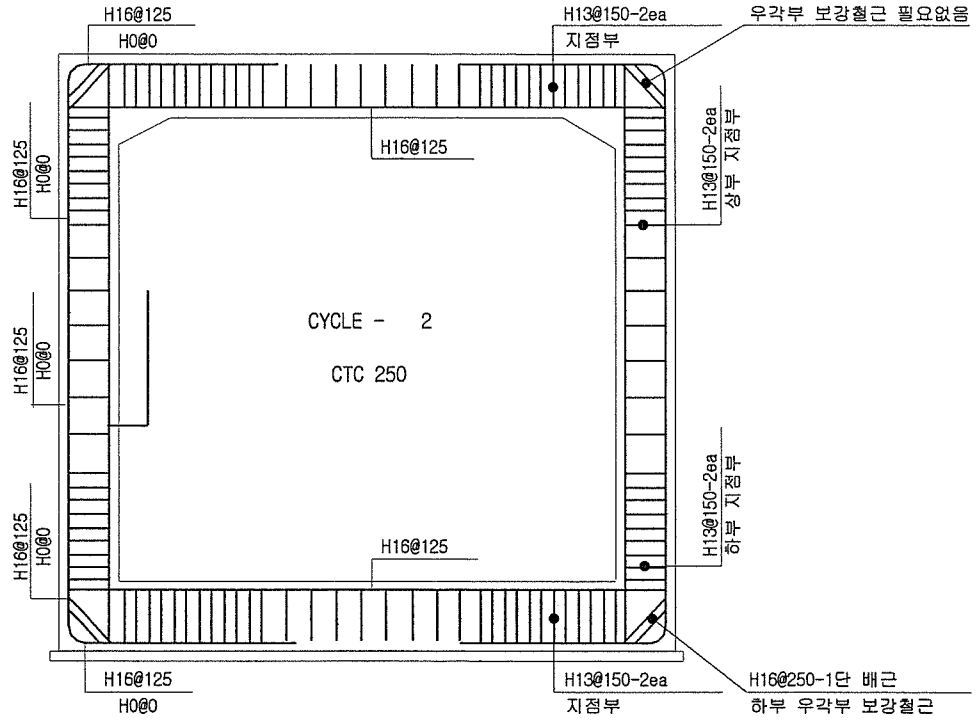
Qmax = 36.400 + 184.040 + 21.019

= 241.459 kN/m²

5) 지지력 검토

Qmax = 241.459 kN/m² < 300.00 kN/m² ---- ∴ O.K.

16. 주철근 조립도



▶ 배력철근

- 상부 지점부 : H13, 인장측:150, 압축측:300
- 하부 지점부 : H13, 인장측:150, 압축측:300
- 벽체부 : H13, 인장측:150, 압축측:300

U-Type 개거 2.0x2.4

구조계산서

목 차

1. 설계개요 및 조건

1.1 설계개요

1.2 설계방법

1.3 일반사항

1.4 설계하중

1.5 참고문헌

2. 단면가정

3. 구조해석 모델링

3.1 해석모형

3.2 단면제원

3.3 지반반력계수 산정

4. 하중산정

5. 하중조합

6. 구조해석 결과

6.1 부재력도

6.2 부재력 집계

7. 단면설계

7.1 하부슬래브

7.2 좌측벽체

7.3 우측벽체

7.4 배력철근

7.5 우각부

8. 사용성검토

9. 지지력 검토

■ 해석결과 요약

* 기초 검토

구분	q_{max}(kN/m^2)	Qu(kN)	qa(kN/m^2)	비 고
직접기초	34.840	2240.680	287.267	∴ O.K

* 휨 검토

구분		B(m)	H(m)	dc(m)	헌치(m)	Mu(kn.m)	ΦMn(kn.m)	BENDING Bar(mm)	휨검토		최소철근비 검토	주철근간격 검토
									판정	S.F		
하부슬래브	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		59.672	90.378	H 16 @ 150	O.K	1.515	O.K	O.K
좌측 벽체	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		26.358	46.427	H 16 @ 300	O.K	1.761	O.K	O.K
우측 벽체	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		26.383	46.427	H 16 @ 300	O.K	1.760	O.K	O.K

* 전단검토

구분		ΦVc	Vu	판정	전단철근			전단검토	
					사용철근	다리수	간격	판정	S.F
하부슬래브	단부	155.188	30.052	전단철근 불필요	H 0 × 0	@	0	O.K	-
	중앙부	-	-	-	H - × -	@	-	-	-
좌측 벽체	단부	155.188	84.550	전단철근 불필요	H 0 × 0	@	0	O.K	-
	중앙부	-	-	-	H - × -	@	-	-	-
우측 벽체	단부	155.188	84.550	전단철근 불필요	H 0 × 0	@	0	O.K	-
	중앙부	-	-	-	H - × -	@	-	-	-

1. 설계개요 및 조건

1.1 설계개요

• 구조해석 프로그램 : MIDAS CIVIL

1.2 설계방법

(1) 부재의 단면검토 : 강도설계법

(2) 사용성 검토 : 허용응력설계법

1.3 일반사항

(1) 사용재료의 강도

① 콘크리트의 압축강도 : f_{ck} = 30 MPa

② 철근의 항복강도 : f_y = 400 MPa

(2) 사용재료의 탄성계수

① 콘크리트의 탄성계수 : E_c = 27,537 MPa

② 철근의 탄성계수 : E_s = 200,000 MPa

(3) 토사 내부마찰각 : Φ = 35°

(4) 토압 : K_o = 0.426

(5) 사 각(Skew) : 71.00 °

1.4 설계하중

(1) 고정하중

재 료	단위중량(kN/m^3)	재 료	단위중량(kN/m^3)
철근콘크리트	24.5	아스팔트 포장	23.0
흙(지하수위 이상)	20.0	흙(지하수위 이하)	11.0
지하수	10.0		

(2) 상재 하중(kN/m^2)

q_L = 15.0 kN/m^2

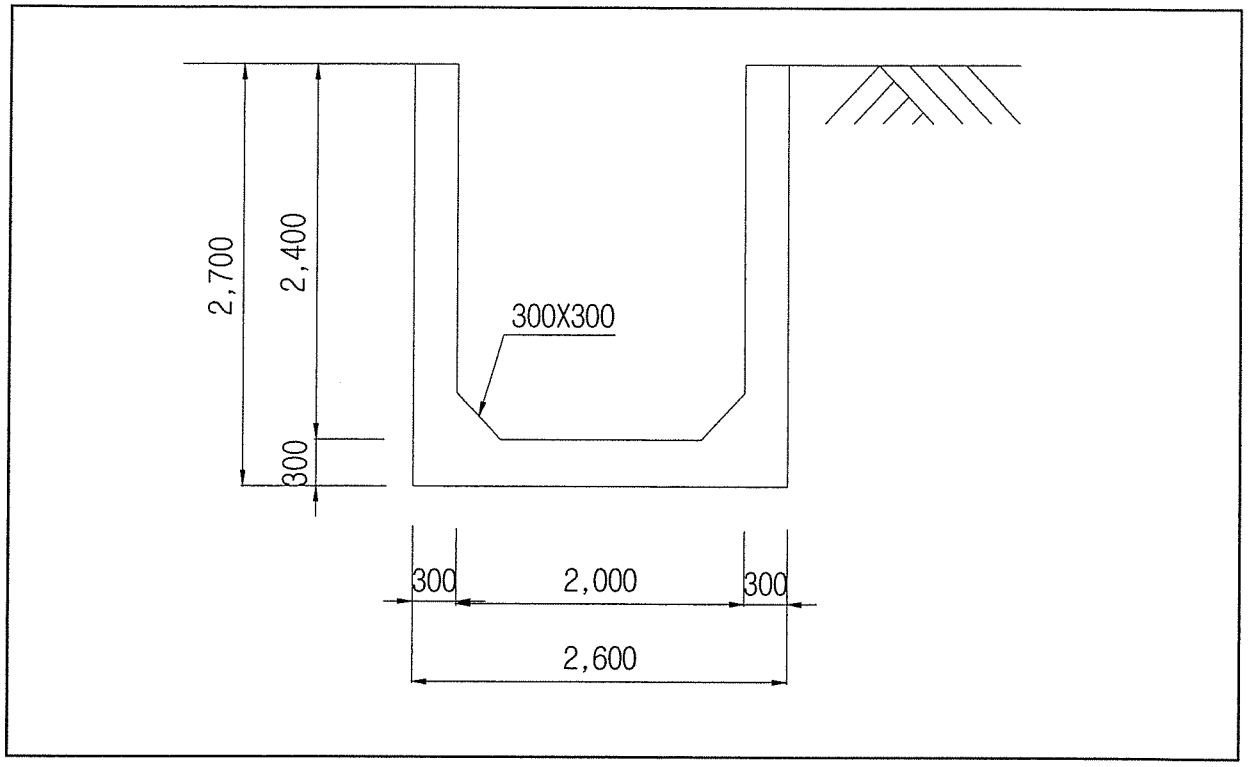
1.5 참고문헌

(1) 콘크리트 구조설계기준 (한국콘크리트 학회, 2012)

(2) 도로교 설계기준 (건설교통부, 2010)

(3) 철도설계기준 (노반편) (건설교통부 2013)

2. 단면가정

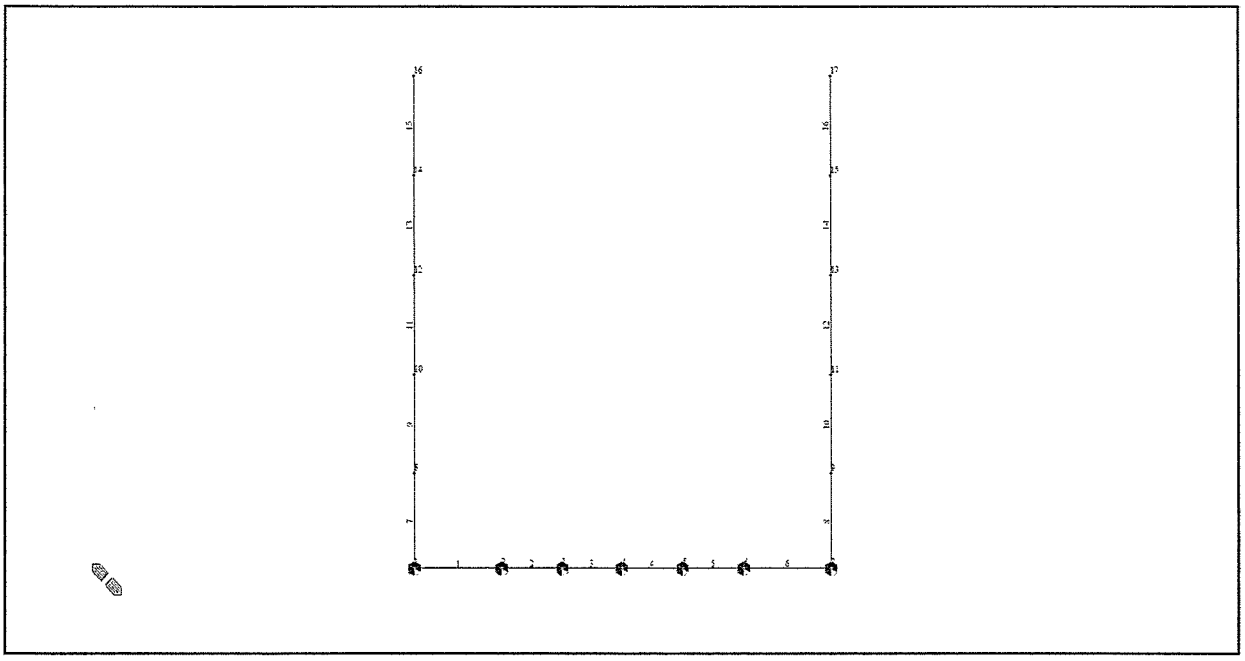


* N=15, Φ=35° 적용 함.

* 지하수위는 극한 지하수위(GL -1.0m) 로 적용 함.

3. 구조해석 모델링

3.1 해석모형



3.2 단면제원

구 분	폭(m)	높이(m)	C.T.C(m)	단면적(m^2)	단면2차모멘트(m^4)	비 고
1	1.00	0.30	-	0.300	0.002250	하부슬래브
2	1.00	0.30	-	0.300	0.002250	좌측벽체
3	1.00	0.30	-	0.300	0.002250	우측벽체

3.3 지반반력계수

$Kv = Kvo \times (Bv / 30)^n$ (n = -3/4)

$Kvo = 1/30 \times \alpha \times Eo$

Bv : 구조물의 환산재하폭

Eo = 2800 x N = 2800 × 9 = 25,200.000 kN/m^2

α = 1

Kvo = 1 × 1 / 0.3 × 25200 = 84000.000 kN/m^3

Bv = √ (2.600 × 1.000) = 1.612 m

∴ Kv = 84000.000 × (1.6 / 0.3) ^ (-3/4) = 23796.069 kN/m^3

절점번호	지반반력계수					비고
1,7	23796.069	×	0.3750	=	8923.526 kN/m^2	
2,6	23796.069	×	0.3750	=	8923.526 kN/m^2	
3,4,5	23796.069	×	0.4000	=	9518.428 kN/m^2	

※ 지반스프링은 압축력에만 저항하는 비선형 경계조건을 사용하여 부반력 발생시 자동제거함.

4. 하중산정

4.1 고정하중

(1) 구조물 자중 : 프로그램내 자동입력 ---------- LC 1

4.2 활하중에 의한 측압 ---------- LC 2

Lh = 0.426 × 15.000 = 6.390 kN/m^2

4.3 토압

(1) 지하수위 유 ---------- LC 3

Q_{N1L} = 1.000 × 20.000 × 0.426 = 8.520 kN/m^2

Q_{N1R} = 8.520 + 1.700 × 11.000 × 0.426 = 16.486 kN/m^2

(2) 지하수위 무 ---------- LC 4

Q_{N1L} = 2.700 × 20.000 × 0.426 = 23.004 kN/m^2

4.4 수압

(1) 측벽 수압 ---------- LC 5

1) 벽체

Q_{W1L} = 10.000 × 1.700 = 17.000 kN/m^2

4.5 온도하중 ---------- LC 6, LC 7

- 계절적 온도변화 ± 10°C를 프로그램내 SYSTEM TEMPERRATURE 기능을 이용하여 이상화 한다.

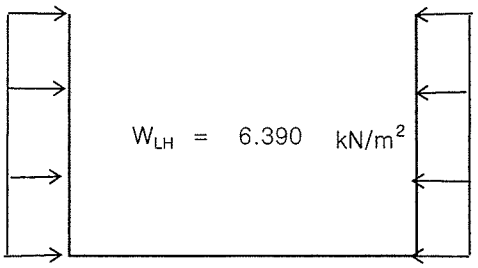
4.6 건조수축 ---------- LC 8

- 15^0c 의 온도하중으로 변환 설계
  - 건조수축계수 : $\varepsilon = 15 \times 10^{-5}$
  - 온도선팽찰 계수 : $\alpha = 1.0 \times 10^{-5}$
  - $\Delta T = -\frac{\varepsilon}{\alpha} = 15\ °C$

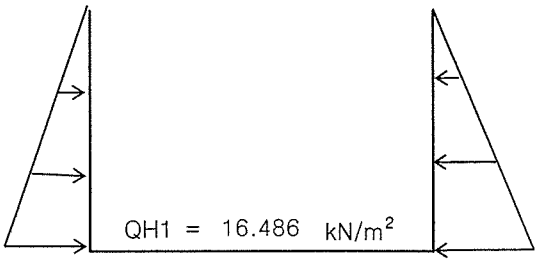
4.7 하중재하도

(1) LC 1 : 프로그램내 자동재하

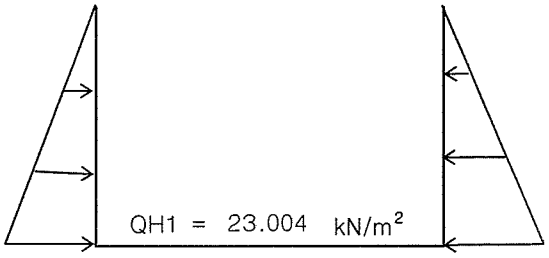
(2) LC 2



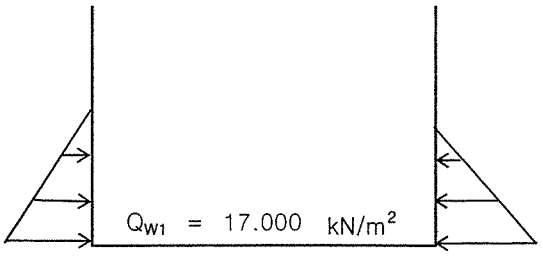
(3) LC 3



(4) LC 4



(5) LC 5



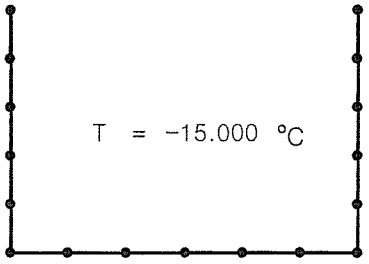
(6) LC 6

- 프래그램내 System Temperature 기능을 이용
10 °C 온도하중 재하

(7) LC 7

- 프래그램내 System Temperature 기능을 이용
-10 °C 온도하중 재하

(8) LC 8



5. 하중조합

5.1 계수하중

구분	고정하중 (D	활하중측압	수평토압		수압	온도하중		건조수축	비고
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	
CB1	1.35	1.85	1.60		1.60				계수하중
CB2	1.35	1.85		1.60					
CB3	1.35	1.85	0.80		0.80				
CB4	1.35	1.85		0.80					
CB5	1.60	1.60	1.60		1.60				
CB6	1.60	1.60		1.60					
CB7	1.60	1.60	0.80		0.80				
CB8	1.60	1.60		0.80					
CB9	1.35	1.40	1.60		1.60	1.35			
CB10	1.35	1.40		1.60		1.35			
CB11	1.35	1.40	0.80		0.80	1.35			
CB12	1.35	1.40		0.80		1.35			
CB13	1.35	1.40	1.60		1.60		1.35	1.35	
CB14	1.35	1.40		1.60			1.35	1.35	
CB15	1.35	1.40	0.80		0.80		1.35	1.35	
CB16	1.35	1.40		0.80			1.35	1.35	

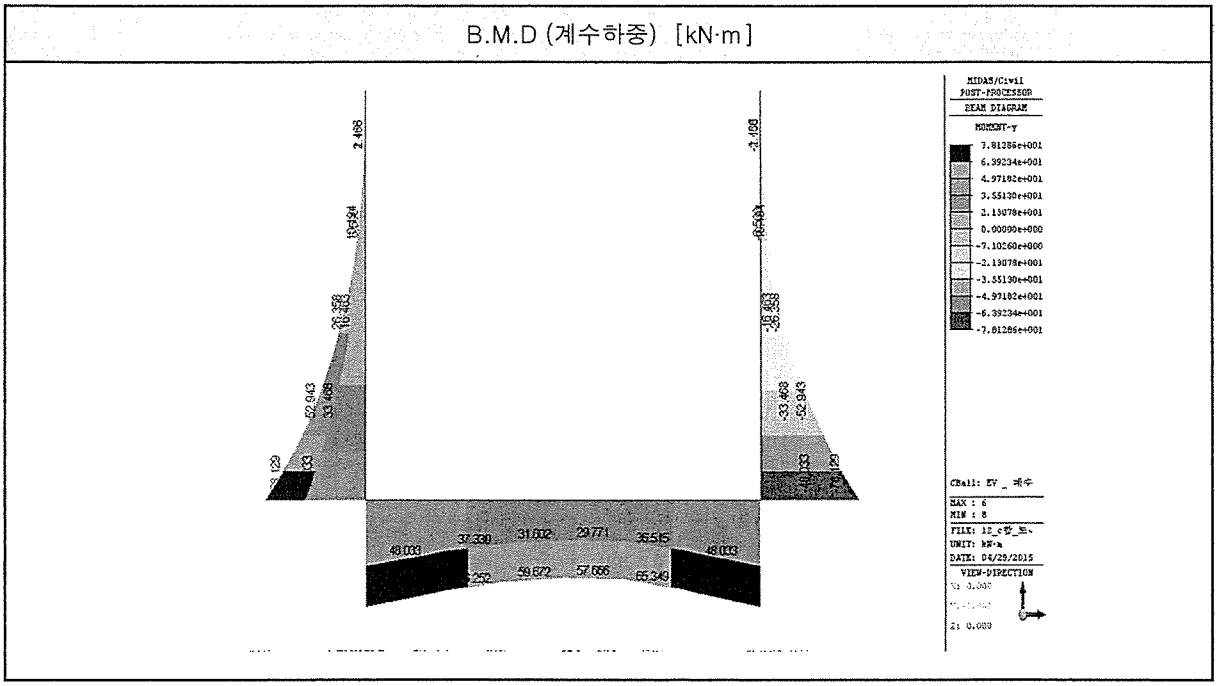
5.2 사용하중

구분	고정하중 (D	활하중측압	수평토압		수압	온도하중		건조수축	비고
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	
CB17	1.00	1.00	1.00		1.00				사용하중
CB18	1.00	1.00		1.00					
CB19	1.00	1.00	0.50		0.50				
CB20	1.00	1.00		0.50					
CB21	1.00	1.00	1.00		1.00	1.00			
CB22	1.00	1.00		1.00		1.00			
CB23	1.00	1.00	0.50		0.50	1.00			
CB24	1.00	1.00		0.50		1.00			
CB25	1.00	1.00	1.00		1.00		1.00	1.00	
CB26	1.00	1.00		1.00			1.00	1.00	
CB27	1.00	1.00	0.50		0.50		1.00	1.00	
CB28	1.00	1.00		0.50			1.00	1.00	
CB29	1.00		1.00		1.00				
CB30	1.00			1.00					

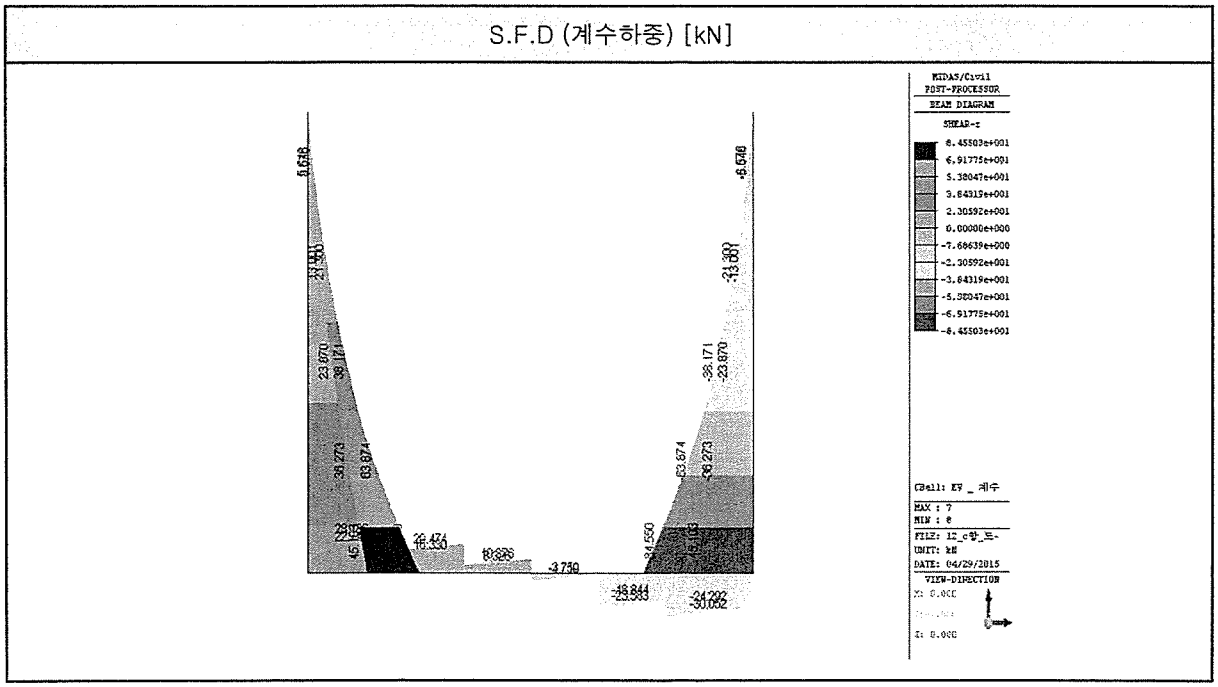
6. 구조해석 결과

6.1 부재력도 (ENVELOPE)

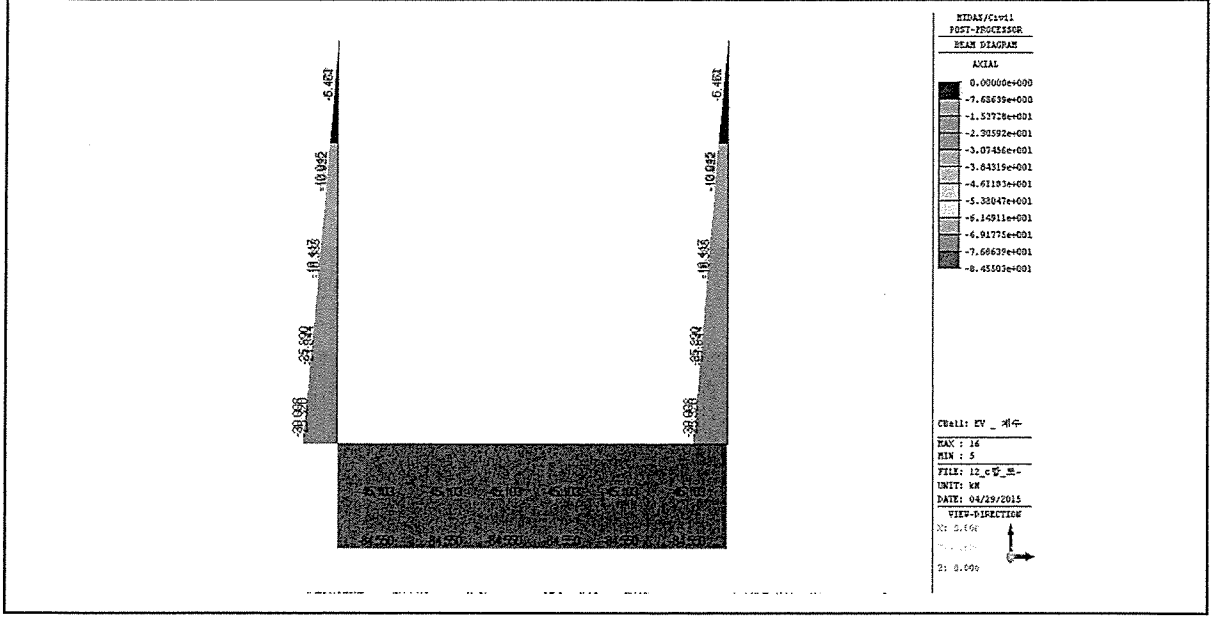
B.M.D (계수하중) [kN·m]



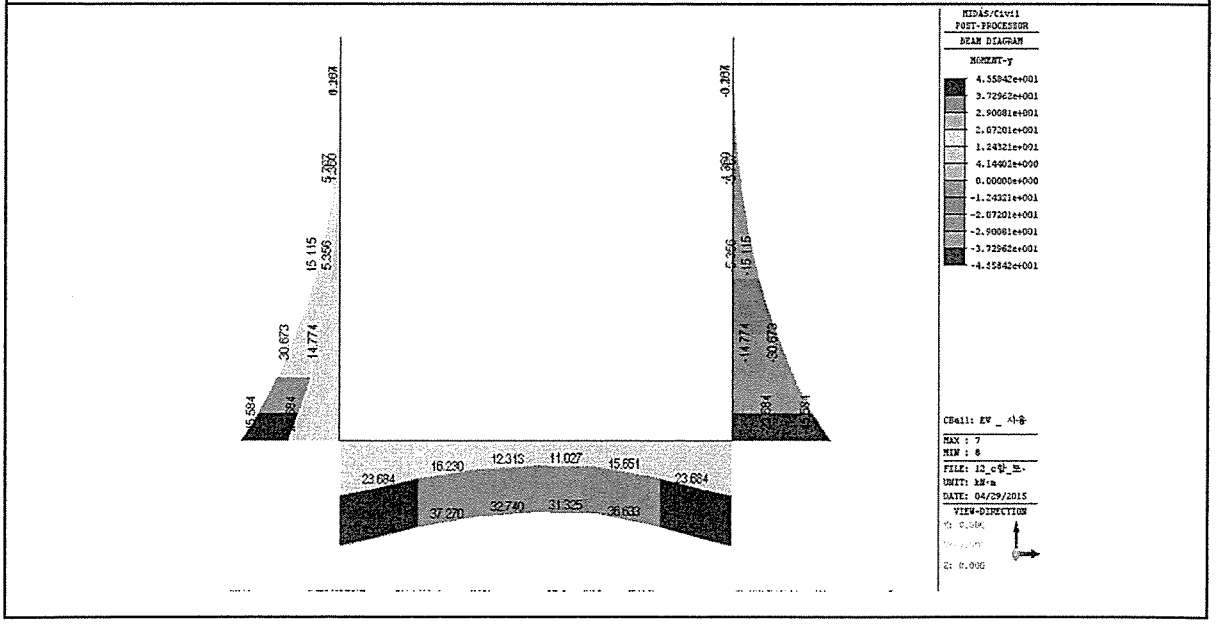
S.F.D (계수하중) [kN]



A.F.D (계수하중) [kN]



B.M.D (사용하중) [kN·m]



6.2 부재력 집계

구 분		단면제원		Mu[kN·m]	Vu[kN]	Mo[kN·m]	비고
		B (mm)	H (mm)				
하 부 슬래브	단 부	1,000	400	78.129	30.052	45.584	
	중앙부	1,000	300	59.672		32.740	
좌측벽체	단 부	1,000	400	78.129	84.550	45.584	
	중앙부	1,000	300	26.358		15.115	
우측벽체	단 부	1,000	400	78.129	84.550	45.584	
	중앙부	1,000	300	26.383		15.115	

7. 단면설계

7.1 하부슬래브

7.1.1 하부슬래브 단부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	78.129 kN.m	Vu	=	30.052 kN	Mo	=	45.584 kN.m	d (휨)	=	300 mm
B	=	1000 mm	H	=	400 mm	헌치	=	300 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	300 mm

Use A_s =	1단	1CYCL	H	16 @	150	, 2CYCLI	H	0 @	0	=	1,324	mm^2
	2단	1CYCL	H	@		, 2CYCLI	H	0 @	0	=	-	mm^2
		TOTAL	=	1,324	mm^2	[p =	0.00441	]				

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $\quad C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 1,050 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 1,027 mm^2

$A_{s,\,min}$ = 1,050 mm^2

$A_{s,\,Req}$ = 738 mm^2 , $4/3\, A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s.min}$, $4/3\, A_{s.req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 30.052 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[\, 2 np + (np)^2 \,]}$ [∵ $n = Es / Ec$ = 7.3 ≒ 7]

$= - 7 \times 0.00441 + \sqrt{[\, 2 \times 0.031 + 0.031^2 \,]} = 0.22$

$j = 1 - k / 3 = 1 - 0.22 / 3 = 0.927$

$fs = M / [As \cdot d \cdot j]$ = 123.801 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.1.2 하부슬래브 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	59.672 kN.m	Vu	=	0.000 kN	Mo	=	32.740 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCL	H	16 @	150 ,	2CYCLI	H	0 @	0 =	1,324 mm^2
	2단	1CYCL	H	@	,	2CYCLI	H	0 @	0 =	- mm^2
				TOTAL =	1,324 mm^2	[p =	0.00662]			

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 25) / 25

= 0.02115 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.02115 - 0.002)$$

= 2.246 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

P_{min1} = 1.4 / f_y = 0.00350 ⇒ $A_{s1.\,min}$ = 700 mm^2

P_{min2} = 0.25 $\sqrt{f_{ck}}$ / f_y = 0.00342 ⇒ $A_{s2.\,min}$ = 685 mm^2

$A_{s,\,min}$ = 700 mm^2

$A_{s,\,Req}$ = 858 mm^2 , 4/3 $A_{s,\,Req}$ = 1,143 mm^2

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 700 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $M_d = \phi_f T (d - a/2)$ = 0.900 × 529,600 × (200 - 21 / 2) / 10 E+6

= 90.378 kN.m > Mu = 59.672 kN.m ∴ O.K [S.F = 1.515]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

A = 2 × 100 × 1,000 / 7 = 30,000 mm^2

$k = -np + \sqrt{[2np + (np)^2]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00662 + $\sqrt{[2 \times 0.046 + 0.046^2]}$ = 0.261

j = 1 - k / 3 = 1 - 0.261 / 3 = 0.913

fs = M / [As·d·j] = 135.422 MPa

◈ 주철근 간격

Cc = d_t' - d_b/2 = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

s_1 = 375 (210 / fs) - 2.5 Cc = 351 mm > s = 150 mm ∴ O.K

s_2 = 300 (210 / fs) = 465 mm

7.2 좌측벽체

7.2.1 좌측벽체 단부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	78.129 kN.m	Vu	=	84.550 kN	Mo	=	45.584 kN.m	d (휨)	=	300 mm
B	=	1000 mm	H	=	400 mm	헌치	=	300 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	300 mm

Use A_s =	1단	1CYCL H	16 @	150	,	2CYCL H	0 @	0	=	1,324 mm^2
	2단	1CYCL H	0 @		,	2CYCL H	0 @	0	=	- mm^2
		TOTAL =	1,324 mm^2		[p =	0.00441]				

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a, $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1.\,min}$ = 1,050 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2.\,min}$ = 1,027 mm^2

$A_{s,\,min}$ = 1,050 mm^2

$A_{s.\,Req}$ = 738 mm^2, 4/3 $A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 84.550 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

A = 2 × 100 × 1,000 / 7 = 30,000 mm^2

k = - np + √ [2 np + (np)²] [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00441 + √ [2 × 0.031 + 0.0309 ²] = 0.22

j = 1 - k / 3 = 1 - 0.22 / 3 = 0.927

fs = M / [As·d·j] = 123.801 MPa

◈ 주철근 간격

Cc = $d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

s_1 = 375 (210 / fs) - 2.5 Cc = 406 mm > s = 150 mm ∴ O.K

s_2 = 300 (210 / fs) = 509 mm

7.2.2 좌측벽체 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	26.358 kN.m	Vu	=	0.000 kN	Mo	=	15.115 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCL H	16 @	300	,	2CYCLI H	0 @	0	=	662 mm^2
	2단	1CYCL H	@		,	2CYCLI H	0 @	0	=	- mm^2
			TOTAL =		662 mm^2		[p =	0.00331]		

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 264,800 N

$C = 0.85 f_{ck} a b$ = 25,500 a, $C = T$; a = 10 mm

▶ $c = a / \beta_1$ = 10 / 0.84 = 12 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 12) / 12

= 0.04530 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.04530 - 0.002)$$

= 4.259 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

P_{min1} = 1.4 / f_y = 0.00350 ⇒ $A_{s1.\,min}$ = 700 mm^2

P_{min2} = 0.25 $\sqrt{f_{ck}}$ / f_y = 0.00342 ⇒ $A_{s2.\,min}$ = 685 mm^2

$A_{s,\,min}$ = 700 mm^2

$A_{s.\,Req}$ = 371 mm^2 , 4/3 $A_{s.\,Req}$ = 495 mm^2

MIN ($A_{s,min}$, 4/3 $A_{s.req}$) = 495 mm^2 < Use As = 662 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 264,800 × (200 - 10 / 2) / 10 E+6

= 46.427 kN.m > Mu = 26.358 kN.m ∴ O.K [S.F = 1.761]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

A = 2 × 100 × 1,000 / 3 = 60,000 mm^2

k = - np + √ [2 np + (np)^2] [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00331 + √ [2 × 0.023 + 0.0232 ^{2}] = 0.193

j = 1 - k / 3 = 1 - 0.193 / 3 = 0.936

fs = M / [As·d·j] = 121.966 MPa

◈ 주철근 간격

Cc = $d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

s_1 = 375 (210 / fs) - 2.5 Cc = 416 mm > s = 300 mm ∴ O.K

s_2 = 300 (210 / fs) = 517 mm

7.3 우측벽체

7.3.1 우측벽체 단부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	78.129 kN.m	Vu	=	84.550 kN	Mo	=	45.584 kN.m	d (휨)	=	300 mm
B	=	1000 mm	H	=	400 mm	헌치	=	300 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	300 mm

Use A_s =	1단	1CYCl	H	16 @	150	, 2CYCLI	H	0 @	0	=	1,324 mm^2
	2단	1CYCl	H	@		, 2CYCLI	H	0 @	0	=	- mm^2
				TOTAL	=	1,324 mm^2		[p =	0.00441	]	

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a, $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 1,050 mm^2]

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 1,027 mm^2] $A_{s,\,min}$ = 1,050 mm^2

$A_{s,\,Req}$ = 738 mm^2 , 4/3 $A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 84.550 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1,000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[2 np + (np)^2]}$ [∵ $n = Es / Ec$ = 7.3 ≒ 7]

= - 7 × 0.00441 + √ [2 × 0.031 + 0.0309^2] = 0.22

$j = 1 - k / 3 = 1 - 0.22 / 3$ = 0.927

$fs = M / [As \cdot d \cdot j]$ = 123.801 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.3.2 우측벽체 중앙부

(1) 휨 검토

f_{ck}	=	30	MPa	f_y	=	400	MPa	d_t'	=	100	mm
Mu	=	26.383	kN.m	Vu	=	0.000	kN	Mo	=	15.115	kN.m
B	=	1000	mm	H	=	300	mm	헌치	=	0	mm
ϕ_f	=	0.900		ϕ_v	=	0.85		주철근	1	단 배치	

Use A_s =	1단	1CYCl	H	16 @	300	,	2CYCLI	H	0 @	0	=	662 mm²
	2단	1CYCl	H	@		,	2CYCLI	H	0 @	0	=	- mm²
				TOTAL	=	662	mm²	[	p =	0.00331	]	

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 264,800 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 10 mm

▶ $c = a / \beta_1$ = 10 / 0.84 = 12 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 12) / 12

= 0.04530 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.04530 - 0.002)$$

= 4.259 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

P_{min1} = 1.4 / f_y = 0.00350 ⇒ $A_{s1.min}$ = 700 mm²

P_{min2} = 0.25 √f_{ck} / f_y = 0.00342 ⇒ $A_{s2.min}$ = 685 mm²] $A_{s,min}$ = 700 mm²

$A_{s.Req}$ = 372 mm² , 4/3 $A_{s,Req}$ = 496 mm²

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 496 mm² < Use As = 662 mm² ∴ O.K

◈ $Md = \phi_f T (d - a/2)$ = 0.900 × 264,800 × (200 - 10 / 2) / 10 E+6

= 46.427 kN.m > Mu = 26.383 kN.m ∴ O.K [S.F = 1.760]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 3$ = 60,000 mm²

$k = -np + \sqrt{[2np + (np)^2]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00331 + √ [2 × 0.023 + 0.0232 ²] = 0.193

$j = 1 - k / 3 = 1 - 0.193 / 3$ = 0.936

$fs = M / [As \cdot d \cdot j]$ = 121.966 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 416 mm > s = 300 mm ∴ O.K

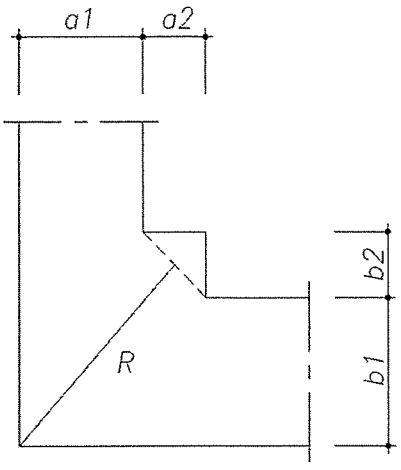
$s_2 = 300 (210 / fs)$ = 517 mm

7.4 온도 및 배력철근 설계

구 분		단면제원		사 용 주철근	소요 배력철근량 (mm^2)		사용 배력철근량 (mm^2)			판정
		B (mm)	H (mm)		주철근 20%	온도철근				
하 부 슬래브	단 부	1,000	300	H16@150	265	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@150	265	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
좌측 벽체	단부	1,000	300	H16@150	265	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@300	132	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
우측 벽체	단부	1,000	300	H16@150	265	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@300	132	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		

7.5 우각부 보강 설계

(1) 하부슬래브 (좌,우측)



f_{ck}	=	30	MPa
f_y	=	400	MPa
Mo	=	45.584	kN·m
a1	=	300	mm
a2	=	300	mm
b1	=	300	mm
b2	=	300	mm

$$R = \{(a2 \times b1 + b2 \times a1 + a2 \times b2) / (a2 + b2)\} \times \sqrt{2}$$

$$= 636 \quad mm$$

- 주철근 (절곡하여 보강철근으로 고려할 수 있는 주철근량)

As' = H 16 @ 300 = 662 mm^2

H 0 @ 0 = 0 mm^2

1) 최대인장응력, f_{tmax}

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 45.584 \times 10^6}{(636.396)^2 \times 1{,}000}$$

$$= 0.563 \text{ Mpa} > 0.08\sqrt{fck} = 0.438 \text{ Mpa}$$ 보강철근 필요 !

2) 보강철근량 산정, As

- 필요철근량

$$As = \frac{2 \times Mo}{R \times f_{sa}} - As'$$

$$= \frac{2 \times 45.584 \times 10^6}{636 \times 180} - 662$$

$$= 796 \ mm^2 - 662 \ mm^2$$

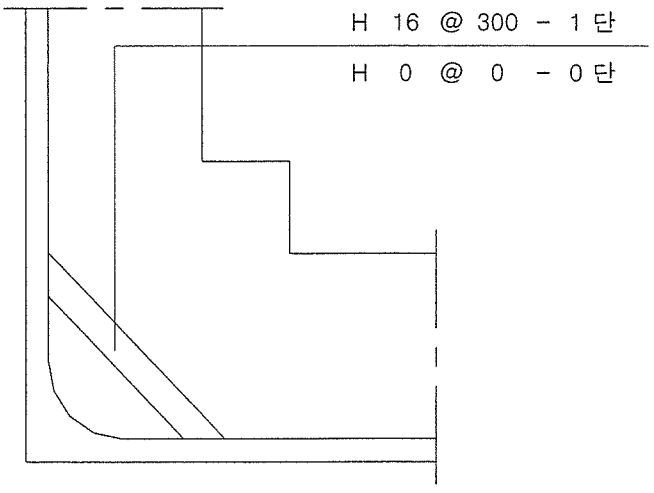
$$= 134 \ mm^2$$

- 사용철근량

As = H 16 @ 300 - 1 단

+ H 0 @ 0 - 0 단

= 662 mm^2 O.K



8. 사용성 검토

8.1 처짐 검토

1) 하부 슬래브 : 최소부재두께 적용

철근의 항복응력 fy = 400 MPa

부재의 지간길이 L = 2.300 m

슬래브 양단 연속의 경우

T = L / 28 = 0.082 m

(보정계수) FACTOR = 1.000

처짐계산을 하지않는 경우의 최소두께

T = 0.082m < H = 0.300m (처짐검토 생략)

9. 기초지반 지지력 검토

9.1 작용하중

9.1.1 구 체 자 중 (W1) :

(0.3 × 2.4 + 0.3 × 2 × 1 EA + 0.3 × 0.3 / 2
× 2 EA + 0.3 × 2.4) × 24.500 / 2.6 = 20.071 kN/m²

9.1.2 상재고정하중(W2)

(1) 상재토

되메움토 : 0.000 × 20.000 = 0.000 kN/m²

아스콘 : 0.000 × 23.000 = 0.000 kN/m²

9.1.3 활 하 중(L)

(1) 활 하 중 :

= 0.000 kN/m²

9.1.4 수로개거내의 물의자중(w3)

2.000 × 1.920 × 1.000 / 2.600 / 1.000 × 10.000 = 14.769 kN/m²

9.2 지지력 검토

9.2.1 최대지반반력 (qmax) : W1 + W2 + L + W3

20.071 + 0.000 + 0.000 + 14.769 = 34.840 kN/m²

9.2.2 허용지반반력 (qa)

- 정역학 공식에 의한 지반의 허용 연직 지지력 (Terzaghi식 사용)

Qu = A · [c · Nc + q · Nq + 0.5 · r1 · B · Nr]

Qu : 하중의 편심 및 경사가 없는 연속기초지반의 극한지지력 (kN)

· A : 재하면적 = 2.600 m²

· c : 지반의 점착력 = 0.000 kN/m²

· q : 상재하중, (q = r2 · Df) = 48.000 kN/m²

· r1 : 지지 지반의 흙의 단위중량 = 20.000 kN/m³

· r2 : 근입 지반의 흙의 단위중량 = 20.000 kN/m³

· B : 확대기초의 폭 = 2.600 m

· L : 확대기초의 길이 = 1.000 m

· Φ : 지반의 전단 저항각

Φ = √ (12 × N) + 15 = √ (12 × 15) + 15 = 28 °

· Nc = 25.100 , Nq = 12.700 , Nr = 9.700 (전단 저항각 28 ° 일때)

· Qu = 2.600 × [0.000 × 25.100 + 48.000 × 12.700 +
0.500 × 20.000 × 2.600 × 9.700] = 2240.680 kN

· Qa = 2240.680 / 3 = 746.893 kN

· qa = 746.893 / 2.600 = 287.267 kN/m²

* 평상시 최대 지반반력 (도.설.해 2008) = 400.000 kN/m²

∴ q_{max} = 34.840 kN/m² < q_a = 287.267 kN/m² ∴ O.K

C(함) 파전제2

- 2.0 x 2.00 x 1
- 토피 = 8.8m 이하

1. 설 계 조 건
2. 단 면 가 정
3. 해석모델 및 단면제원
4. 하중산정
5. 하중재하도
6. 하중계수 및 하중조합
7. INPUT DATA
8. OUTPUT
9. 단면력요약
10. 단 면 력 도
11. 단 면 검 토
12. 우각부 검토
13. 배력철근 검토
14. 사용성 검토
15. 기초지지력 검토
16. 주철근조립도
17. 날개벽 설계

1. 설계 조건

1) 구조물명 : c (함)

2) 구조형식 : 철근 콘크리트 구조

3) 설계하중 : KRL2012 (복 선)

4) 재료중량

- 철근 콘크리트(γ_c)	=	24.5	kN/m^3
- 무근 콘크리트(γ_{con})	=	23.0	kN/m^3
- 뒷채움 토사(γ_t)	=	20.0	kN/m^3
- 뒷채움 토사(γ_{sub})	=	11.0	kN/m^3
- 지하수(γ_w)	=	10.0	kN/m^3

5) 사용재료의 성질

- 콘크리트 설계기준 강도(fck)	=	30.0	MPa
- 콘크리트 탄성계수(Ec)	=	27537	MPa
- 철근의 항복강도(fy)	=	400.0	MPa
- 철근의 탄성계수(Es)	=	200000	MPa

6) 토 사

- 흙의 내부마찰각 (ϕ)	=	35.0	°
- 정지 토압계수 (Ko)	=	0.426	

7) 기 초 형 식 : 직접기초

8) 사 각(Skew) : 90.00 ° 연 장 (L) : 62.00 m

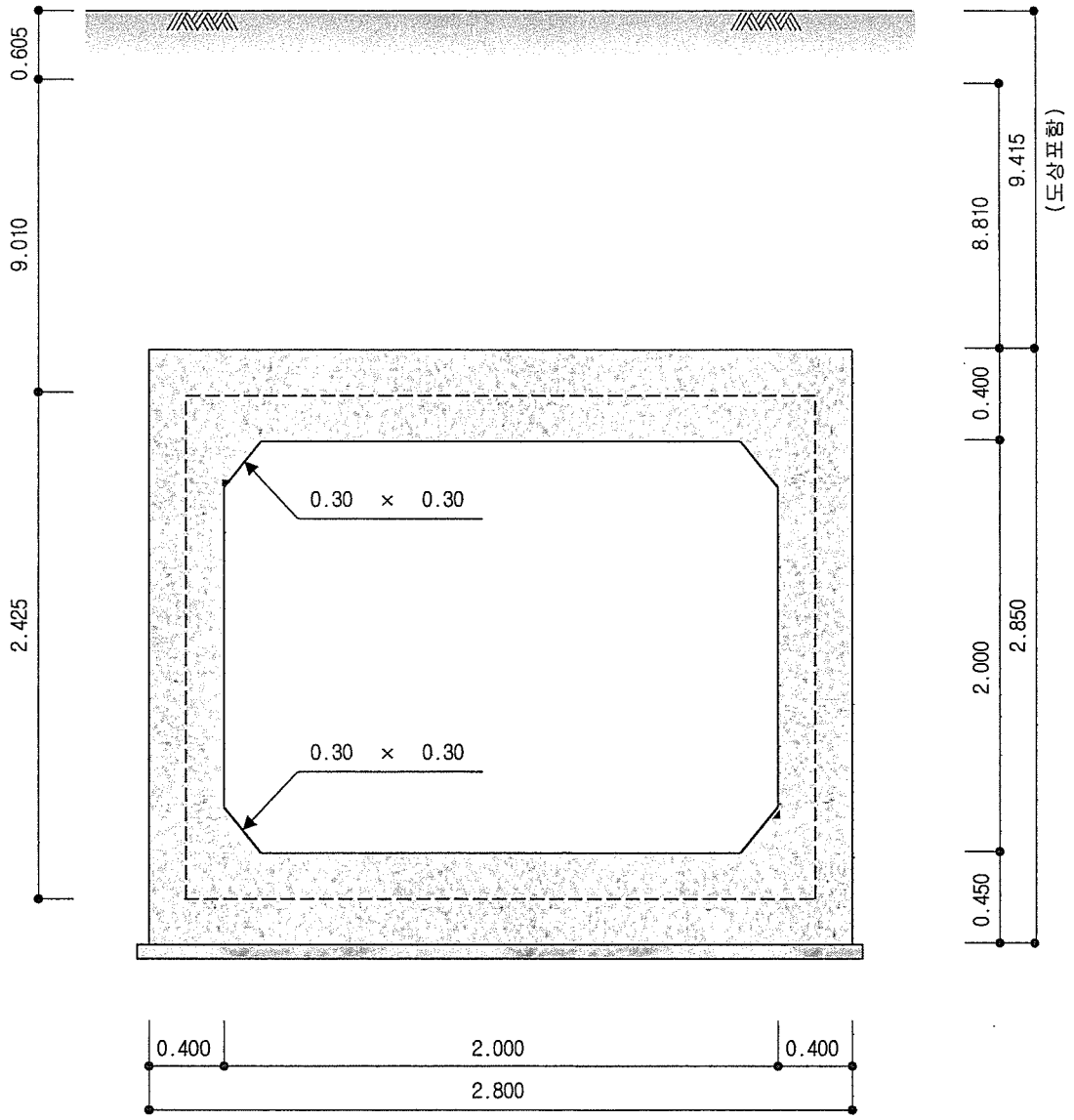
9) 설계방법

- 강도 설계법 : 부재 단면검토(슬래브, 벽체, 보, 기둥 등)
- 허용응력 설계법 : 사용성 검토(처짐, 균열, 우각부 검토)

10) 참고문헌

- 철도설계기준(노반편), 국토해양부, 2013
- 콘크리트 구조설계기준해설, 한국콘크리트 학회, 2012

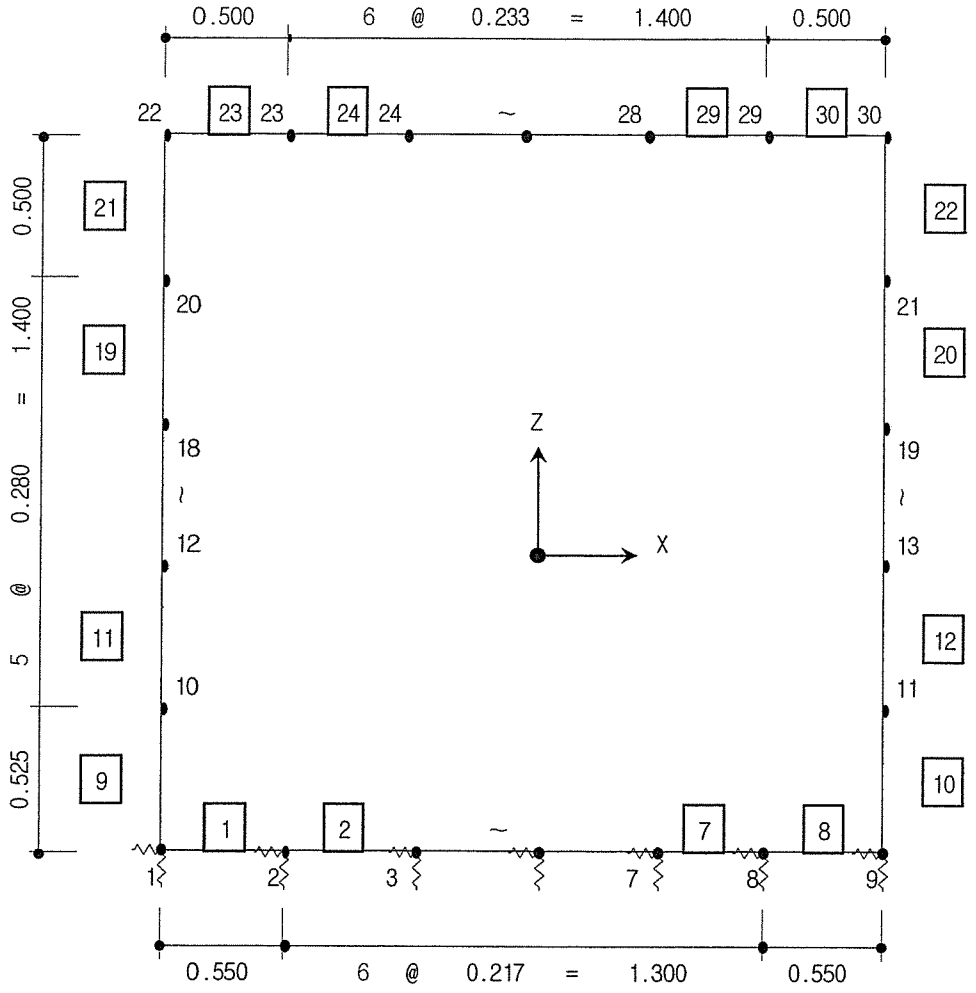
2. 단면 가정



※ 유효경간

Skew =	90.0	°					
Ln =	2.400	m					
Ls =	2.400	m					
Ls/B =	2.400	/	18.000	=	0.133	<	1.500
L =	2.400	m					

3. 해석모델 및 단면제원



1) 절점 좌표

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
1	0.000	0.000	0.000	13	2.400	0.000	0.805
2	0.550	0.000	0.000	14	0.000	0.000	1.085
3	0.767	0.000	0.000	15	2.400	0.000	1.085
4	0.983	0.000	0.000	16	0.000	0.000	1.365
5	1.200	0.000	0.000	17	2.400	0.000	1.365
6	1.417	0.000	0.000	18	0.000	0.000	1.645
7	1.633	0.000	0.000	19	2.400	0.000	1.645
8	1.850	0.000	0.000	20	0.000	0.000	1.925
9	2.400	0.000	0.000	21	2.400	0.000	1.925
10	0.000	0.000	0.525	22	0.000	0.000	2.425
11	2.400	0.000	0.525	23	0.500	0.000	2.425
12	0.000	0.000	0.805	24	0.733	0.000	2.425

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
25	0.967	0.000	2.425	28	1.667	0.000	2.425
26	1.200	0.000	2.425	29	1.900	0.000	2.425
27	1.433	0.000	2.425	30	2.400	0.000	2.425

2) 경계 조건

joint	spring계수 (kN/m²)		joint	spring계수 (kN/m²)	
	z방향(수직)	x방향(수평)		z방향(수직)	x방향(수평)
1 . 9	6524		3 ~ 7	2976	
2 . 8	5265				

3) 단면제원

Element	두께	폭	비 고
23 ~ 30	0.400	1.000	상부슬래브
1 ~ 8	0.450	1.000	하부슬래브
9 ~ 22	0.400	1.000	벽 체

4) 강역설정

(1) 강역설정기준(콘크리트구조설계기준 2012)

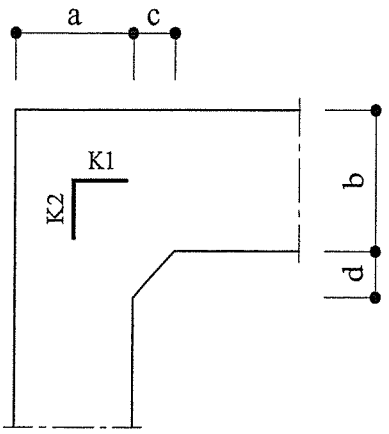
CASE 1 : 부재단부가 다른 부재와 접합할 때는 부재단에서 부재두께의 1/4 안쪽점에서 절점까지

CASE 2 : 부재가 그 축선에 대해 25° 이상 60° 미만인 경사진 헌치를 갖는 경우에는 부재두께가 1.5배가 되는 점에서 부터 절점까지

CASE 3 : 헌치의 경사가 60° 이상의 경우는 헌치의 시점에서 부재두께의 1/4 안쪽 점에서부터 절점까지

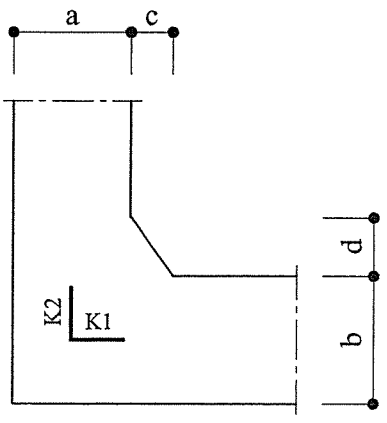
(2) 강역설정

- 절점 22 , 30



a =	400	mm	c =	300	mm
b =	400	mm	d =	300	mm
K1 =	300	mm	K2 =	300	mm

- 절점 1 , 9

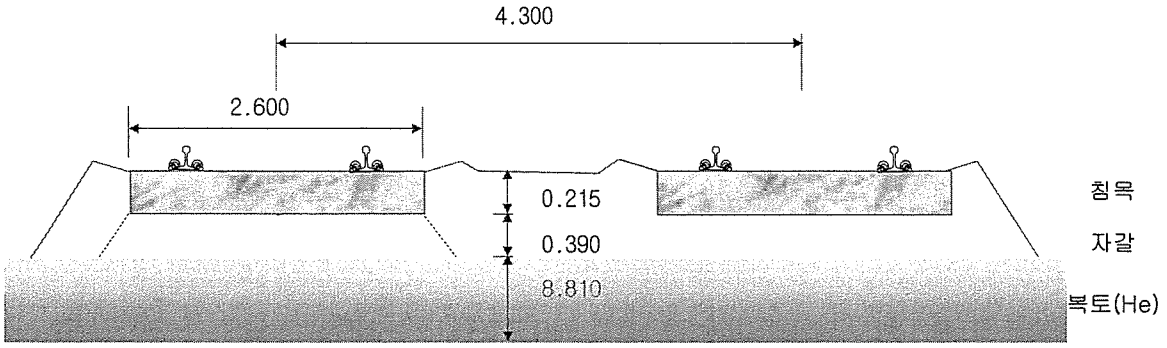


a =	400	mm	c =	300	mm
b =	450	mm	d =	300	mm
K1 =	275	mm	K2 =	325	mm

4. 하중산정

4.1 상시

1) 상부 고정하중(지하수 無)



① 하중 분포폭 산정 (b')

① He < 0.5m 경우 : b + d

b_1 = 2.600 + 0.390 = 2.990 m

② He ≥ 0.5m 경우 : c + b + (d + He)

b_2 = 4.300 + 2.600 + (0.390 + 8.810) = 14.590 m

여기서, He : 시공기면에서의 토피고(m)

a : 동륜간 축간거리(m) c : 복선선로 중심간격(m)

b : 침목길이(m) d : 침목하면의 도상두께(m)

H : 상부슬래브 두께

He ≥ 0.5 m

∴ b' = 14.590 m

② 구조물 자중 : 프로그램 상에서 Self Weight 기능을 이용하여 자동 고려

③ 궤도 중량

- 레일 : 레일당 1.5kN/m를 적용

q_1 = 4 × 1.500 / 14.590 = 0.411 kN/㎡

- 침목 : 고속철도용 5.0kN/m

q_2 = 5.000 × 2 / 14.590 = 0.685 kN/㎡

= 1.096 kN/㎡

④ 도상 (q_2)

TCL = 0.215 × 19.000 × 1.3 = 5.311 kN/㎡

HSB = 0.390 × 19.000 × 1.3 = 9.633 kN/㎡

= 14.944 kN/㎡

⑤ 복토하중 (q_3) = 20.000 × 8.810 = 176.200 kN/㎡

∴ $q_1 + q_2 + q_3$ = 1.096 + 14.944 + 176.200 = 192.240 kN/㎡

2) 활하중

① 활하중 산정 : KRL 2012

$$W_{HL} = \frac{2P}{a \times b'} = \frac{2\times(220+80x3)}{3.000 \times 14.590} = 21.019 \text{ kN/㎡}$$

∴ W = 21.019 kN/㎡

② 충격계수

1) 단선 (i_0) (철도설계기준 노반편(2013) p.5-7)

지 간 L (m)	0	5	10	20	30	40	50	70	100
충격계수 (i)	0.60	0.48	0.43	0.37	0.34	0.32	0.30	0.27	0.24

* 상기표에 없는 지간의 충격 계수는 보간법으로 구한다.

지 간 L (m) = 2.400 m

따라서 i_0 = 0.542 (보간법에 의하여 산정된 충격계수)

2) 구조물 상면의 복토높이에 따른 충격 계수

H ≥ 1.0일 경우 $i = io \cdot \{(2.5 - H)/1.5\}$

여기서, H ≤ 1.0 m 에서는 $i = i_o$

H ≥ 2.5 m 에서는 i = 0

따라서, 본 구조물의 H = 9.415 m i = 0.000

W_L = 21.019 ×(1 + 0.000) = 21.019 kN/㎡

③ 활하중에 의한 측압 (충격비고려)(철도설계기준 노반편(2013) p.5-6)

W_{LH} = 21.019 × 0.4 = 8.408 kN/㎡

3) 토 압

- 지하수가 없는 경우 작용 토압

q_1 = 0.426 ×(16.040 + 20.000 × 9.010) = 83.598 kN/㎡

q_2 = 83.598 + 0.426 ×(20.000 × 0.500) = 87.858 kN/㎡

q_3 = 87.858 + 0.426 ×(20.000 × 0.280) = 90.244 kN/㎡

q_4 = 90.244 + 0.426 ×(20.000 × 0.280) = 92.630 kN/㎡

q_5 = 92.630 + 0.426 ×(20.000 × 0.280) = 95.016 kN/㎡

q_6 = 95.016 + 0.426 ×(20.000 × 0.280) = 97.402 kN/㎡

q_7 = 97.402 + 0.426 ×(20.000 × 0.280) = 99.788 kN/㎡

q_8 = 99.788 + 0.426 ×(20.000 × 0.525) = 104.261 kN/㎡

- 시공중 편토압 산정 (지하수가 없는 경우 작용 토압)

q_1 = 0.426 × (0.000 + 20.000 × 0.200) = 1.704 kN/㎡

q_2 = 1.704 + 0.426 × (20.000 × 0.500) = 5.964 kN/㎡

q_3 = 5.964 + 0.426 × (20.000 × 0.280) = 8.350 kN/㎡

q_4 = 8.350 + 0.426 × (20.000 × 0.280) = 10.736 kN/㎡

q_5 = 10.736 + 0.426 × (20.000 × 0.280) = 13.122 kN/㎡

q_6 = 13.122 + 0.426 × (20.000 × 0.280) = 15.508 kN/㎡

q_7 = 15.508 + 0.426 × (20.000 × 0.280) = 17.894 kN/㎡

q_8 = 17.894 + 0.426 × (20.000 × 0.525) = 22.367 kN/㎡

4) 온도하중

토피가 1.0m 이상일 경우에는 온도변화를 고려치 않으며, 토피가 1.0m 이하일 경우에는 다음식을 따른다.

$t = a \times t_0$ = 0.000 × 15.0 = 0.000 ℃

t : 박스 구조물의 상부 슬래브에 작용하는 온도변화

a : 토피심도(m)에 따른 저감률 $a=1-h_0$ (h_0:토피심도)

t_0 : 지표면에서의 기본온도 변화

상부슬래브의 두께가 700mm 이상인 경우 $t_0 = \pm 10$℃

상부슬래브의 두께가 700mm 미만인 경우 $t_0 = \pm 15$℃

토피고 H > 1.0m 이므로 온도변화는 고려하지 않는다.

5) 건조수축

$$\Delta Tx = \frac{\varepsilon}{\alpha} = \frac{-0.00015}{0.00001} = -15\,^{\circ}C$$

6) 장대레일 하중

장대레일 종하중은 필요시에 고려하여야 하며, 1궤도당 10 kN/m로 하고 작용위치는 상부슬래브 축선으로 한다. (단, 토피가 1.0m 이상인 경우는 이를 무시한다.)

토피가 9.415 m 이므로 장대레일 하중을 무시한다.

H_r = 0.000 × 4 / 14.590 = 0.000 kN/㎡

7) 상시 지반반력 계수

지지 지반 N치 = 7

Eo = 2800 × N = 2800 × 7 = 19600

Kvo = 1 / 0.3 x α x Eo = 1 / 0.3 × 1 x 19600 = 65333

Bv = √ Av = √ (2.400 × 2.400) = 2.400

Kv = Kvo (Bv/0.3)^-3/4 = 13735 kN/㎡

13735 × (0.400 / 2 + 0.550 / 2) = 6524 kN/㎡ - 저판 단부 스프링

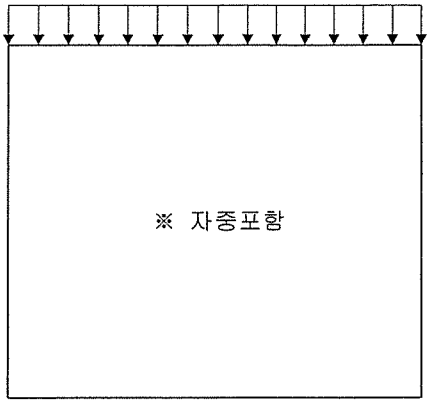
13735 × (0.550 / 2 + 0.217 / 2) = 5265 kN/㎡ - 저판 전단검토위치

13735 × (0.217 / 2 + 0.217 / 2) = 2976 kN/㎡ - 저판 중앙부 스프링

5. 하중재하도

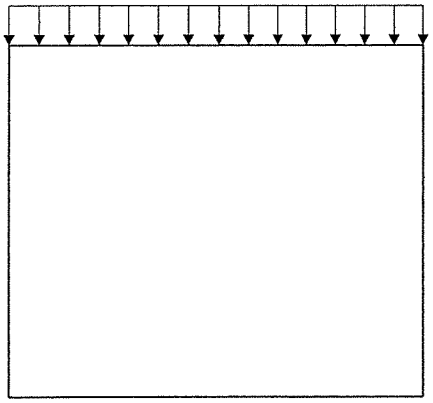
① 고정하중

W_D = 192.240 kN/㎡



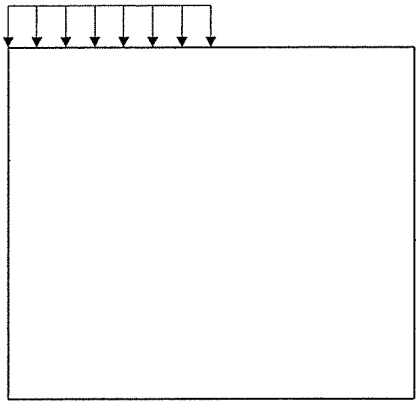
② 활하중(만재하)

W_L = 21.019 kN/㎡

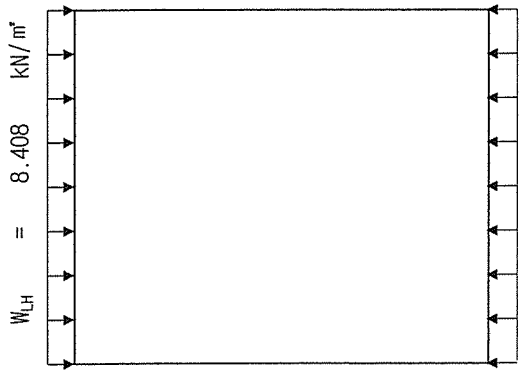


③ 활하중(편재하)

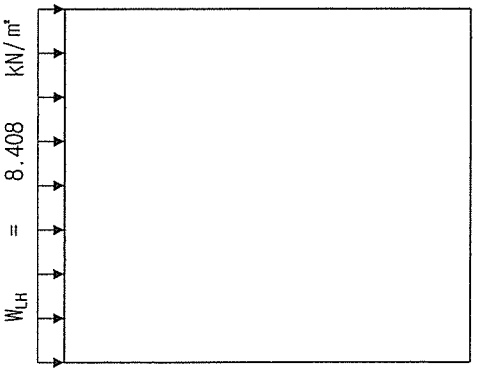
W_L = 21.019 kN/㎡



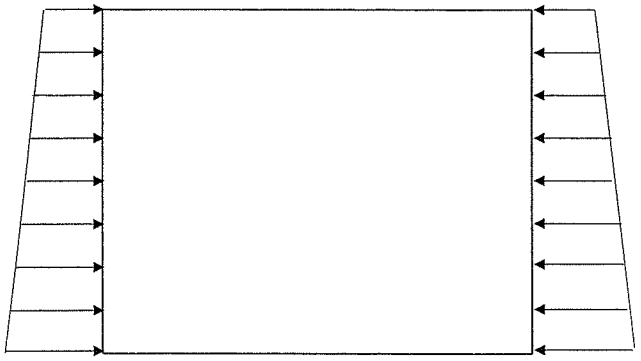
④ 활하중에 의한 측압(만재하)



⑤ 활하중에 의한 측압(편재하)



⑥ 수평토압(지하수 없는 경우)

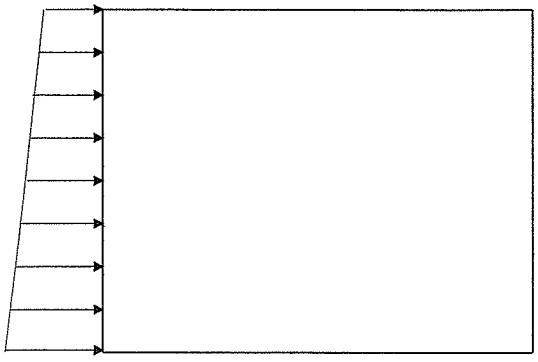


q_1 = 83.598 kN/㎡

q_7 = 104.261 kN/㎡

⑦ 편측토압(지하수 없는 경우)

q_1 = 1.704 kN/㎡



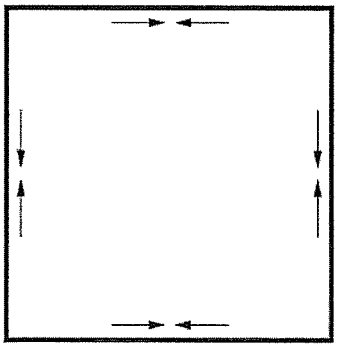
q_7 = 22.367 kN/㎡

⑧ 온도하중

△T = 0 °

⑨ 건조수축

△T = -15 °



⑩ 장대레일 종하중

Hr = 0.000 kN/m^2

6. 하중계수 및 하중조합

1) 극한하중 검토시

구분	고정하중	활하중		활하중 측압		수평토압 (지하수無)		온도하중		건조수축	장대레일	비고
				양측재하	편측재하	양측재하	편측재하					
		전경간	1/2	수평	수평	수평	수평	온도상승	온도하강			
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11	
1	1.35	1.85		1.85		1.6						
2	1.35	1.85		1.85		0.6						
3	1.35		1.85		1.85	1.6						
4	1.35		1.85		1.85	0.6						
5	1.6	1.60		1.60		1.6						
6	1.6	1.60		1.60		0.6						
7	1.6		1.6		1.6	1.6						
8	1.6		1.6		1.6	0.6						
9	1.35	1.40		1.40		1.6		1.35		1.35		
10	1.35	1.40		1.40		0.6		1.35		1.35		
11	1.35	1.40		1.40		1.6			1.35	1.35	1.40	
12	1.35	1.40		1.40		0.6			1.35	1.35	1.40	
13	1.35		1.40		1.40	1.6		1.35		1.35		
14	1.35		1.40		1.40	0.6		1.35		1.35		
15	1.35		1.40		1.40	1.6			1.35	1.35	1.4	
16	1.35		1.40		1.40	0.6			1.35	1.35	1.4	
17	1.35		1.85		1.85		1.60					
18	1.35		1.85		1.85		0.60					
19	1.60		1.60		1.60		1.60					
20	1.60		1.60		1.60		0.60					

2) 사용하중 검토시

구분	고정하중	활하중		활하중 측압		수평토압 (지하수無)		온도하중		건조수축	장대레일	비고
				양측재하	편측재하	양측재하	편측재하					
		전경간	1/2	수평	수평	수평	수평	온도상승	온도하강			
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11	
21	1.0	1.0		1.0		1.0						
22	1.0	1.0		1.0		0.5						
23	1.0		1.0		1.0	1.0						
24	1.0		1.0		1.0	0.5						
25	1.0	1.0		1.0		1.0		1.0			1.0	
26	1.0	1.0		1.0		0.5		1.0			1.0	
27	1.0	1.0		1.0		1.0			1.0	1.0	1.0	
28	1.0	1.0		1.0		0.5			1.0	1.0	1.0	
29	1.0		1.0		1.0	1.0		1.0			1.0	
30	1.0		1.0		1.0	0.5		1.0			1.0	
31	1.0		1.0		1.0	1.0			1.0	1.0	1.0	
32	1.0		1.0		1.0	0.5			1.0	1.0	1.0	
33	1.0					1.0						
34	1.0		1.0		1.0		1.0					
35	1.0		1.0		1.0		0.5					

7. INPUT DATA

```
*VERSION
   8.3.1

*UNIT    ; Unit System
; FORCE, LENGTH, HEAT, TEMPER
   KN   , M, J, C

*STRUCTYPE    ; Structure Type
; iSTYP, iMASS, iSMAS, bMASSOFFSET, bSELFWEIGHT, GRAV, TEMPER, bALIGNBEAM, bALIGNSLAB, bROTRIGID
     1, 1, 1, NO, YES, 9.806, 0, NO, NO, NO

*REBAR-MATL-CODE    ; Rebar Material Code
; CONC_CODE, CONC_MDB, SRC_CODE, SRC_MDB
 KS01-Civil(RC), SD300, KS01-Civil(RC), SD300

*NODE    ; Nodes
; iNO, X, Y, Z
     1, 0, 0, 0
     2, 0.55, 0, 0
     3, 0.78, 0, 0
     4, 1.01, 0, 0
     5, 1.24, 0, 0
     6, 1.47, 0, 0
     7, 1.7, 0, 0
     8, 1.93, 0, 0
     9, 2.48, 0, 0
    10, 0, 0, 0.525
    11, 2.48, 0, 0.525
    12, 0, 0, 0.805
    13, 2.48, 0, 0.805
    14, 0, 0, 1.085
    15, 2.48, 0, 1.085
    16, 0, 0, 1.365
    17, 2.48, 0, 1.365
    18, 0, 0, 1.645
    19, 2.48, 0, 1.645
    20, 0, 0, 1.925
    21, 2.48, 0, 1.925
    22, 0, 0, 2.425
    23, 0.5, 0, 2.425
    24, 0.747, 0, 2.425
    25, 0.993, 0, 2.425
    26, 1.24, 0, 2.425
    27, 1.487, 0, 2.425
    28, 1.733, 0, 2.425
    29, 1.98, 0, 2.425
    30, 2.48, 0, 2.425

*ELEMENT    ; Elements
; iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, iOPT(EXVAL2) ; Frame  Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, EXVAL2, bLMT ; Comp/Tens Truss
; iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iSUB, iWID             ; Planar Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iN5, iN6, iN7, iN8     ; Solid  Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, REF, RPX, RPY, RPZ, iSUB, EXVAL  ; Frame(Ref. Point)
     1, BEAM  ,    2,    2,    1,    2,  180
     2, BEAM  ,    2,    2,    2,    3,  180
     3, BEAM  ,    2,    2,    3,    4,  180
     4, BEAM  ,    2,    2,    4,    5,  180
     5, BEAM  ,    2,    2,    5,    6,  180
     6, BEAM  ,    2,    2,    6,    7,  180
     7, BEAM  ,    2,    2,    7,    8,  180
     8, BEAM  ,    2,    2,    8,    9,  180
     9, BEAM  ,    2,    3,    1,   10,  180
    10, BEAM  ,    2,    3,    9,   11,    0
    11, BEAM  ,    2,    3,   10,   12,  180
    12, BEAM  ,    2,    3,   11,   13,    0
    13, BEAM  ,    2,    3,   12,   14,  180
    14, BEAM  ,    2,    3,   13,   15,    0
    15, BEAM  ,    2,    3,   14,   16,  180
    16, BEAM  ,    2,    3,   15,   17,    0
    17, BEAM  ,    2,    3,   16,   18,  180
    18, BEAM  ,    2,    3,   17,   19,    0
    19, BEAM  ,    2,    3,   18,   20,  180
    20, BEAM  ,    2,    3,   19,   21,    0
    21, BEAM  ,    2,    3,   20,   22,  180
    22, BEAM  ,    2,    3,   21,   30,    0
    23, BEAM  ,    2,    1,   22,   23,    0
    24, BEAM  ,    2,    1,   23,   24,    0
    25, BEAM  ,    2,    1,   24,   25,    0
    26, BEAM  ,    2,    1,   25,   26,    0
    27, BEAM  ,    2,    1,   26,   27,    0
    28, BEAM  ,    2,    1,   27,   28,    0
    29, BEAM  ,    2,    1,   28,   29,    0
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    30, BEAM  ,    2,     1,    29,    30,     0

*MATERIAL    ; Material
; iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, DAMPRATIO, [DATA1]          ; STEEL, CONC, USER
; iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, DAMPRATIO, [DATA2], [DATA2] ; SRC
; [DATA1] : 1, DB, NAME, CODE
; [DATA1] : 2, ELAST, POISN, THERMAL, DEN, MASS
; [DATA1] : 3, Ex, Ey, Ez, Tx, Ty, Tz, Sxy, Sxz, Syz, Pxy, Pxz, Pyz, DEN, MASS   ; Orthotropic
; [DATA2] : 1, DB, NAME, CODE or 2, ELAST, POISN, THERMAL, DEN, MASS
    1, USER , STEEL             , 0, 0, , C, NO, 0, 2, 2.0000e+008,   0.3, 1.1700e-005, 76.8196,     0
    2, USER , CONC              , 0, 0, , C, NO, 0, 2, 2.7537e+007,  0.18, 1.0000e-005,  24.5,     0

*MATL-COLOR
; iMAT, W_R, W_G, W_B, HF_R, HF_G, HF_B, HE_R, HE_G, HE_B, bBLEND, FACT
    1, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
    2, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5


*SECTION    ; Section
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2]                  ; 1st line - DB/USER
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL            ; 1st line - VALUE
;       AREA, ASy, ASz, Ixx, Iyy, Izz                                       ; 2nd line
;       CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz             ; 3rd line
;       Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz                            ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF       ; 1st line - SRC
;       D1, D2, [SRC]                                                       ; 2nd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2      ; 1st line - COMBINED
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24
; iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, iyVAR, izVAR, STYPE              ; 1st line - TAPERED
;       DB, NAME1, NAME2                                                    ; 2nd line(STYPE=DB)
;       [DIM1], [DIM2]                                                      ; 2nd line(STYPE=USER)
;       D11, D12, D13, D14, D15, D16, D17, D18                              ; 2nd line(STYPE=VALUE)
;       AREA1, ASy1, ASz1, Ixx1, Iyy1, Izz1                                ; 3rd line(STYPE=VALUE)
;       CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1   ; 4th line(STYPE=VALUE)
;       Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2                  ; 5th line(STYPE=VALUE)
;       D21, D22, D23, D24, D25, D26, D27, D28                              ; 6th line(STYPE=VALUE)
;       AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2                                ; 7th line(STYPE=VALUE)
;       CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2   ; 8th line(STYPE=VALUE)
;       Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2                  ; 9th line(STYPE=VALUE)
;       OPT1, OPT2, [JOINT]                                                 ; 2nd line(STYPE=PSC)
;       ELAST, DEN, POIS, POIC                                              ; 2nd line(STYPE=PSC-CMPW)
;       bSHEARCHK, [SCHK-I], [SCHK-J], [WT-I], [WT-J], WI, WJ, bSYM, bSIDEHOLE ; 3rd line(STYPE=PSC)
;       bSHEARCHK, bSYM, bHUNCH, [CMPWEB-I], [CMPWEB-J]                     ; 3rd line(STYPE=PSC-CMPW)
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF-I], [STIFF-J]     ; 4th line(STYPE=PSC)
;       [SIZE-A]-i                                                          ; 5th line(STYPE=PSC)
;       [SIZE-B]-i                                                          ; 6th line(STYPE=PSC)
;       [SIZE-C]-i                                                          ; 7th line(STYPE=PSC)
;       [SIZE-D]-i                                                          ; 8th line(STYPE=PSC)
;       [SIZE-A]-i                                                          ; 9th line(STYPE=PSC)
;       [SIZE-B]-i                                                          ; 10th line(STYPE=PSC)
;       [SIZE-C]-i                                                          ; 11th line(STYPE=PSC)
;       [SIZE-D]-i                                                          ; 12th line(STYPE=PSC)
;       GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMULTI, EsEc-L, EsEc-S     ; 2nd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i             ; 3rd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i             ; 4th line(STYPE=CMP-B/I)
;       N1, N2, Hr, Hr2, tr1, tr2                                           ; 5th line(STYPE=CMP-B)
;       GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb, bSYM, SW_i, SW_i     ; 2nd line(STYPE=CMP-CI/CT)
;       OPT1, OPT2, [JOINT]                                                 ; 3rd line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                          ; 4th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                          ; 5th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                          ; 6th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                          ; 7th line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                          ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                          ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                          ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                          ; 11th line(STYPE=CMP-CI/CT)
; iSEC, TYPE, SNAME, [OFFSET], bSD, STYPE1, STYPE2                          ; 1st line - CONSTRUCT
;       SHAPE, ...(same with other type data from shape)                    ; Before (STYPE1)
;       SHAPE, ...(same with other type data from shape)                    ; After  (STYPE2)
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                   ; 1st line - COMPOSITE-SB
;       Hw, tw, B, Bf1, tf1, B2, Bf2, tf2                                   ; 2nd line
;       N1, N2, Hr, Hr2, tr1, tr2                                           ; 3rd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh     ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                   ; 1st line - COMPOSITE-SI
;       Hw, tw, B, tf1, B2, tf2                                             ; 2nd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh     ; 3rd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                   ; 1st line - COMPOSITE-CI/CT
;       OPT1, OPT2, [JOINT]                                                 ; 2nd line
;       [SIZE-A]                                                            ; 3rd line
;       [SIZE-B]                                                            ; 4th line
;       [SIZE-C]                                                            ; 5th line
;       [SIZE-D]                                                            ; 6th line
;       SW, GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb                   ; 7th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                   ; 1st line - PSC
;       OPT1, OPT2, [JOINT]                                                 ; 2nd line
;       bSHEARCHK, [SCHK], [WT], WIDTH, bSYM, bSIDEHOLE                     ; 3rd line
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF]                  ; 4th line
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;       [SIZE-A]                                                                ; 5th line
;       [SIZE-B]                                                                ; 6th line
;       [SIZE-C]                                                                ; 7th line
;       [SIZE-D]                                                                ; 8th line
; [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10
; [DATA2] : CCSHAPE or iCEL or iN1, iN2
; [SRC]  : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2
; [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8
; [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER
; [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ
; [JOINT]  :  8(1CELL, 2CELL), 13(3CELL),  9(PSCM),  8(PSCH), 9(PSCT),  2(PSCB), 0(nCELL),  2(nCEL2)
; [SIZE-A] :  6(1CELL, 2CELL), 10(3CELL), 10(PSCM),  6(PSCH), 8(PSCT), 10(PSCB), 5(nCELL), 11(nCEL2)
; [SIZE-B] :  6(1CELL, 2CELL), 12(3CELL),  6(PSCM),  6(PSCH), 8(PSCT),  6(PSCB), 8(nCELL), 18(nCEL2)
; [SIZE-C] : 10(1CELL, 2CELL), 13(3CELL),  9(PSCM), 10(PSCH), 7(PSCT),  8(PSCB), 0(nCELL), 11(nCEL2)
; [SIZE-D] :  8(1CELL, 2CELL), 13(3CELL),  6(PSCM),  7(PSCH), 8(PSCT),  5(PSCB), 0(nCELL), 18(nCEL2)
; [STIFF]  : AREA, ASy, ASz, Ixx, Iyy, Izz
; [SCHK]   : bAUTO_Z1, Z1, bAUTO_Z3, Z3
; [WT]     : bAUTO_TOR, TOR, bAUTO_SHR1, SHR1, bAUTO_SHR2, SHR2, bAUTO_SHR3, SHR3
; [CMPWEB] : EFD, LRF, A, B, H, T
   1, DBUSER    , TOPSLAB           , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB           , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.45, 1, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL              , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0

*SECT-COLOR
; iSEC, W_R, W_G, W_B, HF_R, HF_G, HF_B, HE_R, HE_G, HE_B, bBLEND, FACT
   1, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
   2, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
   3, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5

*DGN-SECT
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2]                    ; 1st line - DB/USER
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL             ; 1st line - VALUE
;       AREA, ASy, ASz, Ixx, Iyy, Izz                                         ; 2nd line
;       CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz               ; 3rd line
;       Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz                              ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF         ; 1st line - SRC
;       D1, D2, [SRC]                                                         ; 2nd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2        ; 1st line - COMBINED
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24
; iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, iyVAR, izVAR, STYPE               ; 1st line - TAPERED
;       DB, NAME1, NAME2                                                      ; 2nd line(STYPE=DB)
;       [DIM1], [DIM2]                                                        ; 2nd line(STYPE=USER)
;       D11, D12, D13, D14, D15, D16, D17, D18                                ; 2nd line(STYPE=VALUE)
;       AREA1, ASy1, ASz1, Ixx1, Iyy1, Izz1                                   ; 3rd line(STYPE=VALUE)
;       CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1     ; 4th line(STYPE=VALUE)
;       Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2                    ; 5th line(STYPE=VALUE)
;       D21, D22, D23, D24, D25, D26, D27, D28                                ; 6th line(STYPE=VALUE)
;       AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2                                   ; 7th line(STYPE=VALUE)
;       CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2     ; 8th line(STYPE=VALUE)
;       Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2                    ; 9th line(STYPE=VALUE)
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line(STYPE=PSC)
;       ELAST, DEN, POIS, POIC                                                ; 2nd line(STYPE=PSC-CMPW)
;       bSHEARCHK, [SCHK-I], [SCHK-J], [WT-I], [WT-J], WI, WJ, bSYM, bSIDEHOLE ; 3rd line(STYPE=PSC)
;       bSHEARCHK, bSYM, bHUNCH, [CMPWEB-I], [CMPWEB-J]                       ; 3rd line(STYPE=PSC-CMPW)
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF-I], [STIFF-J]       ; 4th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 5th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 6th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 7th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 8th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 9th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 10th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 11th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 12th line(STYPE=PSC)
;       GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMULTI, EsEc-L, EsEc-S       ; 2nd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 3rd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 4th line(STYPE=CMP-B/I)
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 5th line(STYPE=CMP-B)
;       GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb, bSYM, SW_i, SW_i       ; 2nd line(STYPE=CMP-CI/CT)
;       OPT1, OPT2, [JOINT]                                                   ; 3rd line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 4th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 5th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 6th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 7th line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 11th line(STYPE=CMP-CI/CT)
; iSEC, TYPE, SNAME, [OFFSET], bSD, STYPE1, STYPE2                            ; 1st line - CONSTRUCT
;       SHAPE, ...(same with other type data from shape)                      ; Before (STYPE1)
;       SHAPE, ...(same with other type data from shape)                      ; After  (STYPE2)
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SB
;       Hw, tw, B, Bf1, tf1, B2, Bf2, tf2                                     ; 2nd line
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 3rd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SI
;       Hw, tw, B, tf1, B2, tf2                                               ; 2nd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 3rd line
```

```
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                    ; 1st line - COMPOSITE-CI/CT
;       OPT1, OPT2, [JOINT]                                                  ; 2nd line
;       [SIZE-A]                                                             ; 3rd line
;       [SIZE-B]                                                             ; 4th line
;       [SIZE-C]                                                             ; 5th line
;       [SIZE-D]                                                             ; 6th line
;       SW, GN, CTC, Bc, Tc, Hh, EqdEsb, DqdDsb, Pqd, Psb                    ; 7th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                    ; 1st line - PSC
;       OPT1, OPT2, [JOINT]                                                  ; 2nd line
;       bSHEARCHK, [SCHK], [WT], WIDTH, bSYM, bSIDEHOLE                      ; 3rd line
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF]                   ; 4th line
;       [SIZE-A]                                                             ; 5th line
;       [SIZE-B]                                                             ; 6th line
;       [SIZE-C]                                                             ; 7th line
;       [SIZE-D]                                                             ; 8th line
; [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10
; [DATA2] : CCSHAPE or iCEL or iN1, iN2
; [SRC]  : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2
; [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8
; [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER
; [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ
; [JOINT]  :  8(1CELL, 2CELL), 13(3CELL),  9(PSCM),  8(PSCH), 9(PSCT),  2(PSCB), 0(nCELL),  2(nCEL2)
; [SIZE-A] :  6(1CELL, 2CELL), 10(3CELL), 10(PSCM),  6(PSCH), 8(PSCT), 10(PSCB), 5(nCELL), 11(nCEL2)
; [SIZE-B] :  6(1CELL, 2CELL), 12(3CELL),  6(PSCM),  6(PSCH), 8(PSCT),  6(PSCB), 8(nCELL), 18(nCEL2)
; [SIZE-C] : 10(1CELL, 2CELL), 13(3CELL),  9(PSCM), 10(PSCH), 7(PSCT),  8(PSCB), 0(nCELL), 11(nCEL2)
; [SIZE-D] :  8(1CELL, 2CELL), 13(3CELL),  6(PSCM),  7(PSCH), 8(PSCT),  5(PSCB), 0(nCELL), 18(nCEL2)
; [STIFF]  : AREA, ASy, ASz, Ixx, Iyy, Izz
; [SCHK]   : bAUTO_Z1, Z1, bAUTO_Z3, Z3
; [WT]     : bAUTO_TOR, TOR, bAUTO_SHR1, SHR1, bAUTO_SHR2, SHR2, bAUTO_SHR3, SHR3
; [CMPWEB] : EFD, LRF, A, B, H, T
   1, DBUSER    , TOPSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.45, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL             , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0


*STLDCASE    ; Static Load Cases
; LCNAME, LCTYPE, DESC
   LC1  , USER,
   LC2  , USER,
   LC3  , USER,
   LC4  , USER,
   LC5  , USER,
   LC6  , USER,
   LC7  , USER,
   LC8  , USER,
   LC9  , USER,
   LC10 , USER,
   LC11 , USER,
   NCOMB1, USER,
   NCOMB2, USER,
   NCOMB3, USER,
   NCOMB4, USER,
   NCOMB5, USER,
   NCOMB6, USER,
   NCOMB7, USER,
   NCOMB8, USER,
   NCOMB9, USER,
   NCOMB10, USER,
   NCOMB11, USER,
   NCOMB12, USER,
   NCOMB13, USER,
   NCOMB14, USER,
   NCOMB15, USER,
   NCOMB16, USER,
   NCOMB17, USER,
   NCOMB18, USER,
   NCOMB19, USER,
   NCOMB20, USER,
   NCOMB21, USER,
   NCOMB22, USER,
   NCOMB23, USER,
   NCOMB24, USER,
   NCOMB25, USER,
   NCOMB26, USER,
   NCOMB27, USER,
   NCOMB28, USER,
   NCOMB29, USER,
   NCOMB30, USER,
   NCOMB31, USER,
   NCOMB32, USER,
   NCOMB33, USER,
   NCOMB34, USER,
   NCOMB35, USER,


*SPRING    ; Point Spring Supports
; NODE_LIST, Type, SDx, SDy, SDz, SRx, SRy, SRz, GROUP, FROMTYPE, EFFAREA, Kx, Ky, Kz
```

```
; NODE_LIST, Type, Direction, Vx, Vy, Vz, Stiffness, GROUP, FROMTYPE, EFFAREA
; NODE_LIST, Type, Multi-Linear Type, Direction, Vx, Vy, Vz, ax, ay, bx, by, cx, cy, dx, dy, ex, ey, fx, fy, GROUP, FROMTYPE, EFFAREA
   2 8, COMP  ,  5, 0, 0, 0, 4480, , 0, 0, 0, 0, 0
   3to7, COMP  ,  5, 0, 0, 0, 2642, , 0, 0, 0, 0, 0
   1, LINEAR, 1e+014, 0, 0, 0, 0, 0, NO, 0, 0, 0, 0, 0, 0, , 0, 0, 0, 0, 0
   1 9, COMP  ,  5, 0, 0, 0, 5456, , 0, 0, 0, 0, 0

*OFFSET    ; Beam End Offsets
; ELEM_LIST, TYPE, RGDXi, RGDYi, RGDZi, RGDXi, RGDYi, RGDZi, GROUP  ; TYPE=GLOBAL
; ELEM_LIST, TYPE, RGDi, RGDi, GROUP                                ; TYPE=ELEMENT
     1, ELEMENT, 0.275, 0,
     8, ELEMENT, 0, 0.275,
     9, ELEMENT, 0.325, 0,
    10, ELEMENT, 0.325, 0,
    21, ELEMENT, 0, 0.3,
    22, ELEMENT, 0, 0.3,
    23, ELEMENT, 0.3, 0,
    30, ELEMENT, 0, 0.3,

*USE-STLD, LC1

; *SELFWEIGHT, X, Y, Z, GROUP
*SELFWEIGHT, 0, 0, -1,

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC1] ------------------------

*USE-STLD, LC2

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC2] ------------------------

*USE-STLD, LC3

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC3] ------------------------

*USE-STLD, LC4

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
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    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC4] ----------

*USE-STLD, LC5

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC5] ----------

*USE-STLD, LC6

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL I-END, ADDITIONAL J-END, bADDITIONAL J-END
     9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 111.427, 1, 106.954, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -111.427, 1, -106.954, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 106.954, 1, 104.568, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -106.954, 1, -104.568, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 104.568, 1, 102.182, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -104.568, 1, -102.182, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 102.182, 1, 99.796, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -102.182, 1, -99.796, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 99.796, 1, 97.41, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -99.796, 1, -97.41, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 97.41, 1, 95.024, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -97.41, 1, -95.024, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 95.024, 1, 90.764, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -95.024, 1, -90.764, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC6] ----------

*USE-STLD, LC7

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL I-END, ADDITIONAL J-END, bADDITIONAL J-END
     9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 22.367, 1, 17.894, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 17.894, 1, 15.508, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 15.508, 1, 13.122, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 13.122, 1, 10.736, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 10.736, 1, 8.35, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.35, 1, 5.964, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 5.964, 1, 1.704, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC7] ----------

*USE-STLD, LC10

*ELTEMPER    ; Element Temperatures
; ELEM LIST, TEMPER, GROUP
     1, -15.
     2, -15.
     3, -15.
     4, -15.
     5, -15.
     6, -15.
     7, -15.
     8, -15.
     9, -15.
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    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [LC10] ------------------------

*USE-STLD. NCOMB1

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB1] ------------------------

*USE-STLD. NCOMB2

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.
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*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB2] ------------------------

*USE-STLD. NCOMB3

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB3] ------------------------

*USE-STLD. NCOMB4

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB4] ------------------------

*USE-STLD. NCOMB5

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. N(
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. N(
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
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    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB5] ------------------------

*USE-STLD. NCOMB6

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
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; End of data for load case [NCOMB6] ------------------------

*USE-STLD. NCOMB7

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB7] ------------------------

*USE-STLD. NCOMB8

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB8] ------------------------

*USE-STLD. NCOMB9

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. N(
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. N(
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. N(
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. N(
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB9] ------------------------

*USE-STLD. NCOMB10

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
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```
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB10] ------------------------

*USE-STLD. NCOMB11

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB11] ------------------------

*USE-STLD. NCOMB12

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB12] ----------------------------

*USE-STLD. NCOMB13

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB13] ------------------------

*USE-STLD. NCOMB14

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB14] ------------------------

*USE-STLD. NCOMB15

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB15] ------------------------

*USE-STLD. NCOMB16

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB16] ------------------------

*USE-STLD. NCOMB17

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 28.6304. 1. 24.8128. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.8128. 1. 20.9952. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 20.9952. 1. 17.1776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.1776. 1. 13.36. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.36. 1. 9.5424. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.5424. 1. 2.7264. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB17] ------------------------

*USE-STLD. NCOMB18

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
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; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4202. 1. 10.7364. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.7364. 1. 9.3048. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.3048. 1. 7.8732. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.8732. 1. 6.4416. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.4416. 1. 5.01. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.01. 1. 3.5784. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 3.5784. 1. 1.0224. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB18] ------------------------

*USE-STLD. NCOMB19

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 28.6304. 1. 24.8128. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.8128. 1. 20.9952. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 20.9952. 1. 17.1776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.1776. 1. 13.36. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.36. 1. 9.5424. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.5424. 1. 2.7264. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB19] ------------------------

*USE-STLD. NCOMB20

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4202. 1. 10.7364. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.7364. 1. 9.3048. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
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    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.3048. 1. 7.8732. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.8732. 1. 6.4416. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.4416. 1. 5.01. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.01. 1. 3.5784. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 3.5784. 1. 1.0224. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB20] ------------------------

*USE-STLD. NCOMB21

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. N(
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB21] ------------------------

*USE-STLD. NCOMB22

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.
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*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB22] ------------------------

*USE-STLD. NCOMB23

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
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    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB23] ------------------------

*USE-STLD. NCOMB24

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB24] ------------------------

*USE-STLD. NCOMB25

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
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    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB25] ----------------------

*USE-STLD. NCOMB26

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
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; End of data for load case [NCOMB26] ------------------------

*USE-STLD. NCOMB27

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
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    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB27] ------------------------

*USE-STLD. NCOMB28

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
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    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB28] ------------------------

*USE-STLD. NCOMB29

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB29] ------------------------

*USE-STLD. NCOMB30

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
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    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB30] ------------------------

*USE-STLD. NCOMB31

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
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     23. -15.
     24. -15.
     25. -15.
     26. -15.
     27. -15.
     28. -15.
     29. -15.
     30. -15.

; End of data for load case [NCOMB31] ------------------------

*USE-STLD. NCOMB32

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
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    30. -15.

; End of data for load case [NCOMB32] ------------------------

*USE-STLD. NCOMB33

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB33] ------------------------

*USE-STLD. NCOMB34

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 22.367. 1. 17.894. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.894. 1. 15.508. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.508. 1. 13.122. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.122. 1. 10.736. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.736. 1. 8.35. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.35. 1. 5.964. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.964. 1. 1.704. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB34] ------------------------

*USE-STLD. NCOMB35

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
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; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.1835. 1. 8.947. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.947. 1. 7.754. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.754. 1. 6.561. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.561. 1. 5.368. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.368. 1. 4.175. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 4.175. 1. 2.982. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 2.982. 1. 0.852. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB35] ------------------------


*LOADCOMB    ; Combinations
; NAME=NAME. KIND. ACTIVE. bES. iTYPE. DESC. iSERV-TYPE. nLCOMTYPE   ; line 1
;      ANAL1. LCNAME1. FACT1. ...                                    ; from line 2
   NAME=COMB1. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.85. ST. LC4. 1.85. ST. LC6. 1.6
   NAME=COMB2. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.85. ST. LC4. 1.85. ST. LC6. 0.6
   NAME=COMB3. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC6. 1.6
   NAME=COMB4. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC6. 0.6
   NAME=COMB5. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC2. 1.6. ST. LC4. 1.6. ST. LC6. 1.6
   NAME=COMB6. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC2. 1.6. ST. LC4. 1.6. ST. LC6. 0.6
   NAME=COMB7. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC6. 1.6
   NAME=COMB8. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC6. 0.6
   NAME=COMB9. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 1.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB10. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 0.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB11. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 1.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB12. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 0.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB13. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 1.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB14. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 0.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB15. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 1.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB16. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 0.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB17. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC7. 1.6
   NAME=COMB18. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC7. 0.6
   NAME=COMB19. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC7. 1.6
   NAME=COMB20. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC7. 0.6
   NAME=COMB21. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1
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NAME=COMB22. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5
NAME=COMB23. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1
NAME=COMB24. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5
NAME=COMB25. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1. ST. LC8. 1. ST. LC11. 1
NAME=COMB26. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5. ST. LC8. 1
     ST. LC11. 1
NAME=COMB27. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1. ST. LC9. 1. ST. LC10. 1
     ST. LC11. 1
NAME=COMB28. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5. ST. LC9. 1
     ST. LC10. 1. ST. LC11. 1
NAME=COMB29. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1. ST. LC8. 1. ST. LC11. 1
NAME=COMB30. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5. ST. LC8. 1
     ST. LC11. 1
NAME=COMB31. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1. ST. LC9. 1. ST. LC10. 1
     ST. LC11. 1
NAME=COMB32. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5. ST. LC9. 1
     ST. LC10. 1. ST. LC11. 1
NAME=COMB33. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC6. 1
NAME=COMB34. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC7. 1
NAME=COMB35. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC7. 0.5
NAME=USD. GEN. ACTIVE. 0. 1. . 0. 0
     ST. NCOMB1. 1. ST. NCOMB2. 1. ST. NCOMB3. 1. ST. NCOMB4. 1
     ST. NCOMB5. 1. ST. NCOMB6. 1. ST. NCOMB7. 1. ST. NCOMB8. 1
     ST. NCOMB9. 1. ST. NCOMB10. 1. ST. NCOMB11. 1. ST. NCOMB12. 1
     ST. NCOMB13. 1. ST. NCOMB14. 1. ST. NCOMB15. 1. ST. NCOMB16. 1
     ST. NCOMB17. 1. ST. NCOMB18. 1. ST. NCOMB19. 1. ST. NCOMB20. 1
NAME=WSD. GEN. ACTIVE. 0. 1. . 0. 0
     ST. NCOMB21. 1. ST. NCOMB22. 1. ST. NCOMB23. 1. ST. NCOMB24. 1
     ST. NCOMB25. 1. ST. NCOMB26. 1. ST. NCOMB27. 1. ST. NCOMB28. 1
     ST. NCOMB29. 1. ST. NCOMB30. 1. ST. NCOMB31. 1. ST. NCOMB32. 1
     ST. NCOMB33. 1. ST. NCOMB34. 1. ST. NCOMB35. 1
NAME=NCOMB1. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB1. 1
NAME=NCOMB2. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB2. 1
NAME=NCOMB3. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB3. 1
NAME=NCOMB4. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB4. 1
NAME=NCOMB5. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB5. 1
NAME=NCOMB6. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB6. 1
NAME=NCOMB7. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB7. 1
NAME=NCOMB8. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB8. 1
NAME=NCOMB9. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB9. 1
NAME=NCOMB10. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB10. 1
NAME=NCOMB11. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB11. 1
NAME=NCOMB12. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB12. 1
NAME=NCOMB13. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB13. 1
NAME=NCOMB14. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB14. 1
NAME=NCOMB15. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB15. 1
NAME=NCOMB16. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB16. 1
NAME=NCOMB17. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB17. 1
NAME=NCOMB18. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB18. 1
NAME=NCOMB19. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB19. 1
NAME=NCOMB20. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB20. 1
NAME=NCOMB21. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB21. 1
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    NAME=NCOMB22. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB22. 1
    NAME=NCOMB23. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB23. 1
    NAME=NCOMB24. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB24. 1
    NAME=NCOMB25. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB25. 1
    NAME=NCOMB26. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB26. 1
    NAME=NCOMB27. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB27. 1
    NAME=NCOMB28. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB28. 1
    NAME=NCOMB29. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB29. 1
    NAME=NCOMB30. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB30. 1
    NAME=NCOMB31. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB31. 1
    NAME=NCOMB32. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB32. 1
    NAME=NCOMB33. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB33. 1
    NAME=NCOMB34. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB34. 1
    NAME=NCOMB35. CONC. STRENGTH. 0. 0. . 0. 0
          ST. NCOMB35. 1

*LOADCONST    ; Load Constribution for Nonlinear Load Case
; NAME=STLDCASE. DESC                                          ; 1st line
;      LCNAME1. LCTYPE1. FACTOR1. LCNAME2. LCTYPE2. FACTOR2. ...   ; from line 2
    NAME=NCOMB1.
          LC1. ST. 1.35. LC2. ST. 1.85. LC4. ST. 1.85. LC6. ST. 1.6
    NAME=NCOMB2.
          LC1. ST. 1.35. LC2. ST. 1.85. LC4. ST. 1.85. LC6. ST. 0.6
    NAME=NCOMB3.
          LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC6. ST. 1.6
    NAME=NCOMB4.
          LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC6. ST. 0.6
    NAME=NCOMB5.
          LC1. ST. 1.6. LC2. ST. 1.6. LC4. ST. 1.6. LC6. ST. 1.6
    NAME=NCOMB6.
          LC1. ST. 1.6. LC2. ST. 1.6. LC4. ST. 1.6. LC6. ST. 0.6
    NAME=NCOMB7.
          LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC6. ST. 1.6
    NAME=NCOMB8.
          LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC6. ST. 0.6
    NAME=NCOMB9.
          LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 1.6. LC8. ST. 1.35
          LC11. ST. 1.35
    NAME=NCOMB10.
          LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 0.6. LC8. ST. 1.35
          LC11. ST. 1.35
    NAME=NCOMB11.
          LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 1.6. LC9. ST. 1.35
          LC10. ST. 1.35. LC11. ST. 1.4
    NAME=NCOMB12.
          LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 0.6. LC9. ST. 1.35
          LC10. ST. 1.35. LC11. ST. 1.4
    NAME=NCOMB13.
          LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 1.6. LC8. ST. 1.35
          LC11. ST. 1.35
    NAME=NCOMB14.
          LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 0.6. LC8. ST. 1.35
          LC11. ST. 1.35
    NAME=NCOMB15.
          LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 1.6. LC9. ST. 1.35
          LC10. ST. 1.35. LC11. ST. 1.4
    NAME=NCOMB16.
          LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 0.6. LC9. ST. 1.35
          LC10. ST. 1.35. LC11. ST. 1.4
    NAME=NCOMB17.
          LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC7. ST. 1.6
    NAME=NCOMB18.
          LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC7. ST. 0.6
    NAME=NCOMB19.
          LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC7. ST. 1.6
    NAME=NCOMB20.
          LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC7. ST. 0.6
    NAME=NCOMB21.
          LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1
    NAME=NCOMB22.
          LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5
    NAME=NCOMB23.
          LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1
    NAME=NCOMB24.
```

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        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 0.5
    NAME=NCOMB25.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1. LC8. ST. 1. LC11. ST. 1
    NAME=NCOMB26.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5. LC8. ST. 1
        LC11. ST. 1
    NAME=NCOMB27.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1. LC9. ST. 1. LC10. ST. 1
        LC11. ST. 1
    NAME=NCOMB28.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5. LC9. ST. 1
        LC10. ST. 1. LC11. ST. 1
    NAME=NCOMB29.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1. LC8. ST. 1. LC11. ST. 1
    NAME=NCOMB30.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 0.5. LC8. ST. 1
        LC11. ST. 1
    NAME=NCOMB31.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1. LC9. ST. 1. LC10. ST. 1
        LC11. ST. 1
    NAME=NCOMB32.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 0.5. LC9. ST. 1
        LC10. ST. 1. LC11. ST. 1
    NAME=NCOMB33.
        LC1. ST. 1. LC6. ST. 1
    NAME=NCOMB34.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC7. ST. 1
    NAME=NCOMB35.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC7. ST. 0.5

*LC-COLOR    ; Diagram Color for Load Case
; ANAL. LCNAME. iR1(ALL). iG1(ALL). iB1(ALL). iR2(MIN). iG2(MIN). iB2(MIN). iR3(MAX). iG2(MAX). iB2(MAX)
 CB. COMB1. 85. 0. 192. 255. 255. 87. 146. 0. 255
 CB. COMB2. 192. 72. 0. 0. 128. 128. 93. 255. 87
 CB. COMB3. 255. 87. 128. 255. 192. 87. 160. 255. 255
 CB. COMB4. 255. 160. 255. 255. 192. 87. 163. 160. 255
 CB. COMB5. 0. 192. 192. 85. 0. 192. 85. 192. 0
 CB. COMB6. 0. 128. 255. 160. 255. 255. 192. 72. 0
 CB. COMB7. 255. 192. 160. 192. 0. 128. 192. 192. 192
 CB. COMB8. 255. 87. 128. 160. 255. 255. 192. 128. 0
 CB. COMB9. 255. 160. 255. 192. 0. 128. 255. 192. 87
 CB. COMB10. 163. 160. 255. 255. 255. 87. 255. 192. 160
 CB. COMB11. 192. 0. 128. 255. 192. 160. 255. 160. 255
 CB. COMB12. 255. 128. 0. 192. 0. 128. 210. 210. 210
 CB. COMB13. 192. 192. 192. 85. 192. 0. 212. 160. 255
 CB. COMB14. 255. 192. 160. 0. 157. 192. 255. 192. 87
 CB. COMB15. 0. 157. 192. 192. 192. 192. 160. 255. 255
 CB. COMB16. 0. 128. 128. 160. 255. 255. 255. 87. 87
 CB. COMB17. 255. 0. 192. 78. 0. 255. 255. 128. 0
 CB. COMB18. 85. 192. 0. 255. 192. 160. 255. 192. 87
 CB. COMB19. 160. 255. 255. 255. 128. 0. 0. 192. 192
 CB. COMB20. 192. 192. 0. 160. 255. 255. 255. 87. 87
 CB. COMB21. 192. 192. 192. 192. 192. 192. 85. 0. 192
 CB. COMB22. 255. 192. 87. 192. 128. 0. 212. 160. 255
 CB. COMB23. 255. 255. 255. 0. 128. 128. 192. 128. 0
 CB. COMB24. 192. 192. 0. 85. 0. 192. 255. 0. 192
 CB. COMB25. 128. 192. 0. 210. 210. 210. 255. 255. 255
 CB. COMB26. 192. 0. 192. 148. 87. 255. 0. 192. 128
 CB. COMB27. 93. 255. 87. 255. 255. 255. 192. 0. 192
 CB. COMB28. 192. 128. 0. 255. 255. 87. 255. 192. 160
 CB. COMB29. 255. 192. 160. 212. 160. 255. 192. 192. 0
 CB. COMB30. 255. 255. 87. 163. 160. 255. 148. 87. 255
 CB. COMB31. 192. 192. 0. 255. 87. 128. 0. 192. 192
 CB. COMB32. 128. 192. 0. 85. 192. 0. 192. 128. 0
 CB. COMB33. 255. 255. 255. 192. 192. 192. 148. 87. 255
 CB. COMB34. 192. 0. 192. 255. 87. 128. 212. 160. 255
 CB. COMB35. 255. 160. 255. 85. 192. 0. 255. 255. 87
 CB. USD. 255. 192. 87. 163. 255. 160. 192. 128. 0
 CB. WSD. 212. 160. 255. 255. 0. 192. 93. 255. 87
 ST. LC1. 212. 160. 255. 210. 210. 210. 212. 160. 255
 ST. LC2. 212. 160. 255. 0. 128. 57. 255. 255. 87
 ST. LC3. 210. 210. 210. 212. 160. 255. 146. 0. 255
 ST. LC4. 0. 128. 57. 128. 192. 0. 0. 157. 192
 ST. LC5. 128. 192. 0. 148. 87. 255. 160. 255. 255
 ST. LC6. 192. 0. 192. 255. 160. 255. 163. 160. 255
 ST. LC7. 192. 192. 192. 0. 128. 255. 255. 160. 255
 ST. LC8. 192. 128. 0. 192. 0. 128. 128. 192. 0
 ST. LC9. 192. 0. 192. 78. 0. 255. 85. 0. 192
 ST. LC10. 210. 210. 210. 255. 255. 255. 0. 128. 128
 ST. LC11. 255. 255. 87. 255. 0. 128. 210. 210. 210
 CBC. NCOMB1. 192. 72. 0. 255. 192. 160. 0. 192. 128
 CBC. NCOMB2. 78. 0. 255. 192. 0. 192. 255. 160. 255
 CBC. NCOMB3. 163. 255. 160. 78. 0. 255. 85. 0. 192
 CBC. NCOMB4. 0. 192. 128. 85. 0. 192. 212. 160. 255
 CBC. NCOMB5. 0. 128. 255. 255. 87. 87. 0. 192. 128
 CBC. NCOMB6. 78. 0. 255. 0. 128. 128. 93. 255. 87
 CBC. NCOMB7. 160. 192. 255. 160. 255. 255. 210. 210. 210
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CBC. NCOMB8. 192. 72. 0. 192. 0. 192. 192. 72. 0
CBC. NCOMB9. 148. 87. 255. 212. 160. 255. 210. 210. 210
CBC. NCOMB10. 0. 128. 57. 192. 72. 0. 255. 0. 128
CBC. NCOMB11. 0. 128. 192. 212. 160. 255. 255. 255. 87
CBC. NCOMB12. 192. 0. 128. 255. 87. 87. 0. 157. 192
CBC. NCOMB13. 255. 160. 255. 255. 0. 128. 0. 128. 128
CBC. NCOMB14. 93. 255. 87. 255. 192. 160. 255. 255. 87
CBC. NCOMB15. 255. 255. 87. 192. 192. 192. 192. 0. 192
CBC. NCOMB16. 0. 128. 128. 255. 255. 255. 163. 255. 160
CBC. NCOMB17. 163. 255. 160. 160. 192. 255. 163. 255. 160
CBC. NCOMB18. 255. 255. 87. 0. 157. 192. 255. 87. 87
CBC. NCOMB19. 0. 128. 255. 0. 128. 192. 0. 157. 192
CBC. NCOMB20. 192. 0. 192. 255. 128. 0. 255. 87. 87
CBC. NCOMB21. 255. 255. 255. 160. 255. 255. 78. 0. 255
CBC. NCOMB22. 85. 0. 192. 255. 255. 87. 148. 87. 255
CBC. NCOMB23. 255. 128. 0. 255. 255. 255. 255. 0. 192
CBC. NCOMB24. 192. 128. 0. 160. 255. 255. 78. 0. 255
CBC. NCOMB25. 163. 160. 255. 192. 192. 192. 255. 87. 128
CBC. NCOMB26. 212. 160. 255. 192. 0. 128. 210. 210. 210
CBC. NCOMB27. 148. 87. 255. 128. 192. 0. 93. 255. 87
CBC. NCOMB28. 0. 192. 128. 255. 87. 128. 0. 128. 192
CBC. NCOMB29. 255. 255. 255. 192. 128. 0. 192. 0. 192
CBC. NCOMB30. 163. 160. 255. 255. 255. 87. 78. 0. 255
CBC. NCOMB31. 85. 0. 192. 255. 160. 255. 148. 87. 255
CBC. NCOMB32. 212. 160. 255. 192. 128. 0. 85. 0. 192
CBC. NCOMB33. 192. 192. 0. 85. 192. 0. 163. 160. 255
CBC. NCOMB34. 255. 192. 87. 255. 87. 128. 0. 128. 128
CBC. NCOMB35. 0. 128. 192. 192. 128. 0. 192. 0. 192
ST. NCOMB1. 93. 255. 87. 255. 255. 255. 255. 87. 87
ST. NCOMB2. 78. 0. 255. 255. 192. 160. 0. 157. 192
ST. NCOMB3. 255. 192. 87. 146. 0. 255. 0. 128. 192
ST. NCOMB4. 128. 192. 0. 192. 128. 0. 192. 192. 192
ST. NCOMB5. 160. 255. 255. 85. 0. 192. 255. 128. 0
ST. NCOMB6. 146. 0. 255. 255. 128. 0. 148. 87. 255
ST. NCOMB7. 212. 160. 255. 0. 192. 192. 146. 0. 255
ST. NCOMB8. 85. 0. 192. 85. 0. 192. 160. 255. 255
ST. NCOMB9. 0. 157. 192. 160. 255. 255. 255. 192. 160
ST. NCOMB10. 0. 192. 192. 0. 157. 192. 255. 87. 128
ST. NCOMB11. 255. 128. 0. 255. 255. 255. 0. 157. 192
ST. NCOMB12. 0. 128. 255. 255. 0. 192. 255. 87. 87
ST. NCOMB13. 85. 0. 192. 0. 192. 128. 192. 72. 0
ST. NCOMB14. 0. 157. 192. 0. 128. 57. 148. 87. 255
ST. NCOMB15. 0. 192. 128. 0. 128. 192. 146. 0. 255
ST. NCOMB16. 192. 72. 0. 255. 192. 160. 255. 0. 192
ST. NCOMB17. 0. 192. 128. 192. 72. 0. 212. 160. 255
ST. NCOMB18. 255. 255. 87. 0. 128. 57. 0. 128. 192
ST. NCOMB19. 93. 255. 87. 192. 0. 192. 78. 0. 255
ST. NCOMB20. 160. 192. 255. 255. 255. 87. 255. 0. 192
ST. NCOMB21. 210. 210. 210. 212. 160. 255. 128. 192. 0
ST. NCOMB22. 160. 192. 255. 128. 192. 0. 93. 255. 87
ST. NCOMB23. 255. 87. 128. 255. 87. 87. 192. 192. 0
ST. NCOMB24. 192. 192. 0. 255. 255. 87. 148. 87. 255
ST. NCOMB25. 93. 255. 87. 192. 192. 192. 93. 255. 87
ST. NCOMB26. 160. 192. 255. 192. 0. 192. 160. 192. 255
ST. NCOMB27. 192. 72. 0. 255. 0. 128. 255. 255. 255
ST. NCOMB28. 0. 192. 128. 163. 160. 255. 255. 160. 255
ST. NCOMB29. 0. 157. 192. 93. 255. 87. 148. 87. 255
ST. NCOMB30. 0. 157. 192. 160. 192. 255. 163. 160. 255
ST. NCOMB31. 192. 72. 0. 255. 87. 87. 255. 160. 255
ST. NCOMB32. 0. 128. 128. 163. 160. 255. 0. 128. 57
ST. NCOMB33. 146. 0. 255. 146. 0. 255. 0. 128. 192
ST. NCOMB34. 93. 255. 87. 85. 192. 0. 255. 192. 160
ST. NCOMB35. 163. 255. 160. 192. 0. 128. 255. 160. 255

*ANAL-CTRL
; bARDC. bANRC. iITER. TOL. bCSECF. bTRS. bCRBAR. bTPF. bCSO. bSCS. bCLATS
   YES. YES. 20. 0.001. YES. YES. YES. NO. NO. NO. NO


*ENDDATA
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8.OUPUT

F R A M E E L E M E N T F O R C E S

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
1	USD(max)	I[1]	35.110	0.000	-284.790	0.00E+00	-8.350	0.000
1	USD(max)	1/4	35.110	0.000	-285.810	0.00E+00	15.020	0.000
1	USD(max)	2/4	35.110	0.000	-286.830	0.00E+00	38.480	0.000
1	USD(max)	3/4	35.110	0.000	-287.860	0.00E+00	62.020	0.000
1	USD(max)	J[2]	35.110	0.000	-288.880	0.00E+00	85.650	0.000
1	USD(min)	I[1]	-210.270	0.000	-344.440	0.00E+00	-64.950	0.000
1	USD(min)	1/4	-210.270	0.000	-345.660	0.00E+00	-44.850	0.000
1	USD(min)	2/4	-210.270	0.000	-346.870	0.00E+00	-24.680	0.000
1	USD(min)	3/4	-210.270	0.000	-348.080	0.00E+00	-4.440	0.000
1	USD(min)	J[2]	-210.270	0.000	-349.300	0.00E+00	15.870	0.000
1	WSD(max)	I[1]	21.940	0.000	-195.770	0.00E+00	-6.520	0.000
1	WSD(max)	1/4	21.940	0.000	-196.530	0.00E+00	8.130	0.000
1	WSD(max)	2/4	21.940	0.000	-197.280	0.00E+00	22.830	0.000
1	WSD(max)	3/4	21.940	0.000	-198.040	0.00E+00	37.590	0.000
1	WSD(max)	J[2]	21.940	0.000	-198.800	0.00E+00	52.400	0.000
1	WSD(min)	I[1]	-128.190	0.000	-215.280	0.00E+00	-38.250	0.000
1	WSD(min)	1/4	-128.190	0.000	-216.040	0.00E+00	-23.740	0.000
1	WSD(min)	2/4	-128.190	0.000	-216.790	0.00E+00	-9.180	0.000
1	WSD(min)	3/4	-128.190	0.000	-217.550	0.00E+00	5.430	0.000
1	WSD(min)	J[2]	-128.190	0.000	-218.310	0.00E+00	20.090	0.000
2	USD(max)	I[2]	35.110	0.000	-169.800	0.00E+00	85.650	0.000
2	USD(max)	1/4	35.110	0.000	-170.660	0.00E+00	97.690	0.000
2	USD(max)	2/4	35.110	0.000	-171.510	0.00E+00	109.790	0.000
2	USD(max)	3/4	35.110	0.000	-172.370	0.00E+00	121.950	0.000
2	USD(max)	J[3]	35.110	0.000	-173.220	0.00E+00	134.170	0.000
2	USD(min)	I[2]	-210.270	0.000	-217.420	0.00E+00	15.870	0.000
2	USD(min)	1/4	-210.270	0.000	-218.440	0.00E+00	26.170	0.000
2	USD(min)	2/4	-210.270	0.000	-219.450	0.00E+00	36.520	0.000
2	USD(min)	3/4	-210.270	0.000	-220.470	0.00E+00	46.920	0.000
2	USD(min)	J[3]	-210.270	0.000	-221.480	0.00E+00	57.370	0.000
2	WSD(max)	I[2]	21.940	0.000	-115.210	0.00E+00	52.400	0.000
2	WSD(max)	1/4	21.940	0.000	-115.850	0.00E+00	59.990	0.000
2	WSD(max)	2/4	21.940	0.000	-116.480	0.00E+00	67.610	0.000
2	WSD(max)	3/4	21.940	0.000	-117.110	0.00E+00	75.270	0.000
2	WSD(max)	J[3]	21.940	0.000	-117.750	0.00E+00	82.970	0.000
2	WSD(min)	I[2]	-128.190	0.000	-135.890	0.00E+00	20.090	0.000
2	WSD(min)	1/4	-128.190	0.000	-136.520	0.00E+00	27.450	0.000
2	WSD(min)	2/4	-128.190	0.000	-137.160	0.00E+00	34.850	0.000
2	WSD(min)	3/4	-128.190	0.000	-137.790	0.00E+00	42.280	0.000
2	WSD(min)	J[3]	-128.190	0.000	-138.420	0.00E+00	49.750	0.000
3	USD(max)	I[3]	35.110	0.000	-101.100	0.00E+00	134.170	0.000
3	USD(max)	1/4	35.110	0.000	-101.960	0.00E+00	141.830	0.000
3	USD(max)	2/4	35.110	0.000	-102.810	0.00E+00	149.540	0.000
3	USD(max)	3/4	35.110	0.000	-103.670	0.00E+00	157.320	0.000
3	USD(max)	J[4]	35.110	0.000	-104.520	0.00E+00	165.150	0.000
3	USD(min)	I[3]	-210.270	0.000	-142.530	0.00E+00	57.370	0.000
3	USD(min)	1/4	-210.270	0.000	-143.550	0.00E+00	63.880	0.000
3	USD(min)	2/4	-210.270	0.000	-144.560	0.00E+00	70.420	0.000
3	USD(min)	3/4	-210.270	0.000	-145.580	0.00E+00	76.740	0.000
3	USD(min)	J[4]	-210.270	0.000	-146.590	0.00E+00	83.120	0.000
3	WSD(max)	I[3]	21.940	0.000	-68.570	0.00E+00	82.970	0.000
3	WSD(max)	1/4	21.940	0.000	-69.200	0.00E+00	87.830	0.000
3	WSD(max)	2/4	21.940	0.000	-69.840	0.00E+00	92.720	0.000
3	WSD(max)	3/4	21.940	0.000	-70.470	0.00E+00	97.650	0.000
3	WSD(max)	J[4]	21.940	0.000	-71.100	0.00E+00	102.620	0.000
3	WSD(min)	I[3]	-128.190	0.000	-89.080	0.00E+00	49.750	0.000
3	WSD(min)	1/4	-128.190	0.000	-89.720	0.00E+00	54.340	0.000
3	WSD(min)	2/4	-128.190	0.000	-90.350	0.00E+00	58.930	0.000
3	WSD(min)	3/4	-128.190	0.000	-90.980	0.00E+00	62.960	0.000
3	WSD(min)	J[4]	-128.190	0.000	-91.620	0.00E+00	67.030	0.000
4	USD(max)	I[4]	35.110	0.000	-32.540	0.00E+00	165.150	0.000
4	USD(max)	1/4	35.110	0.000	-33.400	0.00E+00	168.390	0.000
4	USD(max)	2/4	35.110	0.000	-34.250	0.00E+00	171.690	0.000
4	USD(max)	3/4	35.110	0.000	-35.110	0.00E+00	175.050	0.000
4	USD(max)	J[5]	35.110	0.000	-35.970	0.00E+00	178.460	0.000
4	USD(min)	I[4]	-210.270	0.000	-66.370	0.00E+00	83.120	0.000
4	USD(min)	1/4	-210.270	0.000	-67.390	0.00E+00	85.580	0.000
4	USD(min)	2/4	-210.270	0.000	-68.400	0.00E+00	88.090	0.000
4	USD(min)	3/4	-210.270	0.000	-69.410	0.00E+00	90.650	0.000
4	USD(min)	J[5]	-210.270	0.000	-70.430	0.00E+00	93.250	0.000
4	WSD(max)	I[4]	21.940	0.000	-22.000	0.00E+00	102.620	0.000
4	WSD(max)	1/4	21.940	0.000	-22.640	0.00E+00	104.720	0.000
4	WSD(max)	2/4	21.940	0.000	-23.270	0.00E+00	106.850	0.000
4	WSD(max)	3/4	21.940	0.000	-23.900	0.00E+00	109.030	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
4	WSD(max)	J[5]	21.940	0.000	-24.540	0.00E+00	111.240	0.000
4	WSD(min)	I[4]	-128.190	0.000	-41.480	0.00E+00	67.030	0.000
4	WSD(min)	1/4	-128.190	0.000	-42.120	0.00E+00	68.320	0.000
4	WSD(min)	2/4	-128.190	0.000	-42.750	0.00E+00	69.640	0.000
4	WSD(min)	3/4	-128.190	0.000	-43.380	0.00E+00	70.990	0.000
4	WSD(min)	J[5]	-128.190	0.000	-44.020	0.00E+00	72.390	0.000
5	USD(max)	I[5]	35.110	0.000	42.570	0.00E+00	178.460	0.000
5	USD(max)	1/4	35.110	0.000	41.560	0.00E+00	177.240	0.000
5	USD(max)	2/4	35.110	0.000	40.540	0.00E+00	176.080	0.000
5	USD(max)	3/4	35.110	0.000	39.530	0.00E+00	174.980	0.000
5	USD(max)	J[6]	35.110	0.000	38.510	0.00E+00	173.960	0.000
5	USD(min)	I[5]	-210.270	0.000	3.320	0.00E+00	93.250	0.000
5	USD(min)	1/4	-210.270	0.000	2.470	0.00E+00	91.930	0.000
5	USD(min)	2/4	-210.270	0.000	1.610	0.00E+00	90.660	0.000
5	USD(min)	3/4	-210.270	0.000	0.750	0.00E+00	89.440	0.000
5	USD(min)	J[6]	-210.270	0.000	-0.100	0.00E+00	88.270	0.000
5	WSD(max)	I[5]	21.940	0.000	26.610	0.00E+00	111.240	0.000
5	WSD(max)	1/4	21.940	0.000	25.970	0.00E+00	110.550	0.000
5	WSD(max)	2/4	21.940	0.000	25.340	0.00E+00	109.900	0.000
5	WSD(max)	3/4	21.940	0.000	24.710	0.00E+00	109.290	0.000
5	WSD(max)	J[6]	21.940	0.000	24.070	0.00E+00	108.730	0.000
5	WSD(min)	I[5]	-128.190	0.000	6.990	0.00E+00	72.390	0.000
5	WSD(min)	1/4	-128.190	0.000	6.350	0.00E+00	70.990	0.000
5	WSD(min)	2/4	-128.190	0.000	5.720	0.00E+00	69.640	0.000
5	WSD(min)	3/4	-128.190	0.000	5.080	0.00E+00	68.320	0.000
5	WSD(min)	J[6]	-128.190	0.000	4.450	0.00E+00	67.030	0.000
6	USD(max)	I[6]	35.110	0.000	123.700	0.00E+00	173.960	0.000
6	USD(max)	1/4	35.110	0.000	122.690	0.00E+00	168.800	0.000
6	USD(max)	2/4	35.110	0.000	121.670	0.00E+00	163.700	0.000
6	USD(max)	3/4	35.110	0.000	120.660	0.00E+00	158.660	0.000
6	USD(max)	J[7]	35.110	0.000	119.650	0.00E+00	153.670	0.000
6	USD(min)	I[6]	-210.270	0.000	71.350	0.00E+00	88.270	0.000
6	USD(min)	1/4	-210.270	0.000	70.490	0.00E+00	83.140	0.000
6	USD(min)	2/4	-210.270	0.000	69.640	0.00E+00	78.070	0.000
6	USD(min)	3/4	-210.270	0.000	68.780	0.00E+00	72.400	0.000
6	USD(min)	J[7]	-210.270	0.000	67.930	0.00E+00	66.550	0.000
6	WSD(max)	I[6]	21.940	0.000	77.310	0.00E+00	108.730	0.000
6	WSD(max)	1/4	21.940	0.000	76.680	0.00E+00	105.500	0.000
6	WSD(max)	2/4	21.940	0.000	76.050	0.00E+00	102.310	0.000
6	WSD(max)	3/4	21.940	0.000	75.410	0.00E+00	99.160	0.000
6	WSD(max)	J[7]	21.940	0.000	74.780	0.00E+00	96.050	0.000
6	WSD(min)	I[6]	-128.190	0.000	56.400	0.00E+00	67.030	0.000
6	WSD(min)	1/4	-128.190	0.000	55.760	0.00E+00	62.960	0.000
6	WSD(min)	2/4	-128.190	0.000	55.130	0.00E+00	58.930	0.000
6	WSD(min)	3/4	-128.190	0.000	54.500	0.00E+00	54.930	0.000
6	WSD(min)	J[7]	-128.190	0.000	53.860	0.00E+00	50.970	0.000
7	USD(max)	I[7]	35.110	0.000	204.970	0.00E+00	153.670	0.000
7	USD(max)	1/4	35.110	0.000	203.960	0.00E+00	143.870	0.000
7	USD(max)	2/4	35.110	0.000	202.940	0.00E+00	134.130	0.000
7	USD(max)	3/4	35.110	0.000	201.930	0.00E+00	124.450	0.000
7	USD(max)	J[8]	35.110	0.000	200.910	0.00E+00	114.820	0.000
7	USD(min)	I[7]	-210.270	0.000	141.050	0.00E+00	66.550	0.000
7	USD(min)	1/4	-210.270	0.000	140.190	0.00E+00	56.600	0.000
7	USD(min)	2/4	-210.270	0.000	139.340	0.00E+00	46.690	0.000
7	USD(min)	3/4	-210.270	0.000	138.480	0.00E+00	36.840	0.000
7	USD(min)	J[8]	-210.270	0.000	137.620	0.00E+00	27.030	0.000
7	WSD(max)	I[7]	21.940	0.000	128.110	0.00E+00	96.050	0.000
7	WSD(max)	1/4	21.940	0.000	127.470	0.00E+00	89.920	0.000
7	WSD(max)	2/4	21.940	0.000	126.840	0.00E+00	83.830	0.000
7	WSD(max)	3/4	21.940	0.000	126.200	0.00E+00	77.780	0.000
7	WSD(max)	J[8]	21.940	0.000	125.570	0.00E+00	71.760	0.000
7	WSD(min)	I[7]	-128.190	0.000	106.840	0.00E+00	50.970	0.000
7	WSD(min)	1/4	-128.190	0.000	106.200	0.00E+00	44.220	0.000
7	WSD(min)	2/4	-128.190	0.000	105.570	0.00E+00	37.500	0.000
7	WSD(min)	3/4	-128.190	0.000	104.930	0.00E+00	30.820	0.000
7	WSD(min)	J[8]	-128.190	0.000	104.300	0.00E+00	24.180	0.000
8	USD(max)	I[8]	35.110	0.000	345.940	0.00E+00	114.820	0.000
8	USD(max)	1/4	35.110	0.000	344.730	0.00E+00	93.310	0.000
8	USD(max)	2/4	35.110	0.000	343.520	0.00E+00	71.870	0.000
8	USD(max)	3/4	35.110	0.000	342.300	0.00E+00	50.530	0.000
8	USD(max)	J[9]	35.110	0.000	341.090	0.00E+00	29.260	0.000
8	USD(min)	I[8]	-210.270	0.000	264.610	0.00E+00	27.030	0.000
8	USD(min)	1/4	-210.270	0.000	263.580	0.00E+00	6.930	0.000
8	USD(min)	2/4	-210.270	0.000	262.560	0.00E+00	-13.090	0.000
8	USD(min)	3/4	-210.270	0.000	261.540	0.00E+00	-33.510	0.000
8	USD(min)	J[9]	-210.270	0.000	260.510	0.00E+00	-53.940	0.000
8	WSD(max)	I[8]	21.940	0.000	216.210	0.00E+00	71.760	0.000
8	WSD(max)	1/4	21.940	0.000	215.460	0.00E+00	58.320	0.000
8	WSD(max)	2/4	21.940	0.000	214.700	0.00E+00	44.920	0.000
8	WSD(max)	3/4	21.940	0.000	213.940	0.00E+00	31.580	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
8	WSD(max)	J[9]	21.940	0.000	213.180	0.00E+00	18.290	0.000
8	WSD(min)	I[8]	-128.190	0.000	195.980	0.00E+00	24.180	0.000
8	WSD(min)	1/4	-128.190	0.000	195.220	0.00E+00	10.540	0.000
8	WSD(min)	2/4	-128.190	0.000	194.460	0.00E+00	-3.050	0.000
8	WSD(min)	3/4	-128.190	0.000	193.710	0.00E+00	-17.610	0.000
8	WSD(min)	J[9]	-128.190	0.000	192.950	0.00E+00	-32.290	0.000
9	USD(max)	I[1]	-421.670	0.000	-11.380	0.00E+00	-74.310	0.000
9	USD(max)	1/4	-419.940	0.000	-10.130	0.00E+00	-67.720	0.000
9	USD(max)	2/4	-418.200	0.000	-8.880	0.00E+00	-61.160	0.000
9	USD(max)	3/4	-416.460	0.000	-7.660	0.00E+00	-55.060	0.000
9	USD(max)	J[10]	-414.730	0.000	-6.440	0.00E+00	-49.420	0.000
9	USD(min)	I[1]	-513.940	0.000	-158.500	0.00E+00	-100.990	0.000
9	USD(min)	1/4	-511.890	0.000	-149.050	0.00E+00	-99.600	0.000
9	USD(min)	2/4	-509.830	0.000	-139.630	0.00E+00	-98.320	0.000
9	USD(min)	3/4	-507.770	0.000	-130.240	0.00E+00	-97.140	0.000
9	USD(min)	J[10]	-505.710	0.000	-120.890	0.00E+00	-96.080	0.000
9	WSD(max)	I[1]	-295.150	0.000	-9.310	0.00E+00	-50.630	0.000
9	WSD(max)	1/4	-293.870	0.000	-8.400	0.00E+00	-46.600	0.000
9	WSD(max)	2/4	-292.580	0.000	-7.510	0.00E+00	-42.850	0.000
9	WSD(max)	3/4	-291.290	0.000	-6.620	0.00E+00	-39.360	0.000
9	WSD(max)	J[10]	-290.010	0.000	-5.750	0.00E+00	-36.140	0.000
9	WSD(min)	I[1]	-321.210	0.000	-95.370	0.00E+00	-63.120	0.000
9	WSD(min)	1/4	-319.930	0.000	-89.530	0.00E+00	-62.250	0.000
9	WSD(min)	2/4	-318.640	0.000	-83.710	0.00E+00	-61.450	0.000
9	WSD(min)	3/4	-317.360	0.000	-77.910	0.00E+00	-60.710	0.000
9	WSD(min)	J[10]	-316.070	0.000	-72.130	0.00E+00	-60.050	0.000
10	USD(max)	I[9]	-411.730	0.000	35.110	0.00E+00	-53.010	0.000
10	USD(max)	1/4	-409.990	0.000	35.110	0.00E+00	-54.690	0.000
10	USD(max)	2/4	-408.250	0.000	35.110	0.00E+00	-50.640	0.000
10	USD(max)	3/4	-406.520	0.000	35.110	0.00E+00	-45.430	0.000
10	USD(max)	J[11]	-404.780	0.000	35.110	0.00E+00	-40.650	0.000
10	USD(min)	I[9]	-513.940	0.000	-147.990	0.00E+00	-88.190	0.000
10	USD(min)	1/4	-511.890	0.000	-138.540	0.00E+00	-85.420	0.000
10	USD(min)	2/4	-509.830	0.000	-129.120	0.00E+00	-83.290	0.000
10	USD(min)	3/4	-507.770	0.000	-119.730	0.00E+00	-81.340	0.000
10	USD(min)	J[11]	-505.710	0.000	-110.380	0.00E+00	-79.590	0.000
10	WSD(max)	I[9]	-295.150	0.000	21.940	0.00E+00	-41.490	0.000
10	WSD(max)	1/4	-293.870	0.000	21.940	0.00E+00	-42.580	0.000
10	WSD(max)	2/4	-292.580	0.000	21.940	0.00E+00	-40.100	0.000
10	WSD(max)	3/4	-291.290	0.000	21.940	0.00E+00	-36.890	0.000
10	WSD(max)	J[11]	-290.010	0.000	21.940	0.00E+00	-33.950	0.000
10	WSD(min)	I[9]	-321.210	0.000	-89.690	0.00E+00	-55.120	0.000
10	WSD(min)	1/4	-319.930	0.000	-83.850	0.00E+00	-52.870	0.000
10	WSD(min)	2/4	-318.640	0.000	-78.030	0.00E+00	-50.990	0.000
10	WSD(min)	3/4	-317.360	0.000	-72.230	0.00E+00	-49.270	0.000
10	WSD(min)	J[11]	-316.070	0.000	-66.450	0.00E+00	-48.100	0.000
11	USD(max)	I[10]	-414.730	0.000	-6.440	0.00E+00	-49.420	0.000
11	USD(max)	1/4	-413.800	0.000	-4.760	0.00E+00	-42.290	0.000
11	USD(max)	2/4	-412.870	0.000	-3.100	0.00E+00	-36.050	0.000
11	USD(max)	3/4	-411.950	0.000	-1.470	0.00E+00	-30.700	0.000
11	USD(max)	J[12]	-411.020	0.000	0.130	0.00E+00	-26.220	0.000
11	USD(min)	I[10]	-505.710	0.000	-120.890	0.00E+00	-96.080	0.000
11	USD(min)	1/4	-504.610	0.000	-107.860	0.00E+00	-94.760	0.000
11	USD(min)	2/4	-503.520	0.000	-94.890	0.00E+00	-93.650	0.000
11	USD(min)	3/4	-502.420	0.000	-81.990	0.00E+00	-93.350	0.000
11	USD(min)	J[12]	-501.320	0.000	-69.150	0.00E+00	-93.310	0.000
11	WSD(max)	I[10]	-290.010	0.000	-5.750	0.00E+00	-36.140	0.000
11	WSD(max)	1/4	-289.320	0.000	-4.550	0.00E+00	-32.080	0.000
11	WSD(max)	2/4	-288.630	0.000	-3.360	0.00E+00	-28.540	0.000
11	WSD(max)	3/4	-287.950	0.000	-2.200	0.00E+00	-25.520	0.000
11	WSD(max)	J[12]	-287.260	0.000	-1.060	0.00E+00	-23.010	0.000
11	WSD(min)	I[10]	-316.070	0.000	-72.130	0.00E+00	-60.050	0.000
11	WSD(min)	1/4	-315.380	0.000	-64.070	0.00E+00	-59.230	0.000
11	WSD(min)	2/4	-314.700	0.000	-56.060	0.00E+00	-58.530	0.000
11	WSD(min)	3/4	-314.010	0.000	-48.090	0.00E+00	-58.270	0.000
11	WSD(min)	J[12]	-313.330	0.000	-40.160	0.00E+00	-58.150	0.000
12	USD(max)	I[11]	-404.780	0.000	35.110	0.00E+00	-40.650	0.000
12	USD(max)	1/4	-403.850	0.000	35.110	0.00E+00	-34.670	0.000
12	USD(max)	2/4	-402.930	0.000	35.110	0.00E+00	-29.530	0.000
12	USD(max)	3/4	-402.000	0.000	35.110	0.00E+00	-25.220	0.000
12	USD(max)	J[13]	-401.080	0.000	35.110	0.00E+00	-21.730	0.000
12	USD(min)	I[11]	-505.710	0.000	-110.380	0.00E+00	-79.590	0.000
12	USD(min)	1/4	-504.610	0.000	-97.350	0.00E+00	-79.970	0.000
12	USD(min)	2/4	-503.520	0.000	-84.380	0.00E+00	-82.090	0.000
12	USD(min)	3/4	-502.420	0.000	-71.480	0.00E+00	-84.210	0.000
12	USD(min)	J[13]	-501.320	0.000	-58.640	0.00E+00	-86.330	0.000
12	WSD(max)	I[11]	-290.010	0.000	21.940	0.00E+00	-33.950	0.000
12	WSD(max)	1/4	-289.320	0.000	21.940	0.00E+00	-30.280	0.000
12	WSD(max)	2/4	-288.630	0.000	21.940	0.00E+00	-27.140	0.000
12	WSD(max)	3/4	-287.950	0.000	21.940	0.00E+00	-24.510	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
12	WSD(max)	J[13]	-287.260	0.000	21.940	0.00E+00	-22.390	0.000
12	WSD(min)	I[11]	-316.070	0.000	-66.450	0.00E+00	-48.100	0.000
12	WSD(min)	1/4	-315.380	0.000	-58.390	0.00E+00	-49.470	0.000
12	WSD(min)	2/4	-314.700	0.000	-50.380	0.00E+00	-50.840	0.000
12	WSD(min)	3/4	-314.010	0.000	-42.410	0.00E+00	-52.200	0.000
12	WSD(min)	J[13]	-313.330	0.000	-34.480	0.00E+00	-53.570	0.000
13	USD(max)	I[12]	-411.020	0.000	0.130	0.00E+00	-26.220	0.000
13	USD(max)	1/4	-410.100	0.000	1.710	0.00E+00	-22.630	0.000
13	USD(max)	2/4	-409.170	0.000	3.270	0.00E+00	-19.740	0.000
13	USD(max)	3/4	-408.240	0.000	4.800	0.00E+00	-17.330	0.000
13	USD(max)	J[14]	-407.320	0.000	9.630	0.00E+00	-15.790	0.000
13	USD(min)	I[12]	-501.320	0.000	-69.150	0.00E+00	-93.310	0.000
13	USD(min)	1/4	-500.220	0.000	-56.390	0.00E+00	-93.370	0.000
13	USD(min)	2/4	-499.130	0.000	-43.690	0.00E+00	-93.550	0.000
13	USD(min)	3/4	-498.030	0.000	-31.050	0.00E+00	-93.830	0.000
13	USD(min)	J[14]	-496.930	0.000	-18.490	0.00E+00	-94.220	0.000
13	WSD(max)	I[12]	-287.260	0.000	-1.060	0.00E+00	-23.010	0.000
13	WSD(max)	1/4	-286.580	0.000	0.060	0.00E+00	-21.020	0.000
13	WSD(max)	2/4	-285.890	0.000	1.160	0.00E+00	-19.540	0.000
13	WSD(max)	3/4	-285.200	0.000	2.240	0.00E+00	-18.560	0.000
13	WSD(max)	J[14]	-284.520	0.000	4.180	0.00E+00	-18.090	0.000
13	WSD(min)	I[12]	-313.330	0.000	-40.160	0.00E+00	-58.150	0.000
13	WSD(min)	1/4	-312.640	0.000	-32.270	0.00E+00	-58.120	0.000
13	WSD(min)	2/4	-311.950	0.000	-24.430	0.00E+00	-58.160	0.000
13	WSD(min)	3/4	-311.270	0.000	-16.620	0.00E+00	-58.280	0.000
13	WSD(min)	J[14]	-310.580	0.000	-8.860	0.00E+00	-58.480	0.000
14	USD(max)	I[13]	-401.080	0.000	35.110	0.00E+00	-21.730	0.000
14	USD(max)	1/4	-400.150	0.000	35.110	0.00E+00	-19.070	0.000
14	USD(max)	2/4	-399.220	0.000	35.110	0.00E+00	-17.140	0.000
14	USD(max)	3/4	-398.300	0.000	35.110	0.00E+00	-15.920	0.000
14	USD(max)	J[15]	-397.370	0.000	35.110	0.00E+00	-15.510	0.000
14	USD(min)	I[13]	-501.320	0.000	-58.640	0.00E+00	-86.330	0.000
14	USD(min)	1/4	-500.220	0.000	-45.880	0.00E+00	-88.450	0.000
14	USD(min)	2/4	-499.130	0.000	-33.180	0.00E+00	-90.570	0.000
14	USD(min)	3/4	-498.030	0.000	-20.540	0.00E+00	-92.690	0.000
14	USD(min)	J[15]	-496.930	0.000	-7.980	0.00E+00	-94.810	0.000
14	WSD(max)	I[13]	-287.260	0.000	21.940	0.00E+00	-22.390	0.000
14	WSD(max)	1/4	-286.580	0.000	21.940	0.00E+00	-20.790	0.000
14	WSD(max)	2/4	-285.890	0.000	21.940	0.00E+00	-19.540	0.000
14	WSD(max)	3/4	-285.200	0.000	21.940	0.00E+00	-18.560	0.000
14	WSD(max)	J[15]	-284.520	0.000	21.940	0.00E+00	-18.090	0.000
14	WSD(min)	I[13]	-313.330	0.000	-34.480	0.00E+00	-53.570	0.000
14	WSD(min)	1/4	-312.640	0.000	-26.590	0.00E+00	-54.940	0.000
14	WSD(min)	2/4	-311.950	0.000	-18.750	0.00E+00	-56.300	0.000
14	WSD(min)	3/4	-311.270	0.000	-10.940	0.00E+00	-57.670	0.000
14	WSD(min)	J[15]	-310.580	0.000	-3.180	0.00E+00	-59.040	0.000
15	USD(max)	I[14]	-407.320	0.000	9.630	0.00E+00	-15.790	0.000
15	USD(max)	1/4	-406.390	0.000	14.850	0.00E+00	-15.100	0.000
15	USD(max)	2/4	-405.460	0.000	20.050	0.00E+00	-15.270	0.000
15	USD(max)	3/4	-404.540	0.000	31.770	0.00E+00	-16.290	0.000
15	USD(max)	J[16]	-403.610	0.000	43.920	0.00E+00	-18.090	0.000
15	USD(min)	I[14]	-496.930	0.000	-18.490	0.00E+00	-94.220	0.000
15	USD(min)	1/4	-495.830	0.000	-5.990	0.00E+00	-94.710	0.000
15	USD(min)	2/4	-494.740	0.000	1.860	0.00E+00	-95.310	0.000
15	USD(min)	3/4	-493.640	0.000	4.250	0.00E+00	-96.000	0.000
15	USD(min)	J[16]	-492.540	0.000	6.580	0.00E+00	-96.800	0.000
15	WSD(max)	I[14]	-284.520	0.000	4.180	0.00E+00	-18.090	0.000
15	WSD(max)	1/4	-283.830	0.000	8.340	0.00E+00	-18.120	0.000
15	WSD(max)	2/4	-283.150	0.000	12.470	0.00E+00	-18.640	0.000
15	WSD(max)	3/4	-282.460	0.000	19.860	0.00E+00	-19.660	0.000
15	WSD(max)	J[16]	-281.770	0.000	27.450	0.00E+00	-21.050	0.000
15	WSD(min)	I[14]	-310.580	0.000	-8.860	0.00E+00	-58.480	0.000
15	WSD(min)	1/4	-309.900	0.000	-1.140	0.00E+00	-58.740	0.000
15	WSD(min)	2/4	-309.210	0.000	3.670	0.00E+00	-59.080	0.000
15	WSD(min)	3/4	-308.520	0.000	5.070	0.00E+00	-59.490	0.000
15	WSD(min)	J[16]	-307.840	0.000	6.440	0.00E+00	-59.970	0.000
16	USD(max)	I[15]	-397.370	0.000	35.110	0.00E+00	-15.510	0.000
16	USD(max)	1/4	-396.450	0.000	35.110	0.00E+00	-15.900	0.000
16	USD(max)	2/4	-395.520	0.000	35.110	0.00E+00	-17.090	0.000
16	USD(max)	3/4	-394.590	0.000	37.880	0.00E+00	-19.060	0.000
16	USD(max)	J[17]	-393.670	0.000	49.090	0.00E+00	-21.660	0.000
16	USD(min)	I[15]	-496.930	0.000	-7.980	0.00E+00	-94.810	0.000
16	USD(min)	1/4	-495.830	0.000	4.260	0.00E+00	-96.930	0.000
16	USD(min)	2/4	-494.740	0.000	16.430	0.00E+00	-99.050	0.000
16	USD(min)	3/4	-493.640	0.000	21.980	0.00E+00	-101.180	0.000
16	USD(min)	J[17]	-492.540	0.000	27.010	0.00E+00	-103.300	0.000
16	WSD(max)	I[15]	-284.520	0.000	21.940	0.00E+00	-18.090	0.000
16	WSD(max)	1/4	-283.830	0.000	21.940	0.00E+00	-18.120	0.000
16	WSD(max)	2/4	-283.150	0.000	21.940	0.00E+00	-18.640	0.000
16	WSD(max)	3/4	-282.460	0.000	23.680	0.00E+00	-19.660	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN・m)	Moment-y (kN・m)	Moment-z (kN・m)
16	WSD(max)	J[17]	-281.770	0.000	30.680	0.00E+00	-21.170	0.000
16	WSD(min)	I[15]	-310.580	0.000	-3.180	0.00E+00	-59.040	0.000
16	WSD(min)	1/4	-309.900	0.000	3.960	0.00E+00	-60.410	0.000
16	WSD(min)	2/4	-309.210	0.000	11.050	0.00E+00	-61.770	0.000
16	WSD(min)	3/4	-308.520	0.000	16.580	0.00E+00	-63.140	0.000
16	WSD(min)	J[17]	-307.840	0.000	19.530	0.00E+00	-64.510	0.000
17	USD(max)	I[16]	-403.610	0.000	43.920	0.00E+00	-18.090	0.000
17	USD(max)	1/4	-402.690	0.000	56.010	0.00E+00	-20.700	0.000
17	USD(max)	2/4	-401.760	0.000	68.030	0.00E+00	-24.160	0.000
17	USD(max)	3/4	-400.830	0.000	79.980	0.00E+00	-28.470	0.000
17	USD(max)	J[18]	-399.910	0.000	91.860	0.00E+00	-33.620	0.000
17	USD(min)	I[16]	-492.540	0.000	6.580	0.00E+00	-96.800	0.000
17	USD(min)	1/4	-491.440	0.000	8.830	0.00E+00	-97.690	0.000
17	USD(min)	2/4	-490.350	0.000	11.020	0.00E+00	-98.680	0.000
17	USD(min)	3/4	-489.250	0.000	12.860	0.00E+00	-99.770	0.000
17	USD(min)	J[18]	-488.150	0.000	14.310	0.00E+00	-100.940	0.000
17	WSD(max)	I[16]	-281.770	0.000	27.450	0.00E+00	-21.050	0.000
17	WSD(max)	1/4	-281.090	0.000	35.000	0.00E+00	-22.840	0.000
17	WSD(max)	2/4	-280.400	0.000	42.520	0.00E+00	-25.150	0.000
17	WSD(max)	3/4	-279.720	0.000	49.990	0.00E+00	-27.990	0.000
17	WSD(max)	J[18]	-279.030	0.000	57.410	0.00E+00	-31.350	0.000
17	WSD(min)	I[16]	-307.840	0.000	6.440	0.00E+00	-59.970	0.000
17	WSD(min)	1/4	-307.150	0.000	7.750	0.00E+00	-60.520	0.000
17	WSD(min)	2/4	-306.470	0.000	9.030	0.00E+00	-61.130	0.000
17	WSD(min)	3/4	-305.780	0.000	10.120	0.00E+00	-61.810	0.000
17	WSD(min)	J[18]	-305.090	0.000	11.010	0.00E+00	-62.550	0.000
18	USD(max)	I[17]	-393.670	0.000	49.090	0.00E+00	-21.660	0.000
18	USD(max)	1/4	-392.740	0.000	60.240	0.00E+00	-24.920	0.000
18	USD(max)	2/4	-391.820	0.000	71.310	0.00E+00	-29.010	0.000
18	USD(max)	3/4	-390.890	0.000	82.320	0.00E+00	-33.940	0.000
18	USD(max)	J[19]	-389.960	0.000	93.270	0.00E+00	-39.690	0.000
18	USD(min)	I[17]	-492.540	0.000	27.010	0.00E+00	-103.300	0.000
18	USD(min)	1/4	-491.440	0.000	28.800	0.00E+00	-105.420	0.000
18	USD(min)	2/4	-490.350	0.000	28.800	0.00E+00	-107.800	0.000
18	USD(min)	3/4	-489.250	0.000	28.800	0.00E+00	-110.260	0.000
18	USD(min)	J[19]	-488.150	0.000	28.800	0.00E+00	-112.720	0.000
18	WSD(max)	I[17]	-281.770	0.000	30.680	0.00E+00	-21.170	0.000
18	WSD(max)	1/4	-281.090	0.000	37.650	0.00E+00	-23.180	0.000
18	WSD(max)	2/4	-280.400	0.000	44.570	0.00E+00	-25.660	0.000
18	WSD(max)	3/4	-279.720	0.000	51.450	0.00E+00	-28.630	0.000
18	WSD(max)	J[19]	-279.030	0.000	58.290	0.00E+00	-32.080	0.000
18	WSD(min)	I[17]	-307.840	0.000	19.530	0.00E+00	-64.510	0.000
18	WSD(min)	1/4	-307.150	0.000	19.530	0.00E+00	-65.880	0.000
18	WSD(min)	2/4	-306.470	0.000	19.530	0.00E+00	-67.380	0.000
18	WSD(min)	3/4	-305.780	0.000	19.530	0.00E+00	-68.910	0.000
18	WSD(min)	J[19]	-305.090	0.000	19.530	0.00E+00	-70.450	0.000
19	USD(max)	I[18]	-399.910	0.000	91.860	0.00E+00	-33.620	0.000
19	USD(max)	1/4	-398.980	0.000	103.680	0.00E+00	-39.620	0.000
19	USD(max)	2/4	-398.060	0.000	115.430	0.00E+00	-46.450	0.000
19	USD(max)	3/4	-397.130	0.000	127.120	0.00E+00	-54.110	0.000
19	USD(max)	J[20]	-396.200	0.000	138.740	0.00E+00	-62.590	0.000
19	USD(min)	I[18]	-488.150	0.000	14.310	0.00E+00	-100.940	0.000
19	USD(min)	1/4	-487.050	0.000	15.740	0.00E+00	-102.210	0.000
19	USD(min)	2/4	-485.960	0.000	17.140	0.00E+00	-103.560	0.000
19	USD(min)	3/4	-484.860	0.000	18.520	0.00E+00	-105.010	0.000
19	USD(min)	J[20]	-483.760	0.000	19.870	0.00E+00	-107.080	0.000
19	WSD(max)	I[18]	-279.030	0.000	57.410	0.00E+00	-31.350	0.000
19	WSD(max)	1/4	-278.340	0.000	64.800	0.00E+00	-35.230	0.000
19	WSD(max)	2/4	-277.660	0.000	72.150	0.00E+00	-39.630	0.000
19	WSD(max)	3/4	-276.970	0.000	79.450	0.00E+00	-44.540	0.000
19	WSD(max)	J[20]	-276.290	0.000	86.710	0.00E+00	-49.960	0.000
19	WSD(min)	I[18]	-305.090	0.000	11.010	0.00E+00	-62.550	0.000
19	WSD(min)	1/4	-304.410	0.000	11.890	0.00E+00	-63.350	0.000
19	WSD(min)	2/4	-303.720	0.000	12.730	0.00E+00	-64.210	0.000
19	WSD(min)	3/4	-303.040	0.000	13.560	0.00E+00	-65.130	0.000
19	WSD(min)	J[20]	-302.350	0.000	14.370	0.00E+00	-66.110	0.000
20	USD(max)	I[19]	-389.960	0.000	93.270	0.00E+00	-39.690	0.000
20	USD(max)	1/4	-389.040	0.000	104.140	0.00E+00	-46.260	0.000
20	USD(max)	2/4	-388.110	0.000	115.430	0.00E+00	-53.650	0.000
20	USD(max)	3/4	-387.180	0.000	127.120	0.00E+00	-61.850	0.000
20	USD(max)	J[21]	-386.260	0.000	138.740	0.00E+00	-70.860	0.000
20	USD(min)	I[19]	-488.150	0.000	28.800	0.00E+00	-112.720	0.000
20	USD(min)	1/4	-487.050	0.000	28.800	0.00E+00	-115.180	0.000
20	USD(min)	2/4	-485.960	0.000	28.800	0.00E+00	-117.630	0.000
20	USD(min)	3/4	-484.860	0.000	28.800	0.00E+00	-120.090	0.000
20	USD(min)	J[21]	-483.760	0.000	28.800	0.00E+00	-122.550	0.000
20	WSD(max)	I[19]	-279.030	0.000	58.290	0.00E+00	-32.080	0.000
20	WSD(max)	1/4	-278.340	0.000	65.090	0.00E+00	-36.010	0.000
20	WSD(max)	2/4	-277.660	0.000	72.150	0.00E+00	-40.410	0.000
20	WSD(max)	3/4	-276.970	0.000	79.450	0.00E+00	-45.290	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
20	WSD(max)	J[21]	-276.290	0.000	86.710	0.00E+00	-50.630	0.000
20	WSD(min)	I[19]	-305.090	0.000	19.530	0.00E+00	-70.450	0.000
20	WSD(min)	1/4	-304.410	0.000	19.530	0.00E+00	-71.990	0.000
20	WSD(min)	2/4	-303.720	0.000	19.530	0.00E+00	-73.520	0.000
20	WSD(min)	3/4	-303.040	0.000	19.530	0.00E+00	-75.060	0.000
20	WSD(min)	J[21]	-302.350	0.000	19.530	0.00E+00	-76.590	0.000
21	USD(max)	I[20]	-396.200	0.000	138.740	0.00E+00	-62.590	0.000
21	USD(max)	1/4	-394.550	0.000	146.990	0.00E+00	-69.160	0.000
21	USD(max)	2/4	-392.900	0.000	155.220	0.00E+00	-76.140	0.000
21	USD(max)	3/4	-391.240	0.000	163.410	0.00E+00	-83.540	0.000
21	USD(max)	J[22]	-389.590	0.000	171.560	0.00E+00	-90.440	0.000
21	USD(min)	I[20]	-483.760	0.000	19.870	0.00E+00	-107.080	0.000
21	USD(min)	1/4	-481.800	0.000	20.820	0.00E+00	-110.700	0.000
21	USD(min)	2/4	-479.840	0.000	21.760	0.00E+00	-114.490	0.000
21	USD(min)	3/4	-477.880	0.000	22.680	0.00E+00	-118.460	0.000
21	USD(min)	J[22]	-475.920	0.000	23.600	0.00E+00	-122.610	0.000
21	WSD(max)	I[20]	-276.290	0.000	86.710	0.00E+00	-49.960	0.000
21	WSD(max)	1/4	-275.060	0.000	91.870	0.00E+00	-54.140	0.000
21	WSD(max)	2/4	-273.840	0.000	97.010	0.00E+00	-58.580	0.000
21	WSD(max)	3/4	-272.610	0.000	102.130	0.00E+00	-63.270	0.000
21	WSD(max)	J[22]	-271.390	0.000	107.230	0.00E+00	-67.660	0.000
21	WSD(min)	I[20]	-302.350	0.000	14.370	0.00E+00	-66.110	0.000
21	WSD(min)	1/4	-301.120	0.000	14.940	0.00E+00	-67.370	0.000
21	WSD(min)	2/4	-299.900	0.000	15.490	0.00E+00	-70.210	0.000
21	WSD(min)	3/4	-298.670	0.000	16.030	0.00E+00	-73.190	0.000
21	WSD(min)	J[22]	-297.450	0.000	16.560	0.00E+00	-76.310	0.000
22	USD(max)	I[21]	-386.260	0.000	138.740	0.00E+00	-70.860	0.000
22	USD(max)	1/4	-384.600	0.000	146.990	0.00E+00	-77.790	0.000
22	USD(max)	2/4	-382.950	0.000	155.220	0.00E+00	-85.120	0.000
22	USD(max)	3/4	-381.300	0.000	163.410	0.00E+00	-92.860	0.000
22	USD(max)	J[30]	-379.640	0.000	171.560	0.00E+00	-101.010	0.000
22	USD(min)	I[21]	-483.760	0.000	28.800	0.00E+00	-122.550	0.000
22	USD(min)	1/4	-481.800	0.000	28.800	0.00E+00	-124.300	0.000
22	USD(min)	2/4	-479.840	0.000	28.800	0.00E+00	-126.060	0.000
22	USD(min)	3/4	-477.880	0.000	28.800	0.00E+00	-127.810	0.000
22	USD(min)	J[30]	-475.920	0.000	28.800	0.00E+00	-129.570	0.000
22	WSD(max)	I[21]	-276.290	0.000	86.710	0.00E+00	-50.630	0.000
22	WSD(max)	1/4	-275.060	0.000	91.870	0.00E+00	-54.730	0.000
22	WSD(max)	2/4	-273.840	0.000	97.010	0.00E+00	-59.070	0.000
22	WSD(max)	3/4	-272.610	0.000	102.130	0.00E+00	-63.640	0.000
22	WSD(max)	J[30]	-271.390	0.000	107.230	0.00E+00	-68.450	0.000
22	WSD(min)	I[21]	-302.350	0.000	19.530	0.00E+00	-76.590	0.000
22	WSD(min)	1/4	-301.120	0.000	19.530	0.00E+00	-77.690	0.000
22	WSD(min)	2/4	-299.900	0.000	19.530	0.00E+00	-78.790	0.000
22	WSD(min)	3/4	-298.670	0.000	19.530	0.00E+00	-79.880	0.000
22	WSD(min)	J[30]	-297.450	0.000	19.530	0.00E+00	-80.980	0.000
23	USD(max)	I[22]	-28.800	0.000	-292.120	0.00E+00	3.170	0.000
23	USD(max)	1/4	-28.800	0.000	-275.860	0.00E+00	18.300	0.000
23	USD(max)	2/4	-28.800	0.000	-259.140	0.00E+00	33.940	0.000
23	USD(max)	3/4	-28.800	0.000	-242.420	0.00E+00	48.610	0.000
23	USD(max)	J[23]	-28.800	0.000	-225.710	0.00E+00	62.320	0.000
23	USD(min)	I[22]	-219.780	0.000	-360.780	0.00E+00	-53.300	0.000
23	USD(min)	1/4	-219.780	0.000	-341.590	0.00E+00	-37.960	0.000
23	USD(min)	2/4	-219.780	0.000	-322.400	0.00E+00	-23.500	0.000
23	USD(min)	3/4	-219.780	0.000	-303.210	0.00E+00	-9.880	0.000
23	USD(min)	J[23]	-219.780	0.000	-284.020	0.00E+00	2.550	0.000
23	WSD(max)	I[22]	-19.530	0.000	-205.730	0.00E+00	1.070	0.000
23	WSD(max)	1/4	-19.530	0.000	-194.790	0.00E+00	11.440	0.000
23	WSD(max)	2/4	-19.530	0.000	-183.840	0.00E+00	21.210	0.000
23	WSD(max)	3/4	-19.530	0.000	-172.900	0.00E+00	30.380	0.000
23	WSD(max)	J[23]	-19.530	0.000	-161.960	0.00E+00	38.950	0.000
23	WSD(min)	I[22]	-137.360	0.000	-225.490	0.00E+00	-33.310	0.000
23	WSD(min)	1/4	-137.360	0.000	-213.490	0.00E+00	-22.340	0.000
23	WSD(min)	2/4	-137.360	0.000	-201.500	0.00E+00	-11.960	0.000
23	WSD(min)	3/4	-137.360	0.000	-189.500	0.00E+00	-2.190	0.000
23	WSD(min)	J[23]	-137.360	0.000	-177.510	0.00E+00	6.180	0.000
24	USD(max)	I[23]	-28.800	0.000	-225.710	0.00E+00	62.320	0.000
24	USD(max)	1/4	-28.800	0.000	-205.060	0.00E+00	77.940	0.000
24	USD(max)	2/4	-28.800	0.000	-184.410	0.00E+00	92.080	0.000
24	USD(max)	3/4	-28.800	0.000	-163.770	0.00E+00	104.780	0.000
24	USD(max)	J[24]	-28.800	0.000	-143.120	0.00E+00	116.170	0.000
24	USD(min)	I[23]	-219.780	0.000	-284.020	0.00E+00	2.550	0.000
24	USD(min)	1/4	-219.780	0.000	-260.320	0.00E+00	16.770	0.000
24	USD(min)	2/4	-219.780	0.000	-236.620	0.00E+00	29.760	0.000
24	USD(min)	3/4	-219.780	0.000	-212.920	0.00E+00	41.510	0.000
24	USD(min)	J[24]	-219.780	0.000	-189.220	0.00E+00	52.020	0.000
24	WSD(max)	I[23]	-19.530	0.000	-161.960	0.00E+00	38.950	0.000
24	WSD(max)	1/4	-19.530	0.000	-148.440	0.00E+00	48.710	0.000
24	WSD(max)	2/4	-19.530	0.000	-134.930	0.00E+00	57.550	0.000
24	WSD(max)	3/4	-19.530	0.000	-120.980	0.00E+00	65.490	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
24	WSD(max)	J[24]	-19.530	0.000	-106.170	0.00E+00	72.580	0.000
24	WSD(min)	I[23]	-137.360	0.000	-177.510	0.00E+00	6.180	0.000
24	WSD(min)	1/4	-137.360	0.000	-162.700	0.00E+00	15.760	0.000
24	WSD(min)	2/4	-137.360	0.000	-147.890	0.00E+00	24.510	0.000
24	WSD(min)	3/4	-137.360	0.000	-133.070	0.00E+00	32.420	0.000
24	WSD(min)	J[24]	-137.360	0.000	-118.260	0.00E+00	39.500	0.000
25	USD(max)	I[24]	-28.800	0.000	-143.120	0.00E+00	116.170	0.000
25	USD(max)	1/4	-28.800	0.000	-122.560	0.00E+00	126.050	0.000
25	USD(max)	2/4	-28.800	0.000	-102.000	0.00E+00	134.480	0.000
25	USD(max)	3/4	-28.800	0.000	-81.430	0.00E+00	141.460	0.000
25	USD(max)	J[25]	-28.800	0.000	-60.870	0.00E+00	146.990	0.000
25	USD(min)	I[24]	-219.780	0.000	-189.220	0.00E+00	52.020	0.000
25	USD(min)	1/4	-219.780	0.000	-165.610	0.00E+00	61.260	0.000
25	USD(min)	2/4	-219.780	0.000	-142.010	0.00E+00	69.260	0.000
25	USD(min)	3/4	-219.780	0.000	-118.400	0.00E+00	75.620	0.000
25	USD(min)	J[25]	-219.780	0.000	-94.800	0.00E+00	80.350	0.000
25	WSD(max)	I[24]	-19.530	0.000	-106.170	0.00E+00	72.580	0.000
25	WSD(max)	1/4	-19.530	0.000	-91.420	0.00E+00	78.740	0.000
25	WSD(max)	2/4	-19.530	0.000	-76.670	0.00E+00	83.990	0.000
25	WSD(max)	3/4	-19.530	0.000	-61.910	0.00E+00	88.330	0.000
25	WSD(max)	J[25]	-19.530	0.000	-47.160	0.00E+00	91.760	0.000
25	WSD(min)	I[24]	-137.360	0.000	-118.260	0.00E+00	39.500	0.000
25	WSD(min)	1/4	-137.360	0.000	-103.510	0.00E+00	45.730	0.000
25	WSD(min)	2/4	-137.360	0.000	-88.760	0.00E+00	51.120	0.000
25	WSD(min)	3/4	-137.360	0.000	-74.000	0.00E+00	55.690	0.000
25	WSD(min)	J[25]	-137.360	0.000	-59.250	0.00E+00	59.430	0.000
26	USD(max)	I[25]	-28.800	0.000	-60.870	0.00E+00	146.990	0.000
26	USD(max)	1/4	-28.800	0.000	-40.230	0.00E+00	151.070	0.000
26	USD(max)	2/4	-28.800	0.000	-19.580	0.00E+00	153.700	0.000
26	USD(max)	3/4	-28.800	0.000	1.070	0.00E+00	154.860	0.000
26	USD(max)	J[26]	-28.800	0.000	21.710	0.00E+00	154.560	0.000
26	USD(min)	I[25]	-219.780	0.000	-94.800	0.00E+00	80.350	0.000
26	USD(min)	1/4	-219.780	0.000	-71.100	0.00E+00	83.870	0.000
26	USD(min)	2/4	-219.780	0.000	-47.400	0.00E+00	86.150	0.000
26	USD(min)	3/4	-219.780	0.000	-23.700	0.00E+00	87.190	0.000
26	USD(min)	J[26]	-219.780	0.000	0.000	0.00E+00	86.990	0.000
26	WSD(max)	I[25]	-19.530	0.000	-47.160	0.00E+00	91.760	0.000
26	WSD(max)	1/4	-19.530	0.000	-32.350	0.00E+00	94.300	0.000
26	WSD(max)	2/4	-19.530	0.000	-17.540	0.00E+00	95.920	0.000
26	WSD(max)	3/4	-19.530	0.000	-2.720	0.00E+00	96.630	0.000
26	WSD(max)	J[26]	-19.530	0.000	12.090	0.00E+00	96.420	0.000
26	WSD(min)	I[25]	-137.360	0.000	-59.250	0.00E+00	59.430	0.000
26	WSD(min)	1/4	-137.360	0.000	-44.440	0.00E+00	62.350	0.000
26	WSD(min)	2/4	-137.360	0.000	-29.630	0.00E+00	64.430	0.000
26	WSD(min)	3/4	-137.360	0.000	-14.810	0.00E+00	65.680	0.000
26	WSD(min)	J[26]	-137.360	0.000	0.000	0.00E+00	66.100	0.000
27	USD(max)	I[26]	-28.800	0.000	21.710	0.00E+00	154.560	0.000
27	USD(max)	1/4	-28.800	0.000	40.960	0.00E+00	152.860	0.000
27	USD(max)	2/4	-28.800	0.000	62.590	0.00E+00	149.820	0.000
27	USD(max)	3/4	-28.800	0.000	84.210	0.00E+00	145.450	0.000
27	USD(max)	J[27]	-28.800	0.000	105.830	0.00E+00	139.750	0.000
27	USD(min)	I[26]	-219.780	0.000	0.000	0.00E+00	86.990	0.000
27	USD(min)	1/4	-219.780	0.000	20.060	0.00E+00	85.600	0.000
27	USD(min)	2/4	-219.780	0.000	40.120	0.00E+00	83.090	0.000
27	USD(min)	3/4	-219.780	0.000	60.190	0.00E+00	79.460	0.000
27	USD(min)	J[27]	-219.780	0.000	80.250	0.00E+00	74.700	0.000
27	WSD(max)	I[26]	-19.530	0.000	12.090	0.00E+00	96.420	0.000
27	WSD(max)	1/4	-19.530	0.000	25.600	0.00E+00	95.330	0.000
27	WSD(max)	2/4	-19.530	0.000	39.120	0.00E+00	93.420	0.000
27	WSD(max)	3/4	-19.530	0.000	52.630	0.00E+00	90.660	0.000
27	WSD(max)	J[27]	-19.530	0.000	66.150	0.00E+00	87.080	0.000
27	WSD(min)	I[26]	-137.360	0.000	0.000	0.00E+00	66.100	0.000
27	WSD(min)	1/4	-137.360	0.000	13.510	0.00E+00	65.680	0.000
27	WSD(min)	2/4	-137.360	0.000	27.030	0.00E+00	64.430	0.000
27	WSD(min)	3/4	-137.360	0.000	40.540	0.00E+00	62.350	0.000
27	WSD(min)	J[27]	-137.360	0.000	54.060	0.00E+00	59.430	0.000
28	USD(max)	I[27]	-28.800	0.000	105.830	0.00E+00	139.750	0.000
28	USD(max)	1/4	-28.800	0.000	127.370	0.00E+00	132.730	0.000
28	USD(max)	2/4	-28.800	0.000	148.910	0.00E+00	124.400	0.000
28	USD(max)	3/4	-28.800	0.000	170.440	0.00E+00	114.740	0.000
28	USD(max)	J[28]	-28.800	0.000	191.980	0.00E+00	103.760	0.000
28	USD(min)	I[27]	-219.780	0.000	80.250	0.00E+00	74.700	0.000
28	USD(min)	1/4	-219.780	0.000	100.230	0.00E+00	68.830	0.000
28	USD(min)	2/4	-219.780	0.000	120.210	0.00E+00	61.780	0.000
28	USD(min)	3/4	-219.780	0.000	140.190	0.00E+00	53.420	0.000
28	USD(min)	J[28]	-219.780	0.000	158.930	0.00E+00	43.940	0.000
28	WSD(max)	I[27]	-19.530	0.000	66.150	0.00E+00	87.080	0.000
28	WSD(max)	1/4	-19.530	0.000	79.610	0.00E+00	82.680	0.000
28	WSD(max)	2/4	-19.530	0.000	93.070	0.00E+00	77.450	0.000
28	WSD(max)	3/4	-19.530	0.000	106.530	0.00E+00	71.390	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
28	WSD(max)	J[28]	-19.530	0.000	119.990	0.00E+00	64.500	0.000
28	WSD(min)	I[27]	-137.360	0.000	54.060	0.00E+00	59.430	0.000
28	WSD(min)	1/4	-137.360	0.000	67.520	0.00E+00	55.690	0.000
28	WSD(min)	2/4	-137.360	0.000	80.980	0.00E+00	50.950	0.000
28	WSD(min)	3/4	-137.360	0.000	94.440	0.00E+00	44.980	0.000
28	WSD(min)	J[28]	-137.360	0.000	107.900	0.00E+00	38.170	0.000
29	USD(max)	I[28]	-28.800	0.000	191.980	0.00E+00	103.760	0.000
29	USD(max)	1/4	-28.800	0.000	213.600	0.00E+00	91.390	0.000
29	USD(max)	2/4	-28.800	0.000	236.620	0.00E+00	77.700	0.000
29	USD(max)	3/4	-28.800	0.000	260.320	0.00E+00	62.670	0.000
29	USD(max)	J[29]	-28.800	0.000	284.020	0.00E+00	46.300	0.000
29	USD(min)	I[28]	-219.780	0.000	158.930	0.00E+00	43.940	0.000
29	USD(min)	1/4	-219.780	0.000	177.180	0.00E+00	33.300	0.000
29	USD(min)	2/4	-219.780	0.000	195.420	0.00E+00	21.530	0.000
29	USD(min)	3/4	-219.780	0.000	213.670	0.00E+00	8.630	0.000
29	USD(min)	J[29]	-219.780	0.000	231.910	0.00E+00	-5.390	0.000
29	WSD(max)	I[28]	-19.530	0.000	119.990	0.00E+00	64.500	0.000
29	WSD(max)	1/4	-19.530	0.000	133.500	0.00E+00	56.760	0.000
29	WSD(max)	2/4	-19.530	0.000	147.890	0.00E+00	48.180	0.000
29	WSD(max)	3/4	-19.530	0.000	162.700	0.00E+00	38.760	0.000
29	WSD(max)	J[29]	-19.530	0.000	177.510	0.00E+00	28.510	0.000
29	WSD(min)	I[28]	-137.360	0.000	107.900	0.00E+00	38.170	0.000
29	WSD(min)	1/4	-137.360	0.000	121.410	0.00E+00	30.510	0.000
29	WSD(min)	2/4	-137.360	0.000	134.930	0.00E+00	22.010	0.000
29	WSD(min)	3/4	-137.360	0.000	148.440	0.00E+00	12.670	0.000
29	WSD(min)	J[29]	-137.360	0.000	161.960	0.00E+00	2.500	0.000
30	USD(max)	I[29]	-28.800	0.000	284.020	0.00E+00	46.300	0.000
30	USD(max)	1/4	-28.800	0.000	303.210	0.00E+00	32.070	0.000
30	USD(max)	2/4	-28.800	0.000	322.400	0.00E+00	16.960	0.000
30	USD(max)	3/4	-28.800	0.000	341.590	0.00E+00	0.980	0.000
30	USD(max)	J[30]	-28.800	0.000	360.780	0.00E+00	-15.880	0.000
30	USD(min)	I[29]	-219.780	0.000	231.910	0.00E+00	-5.390	0.000
30	USD(min)	1/4	-219.780	0.000	246.690	0.00E+00	-17.560	0.000
30	USD(min)	2/4	-219.780	0.000	261.460	0.00E+00	-30.480	0.000
30	USD(min)	3/4	-219.780	0.000	276.230	0.00E+00	-44.140	0.000
30	USD(min)	J[30]	-219.780	0.000	291.010	0.00E+00	-58.530	0.000
30	WSD(max)	I[29]	-19.530	0.000	177.510	0.00E+00	28.510	0.000
30	WSD(max)	1/4	-19.530	0.000	189.500	0.00E+00	19.600	0.000
30	WSD(max)	2/4	-19.530	0.000	201.500	0.00E+00	10.140	0.000
30	WSD(max)	3/4	-19.530	0.000	213.490	0.00E+00	0.140	0.000
30	WSD(max)	J[30]	-19.530	0.000	225.490	0.00E+00	-10.410	0.000
30	WSD(min)	I[29]	-137.360	0.000	161.960	0.00E+00	2.500	0.000
30	WSD(min)	1/4	-137.360	0.000	172.900	0.00E+00	-6.340	0.000
30	WSD(min)	2/4	-137.360	0.000	183.840	0.00E+00	-15.740	0.000
30	WSD(min)	3/4	-137.360	0.000	194.790	0.00E+00	-25.680	0.000
30	WSD(min)	J[30]	-137.360	0.000	205.730	0.00E+00	-36.160	0.000

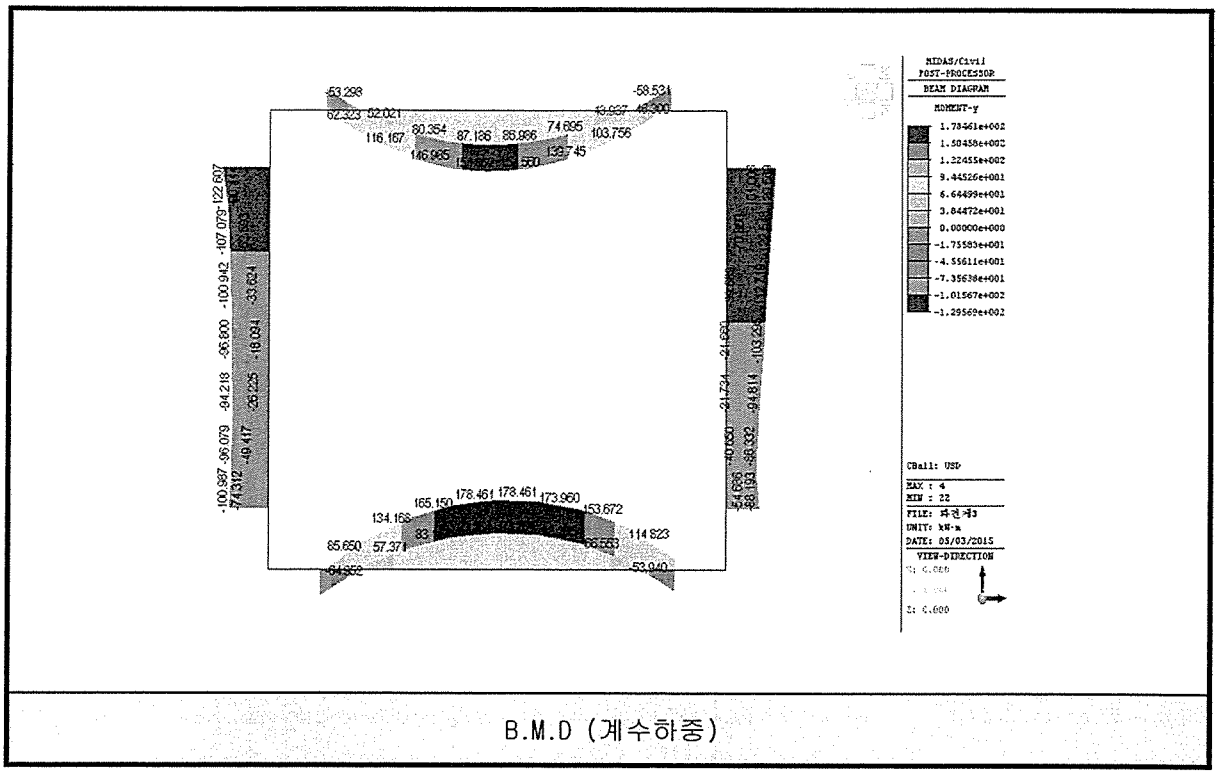
9. 단면력 요약

구분	위치	부재	극한하중			사용하중	비고
			Mu(kN · m)	Su(kN)	Pu(kN)	M(kN · m)	
상부슬래브	단부	23,30	-58.53	360.78	-	-36.16	
	중앙부	26.27	154.86	105.83	-	96.63	
벽체	상단부 (축력최대)	21,22	-89.03	171.56	-483.76	-49.96	
	상단부 (모멘트최대)	21,22	-129.57	171.56	-453.56	-80.98	
	중앙부 (축력최대)	15,16	-32.23	49.09	-496.93	-18.09	
	중앙부 (모멘트최대)	15,16	-103.30	-18.49	-467.57	-64.51	
	하단부 (축력최대)	9,10	-88.19	-158.50	-513.94	-33.95	
	하단부 (모멘트최대)	9,10	-100.99	-158.50	-494.60	-63.12	
하부슬래브	단부	1,8	-64.95	349.30	-	-38.25	
	중앙부	4,5	178.46	70.43	-	111.24	

-'전단력과 사용하중 상태에서의 모멘트는 선택 부재에서의 최대값 적용

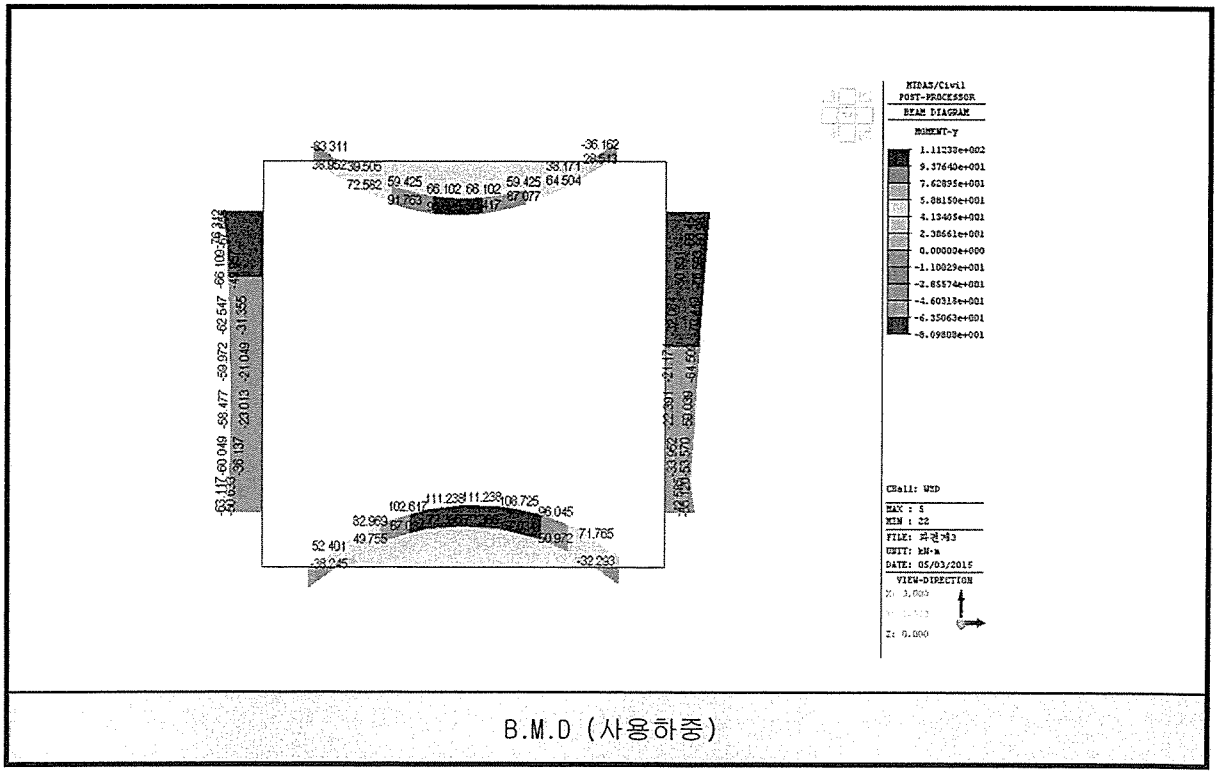
10. 단면력도

(1) 극한하중 모멘트도



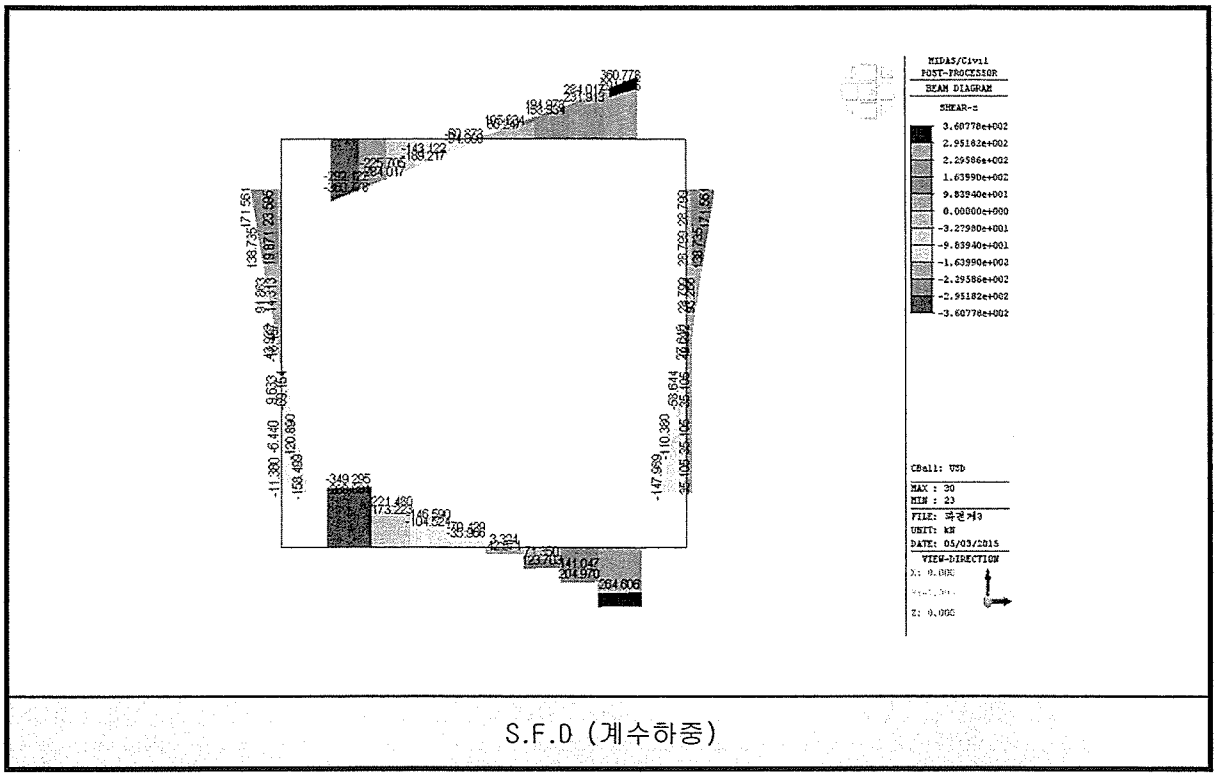
B.M.D (계수하중)

(2) 사용하중 모멘트도



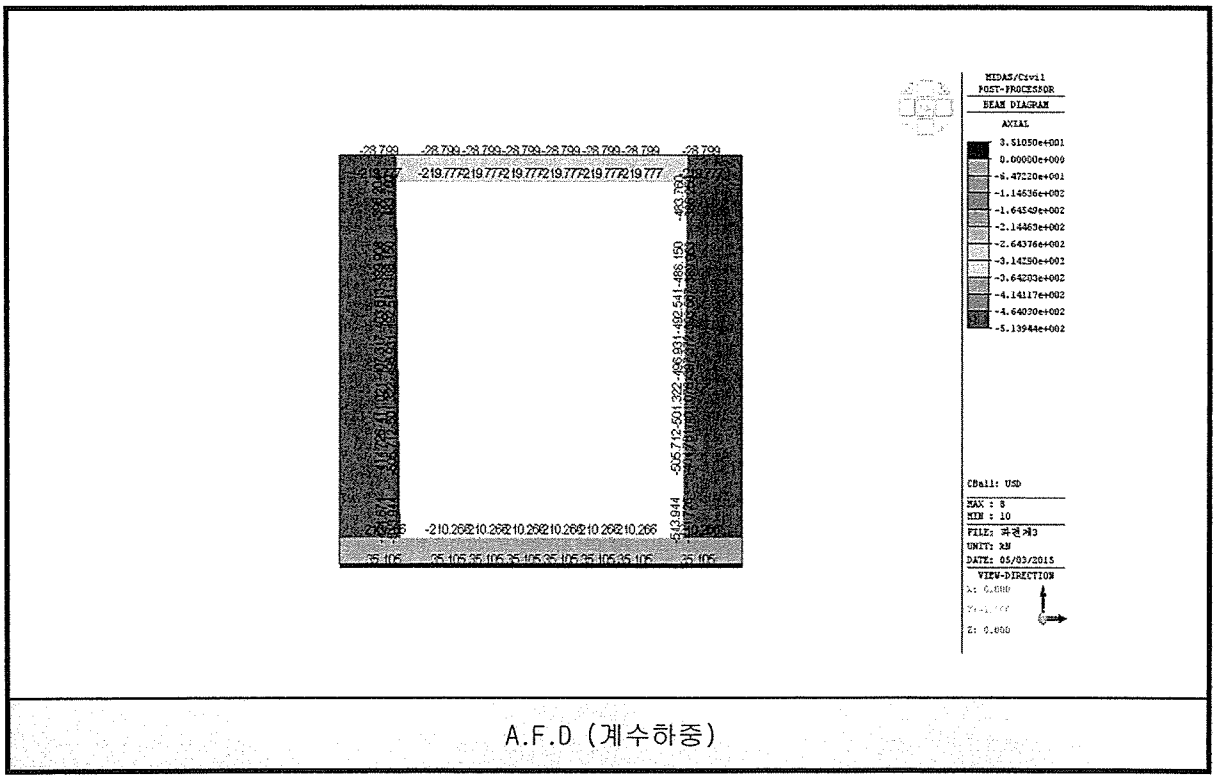
B.M.D (사용하중)

(3) 극한하중 전단력도



S.F.D (계수하중)

(4) 극한하중 축력도



A.F.D (계수하중)

11. 단면검토

① 상부 슬래브 단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	36.160
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Su (kN)
1000.0	500.0	400.0	100.0	58.530	360.780

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K.

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ---------- (1)

$a = As \times fy / (0.85 \times fck \times b)$ ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2 \times 0.85 \times fck \times b} \times As^2 - fy \times d \times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 409.750 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 409.750 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 546.334 mm^2 ※ As = 546.334 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 58.530 kN · m ----- ∴ O.K. [사용률 = 3.787]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (360.8 - 232.782)×10³ ×150.0 / (400.0×300.0×0.85)

= 188.232 ㎟

Use Av = 253.400 ㎟ (H13×2 EA, 간격 s = 150.0 mm)

Øv · As = Øv · Av · fy · D / (s × B) = 172.312 kN

s = 150.0 mm ≥ Min (600, 0.5D) = 150.0 mm ----- ∴ O.K.

Øv · Vn = Øv · Vc + Øv · Vs = 405.094 kN > Vu ----- ∴ O.K.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 36.16 × 1000000 / [1588.8×(400 - 83.857/3)]

= 61.173 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 61.173) - 2.5 × 92 = 1057.330 mm

300 x (210 / fs) = 300 × (210 / 61.173) = 1029.864 mm

Sa는 작은 값인 1029.864 mm 를 적용

S = 125.00 ≤ Sa (= 1029.864 mm) ----- ∴ O.K.

② 상부슬래브 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	96.630
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	154.860	105.830

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.02719 ≥ 0.004 ----- ∴ O.K.

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 1492.094 mm^2

사용철근비 : Puse = As / (B × D) = 0.00530

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 1492.094 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1989.459 mm^2 ※ As = 1492.094 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 164463107 N · mm

= 164.463 kN · m > 154.860 kN · m ----- ∴ O.K. [사용률 = 1.062]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 96.63 × 1000000 / [1588.8×(300 - 71.32/3)]

= 220.180 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 ㎜

사용철근량 = 1588.800 ㎟ (철근도심 : 100 ㎜)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 ㎜

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(㎜)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 220.18) - 2.5 × 92 = 127.662 ㎜

300 x (210 / fs) = 300 × (210 / 220.18) = 286.130 ㎜

Sa는 작은 값인 127.662 ㎜ 를 적용

S = 125.00 ≤ Sa (= 127.662 ㎜) ----- ∴ O.K.

③ 하부슬래브 단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	38.250
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	550.0	450.0	100.0	64.950	349.300

전단설계시 단면의 유효높이 ds = 350.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.04229 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 403.767 mm^2

사용철근비 : Puse = As / (B × D) = 0.00353

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 403.767 mm^2 As(min) = 1575.000 mm^2

4/3×As(req) = 538.356 mm^2 ※ As = 538.356 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 250258307 N · mm

= 250.258 kN · m > 64.950 kN · m ----- ∴ O.K [사용률 = 3.853]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 271.579 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (349.3 - 271.579)×10³ ×150.0 / (400.0×350.0×0.85)

= 97.968 ㎟

Use Av = 253.400 ㎟ (H13×2 EA, 간격 s = 150.0 mm)

Øv · As = Øv · Av · fy · D / (s × B) = 201.031 kN

s = 150.0 mm < Min (600, 0.5D) = 175.0 mm ----- ∴ O.K

Øv · Vn = Øv · Vc + Øv · Vs = 472.610 kN > Vu ----- ∴ O.K

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 38.25 × 1000000 / [1588.8×(450 - 89.542/3)]

= 57.300 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×450/(7×1588.8)]

= 89.542 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 57.3) - 2.5 × 92 = 1144.344 mm

300 x (210 / fs) = 300 × (210 / 57.3) = 1099.475 mm

Sa는 작은 값인 1099.475 mm 를 적용

S = 125.00 ≤ Sa (= 1099.475 mm) ----- ∴ O.K.

④ 하부슬래브 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	111.240
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	450.0	350.0	100.0	178.460	70.430

전단설계시 단면의 유효높이 ds = 350.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03222 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ---------- (1)

$a = As \times fy / (0.85 \times fck \times b)$ ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b} \times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 1464.405 mm^2

사용철근비 : Puse = As / (B × D) = 0.00454

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 1464.405 mm^2 As(min) = 1225.000 mm^2

4/3×As(req) = 1952.540 mm^2 ※ As = 1464.405 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 193061507 N · mm

= 193.062 kN · m > 178.460 kN · m ----- ∴ O.K [사용률 = 1.082]

* 전단력 검토

$\phi v \cdot Vc = \phi v \cdot 1/6 \cdot \sqrt{fck} \cdot B \cdot d / 1000 =$ 271.579 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 111.24 \times 1000000 / [1588.8 \times (350 - 77.81/3)]$

= 216.054 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 350/(7 \times 1588.8)]}$

= 77.810 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 216.054) - 2.5 × 92 = 134.493 mm

300 x (210 / fs) = 300 × (210 / 216.054) = 291.594 mm

Sa는 작은 값인 134.493 mm 를 적용

S = 125.00 ≤ Sa (= 134.493 mm) ----- ∴ O.K.

⑤ 벽체 상단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	80.980
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	129.570	171.560

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 916.253 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 916.253 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 1221.670 mm^2 ※ As = 1221.670 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 129.570 kN · m ----- ∴ O.K [사용률 = 1.711]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

1/2 x Φv x Vc = 116.391 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 80.98 × 1000000 / [1588.8×(400 - 83.857/3)]

= 136.997 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 ㎜

사용철근량 = 1588.800 $㎜^2$ (철근도심 : 100 ㎜)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 ㎜

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(㎜)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 136.997) - 2.5 × 92 = 344.831 ㎜

300 x (210 / fs) = 300 × (210 / 136.997) = 459.865 ㎜

Sa는 작은 값인 344.831 ㎜ 를 적용

S = 125.00 ≤ Sa (= 344.831 ㎜) ----- ∴ O.K.

⑥ 벽체 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	64.510
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	103.300	18.490

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.02719 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ---------- (1)

$a = As \times fy / (0.85 \times fck \times b)$ ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 981.676 mm^2

사용철근비 : Puse = As / (B × D) = 0.00530

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 981.676 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1308.901 mm^2 ※ As = 1050.000 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 164463107 N · mm

= 164.463 kN · m > 103.300 kN · m ----- ∴ O.K [사용률 = 1.592]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 64.51 × 1000000 / [1588.8×(300 - 71.32/3)]

= 146.992 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 146.992) - 2.5 × 92 = 305.745 mm

300 x (210 / fs) = 300 × (210 / 146.992) = 428.596 mm

Sa는 작은 값인 305.745 mm 를 적용

S = 125.00 ≤ Sa (= 305.745 mm) ----- ∴ O.K.

⑦ 벽체 하단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	63.120
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	100.990	158.500

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 711.238 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 711.238 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 948.318 mm^2 ※ As = 948.318 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 100.990 kN · m ----- ∴ O.K [사용률 = 2.195]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

1/2 x Φv x Vc = 116.391 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 63.12 × 1000000 / [1588.8×(400 - 83.857/3)]

= 106.782 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 106.782) - 2.5 × 92 = 507.482 mm

300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 mm

Sa는 작은 값인 507.482 mm 를 적용

S = 125.00 ≤ Sa (= 507.482 mm) ----- ∴ O.K.

⑤ 벽체 상단부 - Pmax 일 경우

설계축력	:	Pu	=	483.76	(kN) ,	설계모멘트	:	Mu	=	89.03	(kN·m)	
설계전단력	:	Vu	=	171.56	(kN) ,	사용 모멘트	:	M	=	49.96	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	184.04 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

$\sum$ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 249.482 mm , a = k1 x c = 208.567 mm 사용

fs = 600 x (400.000 - 249.482) / 249.482 = 361.9917 Mpa (fs ≤ fy)

fs' = 600 x (249.482 - 100.000) / 249.482 = 359.5021 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 208.567 x 1000 = 5230867.543 N

Cs = 794.400 x (359.502 - 0.836 x 30) = 265664.895 N

Ts = 1588.800 x 361.992 = 575132.425 N

Pn = 5230867.543 + 265664.895 - 575132.425 = 4921400.013 N

Mn' = 5230867.543 x (400.0 - 208.567 / 2) + 265664.895 x (400.0 - 100.0)

= 1626552561.153 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 330.505114 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4921400.013

ΦPn = 3444980.009 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4921400.013 = 3444.980 kN ≥ Pu = 483.760 kN ------ O.K!!!

ΦMn = ΦPn x 184.038 = 634.006 kN.m ≥ Mu = 89.030 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 248869.324 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 49.96 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 84.519 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc : 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 84.519) - 2.5 × 92 = 701.742 mm

300 x (210 / fs) = 300 × (210 / 84.519) = 745.394 mm

Sa는 작은 값인 701.742 mm 를 적용

S = 125.00 ≤ Sa (= 701.742 mm) ------ ∴ O.K.

⑥ 벽체 상단부 - Mmax 일 경우

설계축력	:	Pu	=	453.56	(kN) ,	설계모멘트	:	Mu	=	129.57	(kN·m)	
설계전단력	:	Vu	=	171.56	(kN) ,	사용 모멘트	:	M	=	80.98	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	285.67 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 138.006 mm , a = k1 x c = 115.373 mm 사용

fs = 600 x (400.000 - 138.006) / 138.006 = 400 Mpa (fs ≤ fy)

fs' = 600 x (138.006 - 100.000) / 138.006 = 165.235 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 115.373 x 1000 = 2893546.855 N

Cs = 794.400 x (165.235 - 0.836 x 30) = 111339.159 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2893546.855 + 111339.159 - 635520.000 = 2369366.013 N

Mn' = 2893546.855 x (400.0 - 115.373 / 2) + 111339.159 x (400.0 - 100.0)

= 1023902359.529 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 432.140915 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 2369366.013

ΦPn = 1658556.209 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2369366.013 = 1658.556 kN ≥ Pu = 453.560 kN ------ O.K!!!

ΦMn = ΦPn x 285.673 = 473.805 kN.m ≥ Mu = 129.570 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 247865.036 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 cm^2 O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 80.98 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 136.997 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 136.997) - 2.5 × 92 = 344.831 mm

300 x (210 / fs) = 300 × (210 / 136.997) = 459.865 mm

Sa는 작은 값인 344.831 mm 를 적용

S = 125.00 ≤ Sa (= 344.831 mm) ----- ∴ O.K.

⑦ 벽체 중앙부 - Pmax 일 경우

설계축력	:	Pu	=	496.93	(kN) ,	설계모멘트	:	Mu	=	32.23	(kN · m)	
설계전단력	:	Vu	=	49.09	(kN) ,	사용 모멘트	:	M	=	18.09	(kN.m)	
부 재 높 이	:	H	=	400.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	300.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	64.86 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0060) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 400.00 x 1000.00 = 10032000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (10032000.00 x 200.0 + 635520.0 x 100.0 + 317760.0 x 300.0) / 10985280.000

= 197.107 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 180.000 mm, ab = k1 x cb = 150.480 mm

fs' = 600 x (180.000 - 100.0) / 180.0(= 266.6667 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 150.480 x 1000 = 3774038.400 N

Cs = As' x (fs' - 0.9 x fck) = 190391.200 N

Ts = As x fs = 635520.000 N

Pb = 3774038.400 + 190391.200 - 635520.000 = 3328909.600 N

Mb = 3774038.400x(300.0-150.480/2)+190391.200x(300.0-100.0)-3328909.600x(197.107-100.0)

= 563069348.351 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 169.145 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 329.377 mm , a = k1 x c = 275.359 mm 사용

fs = 600 x (300.000 - 329.377) / 329.377 = -53.5139 Mpa (fs ≤ fy)

fs' = 600 x (329.377 - 100.000) / 329.377 = 400 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 275.359 x 1000 = 6906010.130 N

Cs = 794.400 x (400.000 - 0.836 x 30) = 297836.448 N

Ts = 1588.800 x -53.514 = -85022.917 N

Pn = 6906010.130 + 297836.448 - -85022.917 = 7288869.496 N

Mn' = 6906010.130 x (300.0 - 275.359 / 2) + 297836.448 x (300.0 - 100.0)

= 1180553424.391 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 161.965631 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 7288869.496

ΦPn = 5102208.647 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 7288869.496 = 5102.209 kN ≥ Pu = 496.930 kN ------- O.K!!!

ΦMn = ΦPn x 64.858 = 330.920 kN.m ≥ Mu = 32.230 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 253438.587 N

여기서 , Vu < 1/2φVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 18.09 × 1000000 / [1588.8×(300 - 71.32/3)]

= 41.220 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2\times 1000\times 300/(7\times 1588.8)]}$

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 41.22) - 2.5 × 92 = 1680.50 mm

300 x (210 / fs) = 300 × (210 / 41.22) = 1528.40 mm

Sa는 작은 값인 1528.40 mm 를 적용

S = 125.00 ≤ Sa (= 1528.399 mm) ------ ∴ O.K.

⑧ 벽체 중앙부 - Mmax 일 경우

설계축력	:	Pu	=	467.57	(kN) ,	설계모멘트	:	Mu	=	103.30	(kN · m)	
설계전단력	:	Vu	=	18.49	(kN) ,	사용 모멘트	:	M	=	64.51	(kN.m)	
부 재 높 이	:	H	=	400.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	300.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	220.93 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0060) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 400.00 x 1000.00 = 10032000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (10032000.00 x 200.0 + 635520.0 x 100.0 + 317760.0 x 300.0) / 10985280.000

= 197.107 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 180.000 mm, ab = k1 x cb = 150.480 mm

fs' = 600 x (180.000 - 100.0) / 180.0(= 266.6667 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 150.480 x 1000 = 3774038.400 N

Cs = As' x (fs' - 0.9 x fck) = 190391.200 N

Ts = As x fs = 635520.000 N

Pb = 3774038.400 + 190391.200 - 635520.000 = 3328909.600 N

Mb = 3774038.400x(300.0-150.480/2)+190391.200x(300.0-100.0)-3328909.600x(197.107-100.0)

= 563069348.351 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 169.145 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 128.055 mm , a = k1 x c = 107.054 mm 사용

fs = 600 x (300.000 - 128.055) / 128.055 = 400 Mpa (fs ≤ fy)

fs' = 600 x (128.055 - 100.000) / 128.055 = 131.451 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 107.054 x 1000 = 2684911.722 N

Cs = 794.400 x (131.451 - 0.836 x 30) = 84501.093 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2684911.722 + 84501.093 - 635520.000 = 2133892.815 N

Mn' = 2684911.722 x (300.0 - 107.054 / 2) + 84501.093 x (300.0 - 100.0)

= 678658604.562 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 318.036888 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 2133892.815

ΦPn = 1493724.971 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2133892.815 = 1493.725 kN ≥ Pu = 467.570 kN ——— O.K!!!

ΦMn = ΦPn x 220.929 = 330.008 kN.m ≥ Mu = 103.300 kN.m ——— O.K!!!

○ 전단력 검토

ϕVc = 0.85 × 1/6 × (1 + Pu / (14 x Ag)) x √fck × bo × d = 252218.144 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 64.51 × 1000000 / [1588.8×(300 - 71.32/3)]

= 146.992 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 146.992) - 2.5 × 92 = 305.75 mm

300 x (210 / fs) = 300 × (210 / 146.992) = 428.60 mm

Sa는 작은 값인 305.75 mm 를 적용

S = 125.00 ≤ Sa (= 305.745 mm) ----- ∴ O.K.

⑨ 벽체 하단부 - Pmax 일 경우

설계축력	:	Pu	=	513.94	(kN) ,	설계모멘트	:	Mu	=	88.19	(kN·m)
설계전단력	:	Vu	=	158.50	(kN) ,	사용 모멘트	:	M	=	33.95	(kN.m)
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	= 30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	= 0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	= 0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	= 171.60 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 262.694 mm , a = k1 x c = 219.612 mm 사용

fs = 600 x (400.000 - 262.694) / 262.694 = 313.6105 Mpa (fs ≤ fy)

fs' = 600 x (262.694 - 100.000) / 262.694 = 371.5974 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 219.612 x 1000 = 5507873.575 N

Cs = 794.400 x (371.597 - 0.836 x 30) = 275273.400 N

Ts = 1588.800 x 313.611 = 498264.382 N

Pn = 5507873.575 + 275273.400 - 498264.382 = 5284882.592 N

Mn' = 5507873.575 x (400.0 - 219.612 / 2) + 275273.400 x (400.0 - 100.0)

= 1680933377.477 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 318.063481 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 5284882.592

ΦPn = 3699417.815 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 5284882.592 = 3699.418 kN ≥ Pu = 513.940 kN ——— O.K!!!

ΦMn = ΦPn x 171.596 = 634.805 kN.m ≥ Mu = 88.190 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 249872.948 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 33.95 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 57.434 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 ㎜

사용철근량 = 1588.800 ㎟ (철근도심 : 100 ㎜)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 ㎜

여기서 Cc : 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(㎜)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 57.434) - 2.5 × 92 = 1141.13 ㎜

300 x (210 / fs) = 300 × (210 / 57.434) = 1096.90 ㎜

Sa는 작은 값인 1096.90 ㎜ 를 적용

S = 125.00 ≤ Sa (= 1096.904 ㎜) ----- ∴ O.K.

⑩ 벽체 하단부 - Mmax 일 경우

설계축력	:	Pu	=	494.60	(kN) ,	설계모멘트	:	Mu	=	100.99	(kN · m)	
설계전단력	:	Vu	=	158.50	(kN) ,	사용 모멘트	:	M	=	63.12	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	204.19 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 224.848 mm , a = k1 x c = 187.973 mm 사용

fs = 600 x (400.000 - 224.848) / 224.848 = 400 Mpa (fs ≤ fy)

fs' = 600 x (224.848 - 100.000) / 224.848 = 333.1534 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 187.973 x 1000 = 4714366.276 N

Cs = 794.400 x (333.153 - 0.836 x 30) = 244733.477 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 4714366.276 + 244733.477 - 635520.000 = 4323579.753 N

Mn' = 4714366.276 x (400.0 - 187.973 / 2) + 244733.477 x (400.0 - 100.0)

= 1516079444.633 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 350.652775 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4323579.753

ΦPn = 3026505.827 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4323579.753 = 3026.506 kN ≥ Pu = 494.600 kN ------ O.K!!!

ΦMn = ΦPn x 204.185 = 617.968 kN.m ≥ Mu = 100.990 kN.m ------- O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 249229.804 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 63.12 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 106.782 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 ㎜

사용철근량 = 1588.800 ㎟ (철근도심 : 100 ㎜)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 ㎜

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(㎜)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 106.782) - 2.5 × 92 = 507.482 ㎜

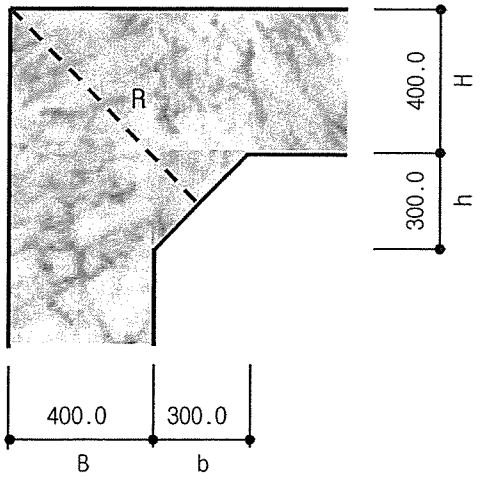
300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 ㎜

Sa는 작은 값인 507.482 ㎜ 를 적용

S = 125.00 ≤ Sa (= 507.482 ㎜) ----- ∴ O.K.

12. 우각부 검토

1) 상부 슬래브



CON'C 설계기준강도(fck)	:	30.0	MPa
CON'C 허용휨인장응력(fta) = 0.13√fck Mpa			
	:	0.712	MPa
철근 항복강도(fy)	:	400.0	MPa
철근 허용응력	:	180.0	MPa
사용 모멘트 Mo	:	80.98	kN · m

$R = \sqrt{2} \times b / (b+h) \times [B + h + (H \times h/b)]$

$= 777.82$ mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 80980000}{777.82^2 \times 1000.0} = 0.669 \text{ MPa}$$

$f_{tmax} =$ 0.669 MPa < $f_{ta} =$ 0.712 MPa 이므로 보강철근 필요없음.

② 소요 철근량

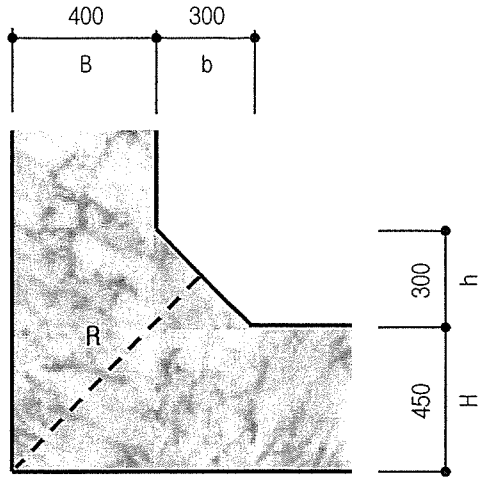
외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 0}{777.82 \times 180.0} = 0.00 \text{ ㎟}$$

▶ 보강 As = Asf − 주철근사용 As = 0.00 − 794.4 = -794.40 ㎟

------ 우각부 보강철근 필요없음

2) 하부 슬래브



CON'C 설계기준강도(fck)	:	30.0	MPa
CON'C 허용휨인장응력(fta) = 0.13√fck Mpa			
	:	0.712	MPa
철근 항복강도(fy)	:	400.0	MPa
철근 허용응력	:	180.0	MPa
사용 모멘트 Mo	:	63.12	kN · m

R = √ (B2 + H2) = 602.08 mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 63120000}{602.08^2 \times 1000.0} = 0.871 \text{ MPa}$$

f_{tmax} = 0.871 MPa > f_{ta} = 0.712 MPa 이므로 보강철근 필요.

② 소요 철근량

외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 63120000}{602.08 \times 180.0} = 1164.85 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 1164.85 - 794.4 = 370.45 ㎟

------ 우각부 보강철근 필요

외측인장에 대한 보강 사용철근량(As)

As = H16 @ 250 - 1 단 = 794.40 ㎟

Asf = 370.45 ㎟ < As = 794.40 ㎟ ------ ∴ O.K.

13. 배력철근 검토

1) 구조상세 - 철도설계기준(노반편) p.5-19

다. 종방향으로 영향을 받는 경우로써 상부슬래브, 하부슬래브와 벽체에 있어서 종방향 최소철근량은 복토의 깊이가 3.0 m 이하인 경우에는 콘크리트 단면적의 0.4%, 복토가 3.0m 이상인 경우에는 복토 깊이가 30m인 경우의 사용량인 1.0%를 기준으로 선형변화량을 사용하되, 종방향 철근량은 주철근량 미만이어야 한다.

라. 단단한 지반 위에 놓인 경우와 말뚝기초로 지지되는 경우로써 종방향 부등침하가 우려되지 않은 경우에는 다.항의 기준을 적용하지 않는다. 따라서 어느 정도 견고한 지반위에 놓이는 일반적인 구교로써 적적한 신축이음매가 설치되어 상세한 종방향해석이 필요하지 않다고 판단되는 경우 종방향 철근량은 슬래브의 경우 콘크리트단면적의 0.25%, 벽체의 경우 0.3%를 적용한다.

마. 배력철근은 단위폭주변의 인장 주철근량의 1/5 이상으로 하여 종단방향에 계산외의 응력이 발생하는 것을 고려하여야 한다.

2) 배력철근의 최소 철근비

슬래브의 배력 철근비 = 0.25 %　　벽체의 배력 철근비 = 0.30 %

① 상부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 400.0 × 0.25 = 1000.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1000.00 ㎟ ------ ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ------ ∴ O.K.

② 하부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 450.0 × 0.25 = 1125.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1125.00 ㎟ ------ ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ------ ∴ O.K.

③ 벽체

배력철근 최소 철근비 (Asreq) = 1,000.0 × 400.0 × 0.30					=	1200.00	㎟
사용철근 인장측 ;	H	13	@	150	=	844.67	㎟
압축측 ;	H	13	@	300	=	422.33	㎟
					∑ As =	1267.00	㎟

따라서, As = 1267.00 ㎟ > Asreq = 1200.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

14. 사용성검토

1) 상부슬래브 최소 두께

1.2(L+3)/30 = 1.2 × (2.400 + 3) / 30 = 216.0 mm

상부슬래브 두께 = 400.0 mm

Tuse = 400.0 mm > Tmin = 216.0 mm ——— ∴ O.K.

2) 철근 피로검토

피로응력한계 : 사용하중하에서 활하중과 충격에 의해 야기되는 직선철근의 최대 인장응력과 최소 응력 상이의 범위는 다음 값을 초과할수 없다.

$f_f = 165 - 0.33fmin$

여기서, f_f : 응력범위(Mpa)

fmin : 최소응력 수준으로 인장은 정(+), 압축은 부(-)의 값(Mpa)

① 상부슬래브 단부

2.4 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 3.053 kN · m Mmin = -0.562 kN · m

- 사용철근량 = H16 × 8ea = 1588.800 ㎟

n = 7

p = As / bd = 1588.80 / (1000 × 400) = 0.00397

$K = -np + \sqrt{\{(np)^2 + 2np\}}$

$= -7 \times 0.00397 + \sqrt{\{ (7 \times 0.00397)^2 + 2 \times 7 \times 0.00397 \}}$

= 0.210

J = 1 - K / 3 = 1 - 0.210 / 3 = 0.930

$$fs\ max = \frac{M}{As \times j \times d} = \frac{3.053 \times 10^6}{1588.80 \times 0.930 \times 400} = 5.160 \text{ Mpa}$$

$$fs\ min = \frac{-0.562 \times 10^6}{1588.80 \times 0.930 \times 400} = -1 \text{ Mpa}$$

Δf = fs max - fs min = 6.111 Mpa

$f_f = 165 - 0.33fmin$

= 165 - 0.33 × -0.95 = 165.314 Mpa > 6.111 Mpa O.K.

② 상부슬래브 중앙부

2.4 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 9.123 kN · m Mmin = 8.451 kN · m

- 사용철근량 = H16 × 8ea = 1588.800 ㎟

n = 7

p = As / bd = 1588.80 / (1000 × 300) = 0.00530

K = $-np + \sqrt{\{(np)^2 + 2np\}}$

= $-7 \times 0.0053 + \sqrt{\{ (7 \times 0.0053)^2 + 2 \times 7 \times 0.0053 \}}$

= 0.238

J = 1 - K / 3 = 1 - 0.238 / 3 = 0.921

$$fs\ max = \frac{M}{As \times j \times d} = \frac{9.123 \times 10^6}{1588.80 \times 0.921 \times 300} = 20.790\ Mpa$$

$$fs\ min = \frac{8.451 \times 10^6}{1588.80 \times 0.921 \times 300} = 19\ Mpa$$

Δf = fs max - fs min = 1.534 Mpa

f_f = 165 - 0.33fmin

= 165 - 0.33 × 19.26 = 158.645 Mpa > 1.534 Mpa O.K.

15. 기초지지력 검토

1) 구체자중

-	2.800	x	0.450	x	24.500				=	30.870	kN/m
-	2.800	x	0.400	x	24.500				=	27.440	kN/m
-	2.000	x	0.400	x	24.500				=	19.600	kN/m
-	2.000	x	0.400	x	24.500				=	19.600	kN/m
-	0.300	x	0.300	x	1/2	x	4	x 24.500	=	4.410	kN/m
								∴ Total	=	101.920	kN/m

101.920 / 2.800 = 36.400 kN/m²

2) 상부연직하중

= 192.24 kN/m²

3) 활하중

= 21.019 kN/m²

4) 최대 지반 반력

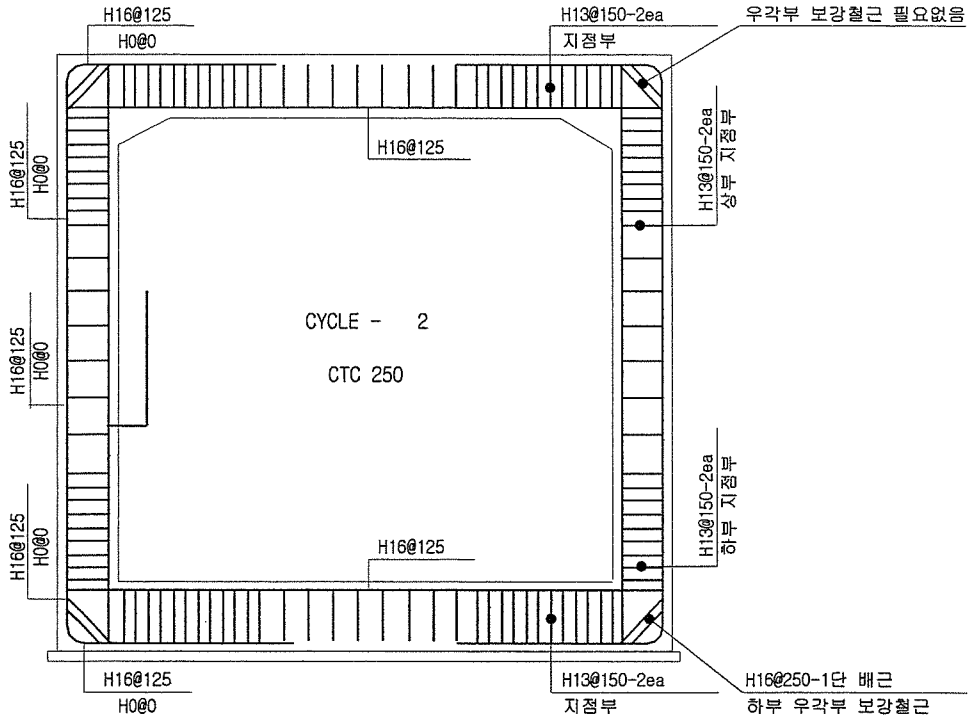
Qmax = 36.400 + 192.240 + 21.019

= 249.659 kN/m²

5) 지지력 검토

Qmax = 249.659 kN/m² < 300.00 kN/m² --- ∴ O.K.

16. 주철근 조립도



▶ 배력철근

- 상부 지점부 : H13, 인장측:150, 압축측:300
- 하부 지점부 : H13, 인장측:150, 압축측:300
- 벽체부 : H13, 인장측:150, 압축측:300

U-Type 개거 2.0x2.4

구조계산서

목 차

1. 설계개요 및 조건

1.1 설계개요

1.2 설계방법

1.3 일반사항

1.4 설계하중

1.5 참고문헌

2. 단면가정

3. 구조해석 모델링

3.1 해석모형

3.2 단면제원

3.3 지반반력계수 산정

4. 하중산정

5. 하중조합

6. 구조해석 결과

6.1 부재력도

6.2 부재력 집계

7. 단면설계

7.1 하부슬래브

7.2 좌측벽체

7.3 우측벽체

7.4 배력철근

7.5 우각부

8. 사용성검토

9. 지지력 검토

■ 해석결과 요약

* 기초 검토

구분	q_{max}(kN/m^2)	Qu(kN)	qa(kN/m^2)	비 고
직접기초	34.840	2240.680	287.267	∴ O.K

* 휨 검토

구분		B(m)	H(m)	dc(m)	헌치(m)	Mu(kn.m)	ΦMn(kn.m)	BENDING Bar(mm)	휨검토		최소철근비 검토	주철근간격 검토
									판정	S.F		
하부슬래브	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		59.672	90.378	H 16 @ 150	O.K	1.515	O.K	O.K
좌측 벽체	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		26.358	46.427	H 16 @ 300	O.K	1.761	O.K	O.K
우측 벽체	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		26.383	46.427	H 16 @ 300	O.K	1.760	O.K	O.K

* 전단검토

구분		ΦVc	Vu	판정	전단철근				전단검토	
					사용철근		다리수	간격	판정	S.F
하부슬래브	단부	155.188	30.052	전단철근 불필요	H 0	× 0	@	0	O.K	-
	중앙부	-	-	-	H -	× -	@	-	-	-
좌측 벽체	단부	155.188	84.550	전단철근 불필요	H 0	× 0	@	0	O.K	-
	중앙부	-	-	-	H -	× -	@	-	-	-
우측 벽체	단부	155.188	84.550	전단철근 불필요	H 0	× 0	@	0	O.K	-
	중앙부	-	-	-	H -	× -	@	-	-	-

1. 설계개요 및 조건

1.1 설계개요

• 구조해석 프로그램 : MIDAS CIVIL

1.2 설계방법

(1) 부재의 단면검토 : 강도설계법

(2) 사용성 검토 : 허용응력설계법

1.3 일반사항

(1) 사용재료의 강도

① 콘크리트의 압축강도 : f_{ck} = 30 MPa

② 철근의 항복강도 : f_y = 400 MPa

(2) 사용재료의 탄성계수

① 콘크리트의 탄성계수 : E_c = 27,537 MPa

② 철근의 탄성계수 : E_s = 200,000 MPa

(3) 토사 내부마찰각 : Φ = 35°

(4) 토압 : K_o = 0.426

(5) 사 각(Skew) : 71.00 °

1.4 설계하중

(1) 고정하중

재 료	단위중량(kN/m^3)	재 료	단위중량(kN/m^3)
철근콘크리트	24.5	아스팔트 포장	23.0
흙(지하수위 이상)	20.0	흙(지하수위 이하)	11.0
지하수	10.0		

(2) 상재 하중(kN/m^2)

q_L = 15.0 kN/m^2

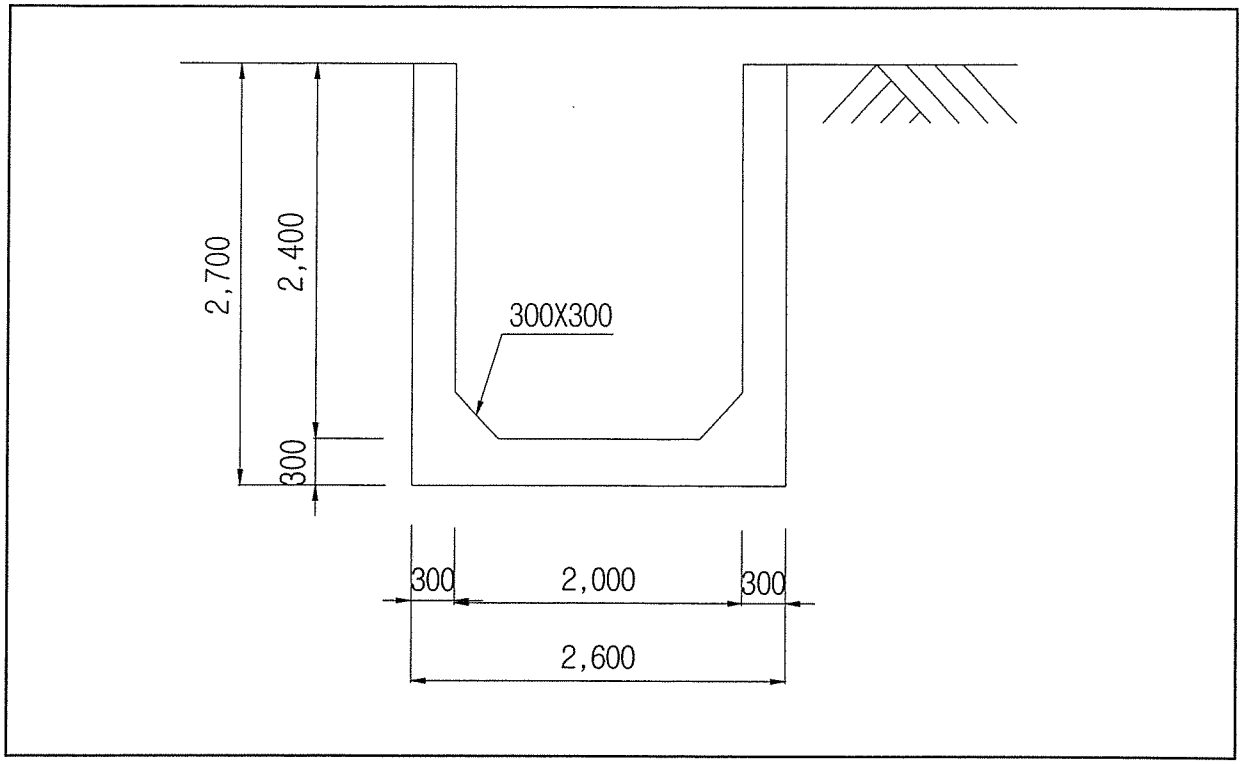
1.5 참고문헌

(1) 콘크리트 구조설계기준 (한국콘크리트 학회, 2012)

(2) 도로교 설계기준 (건설교통부, 2010)

(3) 철도설계기준 (노반편) (건설교통부 2013)

2. 단면가정

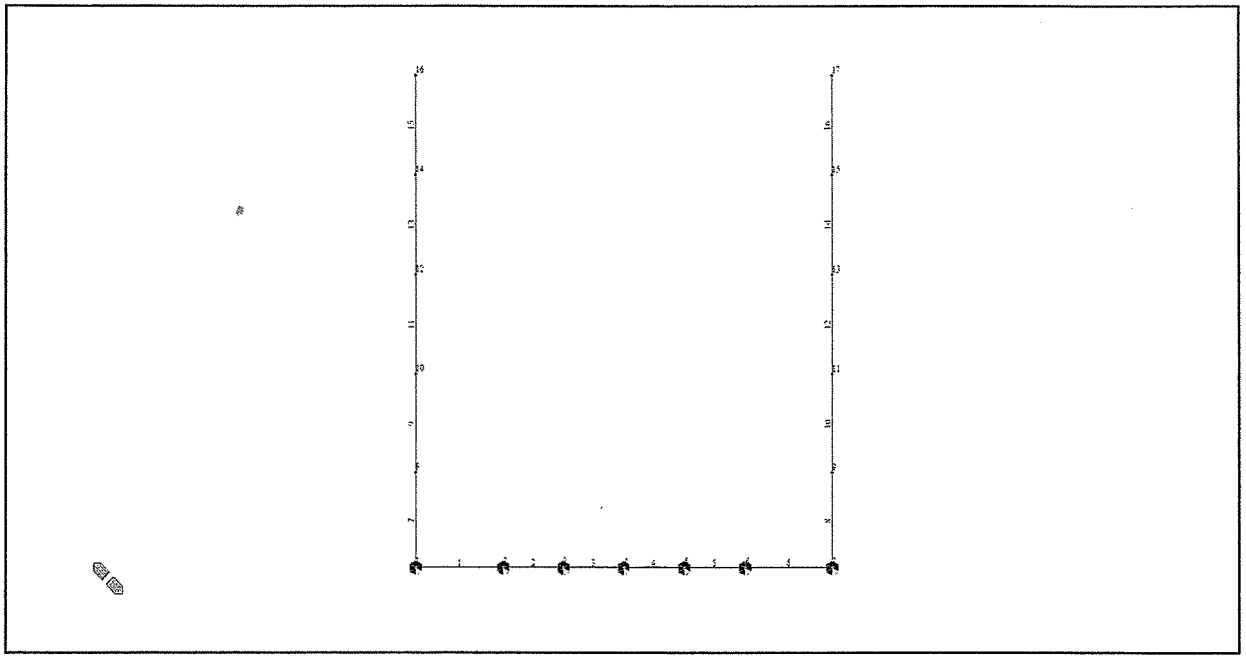


* N=15, Φ=35° 적용 함.

* 지하수위는 극한 지하수위(GL -1.0m) 로 적용 함.

3. 구조해석 모델링

3.1 해석모형



3.2 단면제원

구 분	폭(m)	높이(m)	C.T.C(m)	단면적(m^2)	단면2차모멘트(m^4)	비 고
1	1.00	0.30	-	0.300	0.002250	하부슬래브
2	1.00	0.30	-	0.300	0.002250	좌측벽체
3	1.00	0.30	-	0.300	0.002250	우측벽체

3.3 지반반력계수

$Kv = Kvo \times (Bv / 30)^n$ (n = -3/4)

$Kvo = 1/30 \times \alpha \times Eo$

Bv : 구조물의 환산재하폭

Eo = 2800 x N = 2800 × 9 = 25,200.000 kN/m^2

α = 1

Kvo = 1 × 1 / 0.3 × 25200 = 84000.000 kN/m^3

Bv = √ (2.600 × 1.000) = 1.612 m

∴ Kv = 84000.000 × (1.6 / 0.3) ^ (-3/4) = 23796.069 kN/m^3

절점번호	지반반력계수					비고
1,7	23796.069	×	0.3750	=	8923.526 kN/m^2	
2,6	23796.069	×	0.3750	=	8923.526 kN/m^2	
3,4,5	23796.069	×	0.4000	=	9518.428 kN/m^2	

※ 지반스프링은 압축력에만 저항하는 비선형 경계조건을 사용하여 부반력 발생시 자동제거함.

4. 하중산정

4.1 고정하중

(1) 구조물 자중 : 프로그램내 자동입력 ---------- LC 1

4.2 활하중에 의한 측압 ---------- LC 2

Lh = 0.426 × 15.000 = 6.390 kN/m^2

4.3 토압

(1) 지하수위 유 ---------- LC 3

Q_{N1L} = 1.000 × 20.000 × 0.426 = 8.520 kN/m^2

Q_{N1R} = 8.520 + 1.700 × 11.000 × 0.426 = 16.486 kN/m^2

(2) 지하수위 무 ---------- LC 4

Q_{N1L} = 2.700 × 20.000 × 0.426 = 23.004 kN/m^2

4.4 수압

(1) 측벽 수압 ---------- LC 5

1) 벽체

Q_{W1L} = 10.000 × 1.700 = 17.000 kN/m^2

4.5 온도하중 ---------- LC 6, LC 7

- 계절적 온도변화 ± 10°C를 프로그램내 SYSTEM TEMPERRATURE 기능을 이용하여 이상화 한다.

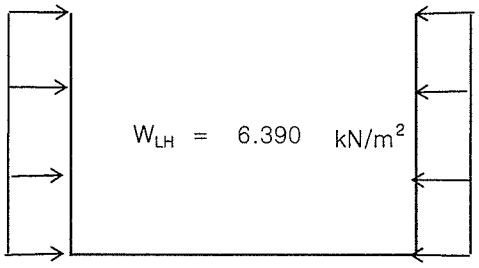
4.6 건조수축 ---------- LC 8

- 15^0c 의 온도하중으로 변환 설계
  - 건조수축계수 : $\varepsilon = 15 \times 10^{-5}$
  - 온도선팽창 계수 : $\alpha = 1.0 \times 10^{-5}$
  - $\triangle T = -\frac{\varepsilon}{\alpha} = 15\ ^{\circ}C$

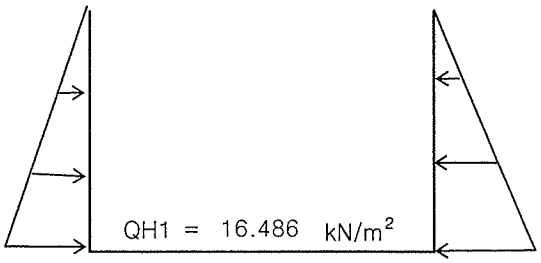
4.7 하중재하도

(1) LC 1 : 프로그램내 자동재하

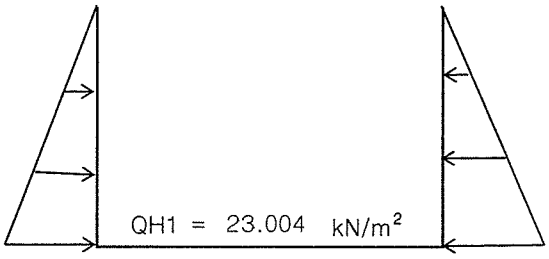
(2) LC 2



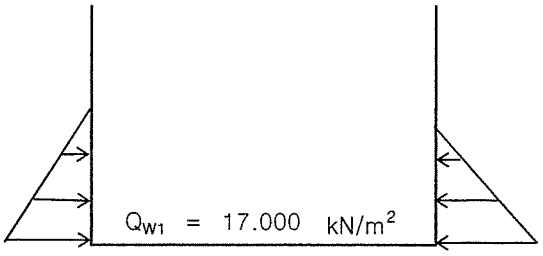
(3) LC 3



(4) LC 4



(5) LC 5



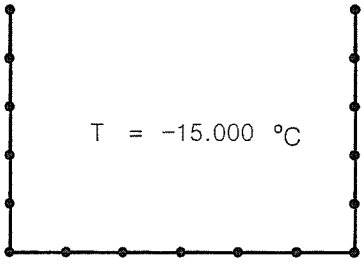
(6) LC 6

- 프래그램내 System Temperature 기능을 이용
10 °C 온도하중 재하

(7) LC 7

- 프래그램내 System Temperature 기능을 이용
-10 °C 온도하중 재하

(8) LC 8



5. 하중조합

5.1 계수하중

구분	고정하중 (D	활하중측압	수평토압		수압	온도하중		건조수축	비고
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	
CB1	1.35	1.85	1.60		1.60				계수하중
CB2	1.35	1.85		1.60					
CB3	1.35	1.85	0.80		0.80				
CB4	1.35	1.85		0.80					
CB5	1.60	1.60	1.60		1.60				
CB6	1.60	1.60		1.60					
CB7	1.60	1.60	0.80		0.80				
CB8	1.60	1.60		0.80					
CB9	1.35	1.40	1.60		1.60	1.35			
CB10	1.35	1.40		1.60		1.35			
CB11	1.35	1.40	0.80		0.80	1.35			
CB12	1.35	1.40		0.80		1.35			
CB13	1.35	1.40	1.60		1.60		1.35	1.35	
CB14	1.35	1.40		1.60			1.35	1.35	
CB15	1.35	1.40	0.80		0.80		1.35	1.35	
CB16	1.35	1.40		0.80			1.35	1.35	

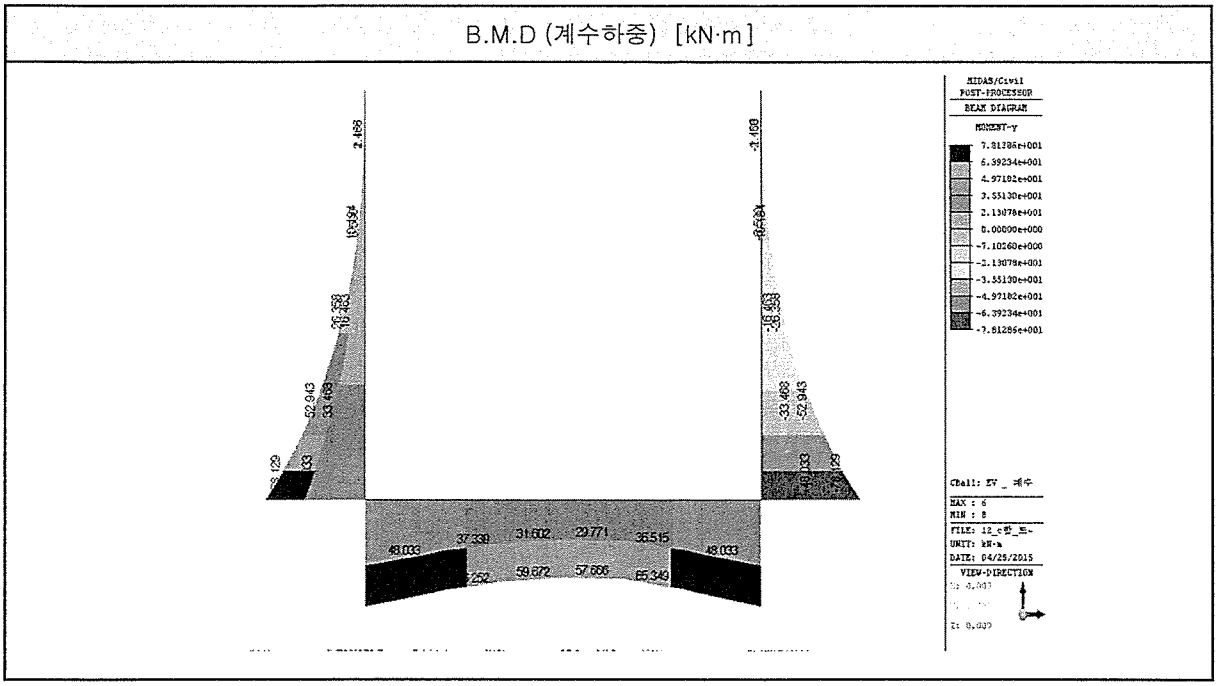
5.2 사용하중

구분	고정하중 (D	활하중측압	수평토압		수압	온도하중		건조수축	비고
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	
CB17	1.00	1.00	1.00		1.00				사용하중
CB18	1.00	1.00		1.00					
CB19	1.00	1.00	0.50		0.50				
CB20	1.00	1.00		0.50					
CB21	1.00	1.00	1.00		1.00	1.00			
CB22	1.00	1.00		1.00		1.00			
CB23	1.00	1.00	0.50		0.50	1.00			
CB24	1.00	1.00		0.50		1.00			
CB25	1.00	1.00	1.00		1.00		1.00	1.00	
CB26	1.00	1.00		1.00			1.00	1.00	
CB27	1.00	1.00	0.50		0.50		1.00	1.00	
CB28	1.00	1.00		0.50			1.00	1.00	
CB29	1.00		1.00		1.00				
CB30	1.00			1.00					

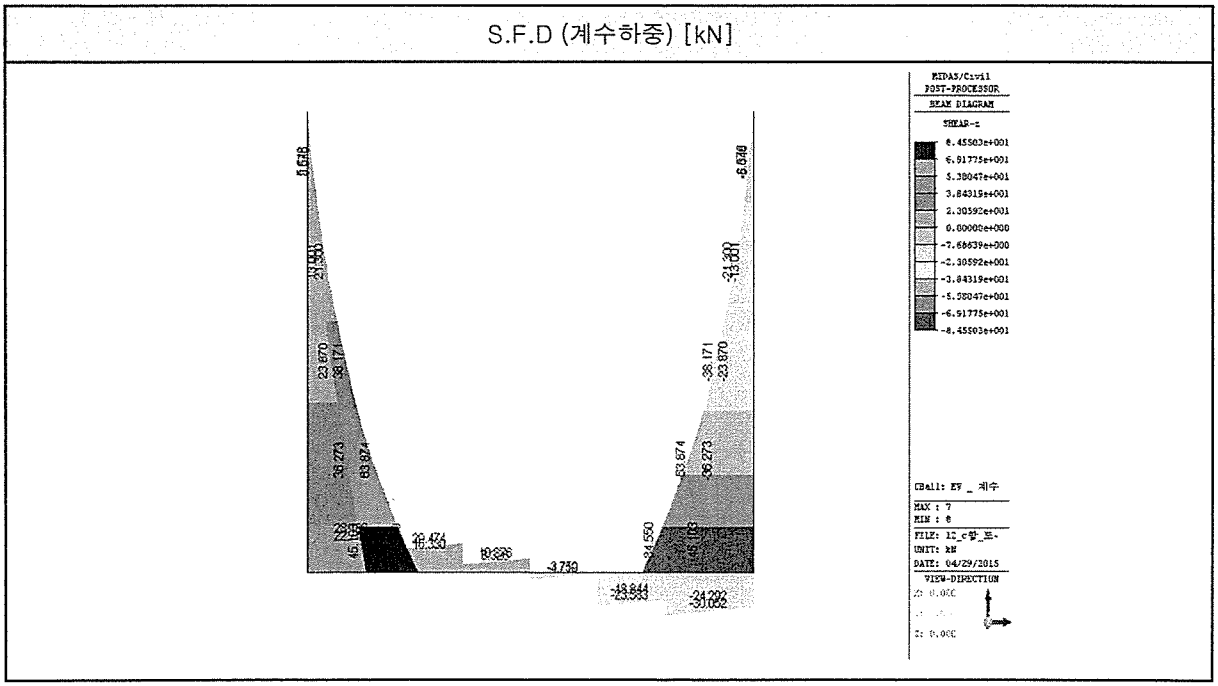
6. 구조해석 결과

6.1 부재력도 (ENVELOPE)

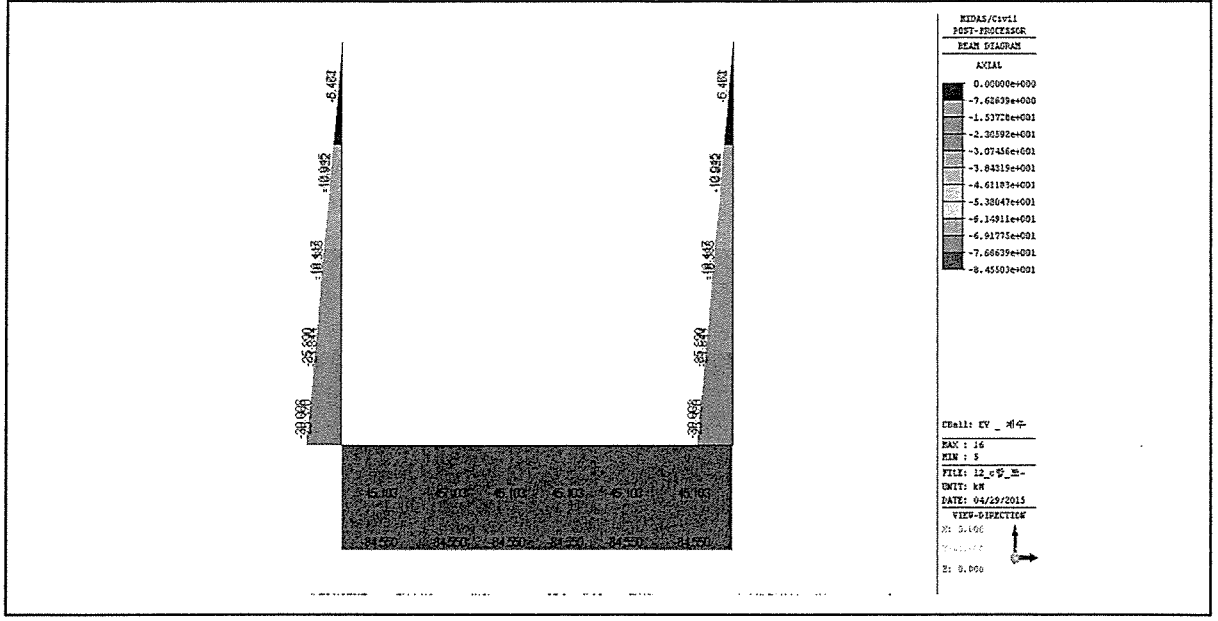
B.M.D (계수하중) [kN·m]



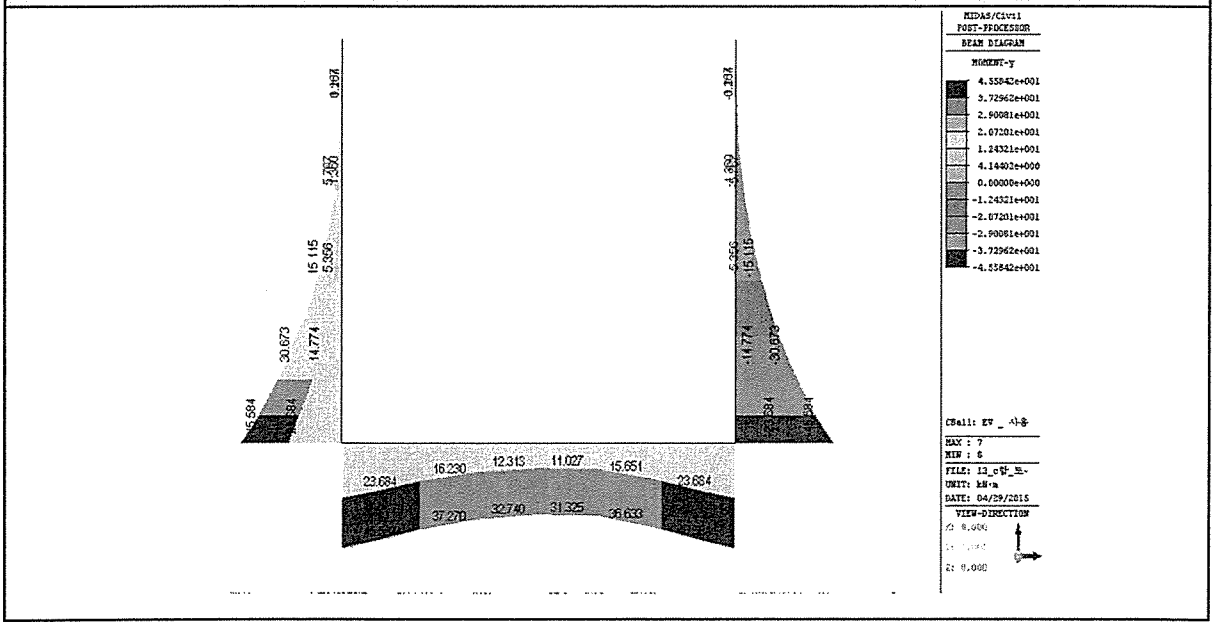
S.F.D (계수하중) [kN]



A.F.D (계수하중) [kN]



B.M.D (사용하중) [kN·m]



6.2 부재력 집계

구 분		단면제원		Mu[kN·m]	Vu[kN]	Mo[kN·m]	비고
		B (mm)	H (mm)				
하 부 슬래브	단 부	1,000	400	78.129	30.052	45.584	
	중앙부	1,000	300	59.672		32.740	
좌측벽체	단 부	1,000	400	78.129	84.550	45.584	
	중앙부	1,000	300	26.358		15.115	
우측벽체	단 부	1,000	400	78.129	84.550	45.584	
	중앙부	1,000	300	26.383		15.115	

7. 단면설계

7.1 하부슬래브

7.1.1 하부슬래브 단부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	78.129 kN.m	Vu	=	30.052 kN	Mo	=	45.584 kN.m	d (휨)	=	300 mm
B	=	1000 mm	H	=	400 mm	헌치	=	300 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	300 mm

Use A_s = 1단 1CYCL H 16 @ 150 , 2CYCLI H 0 @ 0 = 1,324 mm^2

2단 1CYCL H @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 1,324 mm^2 [p = 0.00441]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 1,050 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 1,027 mm^2

$A_{s,\,min}$ = 1,050 mm^2

$A_{s,\,Req}$ = 738 mm^2 , 4/3 $A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s,min}$, 4/3 $A_{s,req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 30.052 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[\,2np + (np)^2\,]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

$= - 7 \times 0.00441 + \sqrt{[\,2 \times 0.031 + 0.031^2\,]}$ = 0.22

$j = 1 - k / 3 = 1 - 0.22 / 3$ = 0.927

$fs = M / [As \cdot d \cdot j]$ = 123.801 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.1.2 하부슬래브 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	59.672 kN.m	Vu	=	0.000 kN	Mo	=	32.740 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s = 1단 1CYCL H 16 @ 150 , 2CYCLI H 0 @ 0 = 1,324 mm^2

2단 1CYCL H @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 1,324 mm^2 [p = 0.00662]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 25) / 25

= 0.02115 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.02115 - 0.002)$$

= 2.246 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1.min}$ = 700 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2.min}$ = 685 mm^2

$A_{s,min}$ = 700 mm^2

$A_{s.Req}$ = 858 mm^2 , $4/3 A_{s,Req}$ = 1,143 mm^2

MIN ($A_{s.min}$, $4/3 A_{s.req}$) = 700 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (200 - 21 / 2) / 10 E+6

= 90.378 kN.m > Mu = 59.672 kN.m ∴ O.K [S.F = 1.515]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1,000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[2np + (np)^2]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00662 + √ [2 × 0.046 + 0.046 ²] = 0.261

$j = 1 - k / 3 = 1 - 0.261 / 3$ = 0.913

$fs = M / [As \cdot d \cdot j]$ = 135.422 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 351 mm

$s_2 = 300 (210 / fs)$ = 465 mm > s = 150 mm ∴ O.K

7.2 좌측벽체

7.2.1 좌측벽체 단부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	78.129 kN.m	Vu	=	84.550 kN	Mo	=	45.584 kN.m	d (휨)	=	300 mm
B	=	1000 mm	H	=	400 mm	헌치	=	300 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	300 mm

Use A_s = 1단 1CYCL H 16 @ 150 , 2CYCLI H 0 @ 0 = 1,324 mm^2

2단 1CYCL H 0 @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 1,324 mm^2 [p = 0.00441]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 1,050 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 1,027 mm^2

$A_{s,\,min}$ = 1,050 mm^2

$A_{s,\,Req}$ = 738 mm^2 , 4/3 $A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s,min}$, 4/3 $A_{s,req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 84.550 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

A = 2 × 100 × 1,000 / 7 = 30,000 mm^2

k = - np + √ [2 np + (np)²] [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00441 + √ [2 × 0.031 + 0.0309 ²] = 0.22

j = 1 - k / 3 = 1 - 0.22 / 3 = 0.927

fs = M / [As·d·j] = 123.801 MPa

◈ 주철근 간격

Cc = $d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

s_1 = 375 (210 / fs) - 2.5 Cc = 406 mm > s = 150 mm ∴ O.K

s_2 = 300 (210 / fs) = 509 mm

7.2.2 좌측벽체 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	26.358 kN.m	Vu	=	0.000 kN	Mo	=	15.115 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCL H	16 @	300	,	2CYCLI H	0 @	0	=	662	mm^2
	2단	1CYCL H	@		,	2CYCLI H	0 @	0	=	-	mm^2
			TOTAL	=	662	mm^2	[p =	0.00331	]		

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 264,800 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 10 mm

▶ $c = a / \beta_1$ = 10 / 0.84 = 12 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 12) / 12

= 0.04530 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.04530 - 0.002)$$

= 4.259 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1.min}$ = 700 mm^2

$P_{min2} = 0.25\sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2.min}$ = 685 mm^2

$A_{s,min}$ = 700 mm^2

$A_{s.Req}$ = 371 mm^2 , 4/3 $A_{s,Req}$ = 495 mm^2

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 495 mm^2 < Use As = 662 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 264,800 × (200 - 10 / 2) / 10 E+6

= 46.427 kN.m > Mu = 26.358 kN.m ∴ O.K [S.F = 1.761]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 3$ = 60,000 mm^2

$k = -np + \sqrt{[\,2np + (np)^2\,]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

$= -7 \times 0.00331 + \sqrt{[\,2 \times 0.023 + 0.0232^2\,]}$ = 0.193

$j = 1 - k / 3 = 1 - 0.193 / 3$ = 0.936

$fs = M / [As \cdot d \cdot j]$ = 121.966 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 416 mm

$s_2 = 300 (210 / fs)$ = 517 mm > s = 300 mm ∴ O.K

7.3 우측벽체

7.3.1 우측벽체 단부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	78.129 kN.m	Vu	=	84.550 kN	Mo	=	45.584 kN.m	d (휨)	=	300 mm
B	=	1000 mm	H	=	400 mm	헌치	=	300 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	300 mm

Use A_s = 1단 1CYCLE H 16 @ 150 , 2CYCLE H 0 @ 0 = 1,324 mm^2

2단 1CYCLE H @ , 2CYCLE H 0 @ 0 = - mm^2

TOTAL = 1,324 mm^2 [p = 0.00441]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 1,050 mm^2]

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 1,050 mm^2] $A_{s,\,min}$ = 1,050 mm^2

$A_{s,\,Req}$ = 738 mm^2 , 4/3 $A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s,min}$, 4/3 $A_{s,req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 84.550 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[\,2np + (np)^2\,]}$ [∵ $n = Es / Ec$ = 7.3 ≒ 7]

= - 7 × 0.00441 + √ [2 × 0.031 + 0.0309^2] = 0.22

$j = 1 - k / 3 = 1 - 0.22 / 3$ = 0.927

$fs = M / [As \cdot d \cdot j]$ = 123.801 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.3.2 우측벽체 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	26.383 kN.m	Vu	=	0.000 kN	Mo	=	15.115 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCL H	16 @	300	, 2CYCLE H	0 @	0	=	662	mm^2
	2단	1CYCL H	@		, 2CYCLE H	0 @	0	=	-	mm^2
			TOTAL	=	662 mm^2	[p =	0.00331	]		

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y = 264{,}800$ N

$C = 0.85 f_{ck} a b = 25{,}500\ a$ $\quad C = T$; $a = 10$ mm

▶ $c = a / \beta_1 = 10 / 0.84 = 12$ mm

$\varepsilon_t = 0.003 (d_t - c) / c = 0.003 \times (200 - 12) / 12$

$= 0.04530 > 0.002$ ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.04530 - 0.002)$$

$= 4.259 > 0.9$ ⇒ $\phi_f = 0.900$

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y = 0.00350$ ⇒ $A_{s1,min} = 700$ mm^2]

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y = 0.00342$ ⇒ $A_{s2,min} = 685$ mm^2] $A_{s,min} = 700$ mm^2

$A_{s,Req} = 372$ mm^2 , $4/3\ A_{s,Req} = 496$ mm^2

$MIN(A_{s,min}, 4/3\ A_{s,req}) = 496$ mm^2 < Use As = 662 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a/2) = 0.900 \times 264{,}800 \times (200 - 10/2) / 10E+6$

$= 46.427$ kN.m > Mu = 26.383 kN.m ∴ O.K [S.F = 1.760]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 3 = 60{,}000$ mm^2

$k = -np + \sqrt{[2np + (np)^2]}$ [∵ $n = Es / Ec = 7.3 \fallingdotseq 7$]

$= -7 \times 0.00331 + \sqrt{[2 \times 0.023 + 0.0232^2]} = 0.193$

$j = 1 - k / 3 = 1 - 0.193 / 3 = 0.936$

$fs = M / [As \cdot d \cdot j] = 121.966$ MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2 = 100 - 15.9 / 2 = 92$ mm (여기서, $d_b = 16$)

$s_1 = 375 (210 / fs) - 2.5\ Cc = 416$ mm

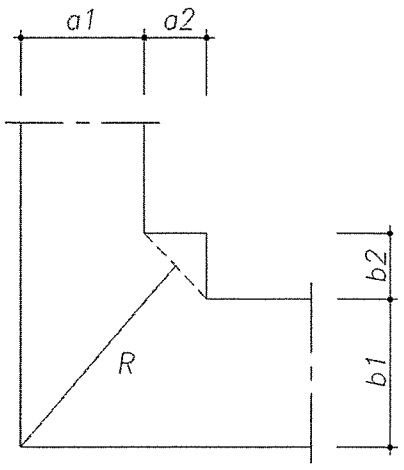
$s_2 = 300 (210 / fs) = 517$ mm $\quad > \quad s = 300$ mm ∴ O.K

7.4 온도 및 배력철근 설계

구 분		단면제원		사 용 주철근	소요 배력철근량 (mm^2)		사용 배력철근량 (mm^2)			판정
		B (mm)	H (mm)		주철근 20%	온도철근				
하 부 슬래브	단 부	1,000	300	H16@150	265	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@150	265	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
좌측 벽체	단부	1,000	300	H16@150	265	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@300	132	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
우측 벽체	단부	1,000	300	H16@150	265	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@300	132	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		

7.5 우각부 보강 설계

(1) 하부슬래브 (좌,우측)



f_{ck}	=	30	MPa
f_y	=	400	MPa
Mo	=	45.584	kN·m
a1	=	300	mm
a2	=	300	mm
b1	=	300	mm
b2	=	300	mm

$$R = \{(a2 \times b1 + b2 \times a1 + a2 \times b2) / (a2 + b2)\} \times \sqrt{2}$$

$$= \quad 636 \quad mm$$

- 주철근 (절곡하여 보강철근으로 고려할 수 있는 주철근량)

As' = H 16 @ 300 = 662 mm^2

H 0 @ 0 = 0 mm^2

1) 최대인장응력, f_{tmax}

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 45.584 \times 10^6}{(636.396)^2 \times 1{,}000}$$

$$= 0.563 \text{ Mpa} > 0.08\sqrt{fck} = 0.438 \text{ Mpa}$$ 보강철근 필요 !

2) 보강철근량 산정, As

- 필요철근량

$$As = \frac{2 \times Mo}{R \times f_{sa}} - As'$$

$$= \frac{2 \times 45.584 \times 10^6}{636 \times 180} - 662$$

$$= 796 \ mm^2 - 662 \ mm^2$$

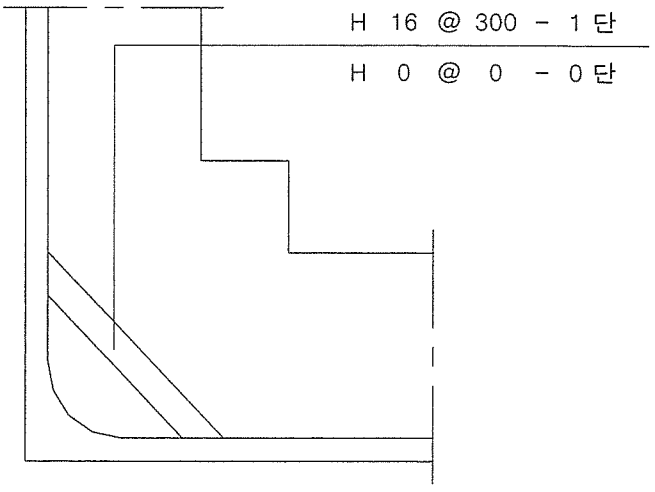
$$= 134 \ mm^2$$

- 사용철근량

As = H 16 @ 300 - 1 단

+ H 0 @ 0 - 0 단

= 662 mm^2 O.K



8. 사용성 검토

8.1 처짐 검토

1) 하부 슬래브 : 최소부재두께 적용

철근의 항복응력 fy = 400 MPa

부재의 지간길이 L = 2.300 m

슬래브 양단 연속의 경우

T = L / 28 = 0.082 m

(보정계수) FACTOR = 1.000

처짐계산을 하지않는 경우의 최소두께

T = 0.082m < H = 0.300m (처짐검토 생략)

9. 기초지반 지지력 검토

9.1 작용하중

9.1.1 구 체 자 중 (W1) :

(0.3 × 2.4 + 0.3 × 2 × 1 EA + 0.3 × 0.3 / 2
× 2 EA + 0.3 × 2.4) × 24.500 / 2.6 = 20.071 kN/m²

9.1.2 상재고정하중(W2)

(1) 상재토

되메움토 : 0.000 × 20.000 = 0.000 kN/m²

아스콘 : 0.000 × 23.000 = 0.000 kN/m²

9.1.3 활 하 중(L)

(1) 활 하 중 :

= 0.000 kN/m²

9.1.4 수로개거내의 물의자중(w3)

2.000 × 1.920 × 1.000 / 2.600 / 1.000 × 10.000 = 14.769 kN/m²

9.2 지지력 검토

9.2.1 최대지반반력 (qmax) : W1 + W2 + L + W3

20.071 + 0.000 + 0.000 + 14.769 = 34.840 kN/m²

9.2.2 허용지반반력 (qa)

- 정역학 공식에 의한 지반의 허용 연직 지지력 (Terzaghi식 사용)

Qu = A · [c · Nc + q · Nq + 0.5 · r1 · B · Nr]

Qu : 하중의 편심 및 경사가 없는 연속기초지반의 극한지지력 (kN)

· A : 재하면적 = 2.600 m²

· c : 지반의 점착력 = 0.000 kN/m²

· q : 상재하중, (q = r2 · Df) = 48.000 kN/m²

· r1 : 지지 지반의 흙의 단위중량 = 20.000 kN/m³

· r2 : 근입 지반의 흙의 단위중량 = 20.000 kN/m³

· B : 확대기초의 폭 = 2.600 m

· L : 확대기초의 길이 = 1.000 m

· Φ : 지반의 전단 저항각

Φ = √ (12 × N) + 15 = √ (12 × 15) + 15 = 28 °

· Nc = 25.100 , Nq = 12.700 , Nr = 9.700 (전단 저항각 28 ° 일때)

· Qu = 2.600 × [0.000 × 25.100 + 48.000 × 12.700 +
0.500 × 20.000 × 2.600 × 9.700] = 2240.680 kN

· Qa = 2240.680 / 3 = 746.893 kN

· qa = 746.893 / 2.600 = 287.267 kN/m²

* 평상시 최대 지반반력 (도.설.해 2008) = 400.000 kN/m²

∴ q_{max} = 34.840 kN/m² < q_a = 287.267 kN/m² ∴ O.K

C(함) 파전제3

- 2.0 x 2.00 x 1
- 토피 = 9.6m 이하

1. 설 계 조 건
2. 단 면 가 정
3. 해석모델 및 단면제원
4. 하중산정
5. 하중재하도
6. 하중계수 및 하중조합
7. INPUT DATA
8. OUTPUT
9. 단면력요약
10. 단 면 력 도
11. 단 면 검 토
12. 우각부 검토
13. 배력철근 검토
14. 사용성 검토
15. 기초지지력 검토
16. 주철근조립도
17. 날개벽 설계

1. 설계 조건

1) 구조물명 : c (함)

2) 구조형식 : 철근 콘크리트 구조

3) 설계하중 : KRL2012 (복 선)

4) 재료중량

- 철근 콘크리트(γ_c)	=	24.5	kN/m^3
- 무근 콘크리트(γ_{con})	=	23.0	kN/m^3
- 뒷채움 토사(γ_t)	=	20.0	kN/m^3
- 뒷채움 토사(γ_{sub})	=	11.0	kN/m^3
- 지하수(γ_w)	=	10.0	kN/m^3

5) 사용재료의 성질

- 콘크리트 설계기준 강도(fck)	=	30.0	MPa
- 콘크리트 탄성계수(Ec)	=	27537	MPa
- 철근의 항복강도(fy)	=	400.0	MPa
- 철근의 탄성계수(Es)	=	200000	MPa

6) 토 사

- 흙의 내부마찰각 (ϕ)	=	35.0	°
- 정지 토압계수 (Ko)	=	0.426	

7) 기 초 형 식 : 직접기초

8) 사 각(Skew) : 70.00 ° 연 장 (L) : 51.00 m

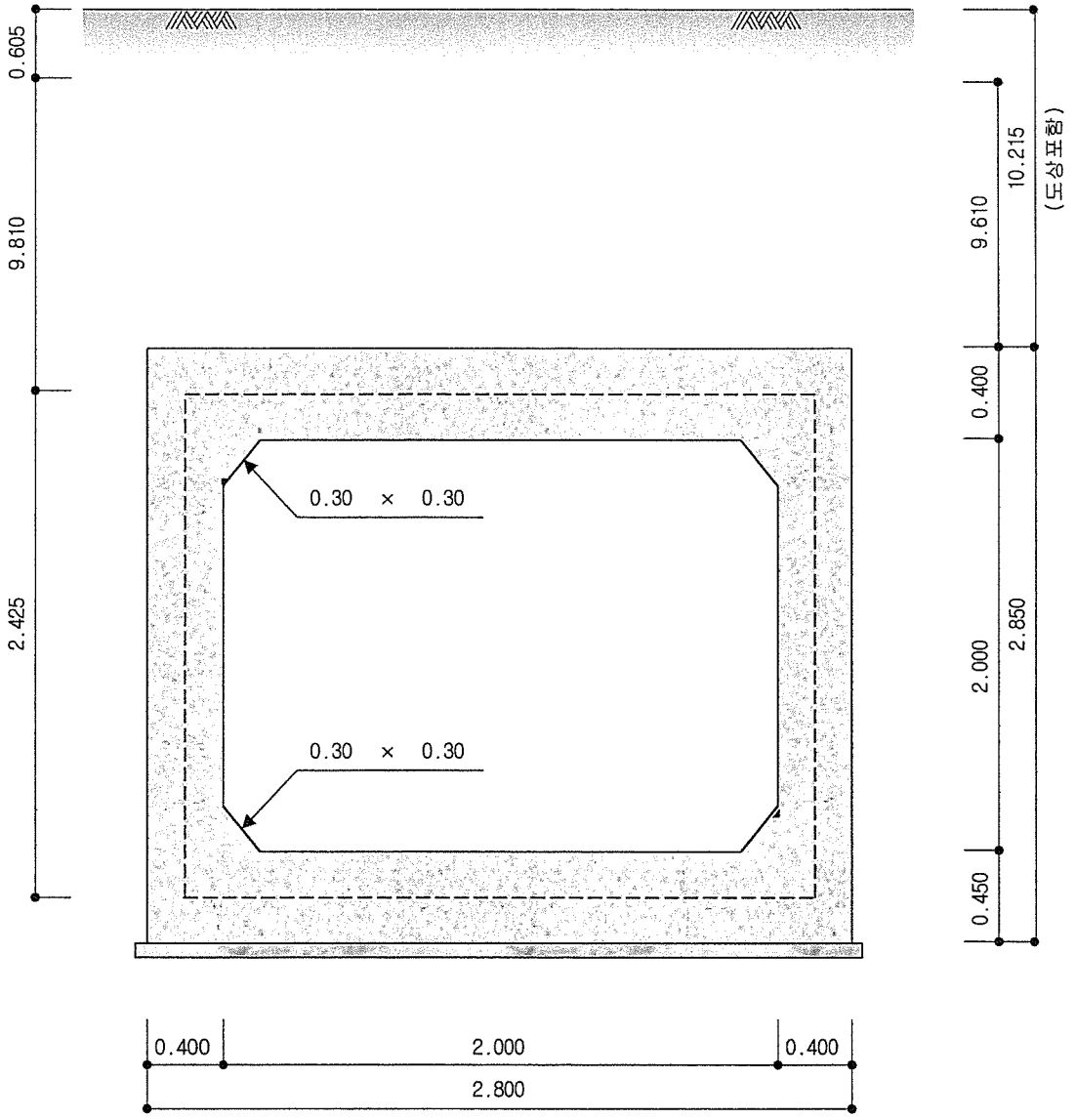
9) 설계방법

- 강도 설계법 : 부재 단면검토(슬래브, 벽체, 보, 기둥 등)
- 허용응력 설계법 : 사용성 검토(처짐, 균열, 우각부 검토)

10) 참고문헌

- 철도설계기준(노반편), 국토해양부, 2013
- 콘크리트 구조설계기준해설, 한국콘크리트 학회, 2012

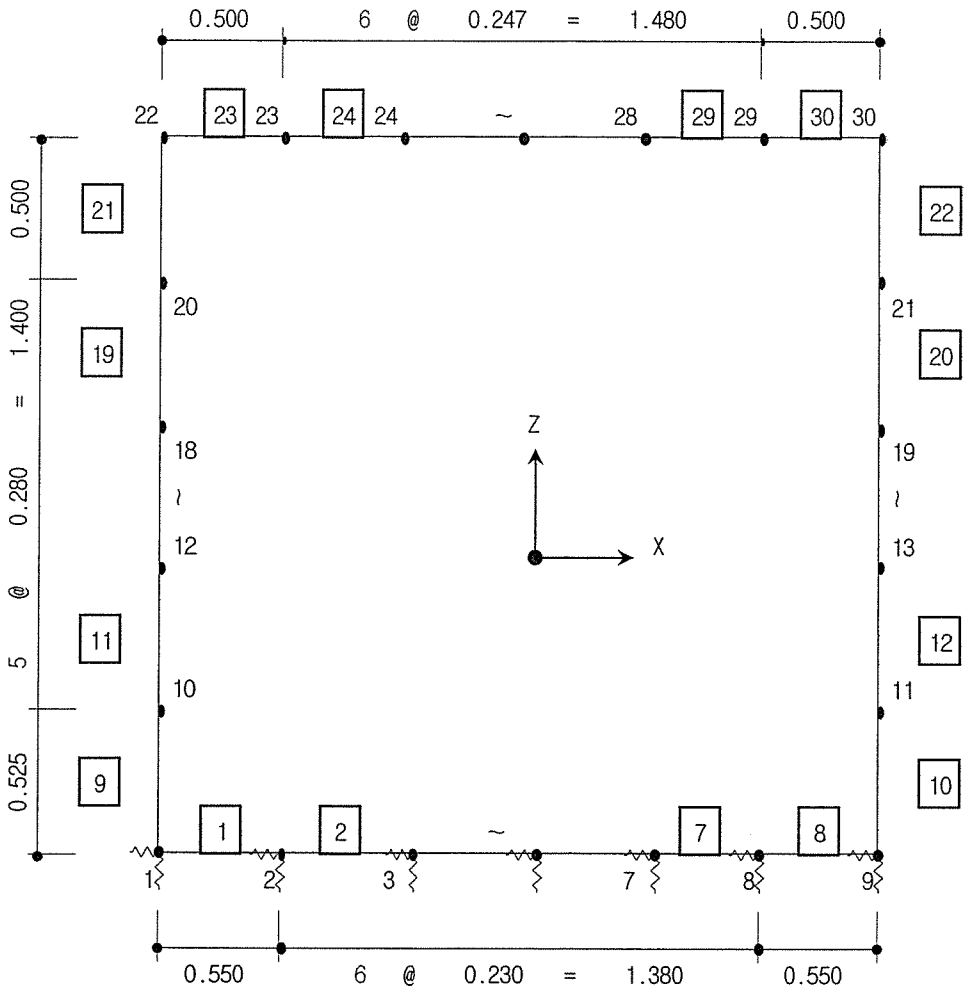
2. 단면 가정



※ 유효경간

Skew =	70.0	°					
Ln =	2.400	m					
Ls =	2.554	m					
Ls/B =	2.554	/	18.000	=	0.142	<	1.500
L =	2.480	m					

3. 해석모델 및 단면제원



1) 절점 좌표

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
1	0.000	0.000	0.000	13	2.480	0.000	0.805
2	0.550	0.000	0.000	14	0.000	0.000	1.085
3	0.780	0.000	0.000	15	2.480	0.000	1.085
4	1.010	0.000	0.000	16	0.000	0.000	1.365
5	1.240	0.000	0.000	17	2.480	0.000	1.365
6	1.470	0.000	0.000	18	0.000	0.000	1.645
7	1.700	0.000	0.000	19	2.480	0.000	1.645
8	1.930	0.000	0.000	20	0.000	0.000	1.925
9	2.480	0.000	0.000	21	2.480	0.000	1.925
10	0.000	0.000	0.525	22	0.000	0.000	2.425
11	2.480	0.000	0.525	23	0.500	0.000	2.425
12	0.000	0.000	0.805	24	0.747	0.000	2.425

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
25	0.993	0.000	2.425	28	1.733	0.000	2.425
26	1.240	0.000	2.425	29	1.980	0.000	2.425
27	1.487	0.000	2.425	30	2.480	0.000	2.425

2) 경계 조건

joint	spring계수 (kN/m²)		joint	spring계수 (kN/m²)	
	z방향(수직)	x방향(수평)		z방향(수직)	x방향(수평)
1 . 9	5456		3 ~ 7	2642	
2 . 8	4480				

3) 단면제원

Element	두께	폭	비 고
23 ~ 30	0.400	1.000	상부슬래브
1 ~ 8	0.450	1.000	하부슬래브
9 ~ 22	0.400	1.000	벽 체

4) 강역설정

(1) 강역설정기준(콘크리트구조설계기준 2012)

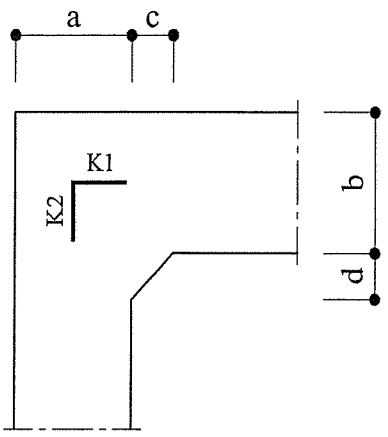
CASE 1 : 부재단부가 다른 부재와 접합할 때는 부재단에서 부재두께의 1/4 안쪽점에서 절점까지

CASE 2 : 부재가 그 축선에 대해 25° 이상 60° 미만인 경사진 헌치를 갖는 경우에는 부재두께가 1.5배가 되는 점에서 부터 절점까지

CASE 3 : 헌치의 경사가 60° 이상의 경우는 헌치의 시점에서 부재두께의 1/4 안쪽 점에서부터 절점까지

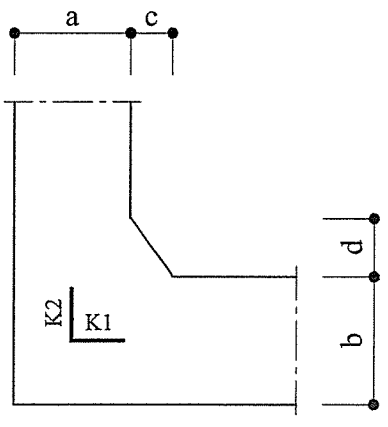
(2) 강역설정

- 절점 22 , 30



a =	400	mm	c =	300	mm
b =	400	mm	d =	300	mm
K1 =	300	mm	K2 =	300	mm

- 절점 1 , 9

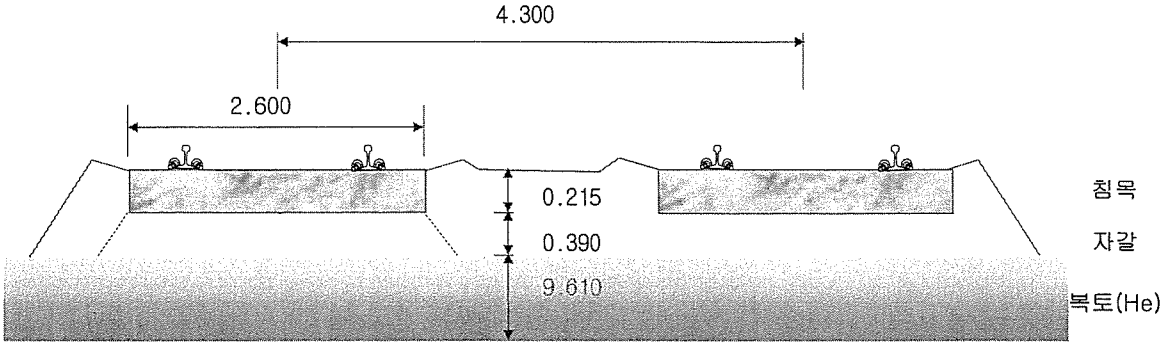


a =	400	mm	c =	300	mm
b =	450	mm	d =	300	mm
K1 =	275	mm	K2 =	325	mm

4. 하중산정

4.1 상시

1) 상부 고정하중(지하수 無)



① 하중 분포폭 산정 (b')

① He < 0.5m 경우 : b + d

b_1 = 2.600 + 0.390 = 2.990 m

② He ≥ 0.5m 경우 : c + b + (d + He)

b_2 = 4.300 + 2.600 + (0.390 + 9.610) = 14.590 m

여기서, He : 시공기면에서의 토피고(m)

a : 동륜간 축간거리(m) c : 복선선로 중심간격(m)

b : 침목길이(m) d : 침목하면의 도상두께(m)

H : 상부슬래브 두께

He ≥ 0.5 m

∴ b' = 14.590 m

② 구조물 자중 : 프로그램 상에서 Self Weight 기능을 이용하여 자동 고려

③ 궤도 중량

- 레일 : 레일당 1.5kN/m를 적용

q_1 = 4 × 1.500 / 14.590 = 0.411 kN/㎡

- 침목 : 고속철도용 5.0kN/m

q_2 = 5.000 × 2 / 14.590 = 0.685 kN/㎡

= 1.096 kN/㎡

④ 도상 (q_2)

TCL = 0.215 × 19.000 × 1.3 = 5.311 kN/㎡

HSB = 0.390 × 19.000 × 1.3 = 9.633 kN/㎡

= 14.944 kN/㎡

⑤ 복토하중 (q_3) = 20.000 × 9.610 = 192.200 kN/㎡

∴ $q_1 + q_2 + q_3$ = 1.096 + 14.944 + 192.200 = 208.240 kN/㎡

2) 활하중

① 활하중 산정 : KRL 2012

$$W_{HL} = \frac{2P}{a \times b'} = \frac{2\times(220+80x3)}{3.000 \times 14.590} = 21.019 \text{ kN/㎡}$$

∴ W = 21.019 kN/㎡

② 충격계수

1) 단선 (i_0) (철도설계기준 노반편(2013) p.5-7)

지 간 L (m)	0	5	10	20	30	40	50	70	100
충격계수 (i)	0.60	0.48	0.43	0.37	0.34	0.32	0.30	0.27	0.24

* 상기표에 없는 지간의 충격 계수는 보간법으로 구한다.

지 간 L (m) = 2.480 m

따라서 i_0 = 0.540 (보간법에 의하여 산정된 충격계수)

2) 구조물 상면의 복토높이에 따른 충격 계수

H ≥ 1.0일 경우 $i = io \cdot \{(2.5 - H)/1.5\}$

여기서, H ≤ 1.0 m 에서는 $i = i_o$

H ≥ 2.5 m 에서는 i = 0

따라서, 본 구조물의 H = 10.215 m i = 0.000

W_L = 21.019 × (1 + 0.000) = 21.019 kN/㎡

③ 활하중에 의한 측압 (충격비고려)(철도설계기준 노반편(2013) p.5-6)

W_{LH} = 21.019 × 0.4 = 8.408 kN/㎡

3) 토 압

- 지하수가 없는 경우 작용 토압

q_1 = 0.426 × (16.040 + 20.000 × 9.810) = 90.414 kN/㎡

q_2 = 90.414 + 0.426 × (20.000 × 0.500) = 94.674 kN/㎡

q_3 = 94.674 + 0.426 × (20.000 × 0.280) = 97.060 kN/㎡

q_4 = 97.060 + 0.426 × (20.000 × 0.280) = 99.446 kN/㎡

q_5 = 99.446 + 0.426 × (20.000 × 0.280) = 101.832 kN/㎡

q_6 = 101.832 + 0.426 × (20.000 × 0.280) = 104.218 kN/㎡

q_7 = 104.218 + 0.426 × (20.000 × 0.280) = 106.604 kN/㎡

q_8 = 106.604 + 0.426 × (20.000 × 0.525) = 111.077 kN/㎡

- 시공중 편토압 산정 (지하수가 없는 경우 작용 토압)

q_1 = 0.426 × (0.000 + 20.000 × 0.200) = 1.704 kN/㎡

q_2 = 1.704 + 0.426 × (20.000 × 0.500) = 5.964 kN/㎡

q_3 = 5.964 + 0.426 × (20.000 × 0.280) = 8.350 kN/㎡

q_4 = 8.350 + 0.426 × (20.000 × 0.280) = 10.736 kN/㎡

q_5 = 10.736 + 0.426 × (20.000 × 0.280) = 13.122 kN/㎡

q_6 = 13.122 + 0.426 × (20.000 × 0.280) = 15.508 kN/㎡

q_7 = 15.508 + 0.426 × (20.000 × 0.280) = 17.894 kN/㎡

q_8 = 17.894 + 0.426 × (20.000 × 0.525) = 22.367 kN/㎡

4) 온도하중

토피가 1.0m 이상일 경우에는 온도변화를 고려치 않으며, 토피가 1.0m 이하일 경우에는 다음식을 따른다.

$t = a \times t_0$ = 0.000 × 15.0 = 0.000 ℃

t : 박스 구조물의 상부 슬래브에 작용하는 온도변화

a : 토피심도(m)에 따른 저감률 $a=1-h_0$ (h_0:토피심도)

t_0 : 지표면에서의 기본온도 변화

상부슬래브의 두께가 700mm 이상인 경우 t_0 = ±10℃

상부슬래브의 두께가 700mm 미만인 경우 t_0 = ±15℃

토피고 H > 1.0m 이므로 온도변화는 고려하지 않는다.

5) 건조수축

$$\Delta Tx = \frac{\varepsilon}{\alpha} = \frac{-0.00015}{0.00001} = -15\,^{\circ}C$$

6) 장대레일 하중

장대레일 종하중은 필요시에 고려하여야 하며, 1궤도당 10 kN/m로 하고 작용위치는 상부슬래브 축선으로 한다. (단, 토피가 1.0m 이상인 경우는 이를 무시한다.)

토피가 10.215 m 이므로 장대레일 하중을 무시한다.

H_r = 0.000 × 4 / 14.590 = 0.000 kN/㎡

7) 상시 지반반력 계수

지지 지반 N치 = 6

Eo = 2800 × N = 2800 × 6 = 16800

Kvo = 1 / 0.3 x α x Eo = 1 / 0.3 × 1 x 16800 = 56000

Bv = √ Av = √ (2.480 × 2.480) = 2.480

Kv = Kvo (Bv/0.3)^-3/4 = 11487 kN/㎡

11487 × (0.400 / 2 + 0.550 / 2) = 5456 kN/㎡ - 저판 단부 스프링

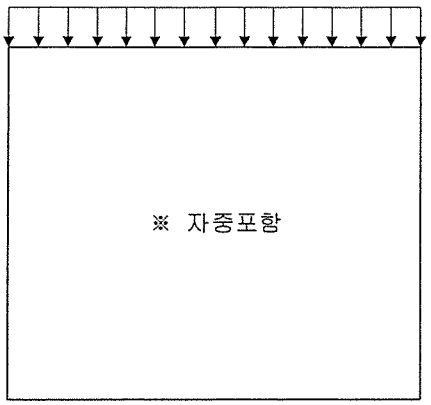
11487 × (0.550 / 2 + 0.230 / 2) = 4480 kN/㎡ - 저판 전단검토위치

11487 × (0.230 / 2 + 0.230 / 2) = 2642 kN/㎡ - 저판 중앙부 스프링

5. 하중재하도

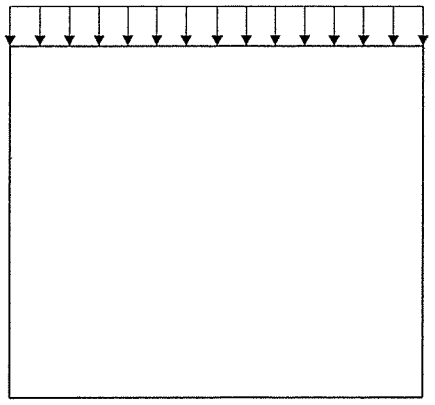
① 고정하중

W_D = 208.240 kN/㎡



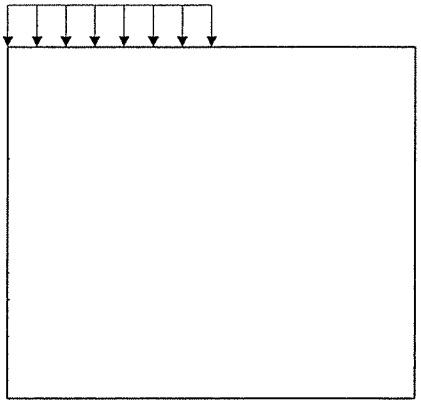
② 활하중(만재하)

W_L = 21.019 kN/㎡

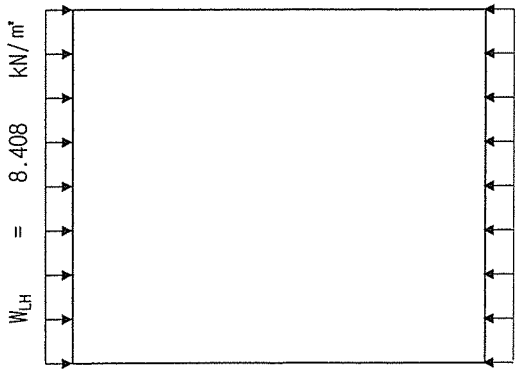


③ 활하중(편재하)

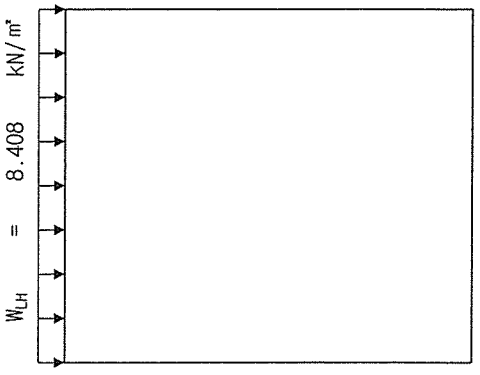
W_L = 21.019 kN/㎡



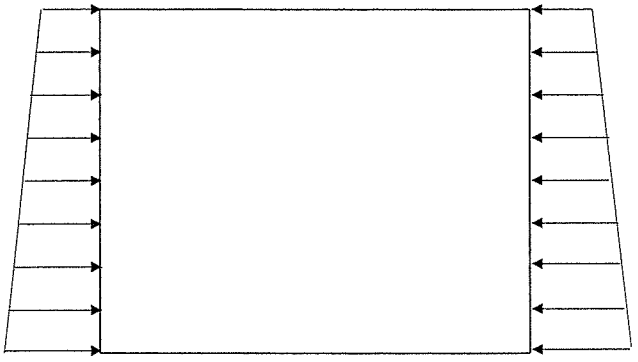
④ 활하중에 의한 측압(만재하)



⑤ 활하중에 의한 측압(편재하)



⑥ 수평토압(지하수 없는 경우)

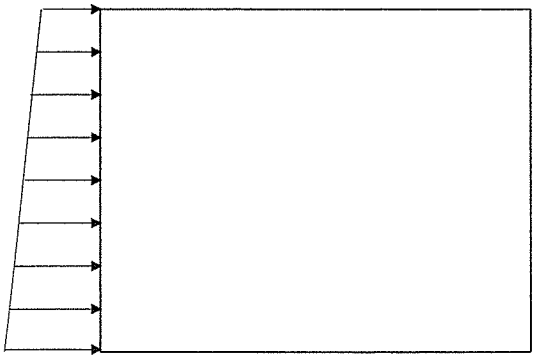


q_1 = 90.414 kN/㎡

q_7 = 111.077 kN/㎡

⑦ 편측토압(지하수 없는 경우)

q_1 = 1.704 kN/㎡



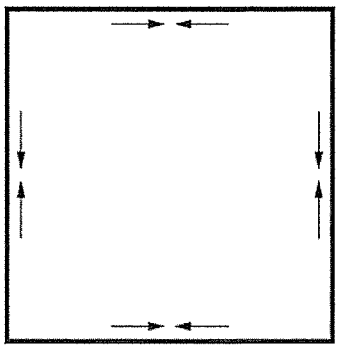
q_7 = 22.367 kN/㎡

⑧ 온도하중

△T = 0 °

⑨ 건조수축

△T = -15 °



⑩ 장대레일 종하중

Hr = 0.000 kN/m^2

6. 하중계수 및 하중조합

1) 극한하중 검토시

구분	고정하중	활하중		활하중 측압		수평토압 (지하수無)		온도하중		건조수축	장대레일	비고
				양측재하	편측재하	양측재하	편측재하					
		전경간	1/2	수평	수평	수평	수평	온도상승	온도하강			
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11	
1	1.35	1.85		1.85		1.6						
2	1.35	1.85		1.85		0.6						
3	1.35		1.85		1.85	1.6						
4	1.35		1.85		1.85	0.6						
5	1.6	1.60		1.60		1.6						
6	1.6	1.60		1.60		0.6						
7	1.6		1.6		1.6	1.6						
8	1.6		1.6		1.6	0.6						
9	1.35	1.40		1.40		1.6		1.35		1.35		
10	1.35	1.40		1.40		0.6		1.35		1.35		
11	1.35	1.40		1.40		1.6			1.35	1.35	1.40	
12	1.35	1.40		1.40		0.6			1.35	1.35	1.40	
13	1.35		1.40		1.40	1.6		1.35		1.35		
14	1.35		1.40		1.40	0.6		1.35		1.35		
15	1.35		1.40		1.40	1.6			1.35	1.35	1.4	
16	1.35		1.40		1.40	0.6			1.35	1.35	1.4	
17	1.35		1.85		1.85		1.60					
18	1.35		1.85		1.85		0.60					
19	1.60		1.60		1.60		1.60					
20	1.60		1.60		1.60		0.60					

2) 사용하중 검토시

구분	고정하중	활하중		활하중 측압		수평토압 (지하수無)		온도하중		건조수축	장대레일	비고
				양측재하	편측재하	양측재하	편측재하					
		전경간	1/2	수평	수평	수평	수평	온도상승	온도하강			
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11	
21	1.0	1.0		1.0		1.0						
22	1.0	1.0		1.0		0.5						
23	1.0		1.0		1.0	1.0						
24	1.0		1.0		1.0	0.5						
25	1.0	1.0		1.0		1.0		1.0			1.0	
26	1.0	1.0		1.0		0.5		1.0			1.0	
27	1.0	1.0		1.0		1.0			1.0	1.0	1.0	
28	1.0	1.0		1.0		0.5			1.0	1.0	1.0	
29	1.0		1.0		1.0	1.0		1.0			1.0	
30	1.0		1.0		1.0	0.5		1.0			1.0	
31	1.0		1.0		1.0	1.0			1.0	1.0	1.0	
32	1.0		1.0		1.0	0.5			1.0	1.0	1.0	
33	1.0					1.0						
34	1.0		1.0		1.0		1.0					
35	1.0		1.0		1.0		0.5					

7. INPUT DATA

```
*VERSION
   8.3.1

*UNIT    ; Unit System
; FORCE, LENGTH, HEAT, TEMPER
   KN   , M, J, C

*STRUCTYPE    ; Structure Type
; iSTYP, iMASS, iSMAS, bMASSOFFSET, bSELFWEIGHT, GRAV, TEMPER, bALIGNBEAM, bALIGNSLAB, bROTRIGID
     1, 1, 1, NO, YES, 9.806, 0, NO, NO, NO

*REBAR-MATL-CODE    ; Rebar Material Code
; CONC_CODE, CONC_MDB, SRC_CODE, SRC_MDB
 KSO1-Civil(RC), SD300, KSO1-Civil(RC), SD300

*NODE    ; Nodes
; iNO, X, Y, Z
     1, 0, 0, 0
     2, 0.55, 0, 0
     3, 0.78, 0, 0
     4, 1.01, 0, 0
     5, 1.24, 0, 0
     6, 1.47, 0, 0
     7, 1.7, 0, 0
     8, 1.93, 0, 0
     9, 2.48, 0, 0
    10, 0, 0, 0.525
    11, 2.48, 0, 0.525
    12, 0, 0, 0.805
    13, 2.48, 0, 0.805
    14, 0, 0, 1.085
    15, 2.48, 0, 1.085
    16, 0, 0, 1.365
    17, 2.48, 0, 1.365
    18, 0, 0, 1.645
    19, 2.48, 0, 1.645
    20, 0, 0, 1.925
    21, 2.48, 0, 1.925
    22, 0, 0, 2.425
    23, 0.5, 0, 2.425
    24, 0.747, 0, 2.425
    25, 0.993, 0, 2.425
    26, 1.24, 0, 2.425
    27, 1.487, 0, 2.425
    28, 1.733, 0, 2.425
    29, 1.98, 0, 2.425
    30, 2.48, 0, 2.425

*ELEMENT    ; Elements
; iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, iOPT(EXVAL2) ; Frame  Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, EXVAL2, bLMT ; Comp/Tens Truss
; iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iSUB, iWID             ; Planar Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iN5, iN6, iN7, iN8     ; Solid  Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, REF, RPX, RPY, RPZ, iSUB, EXVAL  ; Frame(Ref. Point)
     1, BEAM  ,    2,     2,     1,     2,   180
     2, BEAM  ,    2,     2,     2,     3,   180
     3, BEAM  ,    2,     2,     3,     4,   180
     4, BEAM  ,    2,     2,     4,     5,   180
     5, BEAM  ,    2,     2,     5,     6,   180
     6, BEAM  ,    2,     2,     6,     7,   180
     7, BEAM  ,    2,     2,     7,     8,   180
     8, BEAM  ,    2,     2,     8,     9,   180
     9, BEAM  ,    2,     3,     1,    10,   180
    10, BEAM  ,    2,     3,     9,    11,     0
    11, BEAM  ,    2,     3,    10,    12,   180
    12, BEAM  ,    2,     3,    11,    13,     0
    13, BEAM  ,    2,     3,    12,    14,   180
    14, BEAM  ,    2,     3,    13,    15,     0
    15, BEAM  ,    2,     3,    14,    16,   180
    16, BEAM  ,    2,     3,    15,    17,     0
    17, BEAM  ,    2,     3,    16,    18,   180
    18, BEAM  ,    2,     3,    17,    19,     0
    19, BEAM  ,    2,     3,    18,    20,   180
    20, BEAM  ,    2,     3,    19,    21,     0
    21, BEAM  ,    2,     3,    20,    22,   180
    22, BEAM  ,    2,     3,    21,    30,     0
    23, BEAM  ,    2,     1,    22,    23,     0
    24, BEAM  ,    2,     1,    23,    24,     0
    25, BEAM  ,    2,     1,    24,    25,     0
    26, BEAM  ,    2,     1,    25,    26,     0
    27, BEAM  ,    2,     1,    26,    27,     0
    28, BEAM  ,    2,     1,    27,    28,     0
    29, BEAM  ,    2,     1,    28,    29,     0
```

```
    30, BEAM  ,    2,     1,    29,    30,     0

*MATERIAL    ; Material
; iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, DAMPRATIO, [DATA1]          ; STEEL, CONC, USER
; iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, DAMPRATIO, [DATA2], [DATA2] ; SRC
; [DATA1] : 1, DB, NAME, CODE
; [DATA1] : 2, ELAST, POISN, THERMAL, DEN, MASS
; [DATA1] : 3, Ex, Ey, Ez, Tx, Ty, Tz, Sxy, Sxz, Syz, Pxy, Pxz, Pyz, DEN, MASS   ; Orthotropic
; [DATA2] : 1, DB, NAME, CODE or 2, ELAST, POISN, THERMAL, DEN, MASS
    1, USER , STEEL              , 0, 0, , C, NO, 0, 2, 2.0000e+008,   0.3, 1.1700e-005, 76.8196,     0
    2, USER , CONC               , 0, 0, , C, NO, 0, 2, 2.7537e+007,  0.18, 1.0000e-005,  24.5,     0

*MATL-COLOR
; iMAT, W_R, W_G, W_B, HF_R, HF_G, HF_B, HE_R, HE_G, HE_B, bBLEND, FACT
    1, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
    2, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5


*SECTION    ; Section
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2]                    ; 1st line - DB/USER
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL              ; 1st line - VALUE
;       AREA, ASy, ASz, Ixx, Iyy, Izz                                         ; 2nd line
;       CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz               ; 3rd line
;       Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz                              ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF          ; 1st line - SRC
;       D1, D2, [SRC]                                                         ; 2nd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2         ; 1st line - COMBINED
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24
; iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, iyVAR, izVAR, STYPE                ; 1st line - TAPERED
;       DB, NAME1, NAME2                                                      ; 2nd line(STYPE=DB)
;       [DIM1], [DIM2]                                                        ; 2nd line(STYPE=USER)
;       D11, D12, D13, D14, D15, D16, D17, D18                                ; 2nd line(STYPE=VALUE)
;       AREA1, ASy1, ASz1, Ixx1, Iyy1, Izz1                                   ; 3rd line(STYPE=VALUE)
;       CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1     ; 4th line(STYPE=VALUE)
;       Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2                    ; 5th line(STYPE=VALUE)
;       D21, D22, D23, D24, D25, D26, D27, D28                                ; 6th line(STYPE=VALUE)
;       AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2                                   ; 7th line(STYPE=VALUE)
;       CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2     ; 8th line(STYPE=VALUE)
;       Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2                    ; 9th line(STYPE=VALUE)
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line(STYPE=PSC)
;       ELAST, DEN, POIS, POIC                                                ; 2nd line(STYPE=PSC-CMPW)
;       bSHEARCHK, [SCHK-I], [SCHK-J], [WT-I], [WT-J], WI, WJ, bSYM, bSIDEHOLE ; 3rd line(STYPE=PSC)
;       bSHEARCHK, bSYM, bHUNCH, [CMPWEB-I], [CMPWEB-J]                       ; 3rd line(STYPE=PSC-CMPW)
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF-I], [STIFF-J]       ; 4th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 5th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 6th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 7th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 8th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 9th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 10th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 11th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 12th line(STYPE=PSC)
;       GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMULTI, EsEc-L, EsEc-S       ; 2nd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 3rd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 4th line(STYPE=CMP-B/I)
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 5th line(STYPE=CMP-B)
;       GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb, bSYM, SW_i, SW_i       ; 2nd line(STYPE=CMP-CI/CT)
;       OPT1, OPT2, [JOINT]                                                   ; 3rd line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 4th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 5th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 6th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 7th line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 11th line(STYPE=CMP-CI/CT)
; iSEC, TYPE, SNAME, [OFFSET], bSD, STYPE1, STYPE2                            ; 1st line - CONSTRUCT
;       SHAPE, ...(same with other type data from shape)                      ; Before (STYPE1)
;       SHAPE, ...(same with other type data from shape)                      ; After  (STYPE2)
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SB
;       Hw, tw, B, Bf1, tf1, B2, Bf2, tf2                                     ; 2nd line
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 3rd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SI
;       Hw, tw, B, tf1, B2, tf2                                               ; 2nd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 3rd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-CI/CT
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line
;       [SIZE-A]                                                              ; 3rd line
;       [SIZE-B]                                                              ; 4th line
;       [SIZE-C]                                                              ; 5th line
;       [SIZE-D]                                                              ; 6th line
;       SW, GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb                     ; 7th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - PSC
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line
;       bSHEARCHK, [SCHK], [WT], WIDTH, bSYM, bSIDEHOLE                       ; 3rd line
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF]                    ; 4th line
```

```
;       [SIZE-A]                                                                ; 5th line
;       [SIZE-B]                                                                ; 6th line
;       [SIZE-C]                                                                ; 7th line
;       [SIZE-D]                                                                ; 8th line
; [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10
; [DATA2] : CCSHAPE or iCEL or iN1, iN2
; [SRC]  : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2
; [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8
; [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER
; [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ
; [JOINT]  :  8(1CELL, 2CELL), 13(3CELL),  9(PSCM),  8(PSCH), 9(PSCT),  2(PSCB), 0(nCELL),  2(nCEL2)
; [SIZE-A] :  6(1CELL, 2CELL), 10(3CELL), 10(PSCM),  6(PSCH), 8(PSCT), 10(PSCB), 5(nCELL), 11(nCEL2)
; [SIZE-B] :  6(1CELL, 2CELL), 12(3CELL),  6(PSCM),  6(PSCH), 8(PSCT),  6(PSCB), 8(nCELL), 18(nCEL2)
; [SIZE-C] : 10(1CELL, 2CELL), 13(3CELL),  9(PSCM), 10(PSCH), 7(PSCT),  8(PSCB), 0(nCELL), 11(nCEL2)
; [SIZE-D] :  8(1CELL, 2CELL), 13(3CELL),  6(PSCM),  7(PSCH), 8(PSCT),  5(PSCB), 0(nCELL), 18(nCEL2)
; [STIFF]  : AREA, ASy, ASz, Ixx, Iyy, Izz
; [SCHK]   : bAUTO_Z1, Z1, bAUTO_Z3, Z3
; [WT]     : bAUTO_TOR, TOR, bAUTO_SHR1, SHR1, bAUTO_SHR2, SHR2, bAUTO_SHR3, SHR3
; [CMPWEB] : EFD, LRF, A, B, H, T
   1, DBUSER    , TOPSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.45, 1, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL             , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0

*SECT-COLOR
; iSEC, W_R, W_G, W_B, HF_R, HF_G, HF_B, HE_R, HE_G, HE_B, bBLEND, FACT
   1, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
   2, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
   3, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5

*DGN-SECT
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2]                    ; 1st line - DB/USER
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL             ; 1st line - VALUE
;       AREA, ASy, ASz, Ixx, Iyy, Izz                                         ; 2nd line
;       CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz               ; 3rd line
;       Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz                              ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF         ; 1st line - SRC
;       D1, D2, [SRC]                                                         ; 2nd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2        ; 1st line - COMBINED
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24
; iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, iyVAR, izVAR, STYPE               ; 1st line - TAPERED
;       DB, NAME1, NAME2                                                      ; 2nd line(STYPE=DB)
;       [DIM1], [DIM2]                                                        ; 2nd line(STYPE=USER)
;       D11, D12, D13, D14, D15, D16, D17, D18                                ; 2nd line(STYPE=VALUE)
;       AREA1, ASy1, ASz1, Ixx1, Iyy1, Izz1                                   ; 3rd line(STYPE=VALUE)
;       CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1     ; 4th line(STYPE=VALUE)
;       Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2                    ; 5th line(STYPE=VALUE)
;       D21, D22, D23, D24, D25, D26, D27, D28                                ; 6th line(STYPE=VALUE)
;       AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2                                   ; 7th line(STYPE=VALUE)
;       CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2     ; 8th line(STYPE=VALUE)
;       Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2                    ; 9th line(STYPE=VALUE)
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line(STYPE=PSC)
;       ELAST, DEN, POIS, POIC                                                ; 2nd line(STYPE=PSC-CMPW)
;       bSHEARCHK, [SCHK-I], [SCHK-J], [WT-I], [WT-J], WI, WJ, bSYM, bSIDEHOLE ; 3rd line(STYPE=PSC)
;       bSHEARCHK, bSYM, bHUNCH, [CMPWEB-I], [CMPWEB-J]                       ; 3rd line(STYPE=PSC-CMPW)
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF-I], [STIFF-J]       ; 4th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 5th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 6th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 7th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 8th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 9th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 10th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 11th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 12th line(STYPE=PSC)
;       GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMULTI, EsEc-L, EsEc-S       ; 2nd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 3rd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 4th line(STYPE=CMP-B/I)
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 5th line(STYPE=CMP-B)
;       GN, CTC, Bc, Tc, Hh, EqdEsb, DqdDsb, Pqd, Psb, bSYM, SW_i, SW_i       ; 2nd line(STYPE=CMP-CI/CT)
;       OPT1, OPT2, [JOINT]                                                   ; 3rd line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 4th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 5th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 6th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 7th line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 11th line(STYPE=CMP-CI/CT)
; iSEC, TYPE, SNAME, [OFFSET], bSD, STYPE1, STYPE2                            ; 1st line - CONSTRUCT
;       SHAPE, ...(same with other type data from shape)                      ; Before (STYPE1)
;       SHAPE, ...(same with other type data from shape)                      ; After  (STYPE2)
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SB
;       Hw, tw, B, Bf1, tf1, B2, Bf2, tf2                                     ; 2nd line
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 3rd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SI
;       Hw, tw, B, tf1, B2, tf2                                               ; 2nd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 3rd line
```

```
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                    ; 1st line - COMPOSITE-CI/CT
;       OPT1, OPT2, [JOINT]                                                  ; 2nd line
;       [SIZE-A]                                                             ; 3rd line
;       [SIZE-B]                                                             ; 4th line
;       [SIZE-C]                                                             ; 5th line
;       [SIZE-D]                                                             ; 6th line
;       SW, GN, CTC, Bc, Tc, Hh, EqdEsb, DqdDsb, Pqd, Psb                    ; 7th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                    ; 1st line - PSC
;       OPT1, OPT2, [JOINT]                                                  ; 2nd line
;       bSHEARCHK, [SCHK], [WT], WIDTH, bSYM, bSIDEHOLE                      ; 3rd line
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF]                   ; 4th line
;       [SIZE-A]                                                             ; 5th line
;       [SIZE-B]                                                             ; 6th line
;       [SIZE-C]                                                             ; 7th line
;       [SIZE-D]                                                             ; 8th line
; [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10
; [DATA2] : CCSHAPE or iCEL or iN1, iN2
; [SRC]   : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2
; [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8
; [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER
; [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ
; [JOINT]  :  8(1CELL, 2CELL), 13(3CELL),  9(PSCM),  8(PSCH), 9(PSCT),  2(PSCB), 0(nCELL),  2(nCEL2)
; [SIZE-A] :  6(1CELL, 2CELL), 10(3CELL), 10(PSCM),  6(PSCH), 8(PSCT), 10(PSCB), 5(nCELL), 11(nCEL2)
; [SIZE-B] :  6(1CELL, 2CELL), 12(3CELL),  6(PSCM),  6(PSCH), 8(PSCT),  6(PSCB), 8(nCELL), 18(nCEL2)
; [SIZE-C] : 10(1CELL, 2CELL), 13(3CELL),  9(PSCM), 10(PSCH), 7(PSCT),  8(PSCB), 0(nCELL), 11(nCEL2)
; [SIZE-D] :  8(1CELL, 2CELL), 13(3CELL),  6(PSCM),  7(PSCH), 8(PSCT),  5(PSCB), 0(nCELL), 18(nCEL2)
; [STIFF]  : AREA, ASy, ASz, Ixx, Iyy, Izz
; [SCHK]   : bAUTO_Z1, Z1, bAUTO_Z3, Z3
; [WT]     : bAUTO_TOR, TOR, bAUTO_SHR1, SHR1, bAUTO_SHR2, SHR2, bAUTO_SHR3, SHR3
; [CMPWEB] : EFD, LRF, A, B, H, T
   1, DBUSER    , TOPSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.45, 1, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL             , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0


*STLDCASE    ; Static Load Cases
; LCNAME, LCTYPE, DESC
  LC1  , USER,
  LC2  , USER,
  LC3  , USER,
  LC4  , USER,
  LC5  , USER,
  LC6  , USER,
  LC7  , USER,
  LC8  , USER,
  LC9  , USER,
  LC10 , USER,
  LC11 , USER,
  NCOMB1, USER,
  NCOMB2, USER,
  NCOMB3, USER,
  NCOMB4, USER,
  NCOMB5, USER,
  NCOMB6, USER,
  NCOMB7, USER,
  NCOMB8, USER,
  NCOMB9, USER,
  NCOMB10, USER,
  NCOMB11, USER,
  NCOMB12, USER,
  NCOMB13, USER,
  NCOMB14, USER,
  NCOMB15, USER,
  NCOMB16, USER,
  NCOMB17, USER,
  NCOMB18, USER,
  NCOMB19, USER,
  NCOMB20, USER,
  NCOMB21, USER,
  NCOMB22, USER,
  NCOMB23, USER,
  NCOMB24, USER,
  NCOMB25, USER,
  NCOMB26, USER,
  NCOMB27, USER,
  NCOMB28, USER,
  NCOMB29, USER,
  NCOMB30, USER,
  NCOMB31, USER,
  NCOMB32, USER,
  NCOMB33, USER,
  NCOMB34, USER,
  NCOMB35, USER,


*SPRING    ; Point Spring Supports
; NODE_LIST, Type, SDx, SDy, SDz, SRx, SRy, SRz, GROUP, FROMTYPE, EFFAREA, Kx, Ky, Kz
```

```
; NODE_LIST, Type, Direction, Vx, Vy, Vz, Stiffness, GROUP, FROMTYPE, EFFAREA
; NODE_LIST, Type, Multi-Linear Type, Direction, Vx, Vy, Vz, ax, ay, bx, by, cx, cy, dx, dy, ex, ey, fx, fy, GROUP, FROMTYPE, EFFAREA
   2 8, COMP  ,  5, 0, 0, 0, 4480, , 0, 0, 0, 0, 0
   3to7, COMP  ,  5, 0, 0, 0, 2642, , 0, 0, 0, 0, 0
   1, LINEAR, 1e+014, 0, 0, 0, 0, 0, NO, 0, 0, 0, 0, 0, 0, 0, , 0, 0, 0, 0, 0
   1 9, COMP  ,  5, 0, 0, 0, 5456, , 0, 0, 0, 0, 0

*OFFSET    ; Beam End Offsets
; ELEM_LIST, TYPE, RGDXi, RGDYi, RGDZi, RGDXj, RGDYj, RGDZj, GROUP  ; TYPE=GLOBAL
; ELEM_LIST, TYPE, RGDi, RGDj, GROUP                               ; TYPE=ELEMENT
    1, ELEMENT, 0.275, 0,
    8, ELEMENT, 0, 0.275,
    9, ELEMENT, 0.325, 0,
   10, ELEMENT, 0.325, 0,
   21, ELEMENT, 0, 0.3,
   22, ELEMENT, 0, 0.3,
   23, ELEMENT, 0.3, 0,
   30, ELEMENT, 0, 0.3,

*USE-STLD, LC1

; *SELFWEIGHT, X, Y, Z, GROUP
*SELFWEIGHT, 0, 0, -1,

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
   23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
   24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
   25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
   26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
   27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
   28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
   29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
   30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC1] ------------------------

*USE-STLD, LC2

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
   23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
   24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
   25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
   26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
   27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
   28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
   29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
   30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC2] ------------------------

*USE-STLD, LC3

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
   23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
   24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
   25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
   26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC3] ------------------------

*USE-STLD, LC4

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
   10, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
   11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
   12, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
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    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC4] ----------

*USE-STLD, LC5

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC5] ----------

*USE-STLD, LC6

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL I-END, ADDITIONAL J-END, bADDITIONAL J-END
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 111.427, 1, 106.954, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -111.427, 1, -106.954, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 106.954, 1, 104.568, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -106.954, 1, -104.568, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 104.568, 1, 102.182, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -104.568, 1, -102.182, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 102.182, 1, 99.796, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -102.182, 1, -99.796, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 99.796, 1, 97.41, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -99.796, 1, -97.41, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 97.41, 1, 95.024, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -97.41, 1, -95.024, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 95.024, 1, 90.764, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -95.024, 1, -90.764, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC6] ----------

*USE-STLD, LC7

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL I-END, ADDITIONAL J-END, bADDITIONAL J-END
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 22.367, 1, 17.894, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 17.894, 1, 15.508, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 15.508, 1, 13.122, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 13.122, 1, 10.736, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 10.736, 1, 8.35, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.35, 1, 5.964, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 5.964, 1, 1.704, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC7] ----------

*USE-STLD, LC10

*ELTEMPER    ; Element Temperatures
; ELEM LIST, TEMPER, GROUP
     1, -15.
     2, -15.
     3, -15.
     4, -15.
     5, -15.
     6, -15.
     7, -15.
     8, -15.
     9, -15.
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    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [LC10] ---------------------------

*USE-STLD. NCOMB1

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB1] ---------------------------

*USE-STLD. NCOMB2

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.
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*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB2] ------------------------

*USE-STLD. NCOMB3

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB3] ------------------------

*USE-STLD. NCOMB4

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB4] ------------------------

*USE-STLD. NCOMB5

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. N(
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. N(
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
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    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB5] ------------------------

*USE-STLD. NCOMB6

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
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; End of data for load case [NCOMB6] ------------------------

*USE-STLD. NCOMB7

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. N(
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB7] ------------------------

*USE-STLD. NCOMB8

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB8] ------------------------

*USE-STLD. NCOMB9

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB9] ------------------------

*USE-STLD. NCOMB10

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
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    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB10] ------------------------

*USE-STLD. NCOMB11

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB11] ------------------------

*USE-STLD. NCOMB12

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB12] ------------------------

*USE-STLD. NCOMB13

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB13] ------------------------

*USE-STLD. NCOMB14

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB14] ------------------------

*USE-STLD. NCOMB15

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. N(
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB15] ------------------------

*USE-STLD. NCOMB16

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB16] ------------------------

*USE-STLD. NCOMB17

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 28.6304. 1. 24.8128. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.8128. 1. 20.9952. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 20.9952. 1. 17.1776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.1776. 1. 13.36. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.36. 1. 9.5424. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.5424. 1. 2.7264. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB17] ------------------------

*USE-STLD. NCOMB18

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
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; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4202. 1. 10.7364. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.7364. 1. 9.3048. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.3048. 1. 7.8732. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.8732. 1. 6.4416. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.4416. 1. 5.01. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.01. 1. 3.5784. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 3.5784. 1. 1.0224. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB18] ------------------------

*USE-STLD. NCOMB19

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 28.6304. 1. 24.8128. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.8128. 1. 20.9952. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 20.9952. 1. 17.1776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.1776. 1. 13.36. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.36. 1. 9.5424. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.5424. 1. 2.7264. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB19] ------------------------

*USE-STLD. NCOMB20

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4202. 1. 10.7364. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.7364. 1. 9.3048. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
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    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.3048. 1. 7.8732. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.8732. 1. 6.4416. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.4416. 1. 5.01. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.01. 1. 3.5784. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 3.5784. 1. 1.0224. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB20] ------------------------

*USE-STLD. NCOMB21

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB21] ------------------------

*USE-STLD. NCOMB22

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.
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*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB22] ----------------------------

*USE-STLD. NCOMB23

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
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    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB23] ------------------------

*USE-STLD. NCOMB24

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB24] ------------------------

*USE-STLD. NCOMB25

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
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    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB25] ------------------------

*USE-STLD. NCOMB26

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
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; End of data for load case [NCOMB26] ------------------------

*USE-STLD. NCOMB27

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
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    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB27] ------------------------

*USE-STLD. NCOMB28

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
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     23. -15.
     24. -15.
     25. -15.
     26. -15.
     27. -15.
     28. -15.
     29. -15.
     30. -15.

; End of data for load case [NCOMB28] ------------------------

*USE-STLD. NCOMB29

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB29] ------------------------

*USE-STLD. NCOMB30

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
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    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB30] ----------------------------

*USE-STLD. NCOMB31

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
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    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB31] ------------------------

*USE-STLD. NCOMB32

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
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    30. -15.

; End of data for load case [NCOMB32] ------------------------

*USE-STLD. NCOMB33

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB33] ------------------------

*USE-STLD. NCOMB34

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 22.367. 1. 17.894. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.894. 1. 15.508. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.508. 1. 13.122. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.122. 1. 10.736. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.736. 1. 8.35. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.35. 1. 5.964. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.964. 1. 1.704. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB34] ------------------------

*USE-STLD. NCOMB35

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
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; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.1835. 1. 8.947. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.947. 1. 7.754. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.754. 1. 6.561. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.561. 1. 5.368. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.368. 1. 4.175. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 4.175. 1. 2.982. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 2.982. 1. 0.852. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB35] ------------------------


*LOADCOMB    ; Combinations
; NAME=NAME. KIND. ACTIVE. bES. iTYPE. DESC. iSERV-TYPE. nLCOMTYPE   ; line 1
;      ANAL1. LCNAME1. FACT1. ...                                    ; from line 2
   NAME=COMB1. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.85. ST. LC4. 1.85. ST. LC6. 1.6
   NAME=COMB2. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.85. ST. LC4. 1.85. ST. LC6. 0.6
   NAME=COMB3. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC6. 1.6
   NAME=COMB4. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC6. 0.6
   NAME=COMB5. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC2. 1.6. ST. LC4. 1.6. ST. LC6. 1.6
   NAME=COMB6. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC2. 1.6. ST. LC4. 1.6. ST. LC6. 0.6
   NAME=COMB7. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC6. 1.6
   NAME=COMB8. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC6. 0.6
   NAME=COMB9. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 1.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB10. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 0.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB11. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 1.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB12. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 0.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB13. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 1.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB14. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 0.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB15. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 1.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB16. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 0.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB17. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC7. 1.6
   NAME=COMB18. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC7. 0.6
   NAME=COMB19. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC7. 1.6
   NAME=COMB20. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC7. 0.6
   NAME=COMB21. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1
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NAME=COMB22. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5
NAME=COMB23. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1
NAME=COMB24. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5
NAME=COMB25. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1. ST. LC8. 1. ST. LC11. 1
NAME=COMB26. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5. ST. LC8. 1
     ST. LC11. 1
NAME=COMB27. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1. ST. LC9. 1. ST. LC10. 1
     ST. LC11. 1
NAME=COMB28. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5. ST. LC9. 1
     ST. LC10. 1. ST. LC11. 1
NAME=COMB29. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1. ST. LC8. 1. ST. LC11. 1
NAME=COMB30. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5. ST. LC8. 1
     ST. LC11. 1
NAME=COMB31. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1. ST. LC9. 1. ST. LC10. 1
     ST. LC11. 1
NAME=COMB32. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5. ST. LC9. 1
     ST. LC10. 1. ST. LC11. 1
NAME=COMB33. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC6. 1
NAME=COMB34. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC7. 1
NAME=COMB35. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC7. 0.5
NAME=USD. GEN. ACTIVE. 0. 1. . 0. 0
     ST. NCOMB1. 1. ST. NCOMB2. 1. ST. NCOMB3. 1. ST. NCOMB4. 1
     ST. NCOMB5. 1. ST. NCOMB6. 1. ST. NCOMB7. 1. ST. NCOMB8. 1
     ST. NCOMB9. 1. ST. NCOMB10. 1. ST. NCOMB11. 1. ST. NCOMB12. 1
     ST. NCOMB13. 1. ST. NCOMB14. 1. ST. NCOMB15. 1. ST. NCOMB16. 1
     ST. NCOMB17. 1. ST. NCOMB18. 1. ST. NCOMB19. 1. ST. NCOMB20. 1
NAME=WSD. GEN. ACTIVE. 0. 1. . 0. 0
     ST. NCOMB21. 1. ST. NCOMB22. 1. ST. NCOMB23. 1. ST. NCOMB24. 1
     ST. NCOMB25. 1. ST. NCOMB26. 1. ST. NCOMB27. 1. ST. NCOMB28. 1
     ST. NCOMB29. 1. ST. NCOMB30. 1. ST. NCOMB31. 1. ST. NCOMB32. 1
     ST. NCOMB33. 1. ST. NCOMB34. 1. ST. NCOMB35. 1
NAME=NCOMB1. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB1. 1
NAME=NCOMB2. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB2. 1
NAME=NCOMB3. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB3. 1
NAME=NCOMB4. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB4. 1
NAME=NCOMB5. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB5. 1
NAME=NCOMB6. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB6. 1
NAME=NCOMB7. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB7. 1
NAME=NCOMB8. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB8. 1
NAME=NCOMB9. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB9. 1
NAME=NCOMB10. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB10. 1
NAME=NCOMB11. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB11. 1
NAME=NCOMB12. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB12. 1
NAME=NCOMB13. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB13. 1
NAME=NCOMB14. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB14. 1
NAME=NCOMB15. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB15. 1
NAME=NCOMB16. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB16. 1
NAME=NCOMB17. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB17. 1
NAME=NCOMB18. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB18. 1
NAME=NCOMB19. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB19. 1
NAME=NCOMB20. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB20. 1
NAME=NCOMB21. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB21. 1
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   NAME=NCOMB22. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB22. 1
   NAME=NCOMB23. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB23. 1
   NAME=NCOMB24. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB24. 1
   NAME=NCOMB25. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB25. 1
   NAME=NCOMB26. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB26. 1
   NAME=NCOMB27. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB27. 1
   NAME=NCOMB28. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB28. 1
   NAME=NCOMB29. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB29. 1
   NAME=NCOMB30. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB30. 1
   NAME=NCOMB31. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB31. 1
   NAME=NCOMB32. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB32. 1
   NAME=NCOMB33. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB33. 1
   NAME=NCOMB34. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB34. 1
   NAME=NCOMB35. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB35. 1

*LOADCONST    ; Load Constribution for Nonlinear Load Case
; NAME=STLDCASE. DESC                                          ; 1st line
;      LCNAME1. LCTYPE1. FACTOR1. LCNAME2. LCTYPE2. FACTOR2. ...   ; from line 2
   NAME=NCOMB1.
        LC1. ST. 1.35. LC2. ST. 1.85. LC4. ST. 1.85. LC6. ST. 1.6
   NAME=NCOMB2.
        LC1. ST. 1.35. LC2. ST. 1.85. LC4. ST. 1.85. LC6. ST. 0.6
   NAME=NCOMB3.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC6. ST. 1.6
   NAME=NCOMB4.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC6. ST. 0.6
   NAME=NCOMB5.
        LC1. ST. 1.6. LC2. ST. 1.6. LC4. ST. 1.6. LC6. ST. 1.6
   NAME=NCOMB6.
        LC1. ST. 1.6. LC2. ST. 1.6. LC4. ST. 1.6. LC6. ST. 0.6
   NAME=NCOMB7.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC6. ST. 1.6
   NAME=NCOMB8.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC6. ST. 0.6
   NAME=NCOMB9.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 1.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB10.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 0.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB11.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 1.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB12.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 0.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB13.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 1.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB14.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 0.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB15.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 1.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB16.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 0.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB17.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC7. ST. 1.6
   NAME=NCOMB18.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC7. ST. 0.6
   NAME=NCOMB19.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC7. ST. 1.6
   NAME=NCOMB20.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC7. ST. 0.6
   NAME=NCOMB21.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1
   NAME=NCOMB22.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5
   NAME=NCOMB23.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1
   NAME=NCOMB24.
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        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC6, ST, 0.5
    NAME=NCOMB25,
        LC1, ST, 1, LC2, ST, 1, LC4, ST, 1, LC6, ST, 1, LC8, ST, 1, LC11, ST, 1
    NAME=NCOMB26,
        LC1, ST, 1, LC2, ST, 1, LC4, ST, 1, LC6, ST, 0.5, LC8, ST, 1
        LC11, ST, 1
    NAME=NCOMB27,
        LC1, ST, 1, LC2, ST, 1, LC4, ST, 1, LC6, ST, 1, LC9, ST, 1, LC10, ST, 1
        LC11, ST, 1
    NAME=NCOMB28,
        LC1, ST, 1, LC2, ST, 1, LC4, ST, 1, LC6, ST, 0.5, LC9, ST, 1
        LC10, ST, 1, LC11, ST, 1
    NAME=NCOMB29,
        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC6, ST, 1, LC8, ST, 1, LC11, ST, 1
    NAME=NCOMB30,
        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC6, ST, 0.5, LC8, ST, 1
        LC11, ST, 1
    NAME=NCOMB31,
        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC6, ST, 1, LC9, ST, 1, LC10, ST, 1
        LC11, ST, 1
    NAME=NCOMB32,
        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC6, ST, 0.5, LC9, ST, 1
        LC10, ST, 1, LC11, ST, 1
    NAME=NCOMB33,
        LC1, ST, 1, LC6, ST, 1
    NAME=NCOMB34,
        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC7, ST, 1
    NAME=NCOMB35,
        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC7, ST, 0.5

*LC-COLOR    ; Diagram Color for Load Case
; ANAL, LCNAME, iR1(ALL), iG1(ALL), iB1(ALL), iR2(MIN), iG2(MIN), iB2(MIN), iR3(MAX), iG2(MAX), iB2(MAX)
 CB, COMB1, 85, 0, 192, 255, 255, 87, 146, 0, 255
 CB, COMB2, 192, 72, 0, 0, 128, 128, 93, 255, 87
 CB, COMB3, 255, 87, 128, 255, 192, 87, 160, 255, 255
 CB, COMB4, 255, 160, 255, 255, 192, 87, 163, 160, 255
 CB, COMB5, 0, 192, 192, 85, 0, 192, 85, 192, 0
 CB, COMB6, 0, 128, 255, 160, 255, 255, 192, 72, 0
 CB, COMB7, 255, 192, 160, 192, 0, 128, 192, 192, 192
 CB, COMB8, 255, 87, 128, 160, 255, 255, 192, 128, 0
 CB, COMB9, 255, 160, 255, 192, 0, 128, 255, 192, 87
 CB, COMB10, 163, 160, 255, 255, 255, 87, 255, 192, 160
 CB, COMB11, 192, 0, 128, 255, 192, 160, 255, 160, 255
 CB, COMB12, 255, 128, 0, 192, 0, 128, 210, 210, 210
 CB, COMB13, 192, 192, 192, 85, 192, 0, 212, 160, 255
 CB, COMB14, 255, 192, 160, 0, 157, 192, 255, 192, 87
 CB, COMB15, 0, 157, 192, 192, 192, 192, 160, 255, 255
 CB, COMB16, 0, 128, 128, 160, 255, 255, 255, 87, 87
 CB, COMB17, 255, 0, 192, 78, 0, 255, 255, 128, 0
 CB, COMB18, 85, 192, 0, 255, 192, 160, 255, 192, 87
 CB, COMB19, 160, 255, 255, 255, 128, 0, 0, 192, 192
 CB, COMB20, 192, 192, 0, 160, 255, 255, 255, 87, 87
 CB, COMB21, 192, 192, 192, 192, 192, 192, 85, 0, 192
 CB, COMB22, 255, 192, 87, 192, 128, 0, 212, 160, 255
 CB, COMB23, 255, 255, 255, 0, 128, 128, 192, 128, 0
 CB, COMB24, 192, 192, 0, 85, 0, 192, 255, 0, 192
 CB, COMB25, 128, 192, 0, 210, 210, 210, 255, 255, 255
 CB, COMB26, 192, 0, 192, 148, 87, 255, 0, 192, 128
 CB, COMB27, 93, 255, 87, 255, 255, 255, 192, 0, 192
 CB, COMB28, 192, 128, 0, 255, 255, 87, 255, 192, 160
 CB, COMB29, 255, 192, 160, 212, 160, 255, 192, 192, 0
 CB, COMB30, 255, 255, 87, 163, 160, 255, 148, 87, 255
 CB, COMB31, 192, 192, 0, 255, 87, 128, 0, 192, 192
 CB, COMB32, 128, 192, 0, 85, 192, 0, 192, 128, 0
 CB, COMB33, 255, 255, 255, 192, 192, 192, 148, 87, 255
 CB, COMB34, 192, 0, 192, 255, 87, 128, 212, 160, 255
 CB, COMB35, 255, 160, 255, 85, 192, 0, 255, 255, 87
 CB, USD, 255, 192, 87, 163, 255, 160, 192, 128, 0
 CB, WSD, 212, 160, 255, 255, 0, 192, 93, 255, 87
 ST, LC1, 212, 160, 255, 210, 210, 210, 212, 160, 255
 ST, LC2, 212, 160, 255, 0, 128, 57, 255, 255, 87
 ST, LC3, 210, 210, 210, 212, 160, 255, 146, 0, 255
 ST, LC4, 0, 128, 57, 128, 192, 0, 0, 157, 192
 ST, LC5, 128, 192, 0, 148, 87, 255, 160, 255, 255
 ST, LC6, 192, 0, 192, 255, 160, 255, 163, 160, 255
 ST, LC7, 192, 192, 192, 0, 128, 255, 255, 160, 255
 ST, LC8, 192, 128, 0, 192, 0, 128, 128, 192, 0
 ST, LC9, 192, 0, 192, 78, 0, 255, 85, 0, 192
 ST, LC10, 210, 210, 210, 255, 255, 255, 0, 128, 128
 ST, LC11, 255, 255, 87, 255, 0, 128, 210, 210, 210
 CBC, NCOMB1, 192, 72, 0, 255, 192, 160, 0, 192, 128
 CBC, NCOMB2, 78, 0, 255, 192, 0, 192, 255, 160, 255
 CBC, NCOMB3, 163, 255, 160, 78, 0, 255, 85, 0, 192
 CBC, NCOMB4, 0, 192, 128, 85, 0, 192, 212, 160, 255
 CBC, NCOMB5, 0, 128, 255, 255, 87, 87, 0, 192, 128
 CBC, NCOMB6, 78, 0, 255, 0, 128, 128, 93, 255, 87
 CBC, NCOMB7, 160, 192, 255, 160, 255, 255, 210, 210, 210
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 CBC. NCOMB8. 192. 72. 0. 192. 0. 192. 192. 72. 0
 CBC. NCOMB9. 148. 87. 255. 212. 160. 255. 210. 210. 210
 CBC. NCOMB10. 0. 128. 57. 192. 72. 0. 255. 0. 128
 CBC. NCOMB11. 0. 128. 192. 212. 160. 255. 255. 255. 87
 CBC. NCOMB12. 192. 0. 128. 255. 87. 87. 0. 157. 192
 CBC. NCOMB13. 255. 160. 255. 255. 0. 128. 0. 128. 128
 CBC. NCOMB14. 93. 255. 87. 255. 192. 160. 255. 255. 87
 CBC. NCOMB15. 255. 255. 87. 192. 192. 192. 192. 0. 192
 CBC. NCOMB16. 0. 128. 128. 255. 255. 255. 163. 255. 160
 CBC. NCOMB17. 163. 255. 160. 160. 192. 255. 163. 255. 160
 CBC. NCOMB18. 255. 255. 87. 0. 157. 192. 255. 87. 87
 CBC. NCOMB19. 0. 128. 255. 0. 128. 192. 0. 157. 192
 CBC. NCOMB20. 192. 0. 192. 255. 128. 0. 255. 87. 87
 CBC. NCOMB21. 255. 255. 255. 160. 255. 255. 78. 0. 255
 CBC. NCOMB22. 85. 0. 192. 255. 255. 87. 148. 87. 255
 CBC. NCOMB23. 255. 128. 0. 255. 255. 255. 255. 0. 192
 CBC. NCOMB24. 192. 128. 0. 160. 255. 255. 78. 0. 255
 CBC. NCOMB25. 163. 160. 255. 192. 192. 192. 255. 87. 128
 CBC. NCOMB26. 212. 160. 255. 192. 0. 128. 210. 210. 210
 CBC. NCOMB27. 148. 87. 255. 128. 192. 0. 93. 255. 87
 CBC. NCOMB28. 0. 192. 128. 255. 87. 128. 0. 128. 192
 CBC. NCOMB29. 255. 255. 255. 192. 128. 0. 192. 0. 192
 CBC. NCOMB30. 163. 160. 255. 255. 255. 87. 78. 0. 255
 CBC. NCOMB31. 85. 0. 192. 255. 160. 255. 148. 87. 255
 CBC. NCOMB32. 212. 160. 255. 192. 128. 0. 85. 0. 192
 CBC. NCOMB33. 192. 192. 0. 85. 192. 0. 163. 160. 255
 CBC. NCOMB34. 255. 192. 87. 255. 87. 128. 0. 128. 128
 CBC. NCOMB35. 0. 128. 192. 192. 128. 0. 192. 0. 192
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 ST. NCOMB2. 78. 0. 255. 255. 192. 160. 0. 157. 192
 ST. NCOMB3. 255. 192. 87. 146. 0. 255. 0. 128. 192
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 ST. NCOMB8. 85. 0. 192. 85. 0. 192. 160. 255. 255
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 ST. NCOMB25. 93. 255. 87. 192. 192. 192. 93. 255. 87
 ST. NCOMB26. 160. 192. 255. 192. 0. 192. 160. 192. 255
 ST. NCOMB27. 192. 72. 0. 255. 0. 128. 255. 255. 255
 ST. NCOMB28. 0. 192. 128. 163. 160. 255. 255. 160. 255
 ST. NCOMB29. 0. 157. 192. 93. 255. 87. 148. 87. 255
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 ST. NCOMB31. 192. 72. 0. 255. 87. 87. 255. 160. 255
 ST. NCOMB32. 0. 128. 128. 163. 160. 255. 0. 128. 57
 ST. NCOMB33. 146. 0. 255. 146. 0. 255. 0. 128. 192
 ST. NCOMB34. 93. 255. 87. 85. 192. 0. 255. 192. 160
 ST. NCOMB35. 163. 255. 160. 192. 0. 128. 255. 160. 255

*ANAL-CTRL
; bARDC. bANRC. iITER. TOL. bCSECF. bTRS. bCRBAR. bTPF. bCSO. bSCS. bCLATS
   YES. YES. 20. 0.001. YES. YES. YES. NO. NO. NO. NO


*ENDDATA
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8.OUPUT

FRAME ELEMENT FORCES

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN·m)	Moment-y (kN·m)	Moment-z (kN·m)
1	USD(max)	I[1]	35.110	0.000	-284.790	0.00E+00	-8.350	0.000
1	USD(max)	1/4	35.110	0.000	-285.810	0.00E+00	15.020	0.000
1	USD(max)	2/4	35.110	0.000	-286.830	0.00E+00	38.480	0.000
1	USD(max)	3/4	35.110	0.000	-287.860	0.00E+00	62.020	0.000
1	USD(max)	J[2]	35.110	0.000	-288.880	0.00E+00	85.650	0.000
1	USD(min)	I[1]	-210.270	0.000	-344.440	0.00E+00	-64.950	0.000
1	USD(min)	1/4	-210.270	0.000	-345.660	0.00E+00	-44.850	0.000
1	USD(min)	2/4	-210.270	0.000	-346.870	0.00E+00	-24.680	0.000
1	USD(min)	3/4	-210.270	0.000	-348.080	0.00E+00	-4.440	0.000
1	USD(min)	J[2]	-210.270	0.000	-349.300	0.00E+00	15.870	0.000
1	WSD(max)	I[1]	21.940	0.000	-195.770	0.00E+00	-6.520	0.000
1	WSD(max)	1/4	21.940	0.000	-196.530	0.00E+00	8.130	0.000
1	WSD(max)	2/4	21.940	0.000	-197.280	0.00E+00	22.830	0.000
1	WSD(max)	3/4	21.940	0.000	-198.040	0.00E+00	37.590	0.000
1	WSD(max)	J[2]	21.940	0.000	-198.800	0.00E+00	52.400	0.000
1	WSD(min)	I[1]	-128.190	0.000	-215.280	0.00E+00	-38.250	0.000
1	WSD(min)	1/4	-128.190	0.000	-216.040	0.00E+00	-23.740	0.000
1	WSD(min)	2/4	-128.190	0.000	-216.790	0.00E+00	-9.180	0.000
1	WSD(min)	3/4	-128.190	0.000	-217.550	0.00E+00	5.430	0.000
1	WSD(min)	J[2]	-128.190	0.000	-218.310	0.00E+00	20.090	0.000
2	USD(max)	I[2]	35.110	0.000	-169.800	0.00E+00	85.650	0.000
2	USD(max)	1/4	35.110	0.000	-170.660	0.00E+00	97.690	0.000
2	USD(max)	2/4	35.110	0.000	-171.510	0.00E+00	109.790	0.000
2	USD(max)	3/4	35.110	0.000	-172.370	0.00E+00	121.950	0.000
2	USD(max)	J[3]	35.110	0.000	-173.220	0.00E+00	134.170	0.000
2	USD(min)	I[2]	-210.270	0.000	-217.420	0.00E+00	15.870	0.000
2	USD(min)	1/4	-210.270	0.000	-218.440	0.00E+00	26.170	0.000
2	USD(min)	2/4	-210.270	0.000	-219.450	0.00E+00	36.520	0.000
2	USD(min)	3/4	-210.270	0.000	-220.470	0.00E+00	46.920	0.000
2	USD(min)	J[3]	-210.270	0.000	-221.480	0.00E+00	57.370	0.000
2	WSD(max)	I[2]	21.940	0.000	-115.210	0.00E+00	52.400	0.000
2	WSD(max)	1/4	21.940	0.000	-115.850	0.00E+00	59.990	0.000
2	WSD(max)	2/4	21.940	0.000	-116.480	0.00E+00	67.610	0.000
2	WSD(max)	3/4	21.940	0.000	-117.110	0.00E+00	75.270	0.000
2	WSD(max)	J[3]	21.940	0.000	-117.750	0.00E+00	82.970	0.000
2	WSD(min)	I[2]	-128.190	0.000	-135.890	0.00E+00	20.090	0.000
2	WSD(min)	1/4	-128.190	0.000	-136.520	0.00E+00	27.450	0.000
2	WSD(min)	2/4	-128.190	0.000	-137.160	0.00E+00	34.850	0.000
2	WSD(min)	3/4	-128.190	0.000	-137.790	0.00E+00	42.280	0.000
2	WSD(min)	J[3]	-128.190	0.000	-138.420	0.00E+00	49.750	0.000
3	USD(max)	I[3]	35.110	0.000	-101.100	0.00E+00	134.170	0.000
3	USD(max)	1/4	35.110	0.000	-101.960	0.00E+00	141.830	0.000
3	USD(max)	2/4	35.110	0.000	-102.810	0.00E+00	149.540	0.000
3	USD(max)	3/4	35.110	0.000	-103.670	0.00E+00	157.320	0.000
3	USD(max)	J[4]	35.110	0.000	-104.520	0.00E+00	165.150	0.000
3	USD(min)	I[3]	-210.270	0.000	-142.530	0.00E+00	57.370	0.000
3	USD(min)	1/4	-210.270	0.000	-143.550	0.00E+00	63.880	0.000
3	USD(min)	2/4	-210.270	0.000	-144.560	0.00E+00	70.420	0.000
3	USD(min)	3/4	-210.270	0.000	-145.580	0.00E+00	76.740	0.000
3	USD(min)	J[4]	-210.270	0.000	-146.590	0.00E+00	83.120	0.000
3	WSD(max)	I[3]	21.940	0.000	-68.570	0.00E+00	82.970	0.000
3	WSD(max)	1/4	21.940	0.000	-69.200	0.00E+00	87.830	0.000
3	WSD(max)	2/4	21.940	0.000	-69.840	0.00E+00	92.720	0.000
3	WSD(max)	3/4	21.940	0.000	-70.470	0.00E+00	97.650	0.000
3	WSD(max)	J[4]	21.940	0.000	-71.100	0.00E+00	102.620	0.000
3	WSD(min)	I[3]	-128.190	0.000	-89.080	0.00E+00	49.750	0.000
3	WSD(min)	1/4	-128.190	0.000	-89.720	0.00E+00	54.340	0.000
3	WSD(min)	2/4	-128.190	0.000	-90.350	0.00E+00	58.930	0.000
3	WSD(min)	3/4	-128.190	0.000	-90.980	0.00E+00	62.960	0.000
3	WSD(min)	J[4]	-128.190	0.000	-91.620	0.00E+00	67.030	0.000
4	USD(max)	I[4]	35.110	0.000	-32.540	0.00E+00	165.150	0.000
4	USD(max)	1/4	35.110	0.000	-33.400	0.00E+00	168.390	0.000
4	USD(max)	2/4	35.110	0.000	-34.250	0.00E+00	171.690	0.000
4	USD(max)	3/4	35.110	0.000	-35.110	0.00E+00	175.050	0.000
4	USD(max)	J[5]	35.110	0.000	-35.970	0.00E+00	178.460	0.000
4	USD(min)	I[4]	-210.270	0.000	-66.370	0.00E+00	83.120	0.000
4	USD(min)	1/4	-210.270	0.000	-67.390	0.00E+00	85.580	0.000
4	USD(min)	2/4	-210.270	0.000	-68.400	0.00E+00	88.090	0.000
4	USD(min)	3/4	-210.270	0.000	-69.410	0.00E+00	90.650	0.000
4	USD(min)	J[5]	-210.270	0.000	-70.430	0.00E+00	93.250	0.000
4	WSD(max)	I[4]	21.940	0.000	-22.000	0.00E+00	102.620	0.000
4	WSD(max)	1/4	21.940	0.000	-22.640	0.00E+00	104.720	0.000
4	WSD(max)	2/4	21.940	0.000	-23.270	0.00E+00	106.850	0.000
4	WSD(max)	3/4	21.940	0.000	-23.900	0.00E+00	109.030	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
4	WSD(max)	J[5]	21.940	0.000	-24.540	0.00E+00	111.240	0.000
4	WSD(min)	I[4]	-128.190	0.000	-41.480	0.00E+00	67.030	0.000
4	WSD(min)	1/4	-128.190	0.000	-42.120	0.00E+00	68.320	0.000
4	WSD(min)	2/4	-128.190	0.000	-42.750	0.00E+00	69.640	0.000
4	WSD(min)	3/4	-128.190	0.000	-43.380	0.00E+00	70.990	0.000
4	WSD(min)	J[5]	-128.190	0.000	-44.020	0.00E+00	72.390	0.000
5	USD(max)	I[5]	35.110	0.000	42.570	0.00E+00	178.460	0.000
5	USD(max)	1/4	35.110	0.000	41.560	0.00E+00	177.240	0.000
5	USD(max)	2/4	35.110	0.000	40.540	0.00E+00	176.080	0.000
5	USD(max)	3/4	35.110	0.000	39.530	0.00E+00	174.980	0.000
5	USD(max)	J[6]	35.110	0.000	38.510	0.00E+00	173.960	0.000
5	USD(min)	I[5]	-210.270	0.000	3.320	0.00E+00	93.250	0.000
5	USD(min)	1/4	-210.270	0.000	2.470	0.00E+00	91.930	0.000
5	USD(min)	2/4	-210.270	0.000	1.610	0.00E+00	90.660	0.000
5	USD(min)	3/4	-210.270	0.000	0.750	0.00E+00	89.440	0.000
5	USD(min)	J[6]	-210.270	0.000	-0.100	0.00E+00	88.270	0.000
5	WSD(max)	I[5]	21.940	0.000	26.610	0.00E+00	111.240	0.000
5	WSD(max)	1/4	21.940	0.000	25.970	0.00E+00	110.550	0.000
5	WSD(max)	2/4	21.940	0.000	25.340	0.00E+00	109.900	0.000
5	WSD(max)	3/4	21.940	0.000	24.710	0.00E+00	109.290	0.000
5	WSD(max)	J[6]	21.940	0.000	24.070	0.00E+00	108.730	0.000
5	WSD(min)	I[5]	-128.190	0.000	6.990	0.00E+00	72.390	0.000
5	WSD(min)	1/4	-128.190	0.000	6.350	0.00E+00	70.990	0.000
5	WSD(min)	2/4	-128.190	0.000	5.720	0.00E+00	69.640	0.000
5	WSD(min)	3/4	-128.190	0.000	5.080	0.00E+00	68.320	0.000
5	WSD(min)	J[6]	-128.190	0.000	4.450	0.00E+00	67.030	0.000
6	USD(max)	I[6]	35.110	0.000	123.700	0.00E+00	173.960	0.000
6	USD(max)	1/4	35.110	0.000	122.690	0.00E+00	168.800	0.000
6	USD(max)	2/4	35.110	0.000	121.670	0.00E+00	163.700	0.000
6	USD(max)	3/4	35.110	0.000	120.660	0.00E+00	158.660	0.000
6	USD(max)	J[7]	35.110	0.000	119.650	0.00E+00	153.670	0.000
6	USD(min)	I[6]	-210.270	0.000	71.350	0.00E+00	88.270	0.000
6	USD(min)	1/4	-210.270	0.000	70.490	0.00E+00	83.140	0.000
6	USD(min)	2/4	-210.270	0.000	69.640	0.00E+00	78.070	0.000
6	USD(min)	3/4	-210.270	0.000	68.780	0.00E+00	72.400	0.000
6	USD(min)	J[7]	-210.270	0.000	67.930	0.00E+00	66.550	0.000
6	WSD(max)	I[6]	21.940	0.000	77.310	0.00E+00	108.730	0.000
6	WSD(max)	1/4	21.940	0.000	76.680	0.00E+00	105.500	0.000
6	WSD(max)	2/4	21.940	0.000	76.050	0.00E+00	102.310	0.000
6	WSD(max)	3/4	21.940	0.000	75.410	0.00E+00	99.160	0.000
6	WSD(max)	J[7]	21.940	0.000	74.780	0.00E+00	96.050	0.000
6	WSD(min)	I[6]	-128.190	0.000	56.400	0.00E+00	67.030	0.000
6	WSD(min)	1/4	-128.190	0.000	55.760	0.00E+00	62.960	0.000
6	WSD(min)	2/4	-128.190	0.000	55.130	0.00E+00	58.930	0.000
6	WSD(min)	3/4	-128.190	0.000	54.500	0.00E+00	54.930	0.000
6	WSD(min)	J[7]	-128.190	0.000	53.860	0.00E+00	50.970	0.000
7	USD(max)	I[7]	35.110	0.000	204.970	0.00E+00	153.670	0.000
7	USD(max)	1/4	35.110	0.000	203.960	0.00E+00	143.870	0.000
7	USD(max)	2/4	35.110	0.000	202.940	0.00E+00	134.130	0.000
7	USD(max)	3/4	35.110	0.000	201.930	0.00E+00	124.450	0.000
7	USD(max)	J[8]	35.110	0.000	200.910	0.00E+00	114.820	0.000
7	USD(min)	I[7]	-210.270	0.000	141.050	0.00E+00	66.550	0.000
7	USD(min)	1/4	-210.270	0.000	140.190	0.00E+00	56.600	0.000
7	USD(min)	2/4	-210.270	0.000	139.340	0.00E+00	46.690	0.000
7	USD(min)	3/4	-210.270	0.000	138.480	0.00E+00	36.840	0.000
7	USD(min)	J[8]	-210.270	0.000	137.620	0.00E+00	27.030	0.000
7	WSD(max)	I[7]	21.940	0.000	128.110	0.00E+00	96.050	0.000
7	WSD(max)	1/4	21.940	0.000	127.470	0.00E+00	89.920	0.000
7	WSD(max)	2/4	21.940	0.000	126.840	0.00E+00	83.830	0.000
7	WSD(max)	3/4	21.940	0.000	126.200	0.00E+00	77.780	0.000
7	WSD(max)	J[8]	21.940	0.000	125.570	0.00E+00	71.760	0.000
7	WSD(min)	I[7]	-128.190	0.000	106.840	0.00E+00	50.970	0.000
7	WSD(min)	1/4	-128.190	0.000	106.200	0.00E+00	44.220	0.000
7	WSD(min)	2/4	-128.190	0.000	105.570	0.00E+00	37.500	0.000
7	WSD(min)	3/4	-128.190	0.000	104.930	0.00E+00	30.820	0.000
7	WSD(min)	J[8]	-128.190	0.000	104.300	0.00E+00	24.180	0.000
8	USD(max)	I[8]	35.110	0.000	345.940	0.00E+00	114.820	0.000
8	USD(max)	1/4	35.110	0.000	344.730	0.00E+00	93.310	0.000
8	USD(max)	2/4	35.110	0.000	343.520	0.00E+00	71.870	0.000
8	USD(max)	3/4	35.110	0.000	342.300	0.00E+00	50.530	0.000
8	USD(max)	J[9]	35.110	0.000	341.090	0.00E+00	29.260	0.000
8	USD(min)	I[8]	-210.270	0.000	264.610	0.00E+00	27.030	0.000
8	USD(min)	1/4	-210.270	0.000	263.580	0.00E+00	6.930	0.000
8	USD(min)	2/4	-210.270	0.000	262.560	0.00E+00	-13.090	0.000
8	USD(min)	3/4	-210.270	0.000	261.540	0.00E+00	-33.510	0.000
8	USD(min)	J[9]	-210.270	0.000	260.510	0.00E+00	-53.940	0.000
8	WSD(max)	I[8]	21.940	0.000	216.210	0.00E+00	71.760	0.000
8	WSD(max)	1/4	21.940	0.000	215.460	0.00E+00	58.320	0.000
8	WSD(max)	2/4	21.940	0.000	214.700	0.00E+00	44.920	0.000
8	WSD(max)	3/4	21.940	0.000	213.940	0.00E+00	31.580	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN・m)	Moment-y (kN・m)	Moment-z (kN・m)
8	WSD(max)	J[9]	21.940	0.000	213.180	0.00E+00	18.290	0.000
8	WSD(min)	I[8]	-128.190	0.000	195.980	0.00E+00	24.180	0.000
8	WSD(min)	1/4	-128.190	0.000	195.220	0.00E+00	10.540	0.000
8	WSD(min)	2/4	-128.190	0.000	194.460	0.00E+00	-3.050	0.000
8	WSD(min)	3/4	-128.190	0.000	193.710	0.00E+00	-17.610	0.000
8	WSD(min)	J[9]	-128.190	0.000	192.950	0.00E+00	-32.290	0.000
9	USD(max)	I[1]	-421.670	0.000	-11.380	0.00E+00	-74.310	0.000
9	USD(max)	1/4	-419.940	0.000	-10.130	0.00E+00	-67.720	0.000
9	USD(max)	2/4	-418.200	0.000	-8.880	0.00E+00	-61.160	0.000
9	USD(max)	3/4	-416.460	0.000	-7.660	0.00E+00	-55.060	0.000
9	USD(max)	J[10]	-414.730	0.000	-6.440	0.00E+00	-49.420	0.000
9	USD(min)	I[1]	-513.940	0.000	-158.500	0.00E+00	-100.990	0.000
9	USD(min)	1/4	-511.890	0.000	-149.050	0.00E+00	-99.600	0.000
9	USD(min)	2/4	-509.830	0.000	-139.630	0.00E+00	-98.320	0.000
9	USD(min)	3/4	-507.770	0.000	-130.240	0.00E+00	-97.140	0.000
9	USD(min)	J[10]	-505.710	0.000	-120.890	0.00E+00	-96.080	0.000
9	WSD(max)	I[1]	-295.150	0.000	-9.310	0.00E+00	-50.630	0.000
9	WSD(max)	1/4	-293.870	0.000	-8.400	0.00E+00	-46.600	0.000
9	WSD(max)	2/4	-292.580	0.000	-7.510	0.00E+00	-42.850	0.000
9	WSD(max)	3/4	-291.290	0.000	-6.620	0.00E+00	-39.360	0.000
9	WSD(max)	J[10]	-290.010	0.000	-5.750	0.00E+00	-36.140	0.000
9	WSD(min)	I[1]	-321.210	0.000	-95.370	0.00E+00	-63.120	0.000
9	WSD(min)	1/4	-319.930	0.000	-89.530	0.00E+00	-62.250	0.000
9	WSD(min)	2/4	-318.640	0.000	-83.710	0.00E+00	-61.450	0.000
9	WSD(min)	3/4	-317.360	0.000	-77.910	0.00E+00	-60.710	0.000
9	WSD(min)	J[10]	-316.070	0.000	-72.130	0.00E+00	-60.050	0.000
10	USD(max)	I[9]	-411.730	0.000	35.110	0.00E+00	-53.010	0.000
10	USD(max)	1/4	-409.990	0.000	35.110	0.00E+00	-54.690	0.000
10	USD(max)	2/4	-408.250	0.000	35.110	0.00E+00	-50.640	0.000
10	USD(max)	3/4	-406.520	0.000	35.110	0.00E+00	-45.430	0.000
10	USD(max)	J[11]	-404.780	0.000	35.110	0.00E+00	-40.650	0.000
10	USD(min)	I[9]	-513.940	0.000	-147.990	0.00E+00	-88.190	0.000
10	USD(min)	1/4	-511.890	0.000	-138.540	0.00E+00	-85.420	0.000
10	USD(min)	2/4	-509.830	0.000	-129.120	0.00E+00	-83.290	0.000
10	USD(min)	3/4	-507.770	0.000	-119.730	0.00E+00	-81.340	0.000
10	USD(min)	J[11]	-505.710	0.000	-110.380	0.00E+00	-79.590	0.000
10	WSD(max)	I[9]	-295.150	0.000	21.940	0.00E+00	-41.490	0.000
10	WSD(max)	1/4	-293.870	0.000	21.940	0.00E+00	-42.580	0.000
10	WSD(max)	2/4	-292.580	0.000	21.940	0.00E+00	-40.100	0.000
10	WSD(max)	3/4	-291.290	0.000	21.940	0.00E+00	-36.890	0.000
10	WSD(max)	J[11]	-290.010	0.000	21.940	0.00E+00	-33.950	0.000
10	WSD(min)	I[9]	-321.210	0.000	-89.690	0.00E+00	-55.120	0.000
10	WSD(min)	1/4	-319.930	0.000	-83.850	0.00E+00	-52.870	0.000
10	WSD(min)	2/4	-318.640	0.000	-78.030	0.00E+00	-50.990	0.000
10	WSD(min)	3/4	-317.360	0.000	-72.230	0.00E+00	-49.270	0.000
10	WSD(min)	J[11]	-316.070	0.000	-66.450	0.00E+00	-48.100	0.000
11	USD(max)	I[10]	-414.730	0.000	-6.440	0.00E+00	-49.420	0.000
11	USD(max)	1/4	-413.800	0.000	-4.760	0.00E+00	-42.290	0.000
11	USD(max)	2/4	-412.870	0.000	-3.100	0.00E+00	-36.050	0.000
11	USD(max)	3/4	-411.950	0.000	-1.470	0.00E+00	-30.700	0.000
11	USD(max)	J[12]	-411.020	0.000	0.130	0.00E+00	-26.220	0.000
11	USD(min)	I[10]	-505.710	0.000	-120.890	0.00E+00	-96.080	0.000
11	USD(min)	1/4	-504.610	0.000	-107.860	0.00E+00	-94.760	0.000
11	USD(min)	2/4	-503.520	0.000	-94.890	0.00E+00	-93.650	0.000
11	USD(min)	3/4	-502.420	0.000	-81.990	0.00E+00	-93.350	0.000
11	USD(min)	J[12]	-501.320	0.000	-69.150	0.00E+00	-93.310	0.000
11	WSD(max)	I[10]	-290.010	0.000	-5.750	0.00E+00	-36.140	0.000
11	WSD(max)	1/4	-289.320	0.000	-4.550	0.00E+00	-32.080	0.000
11	WSD(max)	2/4	-288.630	0.000	-3.360	0.00E+00	-28.540	0.000
11	WSD(max)	3/4	-287.950	0.000	-2.200	0.00E+00	-25.520	0.000
11	WSD(max)	J[12]	-287.260	0.000	-1.060	0.00E+00	-23.010	0.000
11	WSD(min)	I[10]	-316.070	0.000	-72.130	0.00E+00	-60.050	0.000
11	WSD(min)	1/4	-315.380	0.000	-64.070	0.00E+00	-59.230	0.000
11	WSD(min)	2/4	-314.700	0.000	-56.060	0.00E+00	-58.530	0.000
11	WSD(min)	3/4	-314.010	0.000	-48.090	0.00E+00	-58.270	0.000
11	WSD(min)	J[12]	-313.330	0.000	-40.160	0.00E+00	-58.150	0.000
12	USD(max)	I[11]	-404.780	0.000	35.110	0.00E+00	-40.650	0.000
12	USD(max)	1/4	-403.850	0.000	35.110	0.00E+00	-34.670	0.000
12	USD(max)	2/4	-402.930	0.000	35.110	0.00E+00	-29.530	0.000
12	USD(max)	3/4	-402.000	0.000	35.110	0.00E+00	-25.220	0.000
12	USD(max)	J[13]	-401.080	0.000	35.110	0.00E+00	-21.730	0.000
12	USD(min)	I[11]	-505.710	0.000	-110.380	0.00E+00	-79.590	0.000
12	USD(min)	1/4	-504.610	0.000	-97.350	0.00E+00	-79.970	0.000
12	USD(min)	2/4	-503.520	0.000	-84.380	0.00E+00	-82.090	0.000
12	USD(min)	3/4	-502.420	0.000	-71.480	0.00E+00	-84.210	0.000
12	USD(min)	J[13]	-501.320	0.000	-58.640	0.00E+00	-86.330	0.000
12	WSD(max)	I[11]	-290.010	0.000	21.940	0.00E+00	-33.950	0.000
12	WSD(max)	1/4	-289.320	0.000	21.940	0.00E+00	-30.280	0.000
12	WSD(max)	2/4	-288.630	0.000	21.940	0.00E+00	-27.140	0.000
12	WSD(max)	3/4	-287.950	0.000	21.940	0.00E+00	-24.510	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
12	WSD(max)	J[13]	-287.260	0.000	21.940	0.00E+00	-22.390	0.000
12	WSD(min)	I[11]	-316.070	0.000	-66.450	0.00E+00	-48.100	0.000
12	WSD(min)	1/4	-315.380	0.000	-58.390	0.00E+00	-49.470	0.000
12	WSD(min)	2/4	-314.700	0.000	-50.380	0.00E+00	-50.840	0.000
12	WSD(min)	3/4	-314.010	0.000	-42.410	0.00E+00	-52.200	0.000
12	WSD(min)	J[13]	-313.330	0.000	-34.480	0.00E+00	-53.570	0.000
13	USD(max)	I[12]	-411.020	0.000	0.130	0.00E+00	-26.220	0.000
13	USD(max)	1/4	-410.100	0.000	1.710	0.00E+00	-22.630	0.000
13	USD(max)	2/4	-409.170	0.000	3.270	0.00E+00	-19.740	0.000
13	USD(max)	3/4	-408.240	0.000	4.800	0.00E+00	-17.330	0.000
13	USD(max)	J[14]	-407.320	0.000	9.630	0.00E+00	-15.790	0.000
13	USD(min)	I[12]	-501.320	0.000	-69.150	0.00E+00	-93.310	0.000
13	USD(min)	1/4	-500.220	0.000	-56.390	0.00E+00	-93.370	0.000
13	USD(min)	2/4	-499.130	0.000	-43.690	0.00E+00	-93.550	0.000
13	USD(min)	3/4	-498.030	0.000	-31.050	0.00E+00	-93.830	0.000
13	USD(min)	J[14]	-496.930	0.000	-18.490	0.00E+00	-94.220	0.000
13	WSD(max)	I[12]	-287.260	0.000	-1.060	0.00E+00	-23.010	0.000
13	WSD(max)	1/4	-286.580	0.000	0.060	0.00E+00	-21.020	0.000
13	WSD(max)	2/4	-285.890	0.000	1.160	0.00E+00	-19.540	0.000
13	WSD(max)	3/4	-285.200	0.000	2.240	0.00E+00	-18.560	0.000
13	WSD(max)	J[14]	-284.520	0.000	4.180	0.00E+00	-18.090	0.000
13	WSD(min)	I[12]	-313.330	0.000	-40.160	0.00E+00	-58.150	0.000
13	WSD(min)	1/4	-312.640	0.000	-32.270	0.00E+00	-58.120	0.000
13	WSD(min)	2/4	-311.950	0.000	-24.430	0.00E+00	-58.160	0.000
13	WSD(min)	3/4	-311.270	0.000	-16.620	0.00E+00	-58.280	0.000
13	WSD(min)	J[14]	-310.580	0.000	-8.860	0.00E+00	-58.480	0.000
14	USD(max)	I[13]	-401.080	0.000	35.110	0.00E+00	-21.730	0.000
14	USD(max)	1/4	-400.150	0.000	35.110	0.00E+00	-19.070	0.000
14	USD(max)	2/4	-399.220	0.000	35.110	0.00E+00	-17.140	0.000
14	USD(max)	3/4	-398.300	0.000	35.110	0.00E+00	-15.920	0.000
14	USD(max)	J[15]	-397.370	0.000	35.110	0.00E+00	-15.510	0.000
14	USD(min)	I[13]	-501.320	0.000	-58.640	0.00E+00	-86.330	0.000
14	USD(min)	1/4	-500.220	0.000	-45.880	0.00E+00	-88.450	0.000
14	USD(min)	2/4	-499.130	0.000	-33.180	0.00E+00	-90.570	0.000
14	USD(min)	3/4	-498.030	0.000	-20.540	0.00E+00	-92.690	0.000
14	USD(min)	J[15]	-496.930	0.000	-7.980	0.00E+00	-94.810	0.000
14	WSD(max)	I[13]	-287.260	0.000	21.940	0.00E+00	-22.390	0.000
14	WSD(max)	1/4	-286.580	0.000	21.940	0.00E+00	-20.790	0.000
14	WSD(max)	2/4	-285.890	0.000	21.940	0.00E+00	-19.540	0.000
14	WSD(max)	3/4	-285.200	0.000	21.940	0.00E+00	-18.560	0.000
14	WSD(max)	J[15]	-284.520	0.000	21.940	0.00E+00	-18.090	0.000
14	WSD(min)	I[13]	-313.330	0.000	-34.480	0.00E+00	-53.570	0.000
14	WSD(min)	1/4	-312.640	0.000	-26.590	0.00E+00	-54.940	0.000
14	WSD(min)	2/4	-311.950	0.000	-18.750	0.00E+00	-56.300	0.000
14	WSD(min)	3/4	-311.270	0.000	-10.940	0.00E+00	-57.670	0.000
14	WSD(min)	J[15]	-310.580	0.000	-3.180	0.00E+00	-59.040	0.000
15	USD(max)	I[14]	-407.320	0.000	9.630	0.00E+00	-15.790	0.000
15	USD(max)	1/4	-406.390	0.000	14.850	0.00E+00	-15.100	0.000
15	USD(max)	2/4	-405.460	0.000	20.050	0.00E+00	-15.270	0.000
15	USD(max)	3/4	-404.540	0.000	31.770	0.00E+00	-16.290	0.000
15	USD(max)	J[16]	-403.610	0.000	43.920	0.00E+00	-18.090	0.000
15	USD(min)	I[14]	-496.930	0.000	-18.490	0.00E+00	-94.220	0.000
15	USD(min)	1/4	-495.830	0.000	-5.990	0.00E+00	-94.710	0.000
15	USD(min)	2/4	-494.740	0.000	1.860	0.00E+00	-95.310	0.000
15	USD(min)	3/4	-493.640	0.000	4.250	0.00E+00	-96.000	0.000
15	USD(min)	J[16]	-492.540	0.000	6.580	0.00E+00	-96.800	0.000
15	WSD(max)	I[14]	-284.520	0.000	4.180	0.00E+00	-18.090	0.000
15	WSD(max)	1/4	-283.830	0.000	8.340	0.00E+00	-18.120	0.000
15	WSD(max)	2/4	-283.150	0.000	12.470	0.00E+00	-18.640	0.000
15	WSD(max)	3/4	-282.460	0.000	19.860	0.00E+00	-19.660	0.000
15	WSD(max)	J[16]	-281.770	0.000	27.450	0.00E+00	-21.050	0.000
15	WSD(min)	I[14]	-310.580	0.000	-8.860	0.00E+00	-58.480	0.000
15	WSD(min)	1/4	-309.900	0.000	-1.140	0.00E+00	-58.740	0.000
15	WSD(min)	2/4	-309.210	0.000	3.670	0.00E+00	-59.080	0.000
15	WSD(min)	3/4	-308.520	0.000	5.070	0.00E+00	-59.490	0.000
15	WSD(min)	J[16]	-307.840	0.000	6.440	0.00E+00	-59.970	0.000
16	USD(max)	I[15]	-397.370	0.000	35.110	0.00E+00	-15.510	0.000
16	USD(max)	1/4	-396.450	0.000	35.110	0.00E+00	-15.900	0.000
16	USD(max)	2/4	-395.520	0.000	35.110	0.00E+00	-17.090	0.000
16	USD(max)	3/4	-394.590	0.000	37.880	0.00E+00	-19.060	0.000
16	USD(max)	J[17]	-393.670	0.000	49.090	0.00E+00	-21.660	0.000
16	USD(min)	I[15]	-496.930	0.000	-7.980	0.00E+00	-94.810	0.000
16	USD(min)	1/4	-495.830	0.000	4.260	0.00E+00	-96.930	0.000
16	USD(min)	2/4	-494.740	0.000	16.430	0.00E+00	-99.050	0.000
16	USD(min)	3/4	-493.640	0.000	21.980	0.00E+00	-101.180	0.000
16	USD(min)	J[17]	-492.540	0.000	27.010	0.00E+00	-103.300	0.000
16	WSD(max)	I[15]	-284.520	0.000	21.940	0.00E+00	-18.090	0.000
16	WSD(max)	1/4	-283.830	0.000	21.940	0.00E+00	-18.120	0.000
16	WSD(max)	2/4	-283.150	0.000	21.940	0.00E+00	-18.640	0.000
16	WSD(max)	3/4	-282.460	0.000	23.680	0.00E+00	-19.660	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
16	WSD(max)	J[17]	-281.770	0.000	30.680	0.00E+00	-21.170	0.000
16	WSD(min)	I[15]	-310.580	0.000	-3.180	0.00E+00	-59.040	0.000
16	WSD(min)	1/4	-309.900	0.000	3.960	0.00E+00	-60.410	0.000
16	WSD(min)	2/4	-309.210	0.000	11.050	0.00E+00	-61.770	0.000
16	WSD(min)	3/4	-308.520	0.000	16.580	0.00E+00	-63.140	0.000
16	WSD(min)	J[17]	-307.840	0.000	19.530	0.00E+00	-64.510	0.000
17	USD(max)	I[16]	-403.610	0.000	43.920	0.00E+00	-18.090	0.000
17	USD(max)	1/4	-402.690	0.000	56.010	0.00E+00	-20.700	0.000
17	USD(max)	2/4	-401.760	0.000	68.030	0.00E+00	-24.160	0.000
17	USD(max)	3/4	-400.830	0.000	79.980	0.00E+00	-28.470	0.000
17	USD(max)	J[18]	-399.910	0.000	91.860	0.00E+00	-33.620	0.000
17	USD(min)	I[16]	-492.540	0.000	6.580	0.00E+00	-96.800	0.000
17	USD(min)	1/4	-491.440	0.000	8.830	0.00E+00	-97.690	0.000
17	USD(min)	2/4	-490.350	0.000	11.020	0.00E+00	-98.680	0.000
17	USD(min)	3/4	-489.250	0.000	12.860	0.00E+00	-99.770	0.000
17	USD(min)	J[18]	-488.150	0.000	14.310	0.00E+00	-100.940	0.000
17	WSD(max)	I[16]	-281.770	0.000	27.450	0.00E+00	-21.050	0.000
17	WSD(max)	1/4	-281.090	0.000	35.000	0.00E+00	-22.840	0.000
17	WSD(max)	2/4	-280.400	0.000	42.520	0.00E+00	-25.150	0.000
17	WSD(max)	3/4	-279.720	0.000	49.990	0.00E+00	-27.990	0.000
17	WSD(max)	J[18]	-279.030	0.000	57.410	0.00E+00	-31.350	0.000
17	WSD(min)	I[16]	-307.840	0.000	6.440	0.00E+00	-59.970	0.000
17	WSD(min)	1/4	-307.150	0.000	7.750	0.00E+00	-60.520	0.000
17	WSD(min)	2/4	-306.470	0.000	9.030	0.00E+00	-61.130	0.000
17	WSD(min)	3/4	-305.780	0.000	10.120	0.00E+00	-61.810	0.000
17	WSD(min)	J[18]	-305.090	0.000	11.010	0.00E+00	-62.550	0.000
18	USD(max)	I[17]	-393.670	0.000	49.090	0.00E+00	-21.660	0.000
18	USD(max)	1/4	-392.740	0.000	60.240	0.00E+00	-24.920	0.000
18	USD(max)	2/4	-391.820	0.000	71.310	0.00E+00	-29.010	0.000
18	USD(max)	3/4	-390.890	0.000	82.320	0.00E+00	-33.940	0.000
18	USD(max)	J[19]	-389.960	0.000	93.270	0.00E+00	-39.690	0.000
18	USD(min)	I[17]	-492.540	0.000	27.010	0.00E+00	-103.300	0.000
18	USD(min)	1/4	-491.440	0.000	28.800	0.00E+00	-105.420	0.000
18	USD(min)	2/4	-490.350	0.000	28.800	0.00E+00	-107.800	0.000
18	USD(min)	3/4	-489.250	0.000	28.800	0.00E+00	-110.260	0.000
18	USD(min)	J[19]	-488.150	0.000	28.800	0.00E+00	-112.720	0.000
18	WSD(max)	I[17]	-281.770	0.000	30.680	0.00E+00	-21.170	0.000
18	WSD(max)	1/4	-281.090	0.000	37.650	0.00E+00	-23.180	0.000
18	WSD(max)	2/4	-280.400	0.000	44.570	0.00E+00	-25.660	0.000
18	WSD(max)	3/4	-279.720	0.000	51.450	0.00E+00	-28.630	0.000
18	WSD(max)	J[19]	-279.030	0.000	58.290	0.00E+00	-32.080	0.000
18	WSD(min)	I[17]	-307.840	0.000	19.530	0.00E+00	-64.510	0.000
18	WSD(min)	1/4	-307.150	0.000	19.530	0.00E+00	-65.880	0.000
18	WSD(min)	2/4	-306.470	0.000	19.530	0.00E+00	-67.380	0.000
18	WSD(min)	3/4	-305.780	0.000	19.530	0.00E+00	-68.910	0.000
18	WSD(min)	J[19]	-305.090	0.000	19.530	0.00E+00	-70.450	0.000
19	USD(max)	I[18]	-399.910	0.000	91.860	0.00E+00	-33.620	0.000
19	USD(max)	1/4	-398.980	0.000	103.680	0.00E+00	-39.620	0.000
19	USD(max)	2/4	-398.060	0.000	115.430	0.00E+00	-46.450	0.000
19	USD(max)	3/4	-397.130	0.000	127.120	0.00E+00	-54.110	0.000
19	USD(max)	J[20]	-396.200	0.000	138.740	0.00E+00	-62.590	0.000
19	USD(min)	I[18]	-488.150	0.000	14.310	0.00E+00	-100.940	0.000
19	USD(min)	1/4	-487.050	0.000	15.740	0.00E+00	-102.210	0.000
19	USD(min)	2/4	-485.960	0.000	17.140	0.00E+00	-103.560	0.000
19	USD(min)	3/4	-484.860	0.000	18.520	0.00E+00	-105.010	0.000
19	USD(min)	J[20]	-483.760	0.000	19.870	0.00E+00	-107.080	0.000
19	WSD(max)	I[18]	-279.030	0.000	57.410	0.00E+00	-31.350	0.000
19	WSD(max)	1/4	-278.340	0.000	64.800	0.00E+00	-35.230	0.000
19	WSD(max)	2/4	-277.660	0.000	72.150	0.00E+00	-39.630	0.000
19	WSD(max)	3/4	-276.970	0.000	79.450	0.00E+00	-44.540	0.000
19	WSD(max)	J[20]	-276.290	0.000	86.710	0.00E+00	-49.960	0.000
19	WSD(min)	I[18]	-305.090	0.000	11.010	0.00E+00	-62.550	0.000
19	WSD(min)	1/4	-304.410	0.000	11.890	0.00E+00	-63.350	0.000
19	WSD(min)	2/4	-303.720	0.000	12.730	0.00E+00	-64.210	0.000
19	WSD(min)	3/4	-303.040	0.000	13.560	0.00E+00	-65.130	0.000
19	WSD(min)	J[20]	-302.350	0.000	14.370	0.00E+00	-66.110	0.000
20	USD(max)	I[19]	-389.960	0.000	93.270	0.00E+00	-39.690	0.000
20	USD(max)	1/4	-389.040	0.000	104.140	0.00E+00	-46.260	0.000
20	USD(max)	2/4	-388.110	0.000	115.430	0.00E+00	-53.650	0.000
20	USD(max)	3/4	-387.180	0.000	127.120	0.00E+00	-61.850	0.000
20	USD(max)	J[21]	-386.260	0.000	138.740	0.00E+00	-70.860	0.000
20	USD(min)	I[19]	-488.150	0.000	28.800	0.00E+00	-112.720	0.000
20	USD(min)	1/4	-487.050	0.000	28.800	0.00E+00	-115.180	0.000
20	USD(min)	2/4	-485.960	0.000	28.800	0.00E+00	-117.630	0.000
20	USD(min)	3/4	-484.860	0.000	28.800	0.00E+00	-120.090	0.000
20	USD(min)	J[21]	-483.760	0.000	28.800	0.00E+00	-122.550	0.000
20	WSD(max)	I[19]	-279.030	0.000	58.290	0.00E+00	-32.080	0.000
20	WSD(max)	1/4	-278.340	0.000	65.090	0.00E+00	-36.010	0.000
20	WSD(max)	2/4	-277.660	0.000	72.150	0.00E+00	-40.410	0.000
20	WSD(max)	3/4	-276.970	0.000	79.450	0.00E+00	-45.290	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
20	WSD(max)	J[21]	-276.290	0.000	86.710	0.00E+00	-50.630	0.000
20	WSD(min)	I[19]	-305.090	0.000	19.530	0.00E+00	-70.450	0.000
20	WSD(min)	1/4	-304.410	0.000	19.530	0.00E+00	-71.990	0.000
20	WSD(min)	2/4	-303.720	0.000	19.530	0.00E+00	-73.520	0.000
20	WSD(min)	3/4	-303.040	0.000	19.530	0.00E+00	-75.060	0.000
20	WSD(min)	J[21]	-302.350	0.000	19.530	0.00E+00	-76.590	0.000
21	USD(max)	I[20]	-396.200	0.000	138.740	0.00E+00	-62.590	0.000
21	USD(max)	1/4	-394.550	0.000	146.990	0.00E+00	-69.160	0.000
21	USD(max)	2/4	-392.900	0.000	155.220	0.00E+00	-76.140	0.000
21	USD(max)	3/4	-391.240	0.000	163.410	0.00E+00	-83.540	0.000
21	USD(max)	J[22]	-389.590	0.000	171.560	0.00E+00	-90.440	0.000
21	USD(min)	I[20]	-483.760	0.000	19.870	0.00E+00	-107.080	0.000
21	USD(min)	1/4	-481.800	0.000	20.820	0.00E+00	-110.700	0.000
21	USD(min)	2/4	-479.840	0.000	21.760	0.00E+00	-114.490	0.000
21	USD(min)	3/4	-477.880	0.000	22.680	0.00E+00	-118.460	0.000
21	USD(min)	J[22]	-475.920	0.000	23.600	0.00E+00	-122.610	0.000
21	WSD(max)	I[20]	-276.290	0.000	86.710	0.00E+00	-49.960	0.000
21	WSD(max)	1/4	-275.060	0.000	91.870	0.00E+00	-54.140	0.000
21	WSD(max)	2/4	-273.840	0.000	97.010	0.00E+00	-58.580	0.000
21	WSD(max)	3/4	-272.610	0.000	102.130	0.00E+00	-63.270	0.000
21	WSD(max)	J[22]	-271.390	0.000	107.230	0.00E+00	-67.660	0.000
21	WSD(min)	I[20]	-302.350	0.000	14.370	0.00E+00	-66.110	0.000
21	WSD(min)	1/4	-301.120	0.000	14.940	0.00E+00	-67.370	0.000
21	WSD(min)	2/4	-299.900	0.000	15.490	0.00E+00	-70.210	0.000
21	WSD(min)	3/4	-298.670	0.000	16.030	0.00E+00	-73.190	0.000
21	WSD(min)	J[22]	-297.450	0.000	16.560	0.00E+00	-76.310	0.000
22	USD(max)	I[21]	-386.260	0.000	138.740	0.00E+00	-70.860	0.000
22	USD(max)	1/4	-384.600	0.000	146.990	0.00E+00	-77.790	0.000
22	USD(max)	2/4	-382.950	0.000	155.220	0.00E+00	-85.120	0.000
22	USD(max)	3/4	-381.300	0.000	163.410	0.00E+00	-92.860	0.000
22	USD(max)	J[30]	-379.640	0.000	171.560	0.00E+00	-101.010	0.000
22	USD(min)	I[21]	-483.760	0.000	28.800	0.00E+00	-122.550	0.000
22	USD(min)	1/4	-481.800	0.000	28.800	0.00E+00	-124.300	0.000
22	USD(min)	2/4	-479.840	0.000	28.800	0.00E+00	-126.060	0.000
22	USD(min)	3/4	-477.880	0.000	28.800	0.00E+00	-127.810	0.000
22	USD(min)	J[30]	-475.920	0.000	28.800	0.00E+00	-129.570	0.000
22	WSD(max)	I[21]	-276.290	0.000	86.710	0.00E+00	-50.630	0.000
22	WSD(max)	1/4	-275.060	0.000	91.870	0.00E+00	-54.730	0.000
22	WSD(max)	2/4	-273.840	0.000	97.010	0.00E+00	-59.070	0.000
22	WSD(max)	3/4	-272.610	0.000	102.130	0.00E+00	-63.640	0.000
22	WSD(max)	J[30]	-271.390	0.000	107.230	0.00E+00	-68.450	0.000
22	WSD(min)	I[21]	-302.350	0.000	19.530	0.00E+00	-76.590	0.000
22	WSD(min)	1/4	-301.120	0.000	19.530	0.00E+00	-77.690	0.000
22	WSD(min)	2/4	-299.900	0.000	19.530	0.00E+00	-78.790	0.000
22	WSD(min)	3/4	-298.670	0.000	19.530	0.00E+00	-79.880	0.000
22	WSD(min)	J[30]	-297.450	0.000	19.530	0.00E+00	-80.980	0.000
23	USD(max)	I[22]	-28.800	0.000	-292.120	0.00E+00	3.170	0.000
23	USD(max)	1/4	-28.800	0.000	-275.860	0.00E+00	18.300	0.000
23	USD(max)	2/4	-28.800	0.000	-259.140	0.00E+00	33.940	0.000
23	USD(max)	3/4	-28.800	0.000	-242.420	0.00E+00	48.610	0.000
23	USD(max)	J[23]	-28.800	0.000	-225.710	0.00E+00	62.320	0.000
23	USD(min)	I[22]	-219.780	0.000	-360.780	0.00E+00	-53.300	0.000
23	USD(min)	1/4	-219.780	0.000	-341.590	0.00E+00	-37.960	0.000
23	USD(min)	2/4	-219.780	0.000	-322.400	0.00E+00	-23.500	0.000
23	USD(min)	3/4	-219.780	0.000	-303.210	0.00E+00	-9.880	0.000
23	USD(min)	J[23]	-219.780	0.000	-284.020	0.00E+00	2.550	0.000
23	WSD(max)	I[22]	-19.530	0.000	-205.730	0.00E+00	1.070	0.000
23	WSD(max)	1/4	-19.530	0.000	-194.790	0.00E+00	11.440	0.000
23	WSD(max)	2/4	-19.530	0.000	-183.840	0.00E+00	21.210	0.000
23	WSD(max)	3/4	-19.530	0.000	-172.900	0.00E+00	30.380	0.000
23	WSD(max)	J[23]	-19.530	0.000	-161.960	0.00E+00	38.950	0.000
23	WSD(min)	I[22]	-137.360	0.000	-225.490	0.00E+00	-33.310	0.000
23	WSD(min)	1/4	-137.360	0.000	-213.490	0.00E+00	-22.340	0.000
23	WSD(min)	2/4	-137.360	0.000	-201.500	0.00E+00	-11.960	0.000
23	WSD(min)	3/4	-137.360	0.000	-189.500	0.00E+00	-2.190	0.000
23	WSD(min)	J[23]	-137.360	0.000	-177.510	0.00E+00	6.180	0.000
24	USD(max)	I[23]	-28.800	0.000	-225.710	0.00E+00	62.320	0.000
24	USD(max)	1/4	-28.800	0.000	-205.060	0.00E+00	77.940	0.000
24	USD(max)	2/4	-28.800	0.000	-184.410	0.00E+00	92.080	0.000
24	USD(max)	3/4	-28.800	0.000	-163.770	0.00E+00	104.780	0.000
24	USD(max)	J[24]	-28.800	0.000	-143.120	0.00E+00	116.170	0.000
24	USD(min)	I[23]	-219.780	0.000	-284.020	0.00E+00	2.550	0.000
24	USD(min)	1/4	-219.780	0.000	-260.320	0.00E+00	16.770	0.000
24	USD(min)	2/4	-219.780	0.000	-236.620	0.00E+00	29.760	0.000
24	USD(min)	3/4	-219.780	0.000	-212.920	0.00E+00	41.510	0.000
24	USD(min)	J[24]	-219.780	0.000	-189.220	0.00E+00	52.020	0.000
24	WSD(max)	I[23]	-19.530	0.000	-161.960	0.00E+00	38.950	0.000
24	WSD(max)	1/4	-19.530	0.000	-148.440	0.00E+00	48.710	0.000
24	WSD(max)	2/4	-19.530	0.000	-134.930	0.00E+00	57.550	0.000
24	WSD(max)	3/4	-19.530	0.000	-120.980	0.00E+00	65.490	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
24	WSD(max)	J[24]	-19.530	0.000	-106.170	0.00E+00	72.580	0.000
24	WSD(min)	I[23]	-137.360	0.000	-177.510	0.00E+00	6.180	0.000
24	WSD(min)	1/4	-137.360	0.000	-162.700	0.00E+00	15.760	0.000
24	WSD(min)	2/4	-137.360	0.000	-147.890	0.00E+00	24.510	0.000
24	WSD(min)	3/4	-137.360	0.000	-133.070	0.00E+00	32.420	0.000
24	WSD(min)	J[24]	-137.360	0.000	-118.260	0.00E+00	39.500	0.000
25	USD(max)	I[24]	-28.800	0.000	-143.120	0.00E+00	116.170	0.000
25	USD(max)	1/4	-28.800	0.000	-122.560	0.00E+00	126.050	0.000
25	USD(max)	2/4	-28.800	0.000	-102.000	0.00E+00	134.480	0.000
25	USD(max)	3/4	-28.800	0.000	-81.430	0.00E+00	141.460	0.000
25	USD(max)	J[25]	-28.800	0.000	-60.870	0.00E+00	146.990	0.000
25	USD(min)	I[24]	-219.780	0.000	-189.220	0.00E+00	52.020	0.000
25	USD(min)	1/4	-219.780	0.000	-165.610	0.00E+00	61.260	0.000
25	USD(min)	2/4	-219.780	0.000	-142.010	0.00E+00	69.260	0.000
25	USD(min)	3/4	-219.780	0.000	-118.400	0.00E+00	75.620	0.000
25	USD(min)	J[25]	-219.780	0.000	-94.800	0.00E+00	80.350	0.000
25	WSD(max)	I[24]	-19.530	0.000	-106.170	0.00E+00	72.580	0.000
25	WSD(max)	1/4	-19.530	0.000	-91.420	0.00E+00	78.740	0.000
25	WSD(max)	2/4	-19.530	0.000	-76.670	0.00E+00	83.990	0.000
25	WSD(max)	3/4	-19.530	0.000	-61.910	0.00E+00	88.330	0.000
25	WSD(max)	J[25]	-19.530	0.000	-47.160	0.00E+00	91.760	0.000
25	WSD(min)	I[24]	-137.360	0.000	-118.260	0.00E+00	39.500	0.000
25	WSD(min)	1/4	-137.360	0.000	-103.510	0.00E+00	45.730	0.000
25	WSD(min)	2/4	-137.360	0.000	-88.760	0.00E+00	51.120	0.000
25	WSD(min)	3/4	-137.360	0.000	-74.000	0.00E+00	55.690	0.000
25	WSD(min)	J[25]	-137.360	0.000	-59.250	0.00E+00	59.430	0.000
26	USD(max)	I[25]	-28.800	0.000	-60.870	0.00E+00	146.990	0.000
26	USD(max)	1/4	-28.800	0.000	-40.230	0.00E+00	151.070	0.000
26	USD(max)	2/4	-28.800	0.000	-19.580	0.00E+00	153.700	0.000
26	USD(max)	3/4	-28.800	0.000	1.070	0.00E+00	154.860	0.000
26	USD(max)	J[26]	-28.800	0.000	21.710	0.00E+00	154.560	0.000
26	USD(min)	I[25]	-219.780	0.000	-94.800	0.00E+00	80.350	0.000
26	USD(min)	1/4	-219.780	0.000	-71.100	0.00E+00	83.870	0.000
26	USD(min)	2/4	-219.780	0.000	-47.400	0.00E+00	86.150	0.000
26	USD(min)	3/4	-219.780	0.000	-23.700	0.00E+00	87.190	0.000
26	USD(min)	J[26]	-219.780	0.000	0.000	0.00E+00	86.990	0.000
26	WSD(max)	I[25]	-19.530	0.000	-47.160	0.00E+00	91.760	0.000
26	WSD(max)	1/4	-19.530	0.000	-32.350	0.00E+00	94.300	0.000
26	WSD(max)	2/4	-19.530	0.000	-17.540	0.00E+00	95.920	0.000
26	WSD(max)	3/4	-19.530	0.000	-2.720	0.00E+00	96.630	0.000
26	WSD(max)	J[26]	-19.530	0.000	12.090	0.00E+00	96.420	0.000
26	WSD(min)	I[25]	-137.360	0.000	-59.250	0.00E+00	59.430	0.000
26	WSD(min)	1/4	-137.360	0.000	-44.440	0.00E+00	62.350	0.000
26	WSD(min)	2/4	-137.360	0.000	-29.630	0.00E+00	64.430	0.000
26	WSD(min)	3/4	-137.360	0.000	-14.810	0.00E+00	65.680	0.000
26	WSD(min)	J[26]	-137.360	0.000	0.000	0.00E+00	66.100	0.000
27	USD(max)	I[26]	-28.800	0.000	21.710	0.00E+00	154.560	0.000
27	USD(max)	1/4	-28.800	0.000	40.960	0.00E+00	152.860	0.000
27	USD(max)	2/4	-28.800	0.000	62.590	0.00E+00	149.820	0.000
27	USD(max)	3/4	-28.800	0.000	84.210	0.00E+00	145.450	0.000
27	USD(max)	J[27]	-28.800	0.000	105.830	0.00E+00	139.750	0.000
27	USD(min)	I[26]	-219.780	0.000	0.000	0.00E+00	86.990	0.000
27	USD(min)	1/4	-219.780	0.000	20.060	0.00E+00	85.600	0.000
27	USD(min)	2/4	-219.780	0.000	40.120	0.00E+00	83.090	0.000
27	USD(min)	3/4	-219.780	0.000	60.190	0.00E+00	79.460	0.000
27	USD(min)	J[27]	-219.780	0.000	80.250	0.00E+00	74.700	0.000
27	WSD(max)	I[26]	-19.530	0.000	12.090	0.00E+00	96.420	0.000
27	WSD(max)	1/4	-19.530	0.000	25.600	0.00E+00	95.330	0.000
27	WSD(max)	2/4	-19.530	0.000	39.120	0.00E+00	93.420	0.000
27	WSD(max)	3/4	-19.530	0.000	52.630	0.00E+00	90.660	0.000
27	WSD(max)	J[27]	-19.530	0.000	66.150	0.00E+00	87.080	0.000
27	WSD(min)	I[26]	-137.360	0.000	0.000	0.00E+00	66.100	0.000
27	WSD(min)	1/4	-137.360	0.000	13.510	0.00E+00	65.680	0.000
27	WSD(min)	2/4	-137.360	0.000	27.030	0.00E+00	64.430	0.000
27	WSD(min)	3/4	-137.360	0.000	40.540	0.00E+00	62.350	0.000
27	WSD(min)	J[27]	-137.360	0.000	54.060	0.00E+00	59.430	0.000
28	USD(max)	I[27]	-28.800	0.000	105.830	0.00E+00	139.750	0.000
28	USD(max)	1/4	-28.800	0.000	127.370	0.00E+00	132.730	0.000
28	USD(max)	2/4	-28.800	0.000	148.910	0.00E+00	124.400	0.000
28	USD(max)	3/4	-28.800	0.000	170.440	0.00E+00	114.740	0.000
28	USD(max)	J[28]	-28.800	0.000	191.980	0.00E+00	103.760	0.000
28	USD(min)	I[27]	-219.780	0.000	80.250	0.00E+00	74.700	0.000
28	USD(min)	1/4	-219.780	0.000	100.230	0.00E+00	68.830	0.000
28	USD(min)	2/4	-219.780	0.000	120.210	0.00E+00	61.780	0.000
28	USD(min)	3/4	-219.780	0.000	140.190	0.00E+00	53.420	0.000
28	USD(min)	J[28]	-219.780	0.000	158.930	0.00E+00	43.940	0.000
28	WSD(max)	I[27]	-19.530	0.000	66.150	0.00E+00	87.080	0.000
28	WSD(max)	1/4	-19.530	0.000	79.610	0.00E+00	82.680	0.000
28	WSD(max)	2/4	-19.530	0.000	93.070	0.00E+00	77.450	0.000
28	WSD(max)	3/4	-19.530	0.000	106.530	0.00E+00	71.390	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
28	WSD(max)	J[28]	-19.530	0.000	119.990	0.00E+00	64.500	0.000
28	WSD(min)	I[27]	-137.360	0.000	54.060	0.00E+00	59.430	0.000
28	WSD(min)	1/4	-137.360	0.000	67.520	0.00E+00	55.690	0.000
28	WSD(min)	2/4	-137.360	0.000	80.980	0.00E+00	50.950	0.000
28	WSD(min)	3/4	-137.360	0.000	94.440	0.00E+00	44.980	0.000
28	WSD(min)	J[28]	-137.360	0.000	107.900	0.00E+00	38.170	0.000
29	USD(max)	I[28]	-28.800	0.000	191.980	0.00E+00	103.760	0.000
29	USD(max)	1/4	-28.800	0.000	213.600	0.00E+00	91.390	0.000
29	USD(max)	2/4	-28.800	0.000	236.620	0.00E+00	77.700	0.000
29	USD(max)	3/4	-28.800	0.000	260.320	0.00E+00	62.670	0.000
29	USD(max)	J[29]	-28.800	0.000	284.020	0.00E+00	46.300	0.000
29	USD(min)	I[28]	-219.780	0.000	158.930	0.00E+00	43.940	0.000
29	USD(min)	1/4	-219.780	0.000	177.180	0.00E+00	33.300	0.000
29	USD(min)	2/4	-219.780	0.000	195.420	0.00E+00	21.530	0.000
29	USD(min)	3/4	-219.780	0.000	213.670	0.00E+00	8.630	0.000
29	USD(min)	J[29]	-219.780	0.000	231.910	0.00E+00	-5.390	0.000
29	WSD(max)	I[28]	-19.530	0.000	119.990	0.00E+00	64.500	0.000
29	WSD(max)	1/4	-19.530	0.000	133.500	0.00E+00	56.760	0.000
29	WSD(max)	2/4	-19.530	0.000	147.890	0.00E+00	48.180	0.000
29	WSD(max)	3/4	-19.530	0.000	162.700	0.00E+00	38.760	0.000
29	WSD(max)	J[29]	-19.530	0.000	177.510	0.00E+00	28.510	0.000
29	WSD(min)	I[28]	-137.360	0.000	107.900	0.00E+00	38.170	0.000
29	WSD(min)	1/4	-137.360	0.000	121.410	0.00E+00	30.510	0.000
29	WSD(min)	2/4	-137.360	0.000	134.930	0.00E+00	22.010	0.000
29	WSD(min)	3/4	-137.360	0.000	148.440	0.00E+00	12.670	0.000
29	WSD(min)	J[29]	-137.360	0.000	161.960	0.00E+00	2.500	0.000
30	USD(max)	I[29]	-28.800	0.000	284.020	0.00E+00	46.300	0.000
30	USD(max)	1/4	-28.800	0.000	303.210	0.00E+00	32.070	0.000
30	USD(max)	2/4	-28.800	0.000	322.400	0.00E+00	16.960	0.000
30	USD(max)	3/4	-28.800	0.000	341.590	0.00E+00	0.980	0.000
30	USD(max)	J[30]	-28.800	0.000	360.780	0.00E+00	-15.880	0.000
30	USD(min)	I[29]	-219.780	0.000	231.910	0.00E+00	-5.390	0.000
30	USD(min)	1/4	-219.780	0.000	246.690	0.00E+00	-17.560	0.000
30	USD(min)	2/4	-219.780	0.000	261.460	0.00E+00	-30.480	0.000
30	USD(min)	3/4	-219.780	0.000	276.230	0.00E+00	-44.140	0.000
30	USD(min)	J[30]	-219.780	0.000	291.010	0.00E+00	-58.530	0.000
30	WSD(max)	I[29]	-19.530	0.000	177.510	0.00E+00	28.510	0.000
30	WSD(max)	1/4	-19.530	0.000	189.500	0.00E+00	19.600	0.000
30	WSD(max)	2/4	-19.530	0.000	201.500	0.00E+00	10.140	0.000
30	WSD(max)	3/4	-19.530	0.000	213.490	0.00E+00	0.140	0.000
30	WSD(max)	J[30]	-19.530	0.000	225.490	0.00E+00	-10.410	0.000
30	WSD(min)	I[29]	-137.360	0.000	161.960	0.00E+00	2.500	0.000
30	WSD(min)	1/4	-137.360	0.000	172.900	0.00E+00	-6.340	0.000
30	WSD(min)	2/4	-137.360	0.000	183.840	0.00E+00	-15.740	0.000
30	WSD(min)	3/4	-137.360	0.000	194.790	0.00E+00	-25.680	0.000
30	WSD(min)	J[30]	-137.360	0.000	205.730	0.00E+00	-36.160	0.000

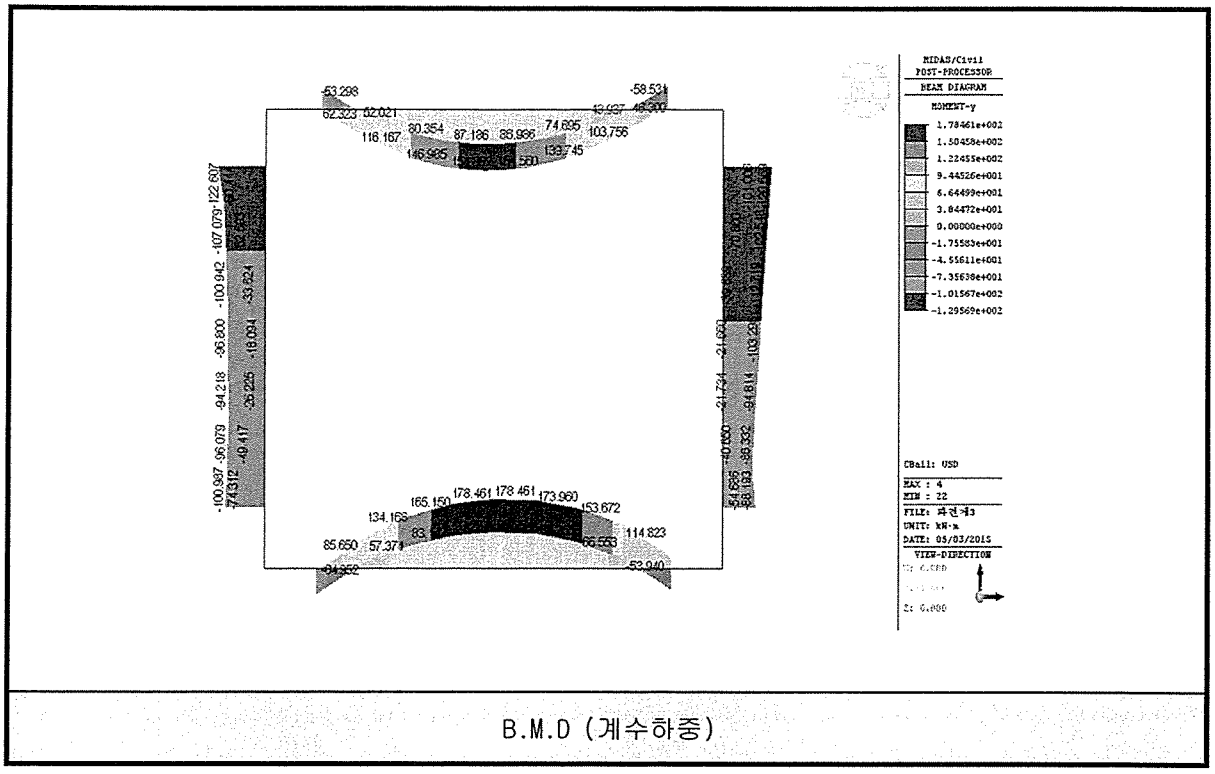
9. 단면력 요약

구분	위치	부재	극한하중			사용하중	비고
			Mu(kN · m)	Su(kN)	Pu(kN)	M(kN · m)	
상부슬래브	단부	23,30	-58.53	360.78	-	-36.16	
	중앙부	26,27	154.86	105.83	-	96.63	
벽체	상단부 (축력최대)	21.22	-89.03	171.56	-483.76	-49.96	
	상단부 (모멘트최대)	21,22	-129.57	171.56	-453.56	-80.98	
	중앙부 (축력최대)	15,16	-32.23	49.09	-496.93	-18.09	
	중앙부 (모멘트최대)	15,16	-103.30	-18.49	-467.57	-64.51	
	하단부 (축력최대)	9,10	-88.19	-158.50	-513.94	-33.95	
	하단부 (모멘트최대)	9,10	-100.99	-158.50	-494.60	-63.12	
하부슬래브	단부	1.8	-64.95	349.30	-	-38.25	
	중앙부	4,5	178.46	70.43	-	111.24	

-'전단력과 사용하중 상태에서의 모멘트는 선택 부재에서의 최대값 적용

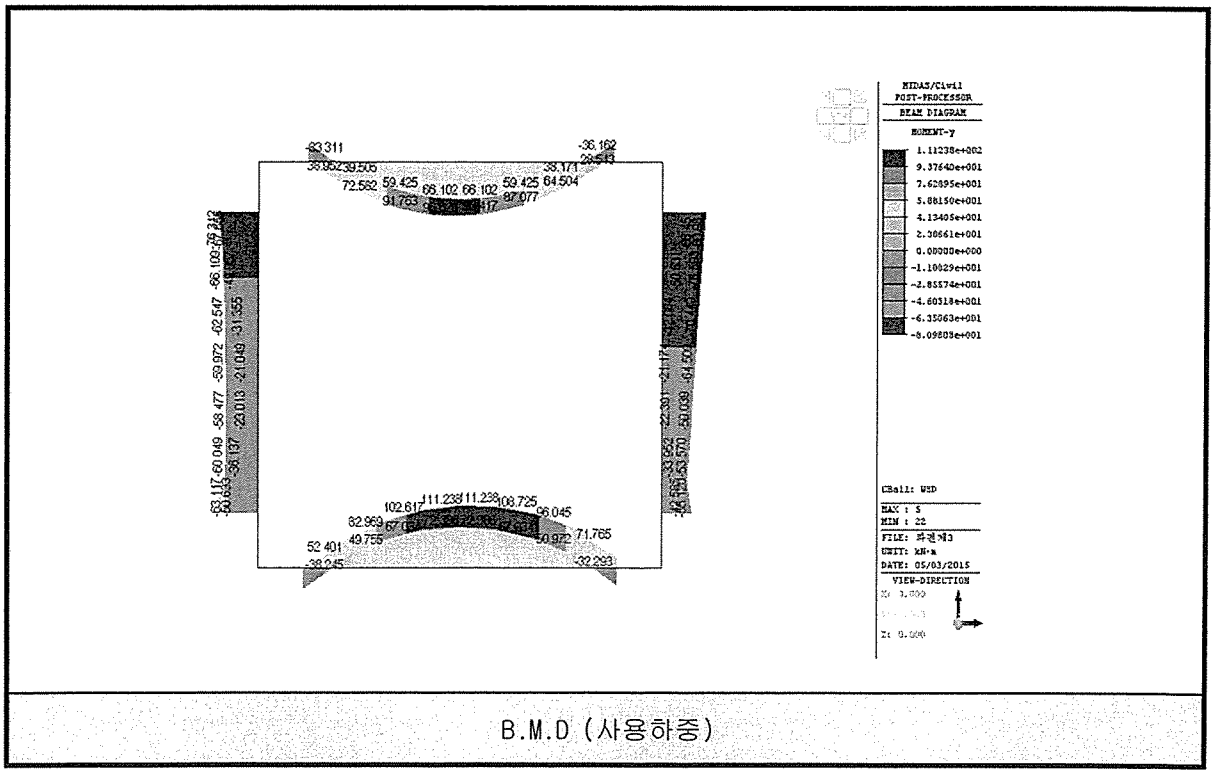
10. 단면력도

(1) 극한하중 모멘트도



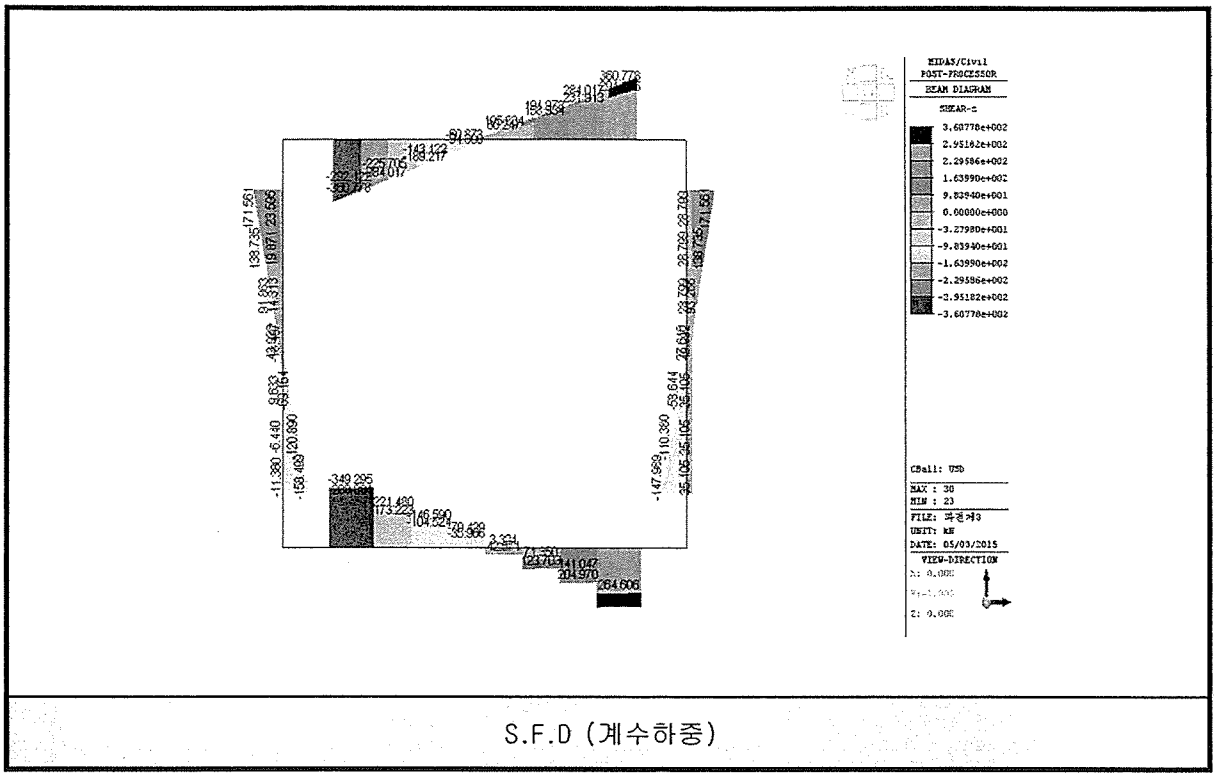
B.M.D (계수하중)

(2) 사용하중 모멘트도



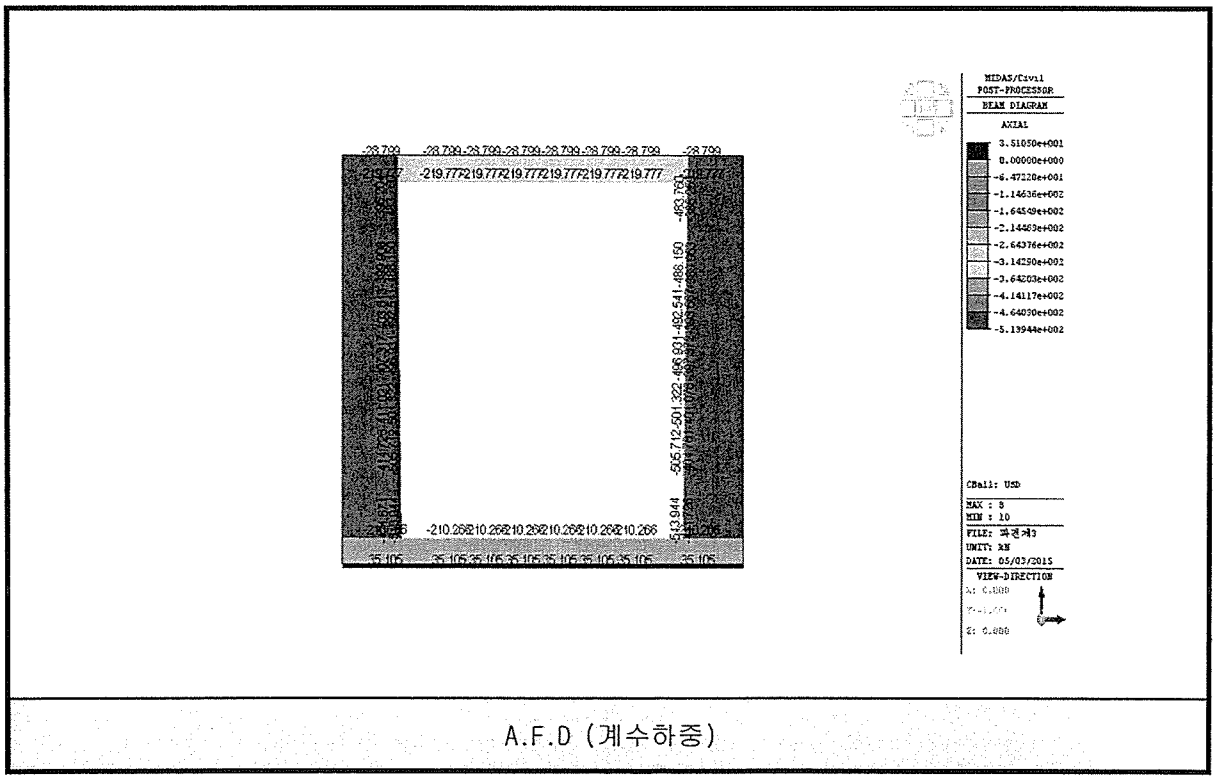
B.M.D (사용하중)

(3) 극한하중 전단력도



S.F.D (계수하중)

(4) 극한하중 축력도



A.F.D (계수하중)

11. 단면검토

① 상부 슬래브 단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	36.160
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Su (kN)
1000.0	500.0	400.0	100.0	58.530	360.780

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K.

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 409.750 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 409.750 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 546.334 mm^2 ※ As = 546.334 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 58.530 kN · m ----- ∴ O.K. [사용률 = 3.787]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (360.8 - 232.782)×10³ ×150.0 / (400.0×300.0×0.85)

= 188.232 ㎟

Use Av = 253.400 ㎟ (H13×2 EA, 간격 s = 150.0 mm)

Øv · As = Øv · Av · fy · D / (s × B) = 172.312 kN

s = 150.0 mm ≥ Min (600, 0.5D) = 150.0 mm ------ ∴ O.K.

Øv · Vn = Øv · Vc + Øv · Vs = 405.094 kN > Vu ----- ∴ O.K.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 36.16 × 1000000 / [1588.8×(400 - 83.857/3)]

= 61.173 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 61.173) - 2.5 × 92 = 1057.330 mm

300 x (210 / fs) = 300 × (210 / 61.173) = 1029.864 mm

Sa는 작은 값인 1029.864 mm 를 적용

S = 125.00 ≤ Sa (= 1029.864 mm) ----- ∴ O.K.

② 상부슬래브 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	96.630
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	154.860	105.830

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.02719 ≥ 0.004 ----- ∴ O.K.

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 1492.094 mm^2

사용철근비 : Puse = As / (B × D) = 0.00530

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 1492.094 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1989.459 mm^2 ※ As = 1492.094 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 164463107 N · mm

= 164.463 kN · m > 154.860 kN · m ----- ∴ O.K. [사용률 = 1.062]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 96.63 × 1000000 / [1588.8×(300 - 71.32/3)]

= 220.180 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 220.18) - 2.5 × 92 = 127.662 mm

300 x (210 / fs) = 300 × (210 / 220.18) = 286.130 mm

Sa는 작은 값인 127.662 mm 를 적용

S = 125.00 ≤ Sa (= 127.662 mm) ----- ∴ O.K.

③ 하부슬래브 단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	38.250
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	550.0	450.0	100.0	64.950	349.300

전단설계시 단면의 유효높이 ds = 350.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.04229 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 403.767 mm^2

사용철근비 : Puse = As / (B × D) = 0.00353

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 403.767 mm^2 As(min) = 1575.000 mm^2

4/3×As(req) = 538.356 mm^2 ※ As = 538.356 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 250258307 N · mm

= 250.258 kN · m > 64.950 kN · m ----- ∴ O.K [사용률 = 3.853]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 271.579 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (349.3 - 271.579)×10^3 ×150.0 / (400.0×350.0×0.85)

= 97.968 ㎟

Use Av = 253.400 ㎟ (H13×2 EA, 간격 s = 150.0 mm)

Øv · As = Øv · Av · fy · D / (s × B) = 201.031 kN

s = 150.0 mm < Min (600, 0.5D) = 175.0 mm ----- ∴ O.K

Øv · Vn = Øv · Vc + Øv · Vs = 472.610 kN > Vu ----- ∴ O.K

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 38.25 × 1000000 / [1588.8×(450 - 89.542/3)]

= 57.300 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×450/(7×1588.8)]

= 89.542 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 57.3) - 2.5 × 92 = 1144.344 mm

300 x (210 / fs) = 300 × (210 / 57.3) = 1099.475 mm

Sa는 작은 값인 1099.475 mm 를 적용

S = 125.00 ≤ Sa (= 1099.475 mm) ----- ∴ O.K.

④ 하부슬래브 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	111.240
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	450.0	350.0	100.0	178.460	70.430

전단설계시 단면의 유효높이 ds = 350.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03222 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ---------- (1)

$a = As \times fy / (0.85 \times fck \times b)$ ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2 \times 0.85 \times fck \times b} \times As^2 - fy \times d \times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 1464.405 mm^2

사용철근비 : Puse = As / (B × D) = 0.00454

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 1464.405 mm^2 As(min) = 1225.000 mm^2

4/3×As(req) = 1952.540 mm^2 ※ As = 1464.405 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 193061507 N · mm

= 193.062 kN · m > 178.460 kN · m ----- ∴ O.K [사용률 = 1.082]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 271.579 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 111.24 × 1000000 / [1588.8×(350 - 77.81/3)]

= 216.054 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×350/(7×1588.8)]

= 77.810 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 216.054) - 2.5 × 92 = 134.493 mm

300 x (210 / fs) = 300 × (210 / 216.054) = 291.594 mm

Sa는 작은 값인 134.493 mm 를 적용

S = 125.00 ≤ Sa (= 134.493 mm) ----- ∴ O.K.

⑤ 벽체 상단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	80.980
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	129.570	171.560

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 916.253 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 916.253 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 1221.670 mm^2 ※ As = 1221.670 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 129.570 kN · m ----- ∴ O.K [사용률 = 1.711]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

1/2 x Φv x Vc = 116.391 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 80.98 × 1000000 / [1588.8×(400 - 83.857/3)]

= 136.997 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 136.997) - 2.5 × 92 = 344.831 mm

300 x (210 / fs) = 300 × (210 / 136.997) = 459.865 mm

Sa는 작은 값인 344.831 mm 를 적용

S = 125.00 ≤ Sa (= 344.831 mm) ----- ∴ O.K.

⑥ 벽체 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	64.510
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	103.300	18.490

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.02719 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ———————— (1)

$a = As \times fy / (0.85 \times fck \times b)$ ———————— (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2 \times 0.85 \times fck \times b} \times As^2 - fy \times d \times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 981.676 mm^2

사용철근비 : Puse = As / (B × D) = 0.00530

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 981.676 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1308.901 mm^2 ※ As = 1050.000 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 164463107 N · mm

= 164.463 kN · m > 103.300 kN · m ----- ∴ O.K [사용률 = 1.592]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 64.51 × 1000000 / [1588.8×(300 - 71.32/3)]

= 146.992 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 146.992) - 2.5 × 92 = 305.745 mm

300 x (210 / fs) = 300 × (210 / 146.992) = 428.596 mm

Sa는 작은 값인 305.745 mm 를 적용

S = 125.00 ≤ Sa (= 305.745 mm) ----- ∴ O.K.

⑦ 벽체 하단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	63.120
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	100.990	158.500

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 711.238 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 711.238 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 948.318 mm^2 ※ As = 948.318 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 100.990 kN · m ----- ∴ O.K [사용률 = 2.195]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

1/2 x Φv x Vc = 116.391 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 63.12 × 1000000 / [1588.8×(400 - 83.857/3)]

= 106.782 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 ㎜

사용철근량 = 1588.800 $㎟^2$ (철근도심 : 100 ㎜)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 ㎜

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(㎜)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 106.782) - 2.5 × 92 = 507.482 ㎜

300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 ㎜

Sa는 작은 값인 507.482 ㎜ 를 적용

S = 125.00 ≤ Sa (= 507.482 ㎜) ----- ∴ O.K.

⑤ 벽체 상단부 - Pmax 일 경우

설계축력	:	Pu	=	483.76	(kN) ,	설계모멘트	:	Mu	=	89.03	(kN · m)	
설계전단력	:	Vu	=	171.56	(kN) ,	사용 모멘트	:	M	=	49.96	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	184.04 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 249.482 mm , a = k1 x c = 208.567 mm 사용

fs = 600 x (400.000 - 249.482) / 249.482 = 361.9917 Mpa (fs ≤ fy)

fs' = 600 x (249.482 - 100.000) / 249.482 = 359.5021 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 208.567 x 1000 = 5230867.543 N

Cs = 794.400 x (359.502 - 0.836 x 30) = 265664.895 N

Ts = 1588.800 x 361.992 = 575132.425 N

Pn = 5230867.543 + 265664.895 - 575132.425 = 4921400.013 N

Mn' = 5230867.543 x (400.0 - 208.567 / 2) + 265664.895 x (400.0 - 100.0)

= 1626552561.153 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 330.505114 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4921400.013

ΦPn = 3444980.009 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4921400.013 = 3444.980 kN ≥ Pu = 483.760 kN ------ O.K!!!

ΦMn = ΦPn x 184.038 = 634.006 kN.m ≥ Mu = 89.030 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 248869.324 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 49.96 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 84.519 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 84.519) - 2.5 × 92 = 701.742 mm

300 x (210 / fs) = 300 × (210 / 84.519) = 745.394 mm

Sa는 작은 값인 701.742 mm 를 적용

S = 125.00 ≤ Sa (= 701.742 mm) ------ ∴ O.K.

⑥ 벽체 상단부 - Mmax 일 경우

설계축력	:	Pu	=	453.56	(kN) ,	설계모멘트	:	Mu	=	129.57	(kN·m)
설계전단력	:	Vu	=	171.56	(kN) ,	사용 모멘트	:	M	=	80.98	(kN.m)
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck} =	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v =	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc =	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e =	285.67 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 138.006 mm , a = k1 x c = 115.373 mm 사용

fs = 600 x (400.000 - 138.006) / 138.006 = 400 Mpa (fs ≤ fy)

fs' = 600 x (138.006 - 100.000) / 138.006 = 165.235 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 115.373 x 1000 = 2893546.855 N

Cs = 794.400 x (165.235 - 0.836 x 30) = 111339.159 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2893546.855 + 111339.159 - 635520.000 = 2369366.013 N

Mn' = 2893546.855 x (400.0 - 115.373 / 2) + 111339.159 x (400.0 - 100.0)

= 1023902359.529 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 432.140915 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 2369366.013

ΦPn = 1658556.209 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2369366.013 = 1658.556 kN ≥ Pu = 453.560 kN ------ O.K!!!

ΦMn = ΦPn x 285.673 = 473.805 kN.m ≥ Mu = 129.570 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 247865.036 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 80.98 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 136.997 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 ㎜

사용철근량 = 1588.800 ㎟ (철근도심 : 100 ㎜)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 ㎜

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(㎜)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 136.997) - 2.5 × 92 = 344.831 ㎜

300 x (210 / fs) = 300 × (210 / 136.997) = 459.865 ㎜

Sa는 작은 값인 344.831 ㎜ 를 적용

S = 125.00 ≤ Sa (= 344.831 ㎜) ------ ∴ O.K.

⑦ 벽체 중앙부 - Pmax 일 경우

설계축력	:	Pu	=	496.93	(kN) ,	설계모멘트	:	Mu	=	32.23	(kN · m)	
설계전단력	:	Vu	=	49.09	(kN) ,	사용 모멘트	:	M	=	18.09	(kN.m)	
부 재 높 이	:	H	=	400.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	300.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	64.86 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0060) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 400.00 x 1000.00 = 10032000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (10032000.00 x 200.0 + 635520.0 x 100.0 + 317760.0 x 300.0) / 10985280.000

= 197.107 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 180.000 mm, ab = k1 x cb = 150.480 mm

fs' = 600 x (180.000 - 100.0) / 180.0(= 266.6667 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 150.480 x 1000 = 3774038.400 N

Cs = As' x (fs' - 0.9 x fck) = 190391.200 N

Ts = As x fs = 635520.000 N

Pb = 3774038.400 + 190391.200 - 635520.000 = 3328909.600 N

Mb = 3774038.400x(300.0-150.480/2)+190391.200x(300.0-100.0)-3328909.600x(197.107-100.0)

= 563069348.351 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 169.145 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 329.377 mm , a = k1 x c = 275.359 mm 사용

fs = 600 x (300.000 - 329.377) / 329.377 = -53.5139 Mpa (fs ≤ fy)

fs' = 600 x (329.377 - 100.000) / 329.377 = 400 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 275.359 x 1000 = 6906010.130 N

Cs = 794.400 x (400.000 - 0.836 x 30) = 297836.448 N

Ts = 1588.800 x -53.514 = -85022.917 N

Pn = 6906010.130 + 297836.448 - -85022.917 = 7288869.496 N

Mn' = 6906010.130 x (300.0 - 275.359 / 2) + 297836.448 x (300.0 - 100.0)

= 1180553424.391 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 161.965631 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 7288869.496

ΦPn = 5102208.647 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 7288869.496 = 5102.209 kN ≥ Pu = 496.930 kN ——— O.K!!!

ΦMn = ΦPn x 64.858 = 330.920 kN.m ≥ Mu = 32.230 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 253438.587 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 18.09 \times 1000000 / [1588.8 \times (300 - 71.32/3)]$

= 41.220 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 300/(7 \times 1588.8)]}$

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 41.22) - 2.5 × 92 = 1680.50 mm

300 x (210 / fs) = 300 × (210 / 41.22) = 1528.40 mm

Sa는 작은 값인 1528.40 mm 를 적용

S = 125.00 ≤ Sa (= 1528.399 mm) ------ ∴ O.K.

⑧ 벽체 중앙부 - Mmax 일 경우

설계축력	:	Pu	=	467.57	(kN) ,	설계모멘트	:	Mu	=	103.30	(kN · m)
설계전단력	:	Vu	=	18.49	(kN) ,	사용 모멘트	:	M	=	64.51	(kN.m)
부 재 높 이	:	H	=	400.0	(mm) ,	f_y	=	400	MPa	f_{ck} =	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v =	0.85
유효높이(휨)	:	d	=	300.0	(mm) ,	d'	=	100	(mm),	ϕc =	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e =	220.93 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0060) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 400.00 x 1000.00 = 10032000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (10032000.00 x 200.0 + 635520.0 x 100.0 + 317760.0 x 300.0) / 10985280.000

= 197.107 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 180.000 mm, ab = k1 x cb = 150.480 mm

fs' = 600 x (180.000 - 100.0) / 180.0(= 266.6667 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 150.480 x 1000 = 3774038.400 N

Cs = As' x (fs' - 0.9 x fck) = 190391.200 N

Ts = As x fs = 635520.000 N

Pb = 3774038.400 + 190391.200 - 635520.000 = 3328909.600 N

Mb = 3774038.400x(300.0-150.480/2)+190391.200x(300.0-100.0)-3328909.600x(197.107-100.0)

= 563069348.351 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 169.145 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 128.055 mm , a = k1 x c = 107.054 mm 사용

fs = 600 x (300.000 - 128.055) / 128.055 = 400 Mpa (fs ≤ fy)

fs' = 600 x (128.055 - 100.000) / 128.055 = 131.451 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 107.054 x 1000 = 2684911.722 N

Cs = 794.400 x (131.451 - 0.836 x 30) = 84501.093 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2684911.722 + 84501.093 - 635520.000 = 2133892.815 N

Mn' = 2684911.722 x (300.0 - 107.054 / 2) + 84501.093 x (300.0 - 100.0)

= 678658604.562 N.mm

- 편심오차 : |e' - Mn'/Pn| = 0.001 < 0.001 (e' = e + Xp - dc = 318.036888 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 2133892.815

ΦPn = 1493724.971 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2133892.815 = 1493.725 kN ≥ Pu = 467.570 kN ------ O.K!!!

ΦMn = ΦPn x 220.929 = 330.008 kN.m ≥ Mu = 103.300 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 252218.144 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 64.51 \times 1000000 / [1588.8 \times (300 - 71.32/3)]$

= 146.992 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 300/(7 \times 1588.8)]}$

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 146.992) - 2.5 × 92 = 305.75 mm

300 x (210 / fs) = 300 × (210 / 146.992) = 428.60 mm

Sa는 작은 값인 305.75 mm 를 적용

S = 125.00 ≤ Sa (= 305.745 mm) ------ ∴ O.K.

⑨ 벽체 하단부 - Pmax 일 경우

설계축력	:	Pu	=	513.94	(kN) ,	설계모멘트	:	Mu	=	88.19	(kN·m)	
설계전단력	:	Vu	=	158.50	(kN) ,	사용 모멘트	:	M	=	33.95	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	171.60 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 262.694 mm , a = k1 x c = 219.612 mm 사용

fs = 600 x (400.000 - 262.694) / 262.694 = 313.6105 Mpa (fs ≤ fy)

fs' = 600 x (262.694 - 100.000) / 262.694 = 371.5974 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 219.612 x 1000 = 5507873.575 N

Cs = 794.400 x (371.597 - 0.836 x 30) = 275273.400 N

Ts = 1588.800 x 313.611 = 498264.382 N

Pn = 5507873.575 + 275273.400 - 498264.382 = 5284882.592 N

Mn' = 5507873.575 x (400.0 - 219.612 / 2) + 275273.400 x (400.0 - 100.0)

= 1680933377.477 N.mm

- 편심오차 : |e' - Mn'/Pn| = 0.001 < 0.001 (e' = e + Xp - dc = 318.063481 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 5284882.592

ΦPn = 3699417.815 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 5284882.592 = 3699.418 kN ≥ Pu = 513.940 kN ------ O.K!!!

ΦMn = ΦPn x 171.596 = 634.805 kN.m ≥ Mu = 88.190 kN.m ------ O.K!!!

○ 전단력 검토

ϕVc = 0.85 × 1/6 × (1 + Pu / (14 x Ag)) x √fck × bo × d = 249872.948 N

여기서 , 1/2ϕVc< Vu ≤ ϕVc 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 33.95 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

$= 57.434$ Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

$= 83.857$ mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 57.434) - 2.5 × 92 = 1141.13 mm

300 x (210 / fs) = 300 × (210 / 57.434) = 1096.90 mm

Sa는 작은 값인 1096.90 mm 를 적용

S = 125.00 ≤ Sa (= 1096.904 mm) ----- ∴ O.K.

⑩ 벽체 하단부 - Mmax 일 경우

설계축력	:	Pu	=	494.60	(kN) ,	설계모멘트	:	Mu	=	100.99	(kN · m)
설계전단력	:	Vu	=	158.50	(kN) ,	사용 모멘트	:	M	=	63.12	(kN.m)
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck} =	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v =	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc =	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e =	204.19 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 224.848 mm , a = k1 x c = 187.973 mm 사용

fs = 600 x (400.000 - 224.848) / 224.848 = 400 Mpa (fs ≤ fy)

fs' = 600 x (224.848 - 100.000) / 224.848 = 333.1534 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 187.973 x 1000 = 4714366.276 N

Cs = 794.400 x (333.153 - 0.836 x 30) = 244733.477 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 4714366.276 + 244733.477 - 635520.000 = 4323579.753 N

Mn' = 4714366.276 x (400.0 - 187.973 / 2) + 244733.477 x (400.0 - 100.0)

= 1516079444.633 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 350.652775 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4323579.753

ΦPn = 3026505.827 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4323579.753 = 3026.506 kN ≥ Pu = 494.600 kN ——— O.K!!!

ΦMn = ΦPn x 204.185 = 617.968 kN.m ≥ Mu = 100.990 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 249229.804 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 63.12 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 106.782 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 106.782) - 2.5 × 92 = 507.482 mm

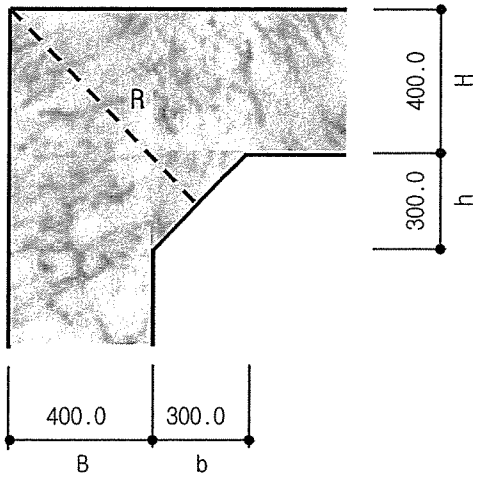
300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 mm

Sa는 작은 값인 507.482 mm 를 적용

S = 125.00 ≤ Sa (= 507.482 mm) ----- ∴ O.K.

12. 우각부 검토

1) 상부 슬래브



CON'C 설계기준강도(fck)	:	30.0	MPa
CON'C 허용휨인장응력(fta) = 0.13√ fck Mpa			
	:	0.712	MPa
철근 항복강도(fy)	:	400.0	MPa
철근 허용응력	:	180.0	MPa
사용 모멘트 Mo	:	80.98	kN · m

$R = \sqrt{2} \times b / (b+h) \times [B + h + (H \times h/b)]$

$= 777.82$ mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 80980000}{777.82^2 \times 1000.0} = 0.669 \text{ MPa}$$

$f_{tmax} =$ 0.669 MPa < $f_{ta} =$ 0.712 MPa 이므로 보강철근 필요없음.

② 소요 철근량

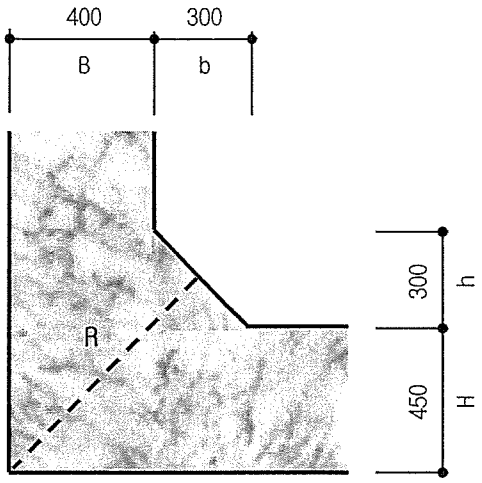
외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 0}{777.82 \times 180.0} = 0.00 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 0.00 - 794.4 = -794.40 ㎟

------ 우각부 보강철근 필요없음

2) 하부 슬래브



CON'C 설계기준강도(fck)	:	30.0	MPa
CON'C 허용휨인장응력(fta) = 0.13√fck Mpa			
	:	0.712	MPa
철근 항복강도(fy)	:	400.0	MPa
철근 허용응력	:	180.0	MPa
사용 모멘트 Mo	:	63.12	kN · m

R = √ (B2 + H2) = 602.08 mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 63120000}{602.08^{\,2} \times 1000.0} = 0.871 \text{ MPa}$$

f_{tmax} = 0.871 MPa > f_{ta} = 0.712 MPa 이므로 보강철근 필요.

② 소요 철근량

외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 63120000}{602.08 \times 180.0} = 1164.85 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 1164.85 - 794.4 = 370.45 ㎟

----- 우각부 보강철근 필요

외측인장에 대한 보강 사용철근량(As)

As = H16 @ 250 - 1 단 = 794.40 ㎟

Asf = 370.45 ㎟ < As = 794.40 ㎟ ----- ∴ O.K.

13. 배력철근 검토

1) 구조상세 - 철도설계기준(노반편) p.5-19

다. 종방향으로 영향을 받는 경우로써 상부슬래브, 하부슬래브와 벽체에 있어서 종방향 최소철근량은 복토의 깊이가 3.0 m 이하인 경우에는 콘크리트 단면적의 0.4%, 복토가 3.0m 이상인 경우에는 복토 깊이가 30m인 경우의 사용량인 1.0%를 기준으로 선형변화량을 사용하되, 종방향 철근량은 주철근량 미만이어야 한다.

라. 단단한 지반 위에 놓인 경우와 말뚝기초로 지지되는 경우로써 종방향 부등침하가 우려되지 않은 경우에는 다.항의 기준을 적용하지 않는다. 따라서 어느 정도 견고한 지반위에 놓이는 일반적인 구교로써 적적한 신축이음매가 설치되어 상세한 종방향해석이 필요하지 않다고 판단되는 경우 종방향 철근량은 슬래브의 경우 콘크리트단면적의 0.25%, 벽체의 경우 0.3%를 적용한다.

마. 배력철근은 단위폭주변의 인장 주철근량의 1/5 이상으로 하여 종단방향에 계산외의 응력이 발생하는 것을 고려하여야 한다.

2) 배력철근의 최소 철근비

슬래브의 배력 철근비 = 0.25 %　　벽체의 배력 철근비 = 0.30 %

① 상부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 400.0 × 0.25	=	1000.00	㎟
사용철근 인장측 ; H 13 @ 150	=	844.67	㎟
압축측 ; H 13 @ 300	=	422.33	㎟
	∑ As =	1267.00	㎟

따라서, As = 1267.00 ㎟ > Asreq = 1000.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

② 하부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 450.0 × 0.25	=	1125.00	㎟
사용철근 인장측 ; H 13 @ 150	=	844.67	㎟
압축측 ; H 13 @ 300	=	422.33	㎟
	∑ As =	1267.00	㎟

따라서, As = 1267.00 ㎟ > Asreq = 1125.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

③ 벽체

배력철근 최소 철근비 (Asreq) = 1,000.0 × 400.0 × 0.30 = 1200.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1200.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

14. 사용성검토

1) 상부슬래브 최소 두께

1.2(L+3)/30 = 1.2 × (2.480 + 3) / 30 = 219.2 mm

상부슬래브 두께 = 400.0 mm

Tuse = 400.0 mm > Tmin = 219.2 mm ------ ∴ O.K.

2) 철근 피로검토

피로응력한계 : 사용하중하에서 활하중과 충격에 의해 야기되는 직선철근의 최대 인장응력과 최소 응력 상이의 범위는 다음 값을 초과할수 없다.

$f_f = 165 - 0.33fmin$

여기서, f_f : 응력범위(Mpa)

fmin : 최소응력 수준으로 인장은 정(+), 압축은 부(-)의 값(Mpa)

① 상부슬래브 단부

2.48 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 3.053 kN ·m Mmin = -0.562 kN ·m

- 사용철근량 = H16 × 8ea = 1588.800 ㎟

n = 7

p = As / bd = 1588.80 / (1000 × 400) = 0.00397

$K = -np + \sqrt{\{(np)^2 + 2np\}}$

$= -7 \times 0.00397 + \sqrt{\{ (7 \times 0.00397)^2 + 2 \times 7 \times 0.00397 \}}$

= 0.210

J = 1 - K / 3 = 1 - 0.210 / 3 = 0.930

$$fs\ max = \frac{M}{As \times j \times d} = \frac{3.053 \times 10^6}{1588.80 \times 0.930 \times 400} = 5.160 \text{ Mpa}$$

$$fs\ min = \frac{-0.562 \times 10^6}{1588.80 \times 0.930 \times 400} = -1 \text{ Mpa}$$

Δf = fs max - fs min = 6.111 Mpa

$f_f = 165 - 0.33fmin$

= 165 - 0.33 × -0.95 = 165.314 Mpa > 6.111 Mpa O.K.

② 상부슬래브 중앙부

2.48 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 9.123 kN · m Mmin = 8.451 kN · m

- 사용철근량 = H16 × 8ea = 1588.800 ㎟

n = 7

p = As / bd = 1588.80 / (1000 × 300) = 0.00530

$K = -np + \sqrt{\{(np)^2 + 2np\}}$

$= -7 \times 0.0053 + \sqrt{\{ (7 \times 0.0053)^2 + 2 \times 7 \times 0.0053 \}}$

= 0.238

J = 1 - K / 3 = 1 - 0.238 / 3 = 0.921

$$fs\ max = \frac{M}{As \times j \times d} = \frac{9.123 \times 10^6}{1588.80 \times 0.921 \times 300} = 20.790\ Mpa$$

$$fs\ min = \frac{8.451 \times 10^6}{1588.80 \times 0.921 \times 300} = 19\ Mpa$$

Δf = fs max - fs min = 1.534 Mpa

$f_f = 165 - 0.33fmin$

= 165 - 0.33 × 19.26 = 158.645 Mpa > 1.534 Mpa O.K.

15. 기초지지력 검토

1) 구체자중

-	2.800	x	0.450	x	24.500				=	30.870	kN/m
-	2.800	x	0.400	x	24.500				=	27.440	kN/m
-	2.000	x	0.400	x	24.500				=	19.600	kN/m
-	2.000	x	0.400	x	24.500				=	19.600	kN/m
-	0.300	x	0.300	x	1/2	x	4	x 24.500	=	4.410	kN/m
							∴ Total		=	101.920	kN/m

101.920 / 2.800 = 36.400 kN/m²

2) 상부연직하중

= 208.24 kN/m²

3) 활하중

= 21.019 kN/m²

4) 최대 지반 반력

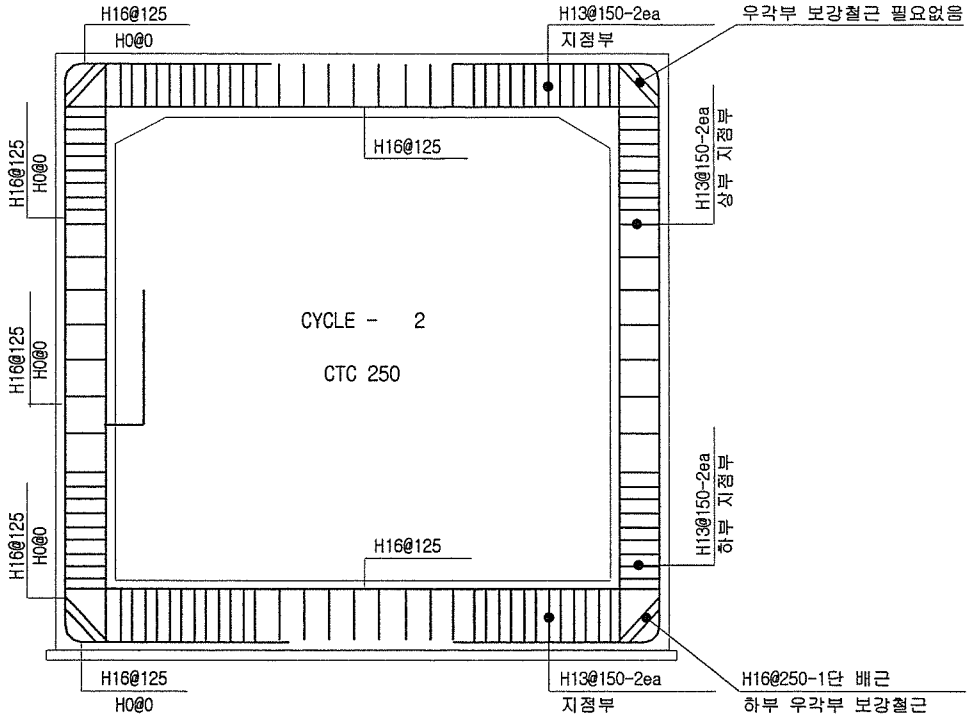
Qmax = 36.400 + 208.240 + 21.019

= 265.659 kN/m²

5) 지지력 검토

Qmax = 265.659 kN/m² < 300.00 kN/m² --- ∴ O.K.

16. 주철근 조립도



▶ 배력철근

- 상부 지점부 : H13, 인장측:150, 압축측:300
- 하부 지점부 : H13, 인장측:150, 압축측:300
- 벽체부 : H13, 인장측:150, 압축측:300

U-Type 개거 2.0x2.4

구조계산서

목 차

1. 설계개요 및 조건

1.1 설계개요

1.2 설계방법

1.3 일반사항

1.4 설계하중

1.5 참고문헌

2. 단면가정

3. 구조해석 모델링

3.1 해석모형

3.2 단면제원

3.3 지반반력계수 산정

4. 하중산정

5. 하중조합

6. 구조해석 결과

6.1 부재력도

6.2 부재력 집계

7. 단면설계

7.1 하부슬래브

7.2 좌측벽체

7.3 우측벽체

7.4 배력철근

7.5 우각부

8. 사용성검토

9. 지지력 검토

■ 해석결과 요약

* 기초 검토

구분	q_{max}(kN/m^2)	Qu(kN)	qa(kN/m^2)	비 고
직접기초	34.840	2240.680	287.267	∴ O.K

* 휨 검토

구분		B(m)	H(m)	dc(m)	헌치(m)	Mu(kn.m)	ΦMn(kn.m)	BENDING Bar(mm)	휨검토		최소철근비 검토	주철근간격 검토
									판정	S.F		
하부슬래브	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		59.672	90.378	H 16 @ 150	O.K	1.515	O.K	O.K
좌측 벽체	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		26.358	46.427	H 16 @ 300	O.K	1.761	O.K	O.K
우측 벽체	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		26.383	46.427	H 16 @ 300	O.K	1.760	O.K	O.K

* 전단검토

구분		ΦVc	Vu	판정	전단철근				전단검토	
					사용철근		다리수	간격	판정	S.F
하부슬래브	단부	155.188	30.052	전단철근 불필요	H 0	× 0	@	0	O.K	-
	중앙부	-	-	-	H -	× -	@	-	-	-
좌측 벽체	단부	155.188	84.550	전단철근 불필요	H 0	× 0	@	0	O.K	-
	중앙부	-	-	-	H -	× -	@	-	-	-
우측 벽체	단부	155.188	84.550	전단철근 불필요	H 0	× 0	@	0	O.K	-
	중앙부	-	-	-	H -	× -	@	-	-	-

1. 설계개요 및 조건

1.1 설계개요

• 구조해석 프로그램 : MIDAS CIVIL

1.2 설계방법

(1) 부재의 단면검토 : 강도설계법

(2) 사용성 검토 : 허용응력설계법

1.3 일반사항

(1) 사용재료의 강도

① 콘크리트의 압축강도 : f_{ck} = 30 MPa

② 철근의 항복강도 : f_y = 400 MPa

(2) 사용재료의 탄성계수

① 콘크리트의 탄성계수 : E_c = 27,537 MPa

② 철근의 탄성계수 : E_s = 200,000 MPa

(3) 토사 내부마찰각 : Φ = 35°

(4) 토압 : K_o = 0.426

(5) 사 각(Skew) : 71.00 °

1.4 설계하중

(1) 고정하중

재 료	단위중량(kN/m^3)	재 료	단위중량(kN/m^3)
철근콘크리트	24.5	아스팔트 포장	23.0
흙(지하수위 이상)	20.0	흙(지하수위 이하)	11.0
지하수	10.0		

(2) 상재 하중(kN/m^2)

q_L = 15.0 kN/m^2

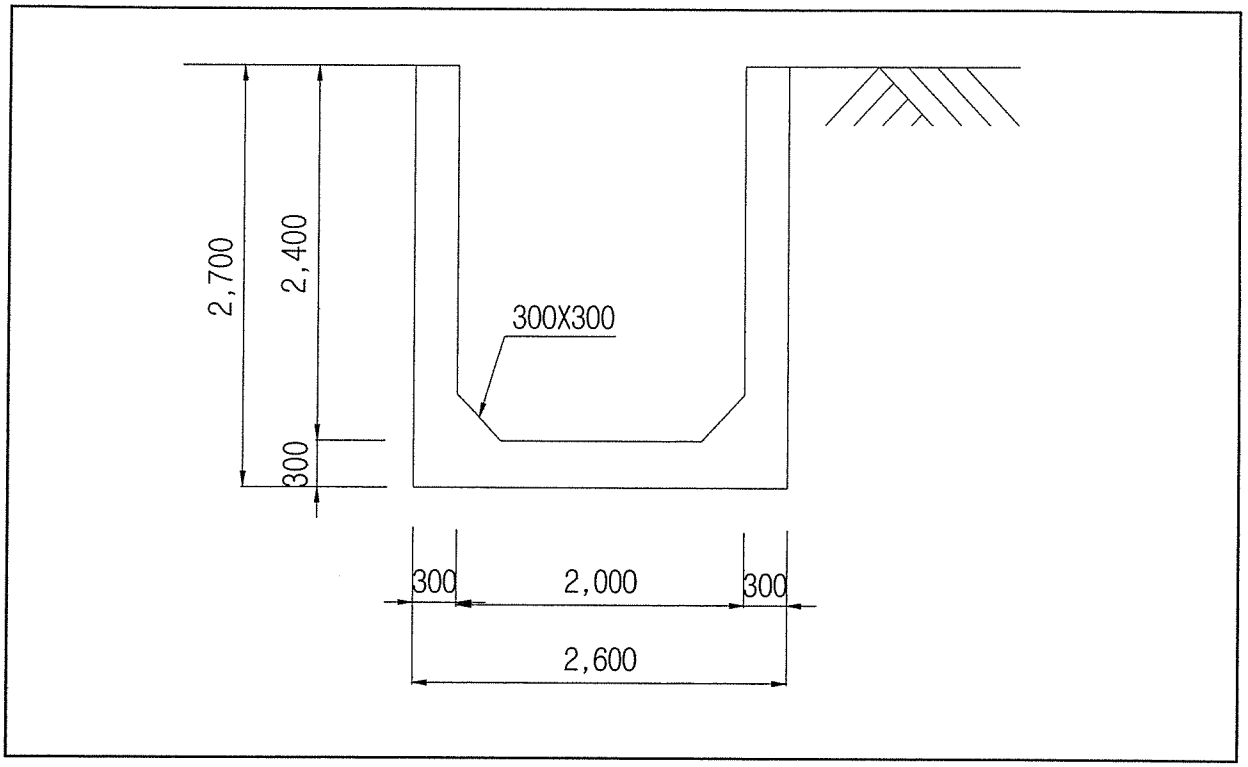
1.5 참고문헌

(1) 콘크리트 구조설계기준 (한국콘크리트 학회, 2012)

(2) 도로교 설계기준 (건설교통부, 2010)

(3) 철도설계기준 (노반편) (건설교통부 2013)

2. 단면가정

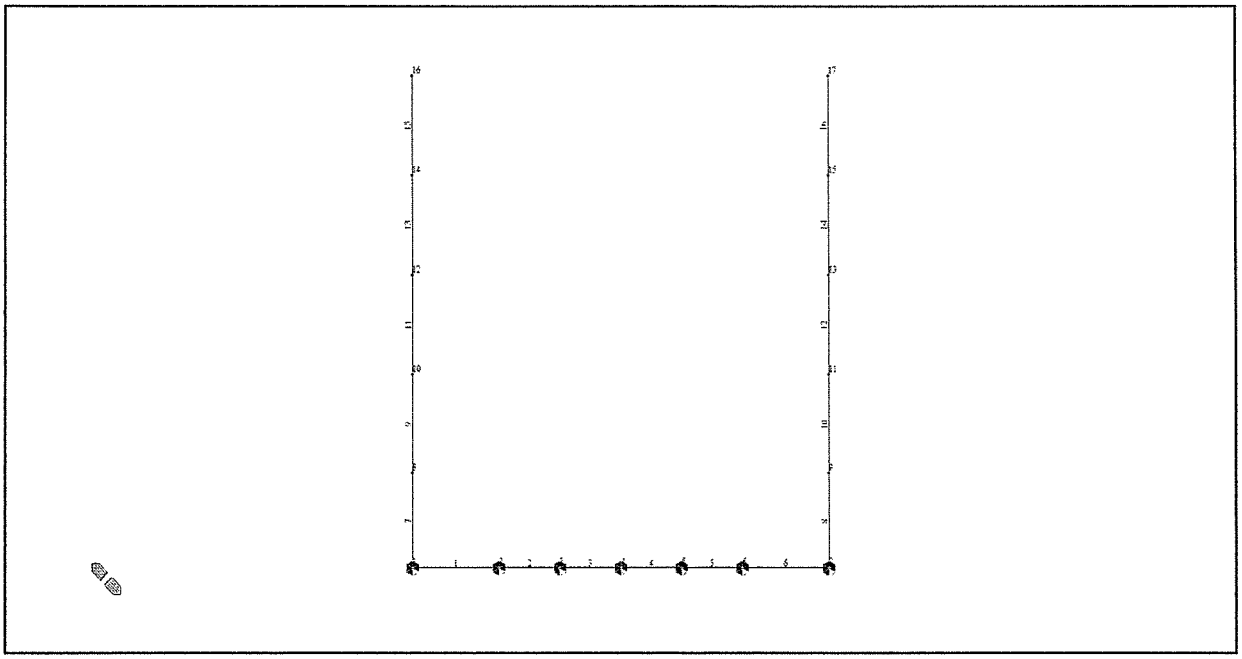


* N=15, Φ=35° 적용 함.

* 지하수위는 극한 지하수위(GL -1.0m) 로 적용 함.

3. 구조해석 모델링

3.1 해석모형



3.2 단면제원

구 분	폭(m)	높이(m)	C.T.C(m)	단면적(m^2)	단면2차모멘트(m^4)	비 고
1	1.00	0.30	-	0.300	0.002250	하부슬래브
2	1.00	0.30	-	0.300	0.002250	좌측벽체
3	1.00	0.30	-	0.300	0.002250	우측벽체

3.3 지반반력계수

$Kv = Kvo \times (Bv / 30)^n \ (n = -3/4)$

$Kvo = 1/30 \times \alpha \times Eo$

Bv : 구조물의 환산재하폭

Eo = 2800 x N = 2800 × 9 = 25,200.000 kN/m^2

α = 1

Kvo = 1 × 1 / 0.3 × 25200 = 84000.000 kN/m^3

Bv = √ (2.600 × 1.000) = 1.612 m

∴ Kv = 84000.000 × (1.6 / 0.3) ^ (-3/4) = 23796.069 kN/m^3

절점번호	지반반력계수					비고
1,7	23796.069	×	0.3750	=	8923.526 kN/m^2	
2,6	23796.069	×	0.3750	=	8923.526 kN/m^2	
3,4,5	23796.069	×	0.4000	=	9518.428 kN/m^2	

※ 지반스프링은 압축력에만 저항하는 비선형 경계조건을 사용하여 부반력 발생시 자동제거함.

4. 하중산정

4.1 고정하중

(1) 구조물 자중 : 프로그램내 자동입력 ---------- LC 1

4.2 활하중에 의한 측압 ---------- LC 2

$$Lh = 0.426 \times 15.000 = 6.390 \ kN/m^2$$

4.3 토압

(1) 지하수위 유 ---------- LC 3

$$Q_{N1L} = 1.000 \times 20.000 \times 0.426 = 8.520 \ kN/m^2$$

$$Q_{N1R} = 8.520 + 1.700 \times 11.000 \times 0.426 = 16.486 \ kN/m^2$$

(2) 지하수위 무 ---------- LC 4

$$Q_{N1L} = 2.700 \times 20.000 \times 0.426 = 23.004 \ kN/m^2$$

4.4 수압

(1) 측벽 수압 ---------- LC 5

1) 벽체

$$Q_{W1L} = 10.000 \times 1.700 = 17.000 \ kN/m^2$$

4.5 온도하중 ---------- LC 6, LC 7

- 계절적 온도변화 ± 10°C를 프로그램내 SYSTEM TEMPERRATURE 기능을 이용하여 이상화 한다.

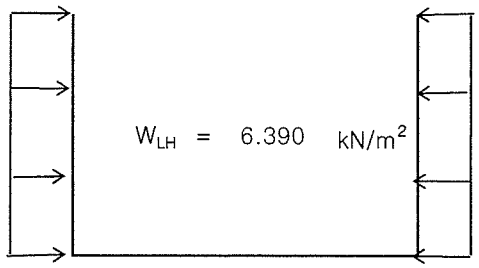
4.6 건조수축 ---------- LC 8

- 15^0c 의 온도하중으로 변환 설계
  - 건조수축계수 : $\varepsilon = 15 \times 10^{-5}$
  - 온도선팽창 계수 : $\alpha = 1.0 \times 10^{-5}$
  - $\triangle T = -\frac{\varepsilon}{\alpha} = 15 \ ^\circ C$

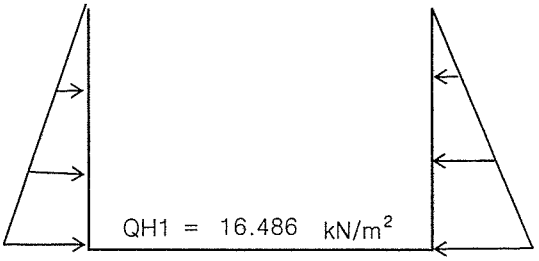
4.7 하중재하도

(1) LC 1 : 프로그램내 자동재하

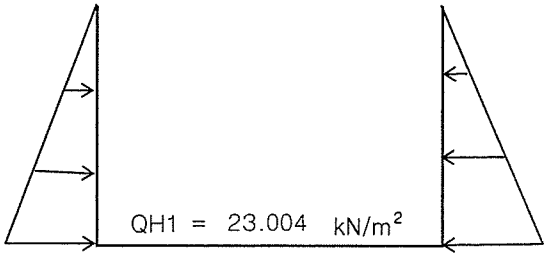
(2) LC 2



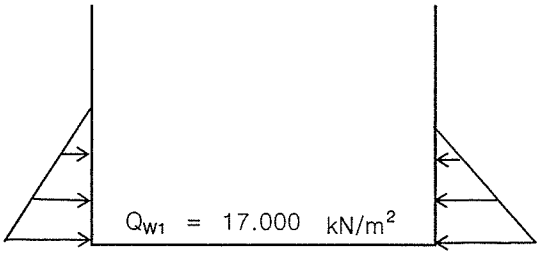
(3) LC 3



(4) LC 4



(5) LC 5



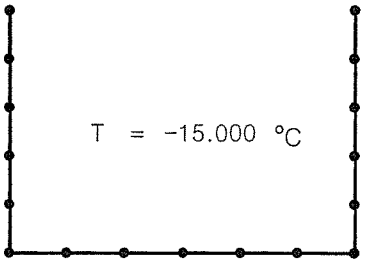
(6) LC 6

- 프래그램내 System Temperature 기능을 이용
10 °C 온도하중 재하

(7) LC 7

- 프래그램내 System Temperature 기능을 이용
-10 °C 온도하중 재하

(8) LC 8



5. 하중조합

5.1 계수하중

구분	고정하중 (D	활하중측압	수평토압		수압	온도하중		건조수축	비고
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	
CB1	1.35	1.85	1.60		1.60				계수하중
CB2	1.35	1.85		1.60					
CB3	1.35	1.85	0.80		0.80				
CB4	1.35	1.85		0.80					
CB5	1.60	1.60	1.60		1.60				
CB6	1.60	1.60		1.60					
CB7	1.60	1.60	0.80		0.80				
CB8	1.60	1.60		0.80					
CB9	1.35	1.40	1.60		1.60	1.35			
CB10	1.35	1.40		1.60		1.35			
CB11	1.35	1.40	0.80		0.80	1.35			
CB12	1.35	1.40		0.80		1.35			
CB13	1.35	1.40	1.60		1.60		1.35	1.35	
CB14	1.35	1.40		1.60			1.35	1.35	
CB15	1.35	1.40	0.80		0.80		1.35	1.35	
CB16	1.35	1.40		0.80			1.35	1.35	

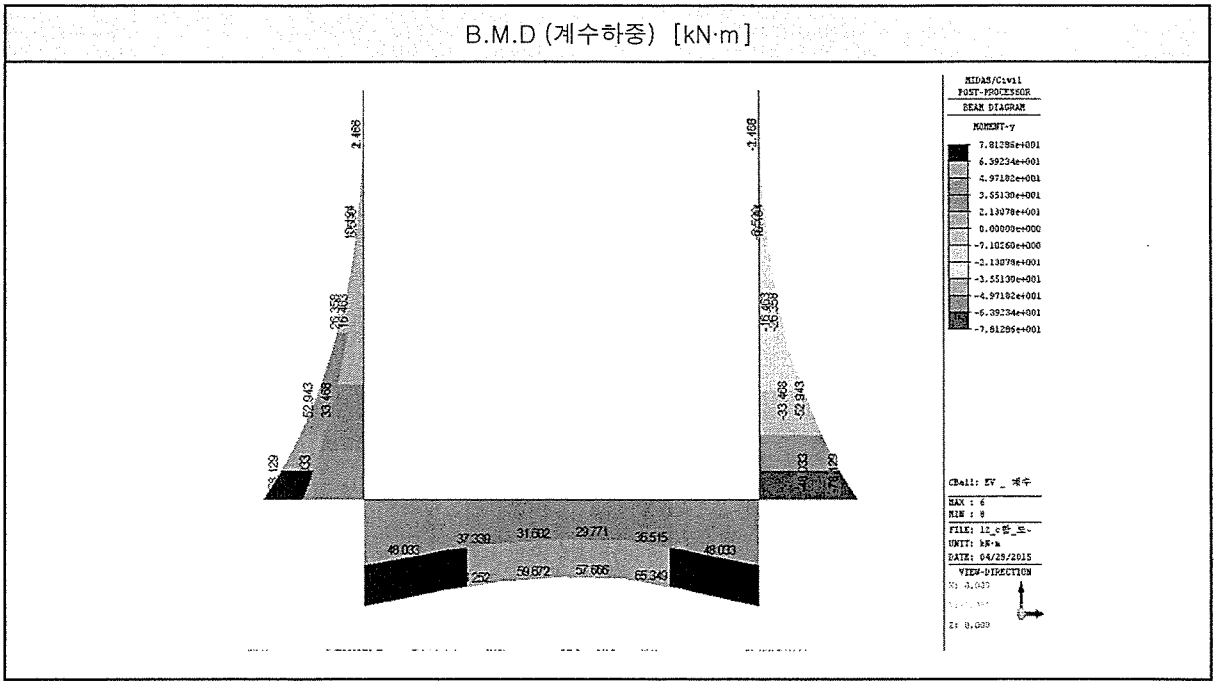
5.2 사용하중

구분	고정하중 (D	활하중측압	수평토압		수압	온도하중		건조수축	비고
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	
CB17	1.00	1.00	1.00		1.00				사용하중
CB18	1.00	1.00		1.00					
CB19	1.00	1.00	0.50		0.50				
CB20	1.00	1.00		0.50					
CB21	1.00	1.00	1.00		1.00	1.00			
CB22	1.00	1.00		1.00		1.00			
CB23	1.00	1.00	0.50		0.50	1.00			
CB24	1.00	1.00		0.50		1.00			
CB25	1.00	1.00	1.00		1.00		1.00	1.00	
CB26	1.00	1.00		1.00			1.00	1.00	
CB27	1.00	1.00	0.50		0.50		1.00	1.00	
CB28	1.00	1.00		0.50			1.00	1.00	
CB29	1.00		1.00		1.00				
CB30	1.00			1.00					

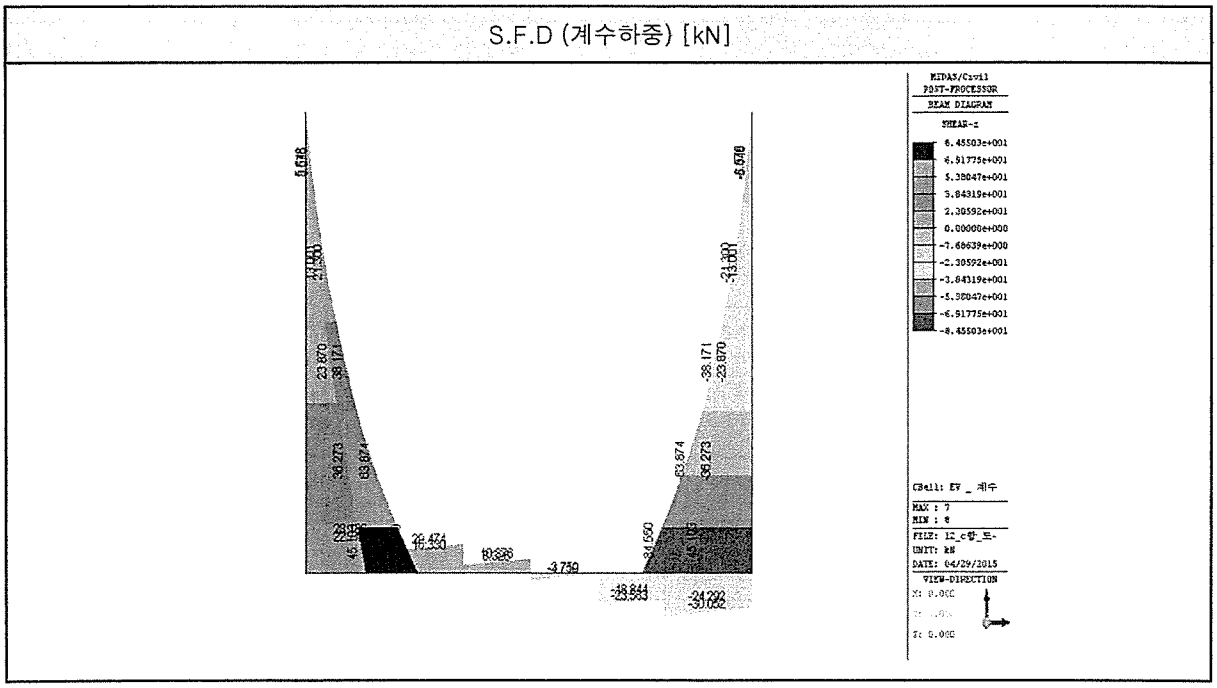
6. 구조해석 결과

6.1 부재력도 (ENVELOPE)

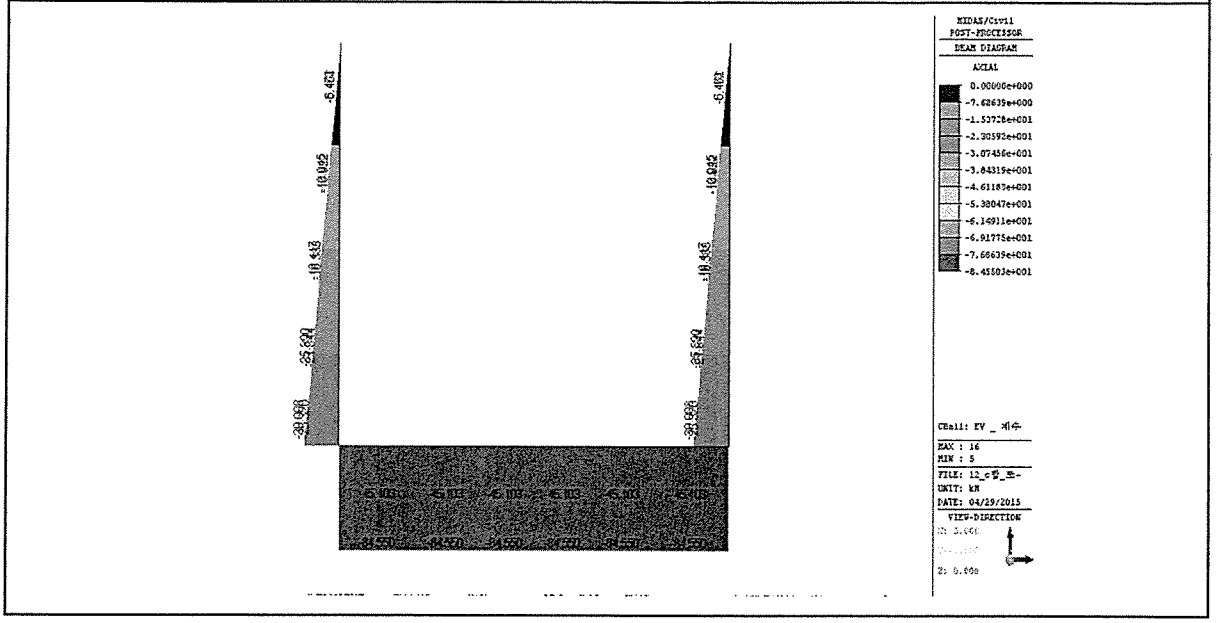
B.M.D (계수하중) [kN·m]



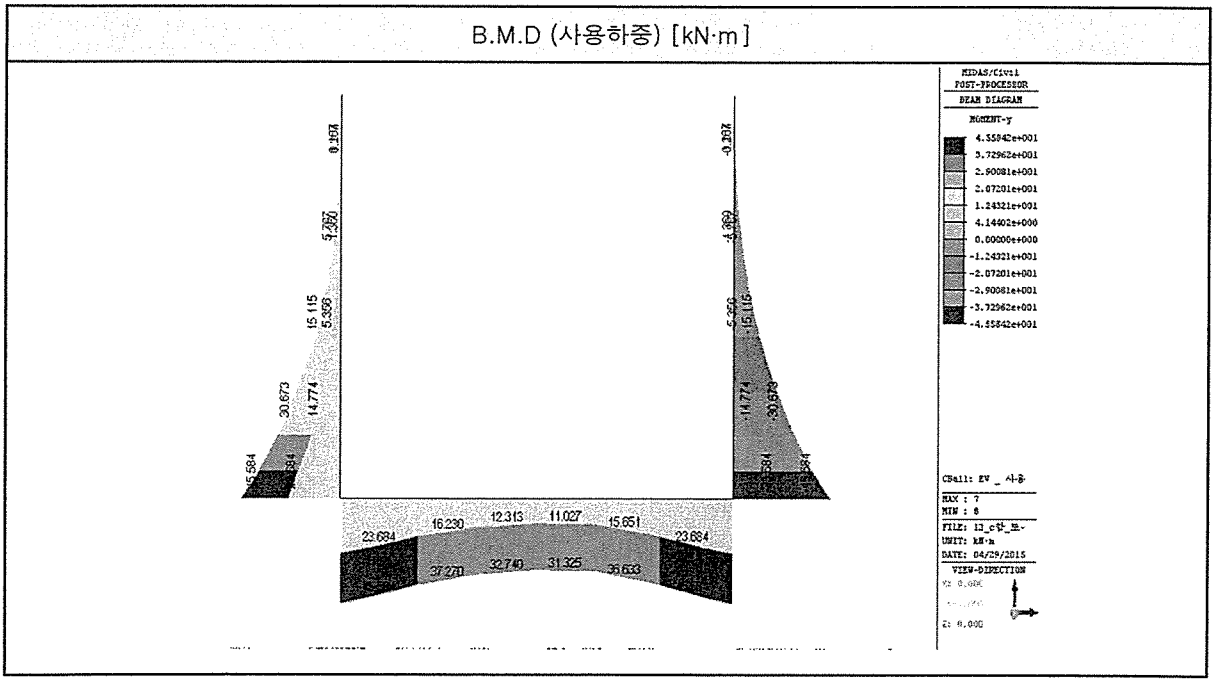
S.F.D (계수하중) [kN]



A.F.D (계수하중) [kN]



B.M.D (사용하중) [kN·m]



6.2 부재력 집계

구 분		단면제원		Mu[kN·m]	Vu[kN]	Mo[kN·m]	비고
		B (mm)	H (mm)				
하 부 슬래브	단 부	1,000	400	78.129	30.052	45.584	
	중앙부	1,000	300	59.672		32.740	
좌측벽체	단 부	1,000	400	78.129	84.550	45.584	
	중앙부	1,000	300	26.358		15.115	
우측벽체	단 부	1,000	400	78.129	84.550	45.584	
	중앙부	1,000	300	26.383		15.115	

7. 단면설계

7.1 하부슬래브

7.1.1 하부슬래브 단부

(1) 휨 검토

f_{ck} =	30 MPa	f_y =	400 MPa	d_t' =	100 mm	d' =	100 mm
Mu =	78.129 kN.m	Vu =	30.052 kN	Mo =	45.584 kN.m	d (휨) =	300 mm
B =	1000 mm	H =	400 mm	헌치 =	300 mm	d (전단) =	200 mm
ϕ_f =	0.900	ϕ_v =	0.85	주철근	1 단 배치	d_t =	300 mm

Use A_s =	1단	1CYCL H	16 @	150	,	2CYCLI H	0 @	0	=	1,324	mm^2
	2단	1CYCL H	@		,	2CYCLI H	0 @	0	=	-	mm^2
			TOTAL =	1,324	mm^2	[p =	0.00441	]			

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $\quad C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 − 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 1,050 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 1,027 mm^2

$A_{s,\,min}$ = 1,050 mm^2

$A_{s,\,Req}$ = 738 mm^2 , 4/3 $A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 − 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 30.052 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

A = 2 × 100 × 1,000 / 7 = 30,000 mm^2

$k = - np + \sqrt{[2 np + (np)^2]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

$= - 7 \times 0.00441 + \sqrt{[2 \times 0.031 + 0.031^2]}$ = 0.22

j = 1 − k / 3 = 1 − 0.22 / 3 = 0.927

fs = M / [As·d·j] = 123.801 MPa

◈ 주철근 간격

Cc = $d_t' - d_b/2$ = 100 − 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.1.2 하부슬래브 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	59.672 kN.m	Vu	=	0.000 kN	Mo	=	32.740 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s = 1단 1CYCL H 16 @ 150 , 2CYCLI H 0 @ 0 = 1,324 mm^2

2단 1CYCL H @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 1,324 mm^2 [p = 0.00662]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 25) / 25

= 0.02115 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.02115 - 0.002)$$

= 2.246 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 700 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 685 mm^2

$A_{s,\,min}$ = 700 mm^2

$A_{s,\,Req}$ = 858 mm^2 , $4/3\, A_{s,\,Req}$ = 1,143 mm^2

MIN ($A_{s.min}$, $4/3\, A_{s.req}$) = 700 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (200 - 21 / 2) / 10 E+6

= 90.378 kN.m > Mu = 59.672 kN.m ∴ O.K [S.F = 1.515]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[\, 2np + (np)^2 \,]}$ [∵ $n = Es / Ec$ = 7.3 ≒ 7]

= - 7 × 0.00662 + √ [2 × 0.046 + 0.046^2] = 0.261

$j = 1 - k / 3 = 1 - 0.261 / 3$ = 0.913

$fs = M / [As \cdot d \cdot j]$ = 135.422 MPa

◈ 주철근 간격

$\bar{C}c = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5\, Cc$ = 351 mm

$s_2 = 300 (210 / fs)$ = 465 mm > s = 150 mm ∴ O.K

7.2 좌측벽체

7.2.1 좌측벽체 단부

(1) 휨 검토

f_{ck}	=	30	MPa	f_y	=	400	MPa	d_t'	=	100	mm
Mu	=	78.129	kN.m	Vu	=	84.550	kN	Mo	=	45.584	kN.m
B	=	1000	mm	H	=	400	mm	헌치	=	300	mm
ϕ_f	=	0.900		ϕ_v	=	0.85		주철근	1	단 배치	

d'	=	100	mm										
d (휨)	=	300	mm										
d (전단)	=	200	mm										
d_t	=	300	mm										

Use A_s =	1단	1CYCL	H	16 @	150	,	2CYCLI	H	0 @	0	=	1,324	mm^2	
	2단	1CYCL	H	0 @		,	2CYCLI	H	0 @	0	=	-	mm^2	
				TOTAL	=	1,324	mm^2		[p =	0.00441	]			

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $\quad C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1.min}$ = 1,050 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2.min}$ = 1,027 mm^2

$A_{s,min}$ = 1,050 mm^2

$A_{s,Req}$ = 738 mm^2 , $4/3\ A_{s,Req}$ = 984 mm^2

MIN ($A_{s.min}$, $4/3\ A_{s.req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 84.550 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1,000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[\ 2 np + (np)^2\ ]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

$= - 7 \times 0.00441 + \sqrt{[\ 2 \times 0.031 + 0.0309^2\ ]}$ = 0.22

$j = 1 - k / 3 = 1 - 0.22 / 3$ = 0.927

$fs = M / [As \cdot d \cdot j]$ = 123.801 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.2.2 좌측벽체 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	26.358 kN.m	Vu	=	0.000 kN	Mo	=	15.115 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCL	H	16 @	300	, 2CYCLI	H	0 @	0	=	662 mm^2
	2단	1CYCL	H	@		, 2CYCLI	H	0 @	0	=	- mm^2
				TOTAL =	662 mm^2	[p =	0.00331	]			

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 264,800 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 10 mm

▶ $c = a / \beta_1$ = 10 / 0.84 = 12 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 12) / 12

= 0.04530 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.04530 - 0.002)$$

= 4.259 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1.min}$ = 700 mm^2

$P_{min2} = 0.25\sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2.min}$ = 685 mm^2

$A_{s,min}$ = 700 mm^2

$A_{s.Req}$ = 371 mm^2 , 4/3 $A_{s,Req}$ = 495 mm^2

MIN ($A_{s,min}$, 4/3 $A_{s,req}$) = 495 mm^2 < Use As = 662 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a/2)$ = 0.900 × 264,800 × (200 - 10 / 2) / 10 E+6

= 46.427 kN.m > Mu = 26.358 kN.m ∴ O.K [S.F = 1.761]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 3$ = 60,000 mm^2

$k = -np + \sqrt{[2np + (np)^2]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

$= -7 \times 0.00331 + \sqrt{[2 \times 0.023 + 0.0232^2]}$ = 0.193

$j = 1 - k / 3 = 1 - 0.193 / 3$ = 0.936

$fs = M / [As \cdot d \cdot j]$ = 121.966 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 416 mm

$s_2 = 300 (210 / fs)$ = 517 mm > s = 300 mm ∴ O.K

7.3 우측벽체

7.3.1 우측벽체 단부

(1) 휨 검토

f_{ck} =	30 MPa	f_y =	400 MPa	d_t' =	100 mm	d' =	100 mm
Mu =	78.129 kN.m	Vu =	84.550 kN	Mo =	45.584 kN.m	d (휨) =	300 mm
B =	1000 mm	H =	400 mm	헌치 =	300 mm	d (전단) =	200 mm
ϕ_f =	0.900	ϕ_v =	0.85	주철근	1 단 배치	d_t =	300 mm

Use A_s = 1단 1CYCl H 16 @ 150 , 2CYCLI H 0 @ 0 = 1,324 mm^2

2단 1CYCl H @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 1,324 mm^2 [p = 0.00441]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 1,050 mm^2]

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 1,027 mm^2] $A_{s,\,min}$ = 1,050 mm^2

$A_{s,\,Req}$ = 738 mm^2 , 4/3 $A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 84.550 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[\,2 np + (np)^2\,]}$ [∵ $n = Es / Ec$ = 7.3 ≒ 7]

$= - 7 \times 0.00441 + \sqrt{[\,2 \times 0.031 + 0.0309^2\,]}$ = 0.22

$j = 1 - k / 3 = 1 - 0.22 / 3$ = 0.927

$fs = M / [As \cdot d \cdot j]$ = 123.801 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.3.2 우측벽체 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	26.383 kN.m	Vu	=	0.000 kN	Mo	=	15.115 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCLE H	16 @	300	,	2CYCLE H	0 @	0	=	662 mm^2
	2단	1CYCLE H	@		,	2CYCLE H	0 @	0	=	- mm^2
			TOTAL	=	662 mm^2	[p =	0.00331	]		

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 264,800 N

$C = 0.85 f_{ck} a b$ = 25,500 a, $C = T$; a = 10 mm

▶ $c = a / \beta_1$ = 10 / 0.84 = 12 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 12) / 12

= 0.04530 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.04530 - 0.002)$$

= 4.259 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,min}$ = 700 mm^2]

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,min}$ = 685 mm^2] $A_{s,min}$ = 700 mm^2

$A_{s,Req}$ = 372 mm^2, $4/3\ A_{s,Req}$ = 496 mm^2

MIN ($A_{s,min}$, $4/3\ A_{s,req}$) = 496 mm^2 < Use As = 662 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 264,800 × (200 - 10 / 2) / 10 E+6

= 46.427 kN.m > Mu = 26.383 kN.m ∴ O.K [S.F = 1.760]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 3$ = 60,000 mm^2

$k = - np + \sqrt{[\ 2np + (np)^2\ ]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

$= - 7 \times 0.00331 + \sqrt{[\ 2 \times 0.023 + 0.0232^2\ ]}$ = 0.193

$j = 1 - k / 3 = 1 - 0.193 / 3$ = 0.936

$fs = M / [As \cdot d \cdot j]$ = 121.966 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 416 mm

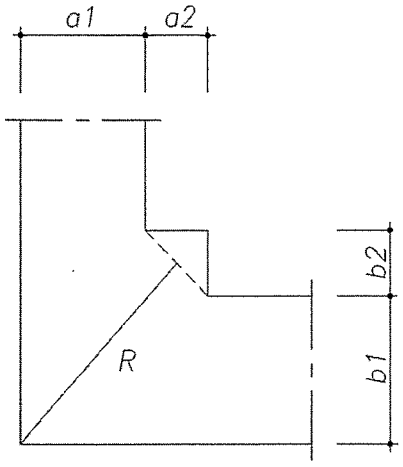
$s_2 = 300 (210 / fs)$ = 517 mm > s = 300 mm ∴ O.K

7.4 온도 및 배력철근 설계

구 분		단면제원		사 용 주철근	소요 배력철근량 (mm^2)		사용 배력철근량 (mm^2)			판정
		B (mm)	H (mm)		주철근 20%	온도철근				
하 부 슬래브	단 부	1,000	300	H16@150	265	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@150	265	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
좌측 벽체	단부	1,000	300	H16@150	265	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@300	132	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
우측 벽체	단부	1,000	300	H16@150	265	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@300	132	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		

7.5 우각부 보강 설계

(1) 하부슬래브 (좌,우측)



f_{ck}	=	30	MPa
f_y	=	400	MPa
Mo	=	45.584	kN·m
a1	=	300	mm
a2	=	300	mm
b1	=	300	mm
b2	=	300	mm

$$R = \{(a2 \times b1 + b2 \times a1 + a2 \times b2) / (a2 + b2)\} \times \sqrt{2}$$

$$= \quad 636 \quad mm$$

- 주철근 (절곡하여 보강철근으로 고려할 수 있는 주철근량)

As' = H 16 @ 300 = 662 mm^2

H 0 @ 0 = 0 mm^2

1) 최대인장응력, f_{tmax}

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 45.584 \times 10^6}{(636.396)^2 \times 1{,}000}$$

$$= 0.563 \text{ Mpa} > 0.08\sqrt{fck} = 0.438 \text{ Mpa}$$ 보강철근 필요 !

2) 보강철근량 산정, As

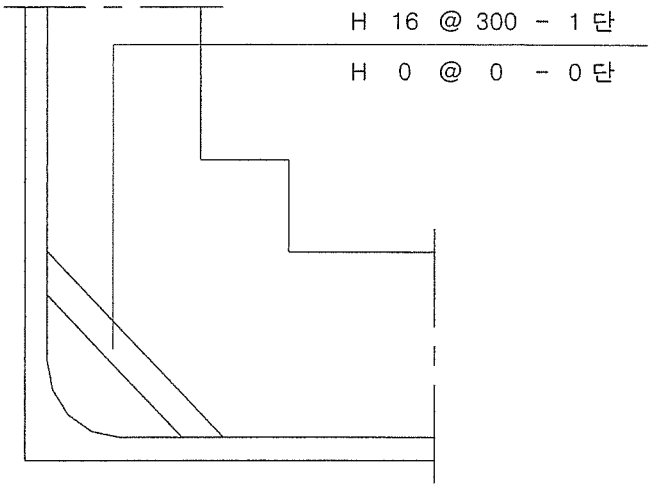
- 필요철근량

$$As = \frac{2 \times Mo}{R \times f_{sa}} - As'$$

$$= \frac{2 \times 45.584 \times 10^6}{636 \times 180} - 662$$

$$= 796 \ mm^2 - 662 \ mm^2$$

$$= 134 \ mm^2$$



- 사용철근량

As = H 16 @ 300 - 1 단

+ H 0 @ 0 - 0 단

= 662 mm^2 O.K

8. 사용성 검토

8.1 처짐 검토

1) 하부 슬래브 : 최소부재두께 적용

철근의 항복응력 fy = 400 MPa

부재의 지간길이 L = 2.300 m

슬래브 양단 연속의 경우

T = L / 28 = 0.082 m

(보정계수) FACTOR = 1.000

처짐계산을 하지않는 경우의 최소두께

T = 0.082m < H = 0.300m (처짐검토 생략)

9. 기초지반 지지력 검토

9.1 작용하중

9.1.1 구 체 자 중 (W1) :

(0.3 × 2.4 + 0.3 × 2 × 1 EA + 0.3 × 0.3 / 2
× 2 EA + 0.3 × 2.4) × 24.500 / 2.6 = 20.071 kN/m²

9.1.2 상재고정하중(W2)

(1) 상재토

되메움토 : 0.000 × 20.000 = 0.000 kN/m²

아스콘 : 0.000 × 23.000 = 0.000 kN/m²

9.1.3 활 하 중(L)

(1) 활 하 중 :

= 0.000 kN/m²

9.1.4 수로개거내의 물의자중(w3)

2.000 × 1.920 × 1.000 / 2.600 / 1.000 × 10.000 = 14.769 kN/m²

9.2 지지력 검토

9.2.1 최대지반반력 (qmax) : W1 + W2 + L + W3

20.071 + 0.000 + 0.000 + 14.769 = 34.840 kN/m²

9.2.2 허용지반반력 (qa)

- 정역학 공식에 의한 지반의 허용 연직 지지력 (Terzaghi식 사용)

Qu = A · [c · Nc + q · Nq + 0.5 · r1 · B · Nr]

Qu : 하중의 편심 및 경사가 없는 연속기초지반의 극한지지력 (kN)

· A : 재하면적 = 2.600 m²

· c : 지반의 점착력 = 0.000 kN/m²

· q : 상재하중, (q = r2 · Df) = 48.000 kN/m²

· r1 : 지지 지반의 흙의 단위중량 = 20.000 kN/m³

· r2 : 근입 지반의 흙의 단위중량 = 20.000 kN/m³

· B : 확대기초의 폭 = 2.600 m

· L : 확대기초의 길이 = 1.000 m

· Φ : 지반의 전단 저항각

Φ = √ (12 × N) + 15 = √ (12 × 15) + 15 = 28 °

· Nc = 25.100 , Nq = 12.700 , Nr = 9.700 (전단 저항각 28 ° 일때)

· Qu = 2.600 × [0.000 × 25.100 + 48.000 × 12.700 +
0.500 × 20.000 × 2.600 × 9.700] = 2240.680 kN

· Qa = 2240.680 / 3 = 746.893 kN

· qa = 746.893 / 2.600 = 287.267 kN/m²

* 평상시 최대 지반반력 (도.설.해 2008) = 400.000 kN/m²

∴ q_{max} = 34.840 kN/m² < q_a = 287.267 kN/m² ∴ O.K

C(함) 파전제4

- 2.0 x 2.00 x 1
- 토피 = 9.6m 이하

1. 설 계 조 건
2. 단 면 가 정
3. 해석모델 및 단면제원
4. 하중산정
5. 하중재하도
6. 하중계수 및 하중조합
7. INPUT DATA
8. OUTPUT
9. 단면력요약
10. 단 면 력 도
11. 단 면 검 토
12. 우각부 검토
13. 배력철근 검토
14. 사용성 검토
15. 기초지지력 검토
16. 주철근조립도
17. 날개벽 설계

1. 설계 조건

1) 구조물명 : c (함)

2) 구조형식 : 철근 콘크리트 구조

3) 설계하중 : KRL2012 (복 선)

4) 재료중량

- 철근 콘크리트(γ_c)	=	24.5	kN/m^3
- 무근 콘크리트(γ_{con})	=	23.0	kN/m^3
- 뒷채움 토사(γ_t)	=	20.0	kN/m^3
- 뒷채움 토사(γ_{sub})	=	11.0	kN/m^3
- 지하수(γ_w)	=	10.0	kN/m^3

5) 사용재료의 성질

- 콘크리트 설계기준 강도(fck)	=	30.0	MPa
- 콘크리트 탄성계수(Ec)	=	27537	MPa
- 철근의 항복강도(fy)	=	400.0	MPa
- 철근의 탄성계수(Es)	=	200000	MPa

6) 토 사

- 흙의 내부마찰각 (ϕ)	=	35.0	°
- 정지 토압계수 (Ko)	=	0.426	

7) 기 초 형 식 : 직접기초

8) 사 각(Skew) : 66.00 ° 연 장 (L) : 55.00 m

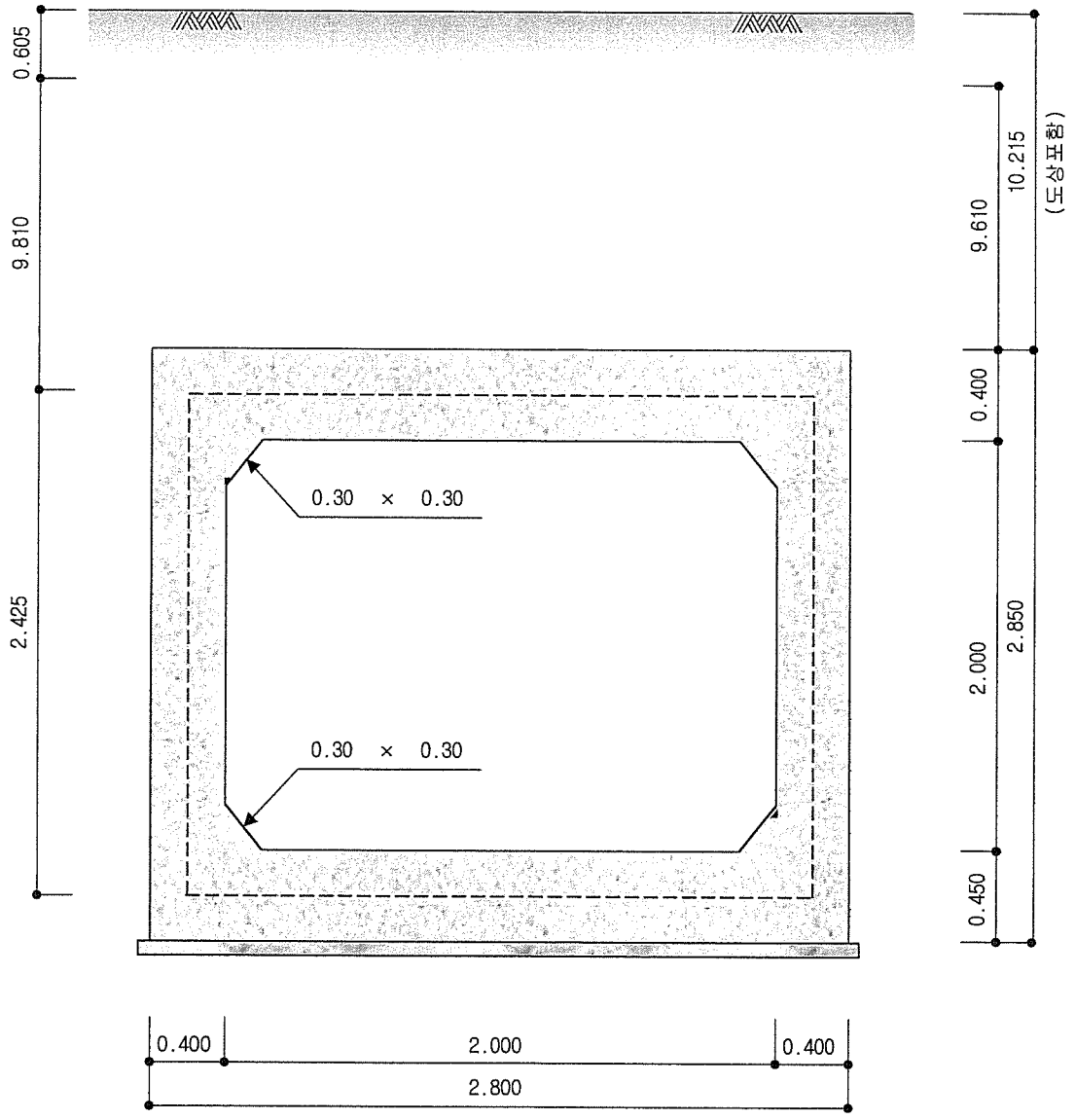
9) 설계방법

- 강도 설계법 : 부재 단면검토(슬래브, 벽체, 보, 기둥 등)
- 허용응력 설계법 : 사용성 검토(처짐, 균열, 우각부 검토)

10) 참고문헌

- 철도설계기준(노반편), 국토해양부, 2013
- 콘크리트 구조설계기준해설, 한국콘크리트 학회, 2012

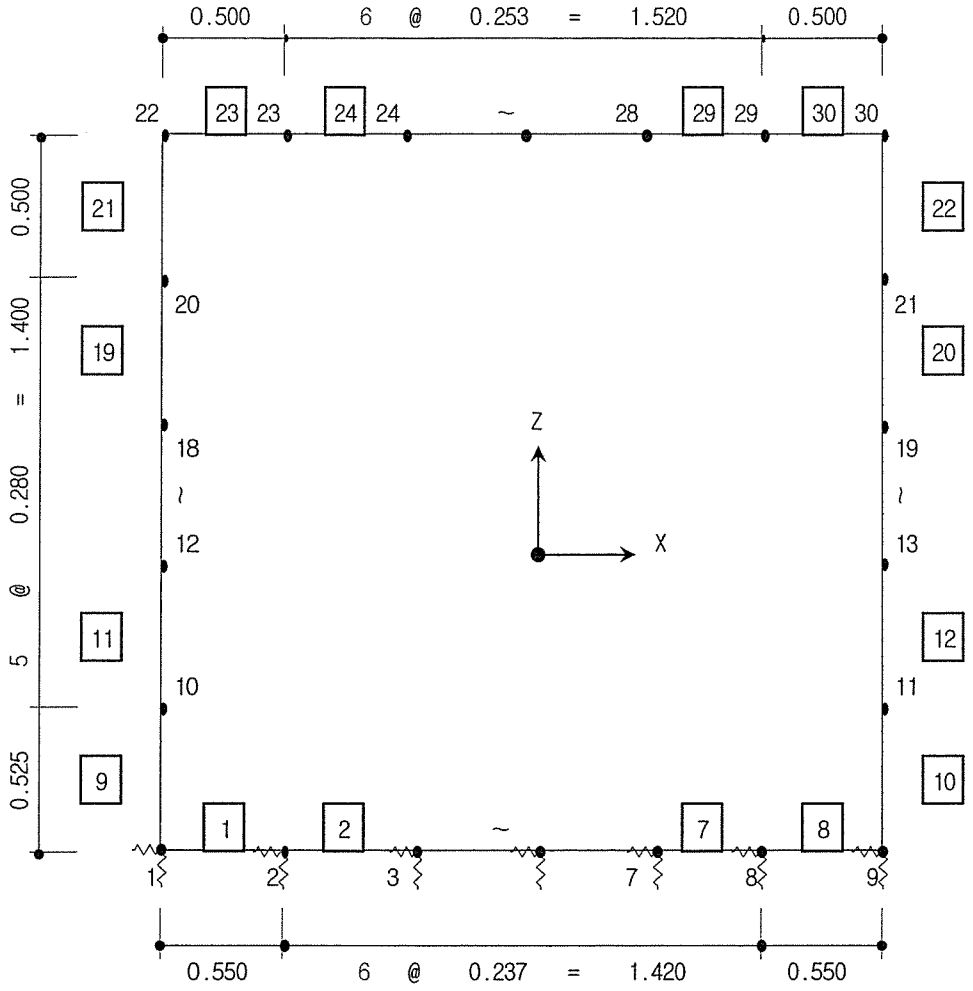
2. 단면 가정



※ 유효경간

Skew =	66.0	°					
Ln =	2.400	m					
Ls =	2.627	m					
Ls/B =	2.627	/	18.000	=	0.146	<	1.500
L =	2.520	m					

3. 해석모델 및 단면제원



1) 절점 좌표

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
1	0.000	0.000	0.000	13	2.520	0.000	0.805
2	0.550	0.000	0.000	14	0.000	0.000	1.085
3	0.787	0.000	0.000	15	2.520	0.000	1.085
4	1.023	0.000	0.000	16	0.000	0.000	1.365
5	1.260	0.000	0.000	17	2.520	0.000	1.365
6	1.497	0.000	0.000	18	0.000	0.000	1.645
7	1.733	0.000	0.000	19	2.520	0.000	1.645
8	1.970	0.000	0.000	20	0.000	0.000	1.925
9	2.520	0.000	0.000	21	2.520	0.000	1.925
10	0.000	0.000	0.525	22	0.000	0.000	2.425
11	2.520	0.000	0.525	23	0.500	0.000	2.425
12	0.000	0.000	0.805	24	0.753	0.000	2.425

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
25	1.007	0.000	2.425	28	1.767	0.000	2.425
26	1.260	0.000	2.425	29	2.020	0.000	2.425
27	1.513	0.000	2.425	30	2.520	0.000	2.425

2) 경계 조건

joint	spring계수 (kN/m²)		joint	spring계수 (kN/m²)	
	z방향(수직)	x방향(수평)		z방향(수직)	x방향(수평)
1 , 9	5391		3 ~ 7	2686	
2 , 8	4464				

3) 단면제원

Element	두께	폭	비 고
23 ~ 30	0.400	1.000	상부슬래브
1 ~ 8	0.450	1.000	하부슬래브
9 ~ 22	0.400	1.000	벽 체

4) 강역설정

(1) 강역설정기준(콘크리트구조설계기준 2012)

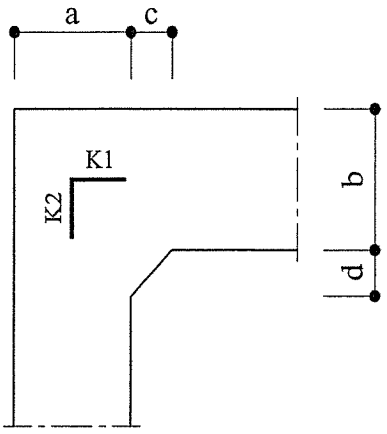
CASE 1 : 부재단부가 다른 부재와 접합할 때는 부재단에서 부재두께의 1/4 안쪽점에서 절점까지

CASE 2 : 부재가 그 축선에 대해 25° 이상 60° 미만인 경사진 헌치를 갖는 경우에는 부재두께가 1.5배가 되는 점에서 부터 절점까지

CASE 3 : 헌치의 경사가 60° 이상의 경우는 헌치의 시점에서 부재두께의 1/4 안쪽 점에서부터 절점까지

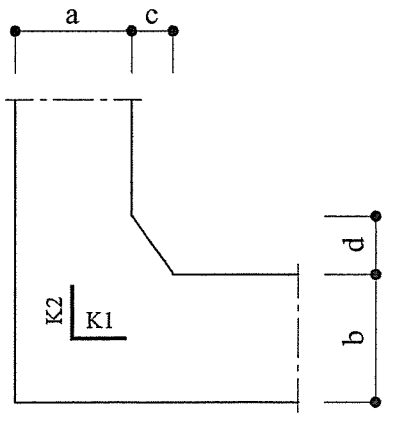
(2) 강역설정

- 절점 22 , 30



a =	400	mm	c =	300	mm
b =	400	mm	d =	300	mm
K1 =	300	mm	K2 =	300	mm

- 절점 1 , 9

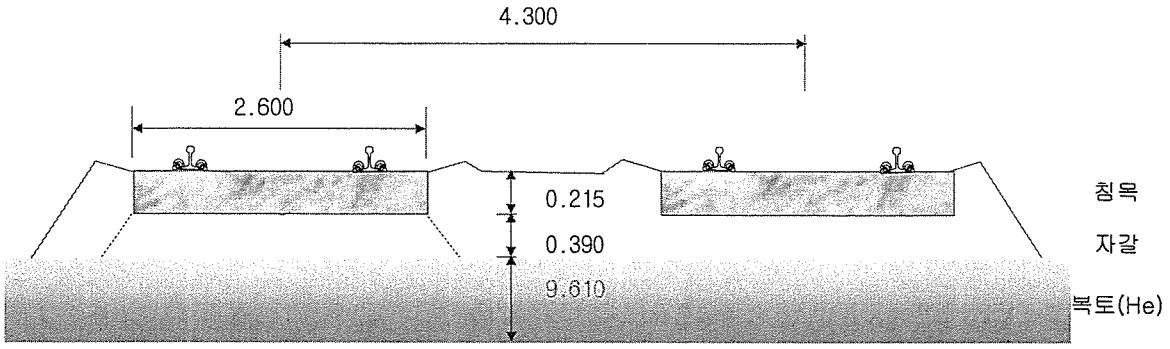


a =	400	mm	c =	300	mm
b =	450	mm	d =	300	mm
K1 =	275	mm	K2 =	325	mm

4. 하중산정

4.1 상시

1) 상부 고정하중(지하수 無)



① 하중 분포폭 산정 (b')

① He < 0.5m 경우 : b + d

b_1 = 2.600 + 0.390 = 2.990 m

② He ≥ 0.5m 경우 : c + b + (d + He)

b_2 = 4.300 + 2.600 + (0.390 + 9.610) = 14.590 m

여기서, He : 시공기면에서의 토피고(m)

a : 동륜간 축간거리(m) c : 복선선로 중심간격(m)

b : 침목길이(m) d : 침목하면의 도상두께(m)

H : 상부슬래브 두께

He ≥ 0.5 m

∴ b' = 14.590 m

② 구조물 자중 : 프로그램 상에서 Self Weight 기능을 이용하여 자동 고려

③ 궤도 중량

- 레일 : 레일당 1.5kN/m를 적용

q_1 = 4 × 1.500 / 14.590 = 0.411 kN/㎡

- 침목 : 고속철도용 5.0kN/m

q_2 = 5.000 × 2 / 14.590 = 0.685 kN/㎡

= 1.096 kN/㎡

④ 도상 (q_2)

TCL = 0.215 × 19.000 × 1.3 = 5.311 kN/㎡

HSB = 0.390 × 19.000 × 1.3 = 9.633 kN/㎡

= 14.944 kN/㎡

⑤ 복토하중 (q_3) = 20.000 × 9.610 = 192.200 kN/㎡

∴ $q_1 + q_2 + q_3$ = 1.096 + 14.944 + 192.200 = 208.240 kN/㎡

2) 활하중

① 활하중 산정 : KRL 2012

$$W_{HL} = \frac{2P}{a \times b'} = \frac{2\times(220+80x3)}{3.000 \times 14.590} = 21.019 \text{ kN/㎡}$$

∴ W = 21.019 kN/㎡

② 충격계수

1) 단선 (i_0) (철도설계기준 노반편(2013) p.5-7)

지 간 L (m)	0	5	10	20	30	40	50	70	100
충격계수 (i)	0.60	0.48	0.43	0.37	0.34	0.32	0.30	0.27	0.24

* 상기표에 없는 지간의 충격 계수는 보간법으로 구한다.

지 간 L (m) = 2.520 m

따라서 i_0 = 0.540 (보간법에 의하여 산정된 충격계수)

2) 구조물 상면의 복토높이에 따른 충격 계수

H ≥ 1.0일 경우 $i = io \cdot \{(2.5 - H)/1.5\}$

여기서, H ≤ 1.0 m 에서는 $i = i_o$

H ≥ 2.5 m 에서는 i = 0

따라서, 본 구조물의 H = 10.215 m i = 0.000

W_L = 21.019 ×(1 + 0.000) = 21.019 kN/㎡

③ 활하중에 의한 측압 (충격비고려)(철도설계기준 노반편(2013) p.5-6)

W_{LH} = 21.019 × 0.4 = 8.408 kN/㎡

3) 토 압

- 지하수가 없는 경우 작용 토압

q_1 = 0.426 ×(16.040 + 20.000 × 9.810) = 90.414 kN/㎡

q_2 = 90.414 + 0.426 ×(20.000 × 0.500) = 94.674 kN/㎡

q_3 = 94.674 + 0.426 ×(20.000 × 0.280) = 97.060 kN/㎡

q_4 = 97.060 + 0.426 ×(20.000 × 0.280) = 99.446 kN/㎡

q_5 = 99.446 + 0.426 ×(20.000 × 0.280) = 101.832 kN/㎡

q_6 = 101.832 + 0.426 ×(20.000 × 0.280) = 104.218 kN/㎡

q_7 = 104.218 + 0.426 ×(20.000 × 0.280) = 106.604 kN/㎡

q_8 = 106.604 + 0.426 ×(20.000 × 0.525) = 111.077 kN/㎡

- 시공중 편토압 산정 (지하수가 없는 경우 작용 토압)

q_1 = 0.426 × (0.000 + 20.000 × 0.200) = 1.704 kN/㎡

q_2 = 1.704 + 0.426 × (20.000 × 0.500) = 5.964 kN/㎡

q_3 = 5.964 + 0.426 × (20.000 × 0.280) = 8.350 kN/㎡

q_4 = 8.350 + 0.426 × (20.000 × 0.280) = 10.736 kN/㎡

q_5 = 10.736 + 0.426 × (20.000 × 0.280) = 13.122 kN/㎡

q_6 = 13.122 + 0.426 × (20.000 × 0.280) = 15.508 kN/㎡

q_7 = 15.508 + 0.426 × (20.000 × 0.280) = 17.894 kN/㎡

q_8 = 17.894 + 0.426 × (20.000 × 0.525) = 22.367 kN/㎡

4) 온도하중

토피가 1.0m 이상일 경우에는 온도변화를 고려치 않으며, 토피가 1.0m 이하일 경우에는 다음식을 따른다.

$t = a \times t_0$ = 0.000 × 15.0 = 0.000 ℃

t : 박스 구조물의 상부 슬래브에 작용하는 온도변화

a : 토피심도(m)에 따른 저감률 $a=1-h_0$ (h_0:토피심도)

t_0 : 지표면에서의 기본온도 변화

상부슬래브의 두께가 700mm 이상인 경우 $t_0 = \pm 10$℃

상부슬래브의 두께가 700mm 미만인 경우 $t_0 = \pm 15$℃

토피고 H > 1.0m 이므로 온도변화는 고려하지 않는다.

5) 건조수축

$$\Delta Tx = \frac{\varepsilon}{\alpha} = \frac{-0.00015}{0.00001} = -15\,^{\circ}C$$

6) 장대레일 하중

장대레일 종하중은 필요시에 고려하여야 하며, 1궤도당 10 kN/m로 하고 작용위치는 상부슬래브 축선으로 한다. (단, 토피가 1.0m 이상인 경우는 이를 무시한다.)

토피가 10.215 m 이므로 장대레일 하중을 무시한다.

H_r = 0.000 × 4 / 14.590 = 0.000 kN/㎡

7) 상시 지반반력 계수

지지 지반 N치 = 6

Eo = 2800 × N = 2800 × 6 = 16800

Kvo = 1 / 0.3 x α x Eo = 1 / 0.3 × 1 x 16800 = 56000

Bv = √ Av = √ (2.520 × 2.520) = 2.520

Kv = Kvo (Bv/0.3)^-3/4 = 11350 kN/㎡

11350 × (0.400 / 2 + 0.550 / 2) = 5391 kN/㎡ - 저판 단부 스프링

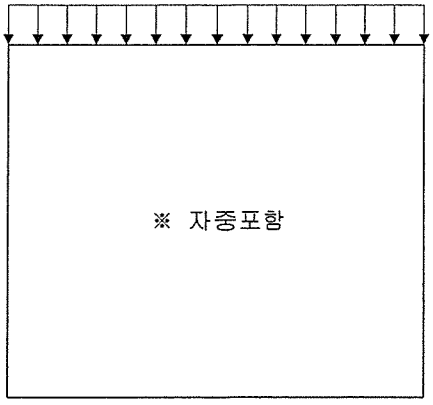
11350 × (0.550 / 2 + 0.237 / 2) = 4464 kN/㎡ - 저판 전단검토위치

11350 × (0.237 / 2 + 0.237 / 2) = 2686 kN/㎡ - 저판 중앙부 스프링

5. 하중재하도

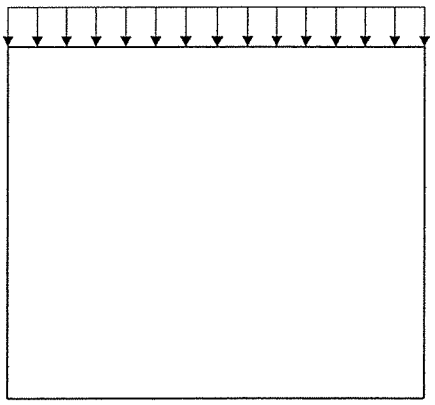
① 고정하중

W_D = 208.240 kN/㎡



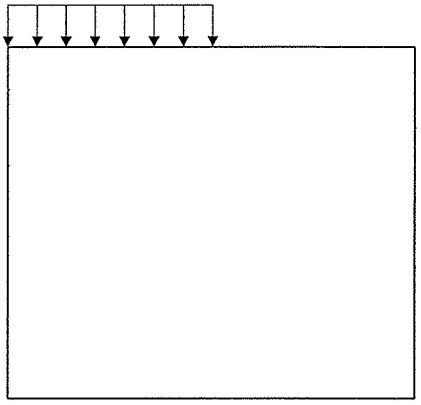
② 활하중(만재하)

W_L = 21.019 kN/㎡

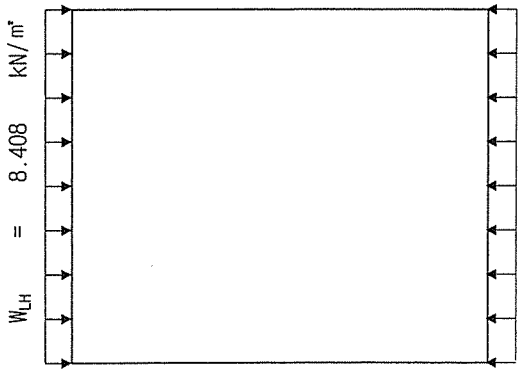


③ 활하중(편재하)

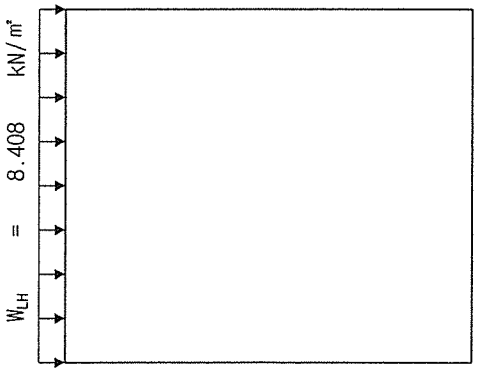
W_L = 21.019 kN/㎡



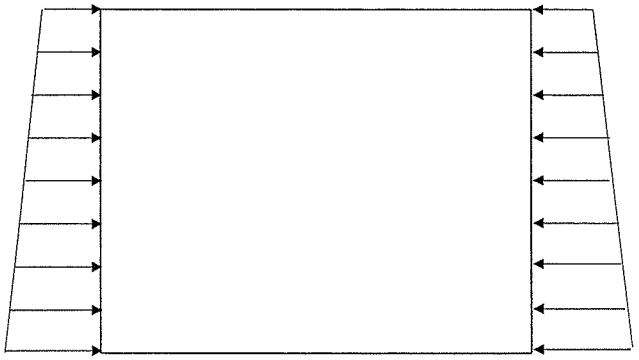
④ 활하중에 의한 측압(만재하)



⑤ 활하중에 의한 측압(편재하)



⑥ 수평토압(지하수 없는 경우)

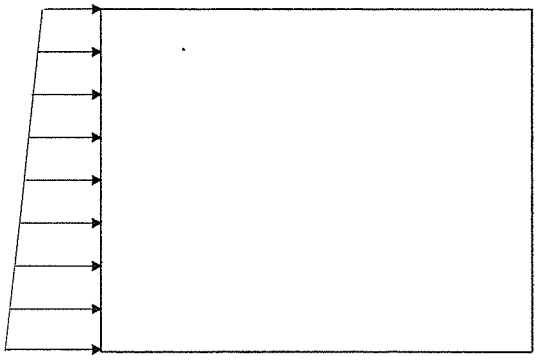


q_1 = 90.414 kN/㎡

q_7 = 111.077 kN/㎡

⑦ 편측토압(지하수 없는 경우)

q_1 = 1.704 kN/㎡



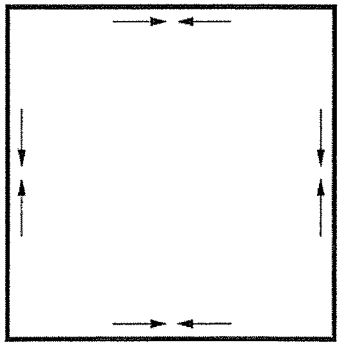
q_7 = 22.367 kN/㎡

⑧ 온도하중

△T = 0 °

⑨ 건조수축

△T = -15 °



⑩ 장대레일 종하중

Hr = 0.000 kN/m^2

6. 하중계수 및 하중조합

1) 극한하중 검토시

구분	고정하중	활하중		활하중 측압		수평토압 (지하수無)		온도하중		건조수축	장대레일	비고
				양측재하	편측재하	양측재하	편측재하					
		전경간	1/2	수평	수평	수평	수평	온도상승	온도하강			
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11	
1	1.35	1.85		1.85		1.6						
2	1.35	1.85		1.85		0.6						
3	1.35		1.85		1.85	1.6						
4	1.35		1.85		1.85	0.6						
5	1.6	1.60		1.60		1.6						
6	1.6	1.60		1.60		0.6						
7	1.6		1.6		1.6	1.6						
8	1.6		1.6		1.6	0.6						
9	1.35	1.40		1.40		1.6		1.35		1.35		
10	1.35	1.40		1.40		0.6		1.35		1.35		
11	1.35	1.40		1.40		1.6			1.35	1.35	1.40	
12	1.35	1.40		1.40		0.6			1.35	1.35	1.40	
13	1.35		1.40		1.40	1.6		1.35		1.35		
14	1.35		1.40		1.40	0.6		1.35		1.35		
15	1.35		1.40		1.40	1.6			1.35	1.35	1.4	
16	1.35		1.40		1.40	0.6			1.35	1.35	1.4	
17	1.35		1.85		1.85		1.60					
18	1.35		1.85		1.85		0.60					
19	1.60		1.60		1.60		1.60					
20	1.60		1.60		1.60		0.60					

2) 사용하중 검토시

구분	고정하중	활하중		활하중 측압		수평토압 (지하수無)		온도하중		건조수축	장대레일	비고
				양측재하	편측재하	양측재하	편측재하					
		전경간	1/2	수평	수평	수평	수평	온도상승	온도하강			
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11	
21	1.0	1.0		1.0		1.0						
22	1.0	1.0		1.0		0.5						
23	1.0		1.0		1.0	1.0						
24	1.0		1.0		1.0	0.5						
25	1.0	1.0		1.0		1.0		1.0			1.0	
26	1.0	1.0		1.0		0.5		1.0			1.0	
27	1.0	1.0		1.0		1.0			1.0	1.0	1.0	
28	1.0	1.0		1.0		0.5			1.0	1.0	1.0	
29	1.0		1.0		1.0	1.0		1.0			1.0	
30	1.0		1.0		1.0	0.5		1.0			1.0	
31	1.0		1.0		1.0	1.0			1.0	1.0	1.0	
32	1.0		1.0		1.0	0.5			1.0	1.0	1.0	
33	1.0					1.0						
34	1.0		1.0		1.0		1.0					
35	1.0		1.0		1.0		0.5					

7. INPUT DATA

```
*VERSION
   8.3.1

*UNIT    ; Unit System
; FORCE, LENGTH, HEAT, TEMPER
   KN   , M, J, C

*STRUCTYPE    ; Structure Type
; iSTYP, iMASS, iSMAS, bMASSOFFSET, bSELFWEIGHT, GRAV, TEMPER, bALIGNBEAM, bALIGNSLAB, bROTRIGID
     1, 1, 1, NO, YES, 9.806, 0, NO, NO, NO

*REBAR-MATL-CODE    ; Rebar Material Code
; CONC_CODE, CONC_MDB, SRC_CODE, SRC_MDB
 KS01-Civil(RC), SD300, KS01-Civil(RC), SD300

*NODE    ; Nodes
; iNO, X, Y, Z
     1, 0, 0, 0
     2, 0.55, 0, 0
     3, 0.78, 0, 0
     4, 1.01, 0, 0
     5, 1.24, 0, 0
     6, 1.47, 0, 0
     7, 1.7, 0, 0
     8, 1.93, 0, 0
     9, 2.48, 0, 0
    10, 0, 0, 0.525
    11, 2.48, 0, 0.525
    12, 0, 0, 0.805
    13, 2.48, 0, 0.805
    14, 0, 0, 1.085
    15, 2.48, 0, 1.085
    16, 0, 0, 1.365
    17, 2.48, 0, 1.365
    18, 0, 0, 1.645
    19, 2.48, 0, 1.645
    20, 0, 0, 1.925
    21, 2.48, 0, 1.925
    22, 0, 0, 2.425
    23, 0.5, 0, 2.425
    24, 0.747, 0, 2.425
    25, 0.993, 0, 2.425
    26, 1.24, 0, 2.425
    27, 1.487, 0, 2.425
    28, 1.733, 0, 2.425
    29, 1.98, 0, 2.425
    30, 2.48, 0, 2.425

*ELEMENT    ; Elements
; iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, iOPT(EXVAL2) ; Frame  Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, EXVAL2, bLMT ; Comp/Tens Truss
; iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iSUB, iWID              ; Planar Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iN5, iN6, iN7, iN8     ; Solid  Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, REF, RPX, RPY, RPZ, iSUB, EXVAL  ; Frame(Ref. Point)
     1, BEAM  ,    2,    2,    1,    2,  180
     2, BEAM  ,    2,    2,    2,    3,  180
     3, BEAM  ,    2,    2,    3,    4,  180
     4, BEAM  ,    2,    2,    4,    5,  180
     5, BEAM  ,    2,    2,    5,    6,  180
     6, BEAM  ,    2,    2,    6,    7,  180
     7, BEAM  ,    2,    2,    7,    8,  180
     8, BEAM  ,    2,    2,    8,    9,  180
     9, BEAM  ,    2,    3,    1,   10,  180
    10, BEAM  ,    2,    3,    9,   11,    0
    11, BEAM  ,    2,    3,   10,   12,  180
    12, BEAM  ,    2,    3,   11,   13,    0
    13, BEAM  ,    2,    3,   12,   14,  180
    14, BEAM  ,    2,    3,   13,   15,    0
    15, BEAM  ,    2,    3,   14,   16,  180
    16, BEAM  ,    2,    3,   15,   17,    0
    17, BEAM  ,    2,    3,   16,   18,  180
    18, BEAM  ,    2,    3,   17,   19,    0
    19, BEAM  ,    2,    3,   18,   20,  180
    20, BEAM  ,    2,    3,   19,   21,    0
    21, BEAM  ,    2,    3,   20,   22,  180
    22, BEAM  ,    2,    3,   21,   30,    0
    23, BEAM  ,    2,    1,   22,   23,    0
    24, BEAM  ,    2,    1,   23,   24,    0
    25, BEAM  ,    2,    1,   24,   25,    0
    26, BEAM  ,    2,    1,   25,   26,    0
    27, BEAM  ,    2,    1,   26,   27,    0
    28, BEAM  ,    2,    1,   27,   28,    0
    29, BEAM  ,    2,    1,   28,   29,    0
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    30, BEAM  ,    2,     1,    29,    30,     0

*MATERIAL    ; Material
; iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, DAMPRATIO, [DATA1]          ; STEEL, CONC, USER
; iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, DAMPRATIO, [DATA2], [DATA2] ; SRC
; [DATA1] : 1, DB, NAME, CODE
; [DATA1] : 2, ELAST, POISN, THERMAL, DEN, MASS
; [DATA1] : 3, Ex, Ey, Ez, Tx, Ty, Tz, Sxy, Sxz, Syz, Pxy, Pxz, Pyz, DEN, MASS   ; Orthotropic
; [DATA2] : 1, DB, NAME, CODE or 2, ELAST, POISN, THERMAL, DEN, MASS
    1, USER , STEEL             , 0, 0, , C, NO, 0, 2, 2.0000e+008,   0.3, 1.1700e-005, 76.8196,     0
    2, USER , CONC              , 0, 0, , C, NO, 0, 2, 2.7537e+007,  0.18, 1.0000e-005,  24.5,     0

*MATL-COLOR
; iMAT, W_R, W_G, W_B, HF_R, HF_G, HF_B, HE_R, HE_G, HE_B, bBLEND, FACT
    1, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
    2, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5


*SECTION    ; Section
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2]                    ; 1st line - DB/USER
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL              ; 1st line - VALUE
;       AREA, ASy, ASz, Ixx, Iyy, Izz                                         ; 2nd line
;       CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz               ; 3rd line
;       Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz                              ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF         ; 1st line - SRC
;       D1, D2, [SRC]                                                         ; 2nd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2        ; 1st line - COMBINED
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24
; iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, iyVAR, izVAR, STYPE               ; 1st line - TAPERED
;       DB, NAME1, NAME2                                                      ; 2nd line(STYPE=DB)
;       [DIM1], [DIM2]                                                        ; 2nd line(STYPE=USER)
;       D11, D12, D13, D14, D15, D16, D17, D18                                ; 2nd line(STYPE=VALUE)
;       AREA1, ASy1, ASz1, Ixx1, Iyy1, Izz1                                   ; 3rd line(STYPE=VALUE)
;       CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1     ; 4th line(STYPE=VALUE)
;       Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2                    ; 5th line(STYPE=VALUE)
;       D21, D22, D23, D24, D25, D26, D27, D28                                ; 6th line(STYPE=VALUE)
;       AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2                                   ; 7th line(STYPE=VALUE)
;       CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2     ; 8th line(STYPE=VALUE)
;       Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2                    ; 9th line(STYPE=VALUE)
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line(STYPE=PSC)
;       ELAST, DEN, POIS, POIC                                                ; 2nd line(STYPE=PSC-CMPW)
;       bSHEARCHK, [SCHK-I], [SCHK-J], [WT-I], [WT-J], WI, WJ, bSYM, bSIDEHOLE ; 3rd line(STYPE=PSC)
;       bSHEARCHK, bSYM, bHUNCH, [CMPWEB-I], [CMPWEB-J]                       ; 3rd line(STYPE=PSC-CMPW)
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF-I], [STIFF-J]       ; 4th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 5th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 6th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 7th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 8th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 9th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 10th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 11th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 12th line(STYPE=PSC)
;       GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMULTI, EsEc-L, EsEc-S       ; 2nd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 3rd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 4th line(STYPE=CMP-B/I)
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 5th line(STYPE=CMP-B)
;       GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb, bSYM, SW_i, SW_i       ; 2nd line(STYPE=CMP-CI/CT)
;       OPT1, OPT2, [JOINT]                                                   ; 3rd line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 4th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 5th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 6th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 7th line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 11th line(STYPE=CMP-CI/CT)
; iSEC, TYPE, SNAME, [OFFSET], bSD, STYPE1, STYPE2                            ; 1st line - CONSTRUCT
;       SHAPE, ...(same with other type data from shape)                      ; Before (STYPE1)
;       SHAPE, ...(same with other type data from shape)                      ; After  (STYPE2)
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SB
;       Hw, tw, B, Bf1, tf1, B2, Bf2, tf2                                     ; 2nd line
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 3rd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SI
;       Hw, tw, B, tf1, B2, tf2                                               ; 2nd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 3rd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-CI/CT
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line
;       [SIZE-A]                                                              ; 3rd line
;       [SIZE-B]                                                              ; 4th line
;       [SIZE-C]                                                              ; 5th line
;       [SIZE-D]                                                              ; 6th line
;       SW, GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb                     ; 7th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - PSC
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line
;       bSHEARCHK, [SCHK], [WT], WIDTH, bSYM, bSIDEHOLE                       ; 3rd line
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF]                    ; 4th line
```

```
;       [SIZE-A]                                                                ; 5th line
;       [SIZE-B]                                                                ; 6th line
;       [SIZE-C]                                                                ; 7th line
;       [SIZE-D]                                                                ; 8th line
; [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10
; [DATA2] : CCSHAPE or iCEL or iN1, iN2
; [SRC]  : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2
; [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8
; [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER
; [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ
; [JOINT]  :  8(1CELL, 2CELL), 13(3CELL),  9(PSCM),  8(PSCH), 9(PSCT),  2(PSCB), 0(nCELL),  2(nCEL2)
; [SIZE-A] :  6(1CELL, 2CELL), 10(3CELL), 10(PSCM),  6(PSCH), 8(PSCT), 10(PSCB), 5(nCELL), 11(nCEL2)
; [SIZE-B] :  6(1CELL, 2CELL), 12(3CELL),  6(PSCM),  6(PSCH), 8(PSCT),  6(PSCB), 8(nCELL), 18(nCEL2)
; [SIZE-C] : 10(1CELL, 2CELL), 13(3CELL),  9(PSCM), 10(PSCH), 7(PSCT),  8(PSCB), 0(nCELL), 11(nCEL2)
; [SIZE-D] :  8(1CELL, 2CELL), 13(3CELL),  6(PSCM),  7(PSCH), 8(PSCT),  5(PSCB), 0(nCELL), 18(nCEL2)
; [STIFF]  : AREA, ASy, ASz, Ixx, Iyy, Izz
; [SCHK]   : bAUTO_Z1, Z1, bAUTO_Z3, Z3
; [WT]     : bAUTO_TOR, TOR, bAUTO_SHR1, SHR1, bAUTO_SHR2, SHR2, bAUTO_SHR3, SHR3
; [CMPWEB] : EFD, LRF, A, B, H, T
   1, DBUSER    , TOPSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.45, 1, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL             , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0

*SECT-COLOR
; iSEC, W_R, W_G, W_B, HF_R, HF_G, HF_B, HE_R, HE_G, HE_B, bBLEND, FACT
   1, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
   2, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
   3, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5

*DGN-SECT
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2]                    ; 1st line - DB/USER
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL             ; 1st line - VALUE
;       AREA, ASy, ASz, Ixx, Iyy, Izz                                         ; 2nd line
;       CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz               ; 3rd line
;       Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz                              ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF         ; 1st line - SRC
;       D1, D2, [SRC]                                                         ; 2nd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2        ; 1st line - COMBINED
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24
; iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, iyVAR, izVAR, STYPE               ; 1st line - TAPERED
;       DB, NAME1, NAME2                                                      ; 2nd line(STYPE=DB)
;       [DIM1], [DIM2]                                                        ; 2nd line(STYPE=USER)
;       D11, D12, D13, D14, D15, D16, D17, D18                                ; 2nd line(STYPE=VALUE)
;       AREA1, ASy1, ASz1, Ixx1, Iyy1, Izz1                                   ; 3rd line(STYPE=VALUE)
;       CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1     ; 4th line(STYPE=VALUE)
;       Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2                    ; 5th line(STYPE=VALUE)
;       D21, D22, D23, D24, D25, D26, D27, D28                                ; 6th line(STYPE=VALUE)
;       AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2                                   ; 7th line(STYPE=VALUE)
;       CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2     ; 8th line(STYPE=VALUE)
;       Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2                    ; 9th line(STYPE=VALUE)
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line(STYPE=PSC)
;       ELAST, DEN, POIS, POIC                                                ; 2nd line(STYPE=PSC-CMPW)
;       bSHEARCHK, [SCHK-I], [SCHK-J], [WT-I], [WT-J], WI, WJ, bSYM, bSIDEHOLE ; 3rd line(STYPE=PSC)
;       bSHEARCHK, bSYM, bHUNCH, [CMPWEB-I], [CMPWEB-J]                       ; 3rd line(STYPE=PSC-CMPW)
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF-I], [STIFF-J]       ; 4th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 5th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 6th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 7th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 8th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 9th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 10th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 11th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 12th line(STYPE=PSC)
;       GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMULTI, EsEc-L, EsEc-S       ; 2nd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 3rd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 4th line(STYPE=CMP-B/I)
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 5th line(STYPE=CMP-B)
;       GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb, bSYM, SW_i, SW_i       ; 2nd line(STYPE=CMP-CI/CT)
;       OPT1, OPT2, [JOINT]                                                   ; 3rd line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 4th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 5th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 6th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 7th line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 11th line(STYPE=CMP-CI/CT)
; iSEC, TYPE, SNAME, [OFFSET], bSD, STYPE1, STYPE2                            ; 1st line - CONSTRUCT
;       SHAPE, ...(same with other type data from shape)                      ; Before (STYPE1)
;       SHAPE, ...(same with other type data from shape)                      ; After  (STYPE2)
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SB
;       Hw, tw, B, Bf1, tf1, B2, Bf2, tf2                                     ; 2nd line
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 3rd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SI
;       Hw, tw, B, tf1, B2, tf2                                               ; 2nd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 3rd line
```

```
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                    ; 1st line - COMPOSITE-CI/CT
;       OPT1, OPT2, [JOINT]                                                  ; 2nd line
;       [SIZE-A]                                                             ; 3rd line
;       [SIZE-B]                                                             ; 4th line
;       [SIZE-C]                                                             ; 5th line
;       [SIZE-D]                                                             ; 6th line
;       SW, GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb                    ; 7th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                    ; 1st line - PSC
;       OPT1, OPT2, [JOINT]                                                  ; 2nd line
;       bSHEARCHK, [SCHK], [WT], WIDTH, bSYM, bSIDEHOLE                      ; 3rd line
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF]                   ; 4th line
;       [SIZE-A]                                                             ; 5th line
;       [SIZE-B]                                                             ; 6th line
;       [SIZE-C]                                                             ; 7th line
;       [SIZE-D]                                                             ; 8th line
; [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10
; [DATA2] : CCSHAPE or iCEL or iN1, iN2
; [SRC]  : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2
; [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8
; [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER
; [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ
; [JOINT]  :  8(1CELL, 2CELL), 13(3CELL),  9(PSCM),  8(PSCH), 9(PSCT),  2(PSCB), 0(nCELL),  2(nCEL2)
; [SIZE-A] :  6(1CELL, 2CELL), 10(3CELL), 10(PSCM),  6(PSCH), 8(PSCT), 10(PSCB), 5(nCELL), 11(nCEL2)
; [SIZE-B] :  6(1CELL, 2CELL), 12(3CELL),  6(PSCM),  6(PSCH), 8(PSCT),  6(PSCB), 8(nCELL), 18(nCEL2)
; [SIZE-C] : 10(1CELL, 2CELL), 13(3CELL),  9(PSCM), 10(PSCH), 7(PSCT),  8(PSCB), 0(nCELL), 11(nCEL2)
; [SIZE-D] :  8(1CELL, 2CELL), 13(3CELL),  6(PSCM),  7(PSCH), 8(PSCT),  5(PSCB), 0(nCELL), 18(nCEL2)
; [STIFF]  : AREA, ASy, ASz, Ixx, Iyy, Izz
; [SCHK]   : bAUTO_Z1, Z1, bAUTO_Z3, Z3
; [WT]     : bAUTO_TOR, TOR, bAUTO_SHR1, SHR1, bAUTO_SHR2, SHR2, bAUTO_SHR3, SHR3
; [CMPWEB] : EFD, LRF, A, B, H, T
   1, DBUSER    , TOPSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.45, 1, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL             , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0


*STLDCASE    ; Static Load Cases
; LCNAME, LCTYPE, DESC
  LC1  , USER,
  LC2  , USER,
  LC3  , USER,
  LC4  , USER,
  LC5  , USER,
  LC6  , USER,
  LC7  , USER,
  LC8  , USER,
  LC9  , USER,
  LC10 , USER,
  LC11 , USER,
  NCOMB1, USER,
  NCOMB2, USER,
  NCOMB3, USER,
  NCOMB4, USER,
  NCOMB5, USER,
  NCOMB6, USER,
  NCOMB7, USER,
  NCOMB8, USER,
  NCOMB9, USER,
  NCOMB10, USER,
  NCOMB11, USER,
  NCOMB12, USER,
  NCOMB13, USER,
  NCOMB14, USER,
  NCOMB15, USER,
  NCOMB16, USER,
  NCOMB17, USER,
  NCOMB18, USER,
  NCOMB19, USER,
  NCOMB20, USER,
  NCOMB21, USER,
  NCOMB22, USER,
  NCOMB23, USER,
  NCOMB24, USER,
  NCOMB25, USER,
  NCOMB26, USER,
  NCOMB27, USER,
  NCOMB28, USER,
  NCOMB29, USER,
  NCOMB30, USER,
  NCOMB31, USER,
  NCOMB32, USER,
  NCOMB33, USER,
  NCOMB34, USER,
  NCOMB35, USER,


*SPRING    ; Point Spring Supports
; NODE_LIST, Type, SDx, SDy, SDz, SRx, SRy, SRz, GROUP, FROMTYPE, EFFAREA, Kx, Ky, Kz
```

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; NODE_LIST, Type, Direction, Vx, Vy, Vz, Stiffness, GROUP, FROMTYPE, EFFAREA
; NODE_LIST, Type, Multi-Linear Type, Direction, Vx, Vy, Vz, ax, ay, bx, by, cx, cy, dx, dy, ex, ey, fx, fy, GROUP, FROMTYPE, EFFAREA
   2 8, COMP  ,  5, 0, 0, 0, 4480, , 0, 0, 0, 0, 0
   3to7, COMP  ,  5, 0, 0, 0, 2642, , 0, 0, 0, 0, 0
   1, LINEAR, 1e+014, 0, 0, 0, 0, 0, NO, 0, 0, 0, 0, 0, 0, 0, , 0, 0, 0, 0, 0
   1 9, COMP  ,  5, 0, 0, 0, 5456, , 0, 0, 0, 0, 0

*OFFSET    ; Beam End Offsets
; ELEM_LIST, TYPE, RGDXi, RGDYi, RGDZi, RGDXj, RGDYj, RGDZj, GROUP  ; TYPE=GLOBAL
; ELEM_LIST, TYPE, RGDi, RGDj, GROUP                                ; TYPE=ELEMENT
     1, ELEMENT, 0.275, 0,
     8, ELEMENT, 0, 0.275,
     9, ELEMENT, 0.325, 0,
    10, ELEMENT, 0.325, 0,
    21, ELEMENT, 0, 0.3,
    22, ELEMENT, 0, 0.3,
    23, ELEMENT, 0.3, 0,
    30, ELEMENT, 0, 0.3,

*USE-STLD, LC1

; *SELFWEIGHT, X, Y, Z, GROUP
*SELFWEIGHT, 0, 0, -1,

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC1] ------------------------

*USE-STLD, LC2

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC2] ------------------------

*USE-STLD, LC3

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC3] ------------------------

*USE-STLD, LC4

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
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    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC4] ------------------------

*USE-STLD, LC5

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC5] ------------------------

*USE-STLD, LC6

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL I-END, ADDITIONAL J-END, bADDITIONAL J-END
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 111.427, 1, 106.954, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -111.427, 1, -106.954, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 106.954, 1, 104.568, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -106.954, 1, -104.568, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 104.568, 1, 102.182, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -104.568, 1, -102.182, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 102.182, 1, 99.796, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -102.182, 1, -99.796, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 99.796, 1, 97.41, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -99.796, 1, -97.41, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 97.41, 1, 95.024, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -97.41, 1, -95.024, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 95.024, 1, 90.764, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -95.024, 1, -90.764, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC6] ------------------------

*USE-STLD, LC7

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL I-END, ADDITIONAL J-END, bADDITIONAL J-END
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 22.367, 1, 17.894, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 17.894, 1, 15.508, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 15.508, 1, 13.122, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 13.122, 1, 10.736, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 10.736, 1, 8.35, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.35, 1, 5.964, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 5.964, 1, 1.704, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC7] ------------------------

*USE-STLD, LC10

*ELTEMPER    ; Element Temperatures
; ELEM LIST, TEMPER, GROUP
     1, -15.
     2, -15.
     3, -15.
     4, -15.
     5, -15.
     6, -15.
     7, -15.
     8, -15.
     9, -15.
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    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [LC10] ------------------------

*USE-STLD. NCOMB1

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB1] ------------------------

*USE-STLD. NCOMB2

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.
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*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB2] ----------------------

*USE-STLD. NCOMB3

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB3] ------------------------

*USE-STLD. NCOMB4

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB4] ------------------------

*USE-STLD. NCOMB5

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
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    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB5] ------------------------

*USE-STLD. NCOMB6

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
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; End of data for load case [NCOMB6] ------------------------

*USE-STLD. NCOMB7

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB7] ------------------------

*USE-STLD. NCOMB8

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB8] ------------------------

*USE-STLD. NCOMB9

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB9] ------------------------

*USE-STLD. NCOMB10

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
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    13 BEAM    UNILOAD GX NO NO aDir[1]     0 62.7408 1 61.3092 0 0 0 0 NO 0 0 NO
    14 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    14 BEAM    UNILOAD GX NO NO aDir[1]     0 -62.7408 1 -61.3092 0 0 0 0 NO 0 0 NO
    15 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
    15 BEAM    UNILOAD GX NO NO aDir[1]     0 61.3092 1 59.8776 0 0 0 0 NO 0 0 NO
    16 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    16 BEAM    UNILOAD GX NO NO aDir[1]     0 -61.3092 1 -59.8776 0 0 0 0 NO 0 0 NO
    17 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
    17 BEAM    UNILOAD GX NO NO aDir[1]     0 59.8776 1 58.446 0 0 0 0 NO 0 0 NO
    18 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    18 BEAM    UNILOAD GX NO NO aDir[1]     0 -59.8776 1 -58.446 0 0 0 0 NO 0 0 NO
    19 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
    19 BEAM    UNILOAD GX NO NO aDir[1]     0 58.446 1 57.0144 0 0 0 0 NO 0 0 NO
    20 BEAM    UNILOAD GX NO NO aDir[1]     0 -58.446 1 -57.0144 0 0 0 0 NO 0 0 NO
    20 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    21 BEAM    UNILOAD GX NO NO aDir[1]     0 57.0144 1 54.4584 0 0 0 0 NO 0 0 NO
    21 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
    22 BEAM    UNILOAD GX NO NO aDir[1]     0 -57.0144 1 -54.4584 0 0 0 0 NO 0 0 NO
    22 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    23 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    23 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    24 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    24 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    25 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    25 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    26 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    26 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    27 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    27 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    28 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    28 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    29 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    29 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    30 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    30 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO

; End of data for load case [NCOMB10] ------------------------

*USE-STLD NCOMB11

; *SELFWEIGHT X Y Z GROUP
*SELFWEIGHT 0 0 -1.35

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST CMD TYPE DIR bPROJ [ECCEN] [VALUE] GROUP
; ELEM LIST CMD TYPE TYPE DIR VX VY VZ bPROJ [ECCEN] [VALUE] GROUP
; [VALUE]       : D1 P1 D2 P2 D3 P3 D4 P4
; [ECCEN]       : bECCEN ECCDIR I-END J-END bJ-END
; [ADDITIONAL]  : bADDITIONAL ADDITIONAL I-END ADDITIONAL J-END bADDITIONAL J-END
     9 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
     9 BEAM    UNILOAD GX NO NO aDir[1]     0 178.283 1 171.126 0 0 0 0 NO 0 0 NO
    10 BEAM    UNILOAD GX NO NO aDir[1]     0 -178.283 1 -171.126 0 0 0 0 NO 0 0 NO
    10 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    11 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
    11 BEAM    UNILOAD GX NO NO aDir[1]     0 171.126 1 167.309 0 0 0 0 NO 0 0 NO
    12 BEAM    UNILOAD GX NO NO aDir[1]     0 -171.126 1 -167.309 0 0 0 0 NO 0 0 NO
    12 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    13 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
    13 BEAM    UNILOAD GX NO NO aDir[1]     0 167.309 1 163.491 0 0 0 0 NO 0 0 NO
    14 BEAM    UNILOAD GX NO NO aDir[1]     0 -167.309 1 -163.491 0 0 0 0 NO 0 0 NO
    14 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    15 BEAM    UNILOAD GX NO NO aDir[1]     0 163.491 1 159.674 0 0 0 0 NO 0 0 NO
    15 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
    16 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    16 BEAM    UNILOAD GX NO NO aDir[1]     0 -163.491 1 -159.674 0 0 0 0 NO 0 0 NO
    17 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
    17 BEAM    UNILOAD GX NO NO aDir[1]     0 159.674 1 155.856 0 0 0 0 NO 0 0 NO
    18 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    18 BEAM    UNILOAD GX NO NO aDir[1]     0 -159.674 1 -155.856 0 0 0 0 NO 0 0 NO
    19 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
    19 BEAM    UNILOAD GX NO NO aDir[1]     0 155.856 1 152.038 0 0 0 0 NO 0 0 NO
    20 BEAM    UNILOAD GX NO NO aDir[1]     0 -155.856 1 -152.038 0 0 0 0 NO 0 0 NO
    20 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    21 BEAM    UNILOAD GX NO NO aDir[1]     0 152.038 1 145.222 0 0 0 0 NO 0 0 NO
    21 BEAM    UNILOAD GX NO NO aDir[1]     0 11.7712 1 11.7712 0 0 0 0 NO 0 0 NO
    22 BEAM    UNILOAD GX NO NO aDir[1]     0 -152.038 1 -145.222 0 0 0 0 NO 0 0 NO
    22 BEAM    UNILOAD GX NO NO aDir[1]     0 -11.7712 1 -11.7712 0 0 0 0 NO 0 0 NO
    23 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    23 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    24 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    24 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    25 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    25 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    26 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    26 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
    27 BEAM    UNILOAD GZ NO NO aDir[1]     0 -29.4266 1 -29.4266 0 0 0 0 NO 0 0 NO
    27 BEAM    UNILOAD GZ NO NO aDir[1]     0 -282.231 1 -282.231 0 0 0 0 NO 0 0 NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
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    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB11] ------------------------

*USE-STLD. NCOMB12

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. N(
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
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    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB12] ------------------------

*USE-STLD. NCOMB13

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. N(
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB13] ------------------------

*USE-STLD. NCOMB14

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB14] ------------------------

*USE-STLD. NCOMB15

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB15] ------------------------

*USE-STLD. NCOMB16

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB16] ------------------------

*USE-STLD. NCOMB17

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 28.6304. 1. 24.8128. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.8128. 1. 20.9952. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 20.9952. 1. 17.1776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.1776. 1. 13.36. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.36. 1. 9.5424. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.5424. 1. 2.7264. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB17] ------------------------

*USE-STLD. NCOMB18

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
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; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4202. 1. 10.7364. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.7364. 1. 9.3048. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.3048. 1. 7.8732. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.8732. 1. 6.4416. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.4416. 1. 5.01. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.01. 1. 3.5784. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 3.5784. 1. 1.0224. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB18] ------------------------

*USE-STLD. NCOMB19

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 28.6304. 1. 24.8128. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.8128. 1. 20.9952. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 20.9952. 1. 17.1776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.1776. 1. 13.36. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.36. 1. 9.5424. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.5424. 1. 2.7264. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB19] ------------------------

*USE-STLD. NCOMB20

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4202. 1. 10.7364. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.7364. 1. 9.3048. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
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    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.3048. 1. 7.8732. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.8732. 1. 6.4416. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.4416. 1. 5.01. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.01. 1. 3.5784. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 3.5784. 1. 1.0224. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB20] ------------------------

*USE-STLD. NCOMB21

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB21] ------------------------

*USE-STLD. NCOMB22

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.
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*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB22] ---------------------------

*USE-STLD. NCOMB23

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
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    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB23] ------------------------

*USE-STLD. NCOMB24

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB24] ------------------------

*USE-STLD. NCOMB25

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
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    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB25] ------------------------

*USE-STLD. NCOMB26

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
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; End of data for load case [NCOMB26] ------------------------

*USE-STLD. NCOMB27

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
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    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB27] ------------------------

*USE-STLD. NCOMB28

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
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    23. -15.
    24. -15.
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    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB28] ------------------------

*USE-STLD. NCOMB29

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB29] ------------------------

*USE-STLD. NCOMB30

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
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    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB30] ----------------------------

*USE-STLD. NCOMB31

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
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    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB31] ------------------------

*USE-STLD. NCOMB32

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
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    30. -15.

; End of data for load case [NCOMB32] ------------------------

*USE-STLD. NCOMB33

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB33] ------------------------

*USE-STLD. NCOMB34

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 22.367. 1. 17.894. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.894. 1. 15.508. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.508. 1. 13.122. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.122. 1. 10.736. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.736. 1. 8.35. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.35. 1. 5.964. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.964. 1. 1.704. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB34] ------------------------

*USE-STLD. NCOMB35

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
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```
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.1835. 1. 8.947. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.947. 1. 7.754. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.754. 1. 6.561. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.561. 1. 5.368. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.368. 1. 4.175. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 4.175. 1. 2.982. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 2.982. 1. 0.852. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB35] ------------------------


*LOADCOMB    ; Combinations
; NAME=NAME. KIND. ACTIVE. bES. iTYPE. DESC. iSERV-TYPE. nLCOMTYPE   ; line 1
;      ANAL1. LCNAME1. FACT1. ...                                    ; from line 2
   NAME=COMB1. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.85. ST. LC4. 1.85. ST. LC6. 1.6
   NAME=COMB2. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.85. ST. LC4. 1.85. ST. LC6. 0.6
   NAME=COMB3. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC6. 1.6
   NAME=COMB4. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC6. 0.6
   NAME=COMB5. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC2. 1.6. ST. LC4. 1.6. ST. LC6. 1.6
   NAME=COMB6. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC2. 1.6. ST. LC4. 1.6. ST. LC6. 0.6
   NAME=COMB7. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC6. 1.6
   NAME=COMB8. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC6. 0.6
   NAME=COMB9. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 1.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB10. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 0.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB11. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 1.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB12. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 0.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB13. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 1.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB14. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 0.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB15. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 1.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB16. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 0.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB17. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC7. 1.6
   NAME=COMB18. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC7. 0.6
   NAME=COMB19. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC7. 1.6
   NAME=COMB20. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC7. 0.6
   NAME=COMB21. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1
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NAME=COMB22. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5
NAME=COMB23. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1
NAME=COMB24. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5
NAME=COMB25. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1. ST. LC8. 1. ST. LC11. 1
NAME=COMB26. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5. ST. LC8. 1
     ST. LC11. 1
NAME=COMB27. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1. ST. LC9. 1. ST. LC10. 1
     ST. LC11. 1
NAME=COMB28. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5. ST. LC9. 1
     ST. LC10. 1. ST. LC11. 1
NAME=COMB29. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1. ST. LC8. 1. ST. LC11. 1
NAME=COMB30. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5. ST. LC8. 1
     ST. LC11. 1
NAME=COMB31. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1. ST. LC9. 1. ST. LC10. 1
     ST. LC11. 1
NAME=COMB32. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5. ST. LC9. 1
     ST. LC10. 1. ST. LC11. 1
NAME=COMB33. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC6. 1
NAME=COMB34. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC7. 1
NAME=COMB35. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC7. 0.5
NAME=USD. GEN. ACTIVE. 0. 1. . 0. 0
     ST. NCOMB1. 1. ST. NCOMB2. 1. ST. NCOMB3. 1. ST. NCOMB4. 1
     ST. NCOMB5. 1. ST. NCOMB6. 1. ST. NCOMB7. 1. ST. NCOMB8. 1
     ST. NCOMB9. 1. ST. NCOMB10. 1. ST. NCOMB11. 1. ST. NCOMB12. 1
     ST. NCOMB13. 1. ST. NCOMB14. 1. ST. NCOMB15. 1. ST. NCOMB16. 1
     ST. NCOMB17. 1. ST. NCOMB18. 1. ST. NCOMB19. 1. ST. NCOMB20. 1
NAME=WSD. GEN. ACTIVE. 0. 1. . 0. 0
     ST. NCOMB21. 1. ST. NCOMB22. 1. ST. NCOMB23. 1. ST. NCOMB24. 1
     ST. NCOMB25. 1. ST. NCOMB26. 1. ST. NCOMB27. 1. ST. NCOMB28. 1
     ST. NCOMB29. 1. ST. NCOMB30. 1. ST. NCOMB31. 1. ST. NCOMB32. 1
     ST. NCOMB33. 1. ST. NCOMB34. 1. ST. NCOMB35. 1
NAME=NCOMB1. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB1. 1
NAME=NCOMB2. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB2. 1
NAME=NCOMB3. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB3. 1
NAME=NCOMB4. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB4. 1
NAME=NCOMB5. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB5. 1
NAME=NCOMB6. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB6. 1
NAME=NCOMB7. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB7. 1
NAME=NCOMB8. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB8. 1
NAME=NCOMB9. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB9. 1
NAME=NCOMB10. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB10. 1
NAME=NCOMB11. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB11. 1
NAME=NCOMB12. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB12. 1
NAME=NCOMB13. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB13. 1
NAME=NCOMB14. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB14. 1
NAME=NCOMB15. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB15. 1
NAME=NCOMB16. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB16. 1
NAME=NCOMB17. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB17. 1
NAME=NCOMB18. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB18. 1
NAME=NCOMB19. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB19. 1
NAME=NCOMB20. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB20. 1
NAME=NCOMB21. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB21. 1
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   NAME=NCOMB22. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB22. 1
   NAME=NCOMB23. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB23. 1
   NAME=NCOMB24. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB24. 1
   NAME=NCOMB25. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB25. 1
   NAME=NCOMB26. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB26. 1
   NAME=NCOMB27. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB27. 1
   NAME=NCOMB28. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB28. 1
   NAME=NCOMB29. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB29. 1
   NAME=NCOMB30. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB30. 1
   NAME=NCOMB31. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB31. 1
   NAME=NCOMB32. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB32. 1
   NAME=NCOMB33. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB33. 1
   NAME=NCOMB34. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB34. 1
   NAME=NCOMB35. CONC. STRENGTH. 0. 0. . 0. 0
        ST. NCOMB35. 1

*LOADCONST    ; Load Constribution for Nonlinear Load Case
; NAME=STLDCASE. DESC                                          ; 1st line
;      LCNAME1. LCTYPE1. FACTOR1. LCNAME2. LCTYPE2. FACTOR2. ...   ; from line 2
   NAME=NCOMB1.
        LC1. ST. 1.35. LC2. ST. 1.85. LC4. ST. 1.85. LC6. ST. 1.6
   NAME=NCOMB2.
        LC1. ST. 1.35. LC2. ST. 1.85. LC4. ST. 1.85. LC6. ST. 0.6
   NAME=NCOMB3.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC6. ST. 1.6
   NAME=NCOMB4.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC6. ST. 0.6
   NAME=NCOMB5.
        LC1. ST. 1.6. LC2. ST. 1.6. LC4. ST. 1.6. LC6. ST. 1.6
   NAME=NCOMB6.
        LC1. ST. 1.6. LC2. ST. 1.6. LC4. ST. 1.6. LC6. ST. 0.6
   NAME=NCOMB7.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC6. ST. 1.6
   NAME=NCOMB8.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC6. ST. 0.6
   NAME=NCOMB9.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 1.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB10.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 0.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB11.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 1.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB12.
        LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 0.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB13.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 1.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB14.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 0.6. LC8. ST. 1.35
        LC11. ST. 1.35
   NAME=NCOMB15.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 1.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB16.
        LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 0.6. LC9. ST. 1.35
        LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB17.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC7. ST. 1.6
   NAME=NCOMB18.
        LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC7. ST. 0.6
   NAME=NCOMB19.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC7. ST. 1.6
   NAME=NCOMB20.
        LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC7. ST. 0.6
   NAME=NCOMB21.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1
   NAME=NCOMB22.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5
   NAME=NCOMB23.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1
   NAME=NCOMB24.
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        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC6, ST, 0.5
    NAME=NCOMB25,
        LC1, ST, 1, LC2, ST, 1, LC4, ST, 1, LC6, ST, 1, LC8, ST, 1, LC11, ST, 1
    NAME=NCOMB26,
        LC1, ST, 1, LC2, ST, 1, LC4, ST, 1, LC6, ST, 0.5, LC8, ST, 1
        LC11, ST, 1
    NAME=NCOMB27,
        LC1, ST, 1, LC2, ST, 1, LC4, ST, 1, LC6, ST, 1, LC9, ST, 1, LC10, ST, 1
        LC11, ST, 1
    NAME=NCOMB28,
        LC1, ST, 1, LC2, ST, 1, LC4, ST, 1, LC6, ST, 0.5, LC9, ST, 1
        LC10, ST, 1, LC11, ST, 1
    NAME=NCOMB29,
        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC6, ST, 1, LC8, ST, 1, LC11, ST, 1
    NAME=NCOMB30,
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        LC11, ST, 1
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        LC11, ST, 1
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        LC10, ST, 1, LC11, ST, 1
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        LC1, ST, 1, LC6, ST, 1
    NAME=NCOMB34,
        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC7, ST, 1
    NAME=NCOMB35,
        LC1, ST, 1, LC3, ST, 1, LC5, ST, 1, LC7, ST, 0.5

*LC-COLOR    ; Diagram Color for Load Case
; ANAL, LCNAME, iR1(ALL), iG1(ALL), iB1(ALL), iR2(MIN), iG2(MIN), iB2(MIN), iR3(MAX), iG2(MAX), iB2(MAX)
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 CB, COMB3, 255, 87, 128, 255, 192, 87, 160, 255, 255
 CB, COMB4, 255, 160, 255, 255, 192, 87, 163, 160, 255
 CB, COMB5, 0, 192, 192, 85, 0, 192, 85, 192, 0
 CB, COMB6, 0, 128, 255, 160, 255, 255, 192, 72, 0
 CB, COMB7, 255, 192, 160, 192, 0, 128, 192, 192, 192
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 CB, COMB9, 255, 160, 255, 192, 0, 128, 255, 192, 87
 CB, COMB10, 163, 160, 255, 255, 255, 87, 255, 192, 160
 CB, COMB11, 192, 0, 128, 255, 192, 160, 255, 160, 255
 CB, COMB12, 255, 128, 0, 192, 0, 128, 210, 210, 210
 CB, COMB13, 192, 192, 192, 85, 192, 0, 212, 160, 255
 CB, COMB14, 255, 192, 160, 0, 157, 192, 255, 192, 87
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 CB, COMB17, 255, 0, 192, 78, 0, 255, 255, 128, 0
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*ANAL-CTRL
; bARDC. bANRC. iITER. TOL. bCSECF. bTRS. bCRBAR. bTPF. bCSO. bSCS. bCLATS
   YES. YES. 20. 0.001. YES. YES. YES. NO. NO. NO. NO


*ENDDATA
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8.OUPUT

F R A M E E L E M E N T F O R C E S

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
1	USD(max)	I[1]	35.110	0.000	-284.790	0.00E+00	-8.350	0.000
1	USD(max)	1/4	35.110	0.000	-285.810	0.00E+00	15.020	0.000
1	USD(max)	2/4	35.110	0.000	-286.830	0.00E+00	38.480	0.000
1	USD(max)	3/4	35.110	0.000	-287.860	0.00E+00	62.020	0.000
1	USD(max)	J[2]	35.110	0.000	-288.880	0.00E+00	85.650	0.000
1	USD(min)	I[1]	-210.270	0.000	-344.440	0.00E+00	-64.950	0.000
1	USD(min)	1/4	-210.270	0.000	-345.660	0.00E+00	-44.850	0.000
1	USD(min)	2/4	-210.270	0.000	-346.870	0.00E+00	-24.680	0.000
1	USD(min)	3/4	-210.270	0.000	-348.080	0.00E+00	-4.440	0.000
1	USD(min)	J[2]	-210.270	0.000	-349.300	0.00E+00	15.870	0.000
1	WSD(max)	I[1]	21.940	0.000	-195.770	0.00E+00	-6.520	0.000
1	WSD(max)	1/4	21.940	0.000	-196.530	0.00E+00	8.130	0.000
1	WSD(max)	2/4	21.940	0.000	-197.280	0.00E+00	22.830	0.000
1	WSD(max)	3/4	21.940	0.000	-198.040	0.00E+00	37.590	0.000
1	WSD(max)	J[2]	21.940	0.000	-198.800	0.00E+00	52.400	0.000
1	WSD(min)	I[1]	-128.190	0.000	-215.280	0.00E+00	-38.250	0.000
1	WSD(min)	1/4	-128.190	0.000	-216.040	0.00E+00	-23.740	0.000
1	WSD(min)	2/4	-128.190	0.000	-216.790	0.00E+00	-9.180	0.000
1	WSD(min)	3/4	-128.190	0.000	-217.550	0.00E+00	5.430	0.000
1	WSD(min)	J[2]	-128.190	0.000	-218.310	0.00E+00	20.090	0.000
2	USD(max)	I[2]	35.110	0.000	-169.800	0.00E+00	85.650	0.000
2	USD(max)	1/4	35.110	0.000	-170.660	0.00E+00	97.690	0.000
2	USD(max)	2/4	35.110	0.000	-171.510	0.00E+00	109.790	0.000
2	USD(max)	3/4	35.110	0.000	-172.370	0.00E+00	121.950	0.000
2	USD(max)	J[3]	35.110	0.000	-173.220	0.00E+00	134.170	0.000
2	USD(min)	I[2]	-210.270	0.000	-217.420	0.00E+00	15.870	0.000
2	USD(min)	1/4	-210.270	0.000	-218.440	0.00E+00	26.170	0.000
2	USD(min)	2/4	-210.270	0.000	-219.450	0.00E+00	36.520	0.000
2	USD(min)	3/4	-210.270	0.000	-220.470	0.00E+00	46.920	0.000
2	USD(min)	J[3]	-210.270	0.000	-221.480	0.00E+00	57.370	0.000
2	WSD(max)	I[2]	21.940	0.000	-115.210	0.00E+00	52.400	0.000
2	WSD(max)	1/4	21.940	0.000	-115.850	0.00E+00	59.990	0.000
2	WSD(max)	2/4	21.940	0.000	-116.480	0.00E+00	67.610	0.000
2	WSD(max)	3/4	21.940	0.000	-117.110	0.00E+00	75.270	0.000
2	WSD(max)	J[3]	21.940	0.000	-117.750	0.00E+00	82.970	0.000
2	WSD(min)	I[2]	-128.190	0.000	-135.890	0.00E+00	20.090	0.000
2	WSD(min)	1/4	-128.190	0.000	-136.520	0.00E+00	27.450	0.000
2	WSD(min)	2/4	-128.190	0.000	-137.160	0.00E+00	34.850	0.000
2	WSD(min)	3/4	-128.190	0.000	-137.790	0.00E+00	42.280	0.000
2	WSD(min)	J[3]	-128.190	0.000	-138.420	0.00E+00	49.750	0.000
3	USD(max)	I[3]	35.110	0.000	-101.100	0.00E+00	134.170	0.000
3	USD(max)	1/4	35.110	0.000	-101.960	0.00E+00	141.830	0.000
3	USD(max)	2/4	35.110	0.000	-102.810	0.00E+00	149.540	0.000
3	USD(max)	3/4	35.110	0.000	-103.670	0.00E+00	157.320	0.000
3	USD(max)	J[4]	35.110	0.000	-104.520	0.00E+00	165.150	0.000
3	USD(min)	I[3]	-210.270	0.000	-142.530	0.00E+00	57.370	0.000
3	USD(min)	1/4	-210.270	0.000	-143.550	0.00E+00	63.880	0.000
3	USD(min)	2/4	-210.270	0.000	-144.560	0.00E+00	70.420	0.000
3	USD(min)	3/4	-210.270	0.000	-145.580	0.00E+00	76.740	0.000
3	USD(min)	J[4]	-210.270	0.000	-146.590	0.00E+00	83.120	0.000
3	WSD(max)	I[3]	21.940	0.000	-68.570	0.00E+00	82.970	0.000
3	WSD(max)	1/4	21.940	0.000	-69.200	0.00E+00	87.830	0.000
3	WSD(max)	2/4	21.940	0.000	-69.840	0.00E+00	92.720	0.000
3	WSD(max)	3/4	21.940	0.000	-70.470	0.00E+00	97.650	0.000
3	WSD(max)	J[4]	21.940	0.000	-71.100	0.00E+00	102.620	0.000
3	WSD(min)	I[3]	-128.190	0.000	-89.080	0.00E+00	49.750	0.000
3	WSD(min)	1/4	-128.190	0.000	-89.720	0.00E+00	54.340	0.000
3	WSD(min)	2/4	-128.190	0.000	-90.350	0.00E+00	58.930	0.000
3	WSD(min)	3/4	-128.190	0.000	-90.980	0.00E+00	62.960	0.000
3	WSD(min)	J[4]	-128.190	0.000	-91.620	0.00E+00	67.030	0.000
4	USD(max)	I[4]	35.110	0.000	-32.540	0.00E+00	165.150	0.000
4	USD(max)	1/4	35.110	0.000	-33.400	0.00E+00	168.390	0.000
4	USD(max)	2/4	35.110	0.000	-34.250	0.00E+00	171.690	0.000
4	USD(max)	3/4	35.110	0.000	-35.110	0.00E+00	175.050	0.000
4	USD(max)	J[5]	35.110	0.000	-35.970	0.00E+00	178.460	0.000
4	USD(min)	I[4]	-210.270	0.000	-66.370	0.00E+00	83.120	0.000
4	USD(min)	1/4	-210.270	0.000	-67.390	0.00E+00	85.580	0.000
4	USD(min)	2/4	-210.270	0.000	-68.400	0.00E+00	88.090	0.000
4	USD(min)	3/4	-210.270	0.000	-69.410	0.00E+00	90.650	0.000
4	USD(min)	J[5]	-210.270	0.000	-70.430	0.00E+00	93.250	0.000
4	WSD(max)	I[4]	21.940	0.000	-22.000	0.00E+00	102.620	0.000
4	WSD(max)	1/4	21.940	0.000	-22.640	0.00E+00	104.720	0.000
4	WSD(max)	2/4	21.940	0.000	-23.270	0.00E+00	106.850	0.000
4	WSD(max)	3/4	21.940	0.000	-23.900	0.00E+00	109.030	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN・m)	Moment-y (kN・m)	Moment-z (kN・m)
4	WSD(max)	J[5]	21.940	0.000	-24.540	0.00E+00	111.240	0.000
4	WSD(min)	I[4]	-128.190	0.000	-41.480	0.00E+00	67.030	0.000
4	WSD(min)	1/4	-128.190	0.000	-42.120	0.00E+00	68.320	0.000
4	WSD(min)	2/4	-128.190	0.000	-42.750	0.00E+00	69.640	0.000
4	WSD(min)	3/4	-128.190	0.000	-43.380	0.00E+00	70.990	0.000
4	WSD(min)	J[5]	-128.190	0.000	-44.020	0.00E+00	72.390	0.000
5	USD(max)	I[5]	35.110	0.000	42.570	0.00E+00	178.460	0.000
5	USD(max)	1/4	35.110	0.000	41.560	0.00E+00	177.240	0.000
5	USD(max)	2/4	35.110	0.000	40.540	0.00E+00	176.080	0.000
5	USD(max)	3/4	35.110	0.000	39.530	0.00E+00	174.980	0.000
5	USD(max)	J[6]	35.110	0.000	38.510	0.00E+00	173.960	0.000
5	USD(min)	I[5]	-210.270	0.000	3.320	0.00E+00	93.250	0.000
5	USD(min)	1/4	-210.270	0.000	2.470	0.00E+00	91.930	0.000
5	USD(min)	2/4	-210.270	0.000	1.610	0.00E+00	90.660	0.000
5	USD(min)	3/4	-210.270	0.000	0.750	0.00E+00	89.440	0.000
5	USD(min)	J[6]	-210.270	0.000	-0.100	0.00E+00	88.270	0.000
5	WSD(max)	I[5]	21.940	0.000	26.610	0.00E+00	111.240	0.000
5	WSD(max)	1/4	21.940	0.000	25.970	0.00E+00	110.550	0.000
5	WSD(max)	2/4	21.940	0.000	25.340	0.00E+00	109.900	0.000
5	WSD(max)	3/4	21.940	0.000	24.710	0.00E+00	109.290	0.000
5	WSD(max)	J[6]	21.940	0.000	24.070	0.00E+00	108.730	0.000
5	WSD(min)	I[5]	-128.190	0.000	6.990	0.00E+00	72.390	0.000
5	WSD(min)	1/4	-128.190	0.000	6.350	0.00E+00	70.990	0.000
5	WSD(min)	2/4	-128.190	0.000	5.720	0.00E+00	69.640	0.000
5	WSD(min)	3/4	-128.190	0.000	5.080	0.00E+00	68.320	0.000
5	WSD(min)	J[6]	-128.190	0.000	4.450	0.00E+00	67.030	0.000
6	USD(max)	I[6]	35.110	0.000	123.700	0.00E+00	173.960	0.000
6	USD(max)	1/4	35.110	0.000	122.690	0.00E+00	168.800	0.000
6	USD(max)	2/4	35.110	0.000	121.670	0.00E+00	163.700	0.000
6	USD(max)	3/4	35.110	0.000	120.660	0.00E+00	158.660	0.000
6	USD(max)	J[7]	35.110	0.000	119.650	0.00E+00	153.670	0.000
6	USD(min)	I[6]	-210.270	0.000	71.350	0.00E+00	88.270	0.000
6	USD(min)	1/4	-210.270	0.000	70.490	0.00E+00	83.140	0.000
6	USD(min)	2/4	-210.270	0.000	69.640	0.00E+00	78.070	0.000
6	USD(min)	3/4	-210.270	0.000	68.780	0.00E+00	72.400	0.000
6	USD(min)	J[7]	-210.270	0.000	67.930	0.00E+00	66.550	0.000
6	WSD(max)	I[6]	21.940	0.000	77.310	0.00E+00	108.730	0.000
6	WSD(max)	1/4	21.940	0.000	76.680	0.00E+00	105.500	0.000
6	WSD(max)	2/4	21.940	0.000	76.050	0.00E+00	102.310	0.000
6	WSD(max)	3/4	21.940	0.000	75.410	0.00E+00	99.160	0.000
6	WSD(max)	J[7]	21.940	0.000	74.780	0.00E+00	96.050	0.000
6	WSD(min)	I[6]	-128.190	0.000	56.400	0.00E+00	67.030	0.000
6	WSD(min)	1/4	-128.190	0.000	55.760	0.00E+00	62.960	0.000
6	WSD(min)	2/4	-128.190	0.000	55.130	0.00E+00	58.930	0.000
6	WSD(min)	3/4	-128.190	0.000	54.500	0.00E+00	54.930	0.000
6	WSD(min)	J[7]	-128.190	0.000	53.860	0.00E+00	50.970	0.000
7	USD(max)	I[7]	35.110	0.000	204.970	0.00E+00	153.670	0.000
7	USD(max)	1/4	35.110	0.000	203.960	0.00E+00	143.870	0.000
7	USD(max)	2/4	35.110	0.000	202.940	0.00E+00	134.130	0.000
7	USD(max)	3/4	35.110	0.000	201.930	0.00E+00	124.450	0.000
7	USD(max)	J[8]	35.110	0.000	200.910	0.00E+00	114.820	0.000
7	USD(min)	I[7]	-210.270	0.000	141.050	0.00E+00	66.550	0.000
7	USD(min)	1/4	-210.270	0.000	140.190	0.00E+00	56.600	0.000
7	USD(min)	2/4	-210.270	0.000	139.340	0.00E+00	46.690	0.000
7	USD(min)	3/4	-210.270	0.000	138.480	0.00E+00	36.840	0.000
7	USD(min)	J[8]	-210.270	0.000	137.620	0.00E+00	27.030	0.000
7	WSD(max)	I[7]	21.940	0.000	128.110	0.00E+00	96.050	0.000
7	WSD(max)	1/4	21.940	0.000	127.470	0.00E+00	89.920	0.000
7	WSD(max)	2/4	21.940	0.000	126.840	0.00E+00	83.830	0.000
7	WSD(max)	3/4	21.940	0.000	126.200	0.00E+00	77.780	0.000
7	WSD(max)	J[8]	21.940	0.000	125.570	0.00E+00	71.760	0.000
7	WSD(min)	I[7]	-128.190	0.000	106.840	0.00E+00	50.970	0.000
7	WSD(min)	1/4	-128.190	0.000	106.200	0.00E+00	44.220	0.000
7	WSD(min)	2/4	-128.190	0.000	105.570	0.00E+00	37.500	0.000
7	WSD(min)	3/4	-128.190	0.000	104.930	0.00E+00	30.820	0.000
7	WSD(min)	J[8]	-128.190	0.000	104.300	0.00E+00	24.180	0.000
8	USD(max)	I[8]	35.110	0.000	345.940	0.00E+00	114.820	0.000
8	USD(max)	1/4	35.110	0.000	344.730	0.00E+00	93.310	0.000
8	USD(max)	2/4	35.110	0.000	343.520	0.00E+00	71.870	0.000
8	USD(max)	3/4	35.110	0.000	342.300	0.00E+00	50.530	0.000
8	USD(max)	J[9]	35.110	0.000	341.090	0.00E+00	29.260	0.000
8	USD(min)	I[8]	-210.270	0.000	264.610	0.00E+00	27.030	0.000
8	USD(min)	1/4	-210.270	0.000	263.580	0.00E+00	6.930	0.000
8	USD(min)	2/4	-210.270	0.000	262.560	0.00E+00	-13.090	0.000
8	USD(min)	3/4	-210.270	0.000	261.540	0.00E+00	-33.510	0.000
8	USD(min)	J[9]	-210.270	0.000	260.510	0.00E+00	-53.940	0.000
8	WSD(max)	I[8]	21.940	0.000	216.210	0.00E+00	71.760	0.000
8	WSD(max)	1/4	21.940	0.000	215.460	0.00E+00	58.320	0.000
8	WSD(max)	2/4	21.940	0.000	214.700	0.00E+00	44.920	0.000
8	WSD(max)	3/4	21.940	0.000	213.940	0.00E+00	31.580	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
8	WSD(max)	J[9]	21.940	0.000	213.180	0.00E+00	18.290	0.000
8	WSD(min)	I[8]	-128.190	0.000	195.980	0.00E+00	24.180	0.000
8	WSD(min)	1/4	-128.190	0.000	195.220	0.00E+00	10.540	0.000
8	WSD(min)	2/4	-128.190	0.000	194.460	0.00E+00	-3.050	0.000
8	WSD(min)	3/4	-128.190	0.000	193.710	0.00E+00	-17.610	0.000
8	WSD(min)	J[9]	-128.190	0.000	192.950	0.00E+00	-32.290	0.000
9	USD(max)	I[1]	-421.670	0.000	-11.380	0.00E+00	-74.310	0.000
9	USD(max)	1/4	-419.940	0.000	-10.130	0.00E+00	-67.720	0.000
9	USD(max)	2/4	-418.200	0.000	-8.880	0.00E+00	-61.160	0.000
9	USD(max)	3/4	-416.460	0.000	-7.660	0.00E+00	-55.060	0.000
9	USD(max)	J[10]	-414.730	0.000	-6.440	0.00E+00	-49.420	0.000
9	USD(min)	I[1]	-513.940	0.000	-158.500	0.00E+00	-100.990	0.000
9	USD(min)	1/4	-511.890	0.000	-149.050	0.00E+00	-99.600	0.000
9	USD(min)	2/4	-509.830	0.000	-139.630	0.00E+00	-98.320	0.000
9	USD(min)	3/4	-507.770	0.000	-130.240	0.00E+00	-97.140	0.000
9	USD(min)	J[10]	-505.710	0.000	-120.890	0.00E+00	-96.080	0.000
9	WSD(max)	I[1]	-295.150	0.000	-9.310	0.00E+00	-50.630	0.000
9	WSD(max)	1/4	-293.870	0.000	-8.400	0.00E+00	-46.600	0.000
9	WSD(max)	2/4	-292.580	0.000	-7.510	0.00E+00	-42.850	0.000
9	WSD(max)	3/4	-291.290	0.000	-6.620	0.00E+00	-39.360	0.000
9	WSD(max)	J[10]	-290.010	0.000	-5.750	0.00E+00	-36.140	0.000
9	WSD(min)	I[1]	-321.210	0.000	-95.370	0.00E+00	-63.120	0.000
9	WSD(min)	1/4	-319.930	0.000	-89.530	0.00E+00	-62.250	0.000
9	WSD(min)	2/4	-318.640	0.000	-83.710	0.00E+00	-61.450	0.000
9	WSD(min)	3/4	-317.360	0.000	-77.910	0.00E+00	-60.710	0.000
9	WSD(min)	J[10]	-316.070	0.000	-72.130	0.00E+00	-60.050	0.000
10	USD(max)	I[9]	-411.730	0.000	35.110	0.00E+00	-53.010	0.000
10	USD(max)	1/4	-409.990	0.000	35.110	0.00E+00	-54.690	0.000
10	USD(max)	2/4	-408.250	0.000	35.110	0.00E+00	-50.640	0.000
10	USD(max)	3/4	-406.520	0.000	35.110	0.00E+00	-45.430	0.000
10	USD(max)	J[11]	-404.780	0.000	35.110	0.00E+00	-40.650	0.000
10	USD(min)	I[9]	-513.940	0.000	-147.990	0.00E+00	-88.190	0.000
10	USD(min)	1/4	-511.890	0.000	-138.540	0.00E+00	-85.420	0.000
10	USD(min)	2/4	-509.830	0.000	-129.120	0.00E+00	-83.290	0.000
10	USD(min)	3/4	-507.770	0.000	-119.730	0.00E+00	-81.340	0.000
10	USD(min)	J[11]	-505.710	0.000	-110.380	0.00E+00	-79.590	0.000
10	WSD(max)	I[9]	-295.150	0.000	21.940	0.00E+00	-41.490	0.000
10	WSD(max)	1/4	-293.870	0.000	21.940	0.00E+00	-42.580	0.000
10	WSD(max)	2/4	-292.580	0.000	21.940	0.00E+00	-40.100	0.000
10	WSD(max)	3/4	-291.290	0.000	21.940	0.00E+00	-36.890	0.000
10	WSD(max)	J[11]	-290.010	0.000	21.940	0.00E+00	-33.950	0.000
10	WSD(min)	I[9]	-321.210	0.000	-89.690	0.00E+00	-55.120	0.000
10	WSD(min)	1/4	-319.930	0.000	-83.850	0.00E+00	-52.870	0.000
10	WSD(min)	2/4	-318.640	0.000	-78.030	0.00E+00	-50.990	0.000
10	WSD(min)	3/4	-317.360	0.000	-72.230	0.00E+00	-49.270	0.000
10	WSD(min)	J[11]	-316.070	0.000	-66.450	0.00E+00	-48.100	0.000
11	USD(max)	I[10]	-414.730	0.000	-6.440	0.00E+00	-49.420	0.000
11	USD(max)	1/4	-413.800	0.000	-4.760	0.00E+00	-42.290	0.000
11	USD(max)	2/4	-412.870	0.000	-3.100	0.00E+00	-36.050	0.000
11	USD(max)	3/4	-411.950	0.000	-1.470	0.00E+00	-30.700	0.000
11	USD(max)	J[12]	-411.020	0.000	0.130	0.00E+00	-26.220	0.000
11	USD(min)	I[10]	-505.710	0.000	-120.890	0.00E+00	-96.080	0.000
11	USD(min)	1/4	-504.610	0.000	-107.860	0.00E+00	-94.760	0.000
11	USD(min)	2/4	-503.520	0.000	-94.890	0.00E+00	-93.650	0.000
11	USD(min)	3/4	-502.420	0.000	-81.990	0.00E+00	-93.350	0.000
11	USD(min)	J[12]	-501.320	0.000	-69.150	0.00E+00	-93.310	0.000
11	WSD(max)	I[10]	-290.010	0.000	-5.750	0.00E+00	-36.140	0.000
11	WSD(max)	1/4	-289.320	0.000	-4.550	0.00E+00	-32.080	0.000
11	WSD(max)	2/4	-288.630	0.000	-3.360	0.00E+00	-28.540	0.000
11	WSD(max)	3/4	-287.950	0.000	-2.200	0.00E+00	-25.520	0.000
11	WSD(max)	J[12]	-287.260	0.000	-1.060	0.00E+00	-23.010	0.000
11	WSD(min)	I[10]	-316.070	0.000	-72.130	0.00E+00	-60.050	0.000
11	WSD(min)	1/4	-315.380	0.000	-64.070	0.00E+00	-59.230	0.000
11	WSD(min)	2/4	-314.700	0.000	-56.060	0.00E+00	-58.530	0.000
11	WSD(min)	3/4	-314.010	0.000	-48.090	0.00E+00	-58.270	0.000
11	WSD(min)	J[12]	-313.330	0.000	-40.160	0.00E+00	-58.150	0.000
12	USD(max)	I[11]	-404.780	0.000	35.110	0.00E+00	-40.650	0.000
12	USD(max)	1/4	-403.850	0.000	35.110	0.00E+00	-34.670	0.000
12	USD(max)	2/4	-402.930	0.000	35.110	0.00E+00	-29.530	0.000
12	USD(max)	3/4	-402.000	0.000	35.110	0.00E+00	-25.220	0.000
12	USD(max)	J[13]	-401.080	0.000	35.110	0.00E+00	-21.730	0.000
12	USD(min)	I[11]	-505.710	0.000	-110.380	0.00E+00	-79.590	0.000
12	USD(min)	1/4	-504.610	0.000	-97.350	0.00E+00	-79.970	0.000
12	USD(min)	2/4	-503.520	0.000	-84.380	0.00E+00	-82.090	0.000
12	USD(min)	3/4	-502.420	0.000	-71.480	0.00E+00	-84.210	0.000
12	USD(min)	J[13]	-501.320	0.000	-58.640	0.00E+00	-86.330	0.000
12	WSD(max)	I[11]	-290.010	0.000	21.940	0.00E+00	-33.950	0.000
12	WSD(max)	1/4	-289.320	0.000	21.940	0.00E+00	-30.280	0.000
12	WSD(max)	2/4	-288.630	0.000	21.940	0.00E+00	-27.140	0.000
12	WSD(max)	3/4	-287.950	0.000	21.940	0.00E+00	-24.510	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN・m)	Moment-y (kN・m)	Moment-z (kN・m)
12	WSD(max)	J[13]	-287.260	0.000	21.940	0.00E+00	-22.390	0.000
12	WSD(min)	I[11]	-316.070	0.000	-66.450	0.00E+00	-48.100	0.000
12	WSD(min)	1/4	-315.380	0.000	-58.390	0.00E+00	-49.470	0.000
12	WSD(min)	2/4	-314.700	0.000	-50.380	0.00E+00	-50.840	0.000
12	WSD(min)	3/4	-314.010	0.000	-42.410	0.00E+00	-52.200	0.000
12	WSD(min)	J[13]	-313.330	0.000	-34.480	0.00E+00	-53.570	0.000
13	USD(max)	I[12]	-411.020	0.000	0.130	0.00E+00	-26.220	0.000
13	USD(max)	1/4	-410.100	0.000	1.710	0.00E+00	-22.630	0.000
13	USD(max)	2/4	-409.170	0.000	3.270	0.00E+00	-19.740	0.000
13	USD(max)	3/4	-408.240	0.000	4.800	0.00E+00	-17.330	0.000
13	USD(max)	J[14]	-407.320	0.000	9.630	0.00E+00	-15.790	0.000
13	USD(min)	I[12]	-501.320	0.000	-69.150	0.00E+00	-93.310	0.000
13	USD(min)	1/4	-500.220	0.000	-56.390	0.00E+00	-93.370	0.000
13	USD(min)	2/4	-499.130	0.000	-43.690	0.00E+00	-93.550	0.000
13	USD(min)	3/4	-498.030	0.000	-31.050	0.00E+00	-93.830	0.000
13	USD(min)	J[14]	-496.930	0.000	-18.490	0.00E+00	-94.220	0.000
13	WSD(max)	I[12]	-287.260	0.000	-1.060	0.00E+00	-23.010	0.000
13	WSD(max)	1/4	-286.580	0.000	0.060	0.00E+00	-21.020	0.000
13	WSD(max)	2/4	-285.890	0.000	1.160	0.00E+00	-19.540	0.000
13	WSD(max)	3/4	-285.200	0.000	2.240	0.00E+00	-18.560	0.000
13	WSD(max)	J[14]	-284.520	0.000	4.180	0.00E+00	-18.090	0.000
13	WSD(min)	I[12]	-313.330	0.000	-40.160	0.00E+00	-58.150	0.000
13	WSD(min)	1/4	-312.640	0.000	-32.270	0.00E+00	-58.120	0.000
13	WSD(min)	2/4	-311.950	0.000	-24.430	0.00E+00	-58.160	0.000
13	WSD(min)	3/4	-311.270	0.000	-16.620	0.00E+00	-58.280	0.000
13	WSD(min)	J[14]	-310.580	0.000	-8.860	0.00E+00	-58.480	0.000
14	USD(max)	I[13]	-401.080	0.000	35.110	0.00E+00	-21.730	0.000
14	USD(max)	1/4	-400.150	0.000	35.110	0.00E+00	-19.070	0.000
14	USD(max)	2/4	-399.220	0.000	35.110	0.00E+00	-17.140	0.000
14	USD(max)	3/4	-398.300	0.000	35.110	0.00E+00	-15.920	0.000
14	USD(max)	J[15]	-397.370	0.000	35.110	0.00E+00	-15.510	0.000
14	USD(min)	I[13]	-501.320	0.000	-58.640	0.00E+00	-86.330	0.000
14	USD(min)	1/4	-500.220	0.000	-45.880	0.00E+00	-88.450	0.000
14	USD(min)	2/4	-499.130	0.000	-33.180	0.00E+00	-90.570	0.000
14	USD(min)	3/4	-498.030	0.000	-20.540	0.00E+00	-92.690	0.000
14	USD(min)	J[15]	-496.930	0.000	-7.980	0.00E+00	-94.810	0.000
14	WSD(max)	I[13]	-287.260	0.000	21.940	0.00E+00	-22.390	0.000
14	WSD(max)	1/4	-286.580	0.000	21.940	0.00E+00	-20.790	0.000
14	WSD(max)	2/4	-285.890	0.000	21.940	0.00E+00	-19.540	0.000
14	WSD(max)	3/4	-285.200	0.000	21.940	0.00E+00	-18.560	0.000
14	WSD(max)	J[15]	-284.520	0.000	21.940	0.00E+00	-18.090	0.000
14	WSD(min)	I[13]	-313.330	0.000	-34.480	0.00E+00	-53.570	0.000
14	WSD(min)	1/4	-312.640	0.000	-26.590	0.00E+00	-54.940	0.000
14	WSD(min)	2/4	-311.950	0.000	-18.750	0.00E+00	-56.300	0.000
14	WSD(min)	3/4	-311.270	0.000	-10.940	0.00E+00	-57.670	0.000
14	WSD(min)	J[15]	-310.580	0.000	-3.180	0.00E+00	-59.040	0.000
15	USD(max)	I[14]	-407.320	0.000	9.630	0.00E+00	-15.790	0.000
15	USD(max)	1/4	-406.390	0.000	14.850	0.00E+00	-15.100	0.000
15	USD(max)	2/4	-405.460	0.000	20.050	0.00E+00	-15.270	0.000
15	USD(max)	3/4	-404.540	0.000	31.770	0.00E+00	-16.290	0.000
15	USD(max)	J[16]	-403.610	0.000	43.920	0.00E+00	-18.090	0.000
15	USD(min)	I[14]	-496.930	0.000	-18.490	0.00E+00	-94.220	0.000
15	USD(min)	1/4	-495.830	0.000	-5.990	0.00E+00	-94.710	0.000
15	USD(min)	2/4	-494.740	0.000	1.860	0.00E+00	-95.310	0.000
15	USD(min)	3/4	-493.640	0.000	4.250	0.00E+00	-96.000	0.000
15	USD(min)	J[16]	-492.540	0.000	6.580	0.00E+00	-96.800	0.000
15	WSD(max)	I[14]	-284.520	0.000	4.180	0.00E+00	-18.090	0.000
15	WSD(max)	1/4	-283.830	0.000	8.340	0.00E+00	-18.120	0.000
15	WSD(max)	2/4	-283.150	0.000	12.470	0.00E+00	-18.640	0.000
15	WSD(max)	3/4	-282.460	0.000	19.860	0.00E+00	-19.660	0.000
15	WSD(max)	J[16]	-281.770	0.000	27.450	0.00E+00	-21.050	0.000
15	WSD(min)	I[14]	-310.580	0.000	-8.860	0.00E+00	-58.480	0.000
15	WSD(min)	1/4	-309.900	0.000	-1.140	0.00E+00	-58.740	0.000
15	WSD(min)	2/4	-309.210	0.000	3.670	0.00E+00	-59.080	0.000
15	WSD(min)	3/4	-308.520	0.000	5.070	0.00E+00	-59.490	0.000
15	WSD(min)	J[16]	-307.840	0.000	6.440	0.00E+00	-59.970	0.000
16	USD(max)	I[15]	-397.370	0.000	35.110	0.00E+00	-15.510	0.000
16	USD(max)	1/4	-396.450	0.000	35.110	0.00E+00	-15.900	0.000
16	USD(max)	2/4	-395.520	0.000	35.110	0.00E+00	-17.090	0.000
16	USD(max)	3/4	-394.590	0.000	37.880	0.00E+00	-19.060	0.000
16	USD(max)	J[17]	-393.670	0.000	49.090	0.00E+00	-21.660	0.000
16	USD(min)	I[15]	-496.930	0.000	-7.980	0.00E+00	-94.810	0.000
16	USD(min)	1/4	-495.830	0.000	4.260	0.00E+00	-96.930	0.000
16	USD(min)	2/4	-494.740	0.000	16.430	0.00E+00	-99.050	0.000
16	USD(min)	3/4	-493.640	0.000	21.980	0.00E+00	-101.180	0.000
16	USD(min)	J[17]	-492.540	0.000	27.010	0.00E+00	-103.300	0.000
16	WSD(max)	I[15]	-284.520	0.000	21.940	0.00E+00	-18.090	0.000
16	WSD(max)	1/4	-283.830	0.000	21.940	0.00E+00	-18.120	0.000
16	WSD(max)	2/4	-283.150	0.000	21.940	0.00E+00	-18.640	0.000
16	WSD(max)	3/4	-282.460	0.000	23.680	0.00E+00	-19.660	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
16	WSD(max)	J[17]	-281.770	0.000	30.680	0.00E+00	-21.170	0.000
16	WSD(min)	I[15]	-310.580	0.000	-3.180	0.00E+00	-59.040	0.000
16	WSD(min)	1/4	-309.900	0.000	3.960	0.00E+00	-60.410	0.000
16	WSD(min)	2/4	-309.210	0.000	11.050	0.00E+00	-61.770	0.000
16	WSD(min)	3/4	-308.520	0.000	16.580	0.00E+00	-63.140	0.000
16	WSD(min)	J[17]	-307.840	0.000	19.530	0.00E+00	-64.510	0.000
17	USD(max)	I[16]	-403.610	0.000	43.920	0.00E+00	-18.090	0.000
17	USD(max)	1/4	-402.690	0.000	56.010	0.00E+00	-20.700	0.000
17	USD(max)	2/4	-401.760	0.000	68.030	0.00E+00	-24.160	0.000
17	USD(max)	3/4	-400.830	0.000	79.980	0.00E+00	-28.470	0.000
17	USD(max)	J[18]	-399.910	0.000	91.860	0.00E+00	-33.620	0.000
17	USD(min)	I[16]	-492.540	0.000	6.580	0.00E+00	-96.800	0.000
17	USD(min)	1/4	-491.440	0.000	8.830	0.00E+00	-97.690	0.000
17	USD(min)	2/4	-490.350	0.000	11.020	0.00E+00	-98.680	0.000
17	USD(min)	3/4	-489.250	0.000	12.860	0.00E+00	-99.770	0.000
17	USD(min)	J[18]	-488.150	0.000	14.310	0.00E+00	-100.940	0.000
17	WSD(max)	I[16]	-281.770	0.000	27.450	0.00E+00	-21.050	0.000
17	WSD(max)	1/4	-281.090	0.000	35.000	0.00E+00	-22.840	0.000
17	WSD(max)	2/4	-280.400	0.000	42.520	0.00E+00	-25.150	0.000
17	WSD(max)	3/4	-279.720	0.000	49.990	0.00E+00	-27.990	0.000
17	WSD(max)	J[18]	-279.030	0.000	57.410	0.00E+00	-31.350	0.000
17	WSD(min)	I[16]	-307.840	0.000	6.440	0.00E+00	-59.970	0.000
17	WSD(min)	1/4	-307.150	0.000	7.750	0.00E+00	-60.520	0.000
17	WSD(min)	2/4	-306.470	0.000	9.030	0.00E+00	-61.130	0.000
17	WSD(min)	3/4	-305.780	0.000	10.120	0.00E+00	-61.810	0.000
17	WSD(min)	J[18]	-305.090	0.000	11.010	0.00E+00	-62.550	0.000
18	USD(max)	I[17]	-393.670	0.000	49.090	0.00E+00	-21.660	0.000
18	USD(max)	1/4	-392.740	0.000	60.240	0.00E+00	-24.920	0.000
18	USD(max)	2/4	-391.820	0.000	71.310	0.00E+00	-29.010	0.000
18	USD(max)	3/4	-390.890	0.000	82.320	0.00E+00	-33.940	0.000
18	USD(max)	J[19]	-389.960	0.000	93.270	0.00E+00	-39.690	0.000
18	USD(min)	I[17]	-492.540	0.000	27.010	0.00E+00	-103.300	0.000
18	USD(min)	1/4	-491.440	0.000	28.800	0.00E+00	-105.420	0.000
18	USD(min)	2/4	-490.350	0.000	28.800	0.00E+00	-107.800	0.000
18	USD(min)	3/4	-489.250	0.000	28.800	0.00E+00	-110.260	0.000
18	USD(min)	J[19]	-488.150	0.000	28.800	0.00E+00	-112.720	0.000
18	WSD(max)	I[17]	-281.770	0.000	30.680	0.00E+00	-21.170	0.000
18	WSD(max)	1/4	-281.090	0.000	37.650	0.00E+00	-23.180	0.000
18	WSD(max)	2/4	-280.400	0.000	44.570	0.00E+00	-25.660	0.000
18	WSD(max)	3/4	-279.720	0.000	51.450	0.00E+00	-28.630	0.000
18	WSD(max)	J[19]	-279.030	0.000	58.290	0.00E+00	-32.080	0.000
18	WSD(min)	I[17]	-307.840	0.000	19.530	0.00E+00	-64.510	0.000
18	WSD(min)	1/4	-307.150	0.000	19.530	0.00E+00	-65.880	0.000
18	WSD(min)	2/4	-306.470	0.000	19.530	0.00E+00	-67.380	0.000
18	WSD(min)	3/4	-305.780	0.000	19.530	0.00E+00	-68.910	0.000
18	WSD(min)	J[19]	-305.090	0.000	19.530	0.00E+00	-70.450	0.000
19	USD(max)	I[18]	-399.910	0.000	91.860	0.00E+00	-33.620	0.000
19	USD(max)	1/4	-398.980	0.000	103.680	0.00E+00	-39.620	0.000
19	USD(max)	2/4	-398.060	0.000	115.430	0.00E+00	-46.450	0.000
19	USD(max)	3/4	-397.130	0.000	127.120	0.00E+00	-54.110	0.000
19	USD(max)	J[20]	-396.200	0.000	138.740	0.00E+00	-62.590	0.000
19	USD(min)	I[18]	-488.150	0.000	14.310	0.00E+00	-100.940	0.000
19	USD(min)	1/4	-487.050	0.000	15.740	0.00E+00	-102.210	0.000
19	USD(min)	2/4	-485.960	0.000	17.140	0.00E+00	-103.560	0.000
19	USD(min)	3/4	-484.860	0.000	18.520	0.00E+00	-105.010	0.000
19	USD(min)	J[20]	-483.760	0.000	19.870	0.00E+00	-107.080	0.000
19	WSD(max)	I[18]	-279.030	0.000	57.410	0.00E+00	-31.350	0.000
19	WSD(max)	1/4	-278.340	0.000	64.800	0.00E+00	-35.230	0.000
19	WSD(max)	2/4	-277.660	0.000	72.150	0.00E+00	-39.630	0.000
19	WSD(max)	3/4	-276.970	0.000	79.450	0.00E+00	-44.540	0.000
19	WSD(max)	J[20]	-276.290	0.000	86.710	0.00E+00	-49.960	0.000
19	WSD(min)	I[18]	-305.090	0.000	11.010	0.00E+00	-62.550	0.000
19	WSD(min)	1/4	-304.410	0.000	11.890	0.00E+00	-63.350	0.000
19	WSD(min)	2/4	-303.720	0.000	12.730	0.00E+00	-64.210	0.000
19	WSD(min)	3/4	-303.040	0.000	13.560	0.00E+00	-65.130	0.000
19	WSD(min)	J[20]	-302.350	0.000	14.370	0.00E+00	-66.110	0.000
20	USD(max)	I[19]	-389.960	0.000	93.270	0.00E+00	-39.690	0.000
20	USD(max)	1/4	-389.040	0.000	104.140	0.00E+00	-46.260	0.000
20	USD(max)	2/4	-388.110	0.000	115.430	0.00E+00	-53.650	0.000
20	USD(max)	3/4	-387.180	0.000	127.120	0.00E+00	-61.850	0.000
20	USD(max)	J[21]	-386.260	0.000	138.740	0.00E+00	-70.860	0.000
20	USD(min)	I[19]	-488.150	0.000	28.800	0.00E+00	-112.720	0.000
20	USD(min)	1/4	-487.050	0.000	28.800	0.00E+00	-115.180	0.000
20	USD(min)	2/4	-485.960	0.000	28.800	0.00E+00	-117.630	0.000
20	USD(min)	3/4	-484.860	0.000	28.800	0.00E+00	-120.090	0.000
20	USD(min)	J[21]	-483.760	0.000	28.800	0.00E+00	-122.550	0.000
20	WSD(max)	I[19]	-279.030	0.000	58.290	0.00E+00	-32.080	0.000
20	WSD(max)	1/4	-278.340	0.000	65.090	0.00E+00	-36.010	0.000
20	WSD(max)	2/4	-277.660	0.000	72.150	0.00E+00	-40.410	0.000
20	WSD(max)	3/4	-276.970	0.000	79.450	0.00E+00	-45.290	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
20	WSD(max)	J[21]	-276.290	0.000	86.710	0.00E+00	-50.630	0.000
20	WSD(min)	I[19]	-305.090	0.000	19.530	0.00E+00	-70.450	0.000
20	WSD(min)	1/4	-304.410	0.000	19.530	0.00E+00	-71.990	0.000
20	WSD(min)	2/4	-303.720	0.000	19.530	0.00E+00	-73.520	0.000
20	WSD(min)	3/4	-303.040	0.000	19.530	0.00E+00	-75.060	0.000
20	WSD(min)	J[21]	-302.350	0.000	19.530	0.00E+00	-76.590	0.000
21	USD(max)	I[20]	-396.200	0.000	138.740	0.00E+00	-62.590	0.000
21	USD(max)	1/4	-394.550	0.000	146.990	0.00E+00	-69.160	0.000
21	USD(max)	2/4	-392.900	0.000	155.220	0.00E+00	-76.140	0.000
21	USD(max)	3/4	-391.240	0.000	163.410	0.00E+00	-83.540	0.000
21	USD(max)	J[22]	-389.590	0.000	171.560	0.00E+00	-90.440	0.000
21	USD(min)	I[20]	-483.760	0.000	19.870	0.00E+00	-107.080	0.000
21	USD(min)	1/4	-481.800	0.000	20.820	0.00E+00	-110.700	0.000
21	USD(min)	2/4	-479.840	0.000	21.760	0.00E+00	-114.490	0.000
21	USD(min)	3/4	-477.880	0.000	22.680	0.00E+00	-118.460	0.000
21	USD(min)	J[22]	-475.920	0.000	23.600	0.00E+00	-122.610	0.000
21	WSD(max)	I[20]	-276.290	0.000	86.710	0.00E+00	-49.960	0.000
21	WSD(max)	1/4	-275.060	0.000	91.870	0.00E+00	-54.140	0.000
21	WSD(max)	2/4	-273.840	0.000	97.010	0.00E+00	-58.580	0.000
21	WSD(max)	3/4	-272.610	0.000	102.130	0.00E+00	-63.270	0.000
21	WSD(max)	J[22]	-271.390	0.000	107.230	0.00E+00	-67.660	0.000
21	WSD(min)	I[20]	-302.350	0.000	14.370	0.00E+00	-66.110	0.000
21	WSD(min)	1/4	-301.120	0.000	14.940	0.00E+00	-67.370	0.000
21	WSD(min)	2/4	-299.900	0.000	15.490	0.00E+00	-70.210	0.000
21	WSD(min)	3/4	-298.670	0.000	16.030	0.00E+00	-73.190	0.000
21	WSD(min)	J[22]	-297.450	0.000	16.560	0.00E+00	-76.310	0.000
22	USD(max)	I[21]	-386.260	0.000	138.740	0.00E+00	-70.860	0.000
22	USD(max)	1/4	-384.600	0.000	146.990	0.00E+00	-77.790	0.000
22	USD(max)	2/4	-382.950	0.000	155.220	0.00E+00	-85.120	0.000
22	USD(max)	3/4	-381.300	0.000	163.410	0.00E+00	-92.860	0.000
22	USD(max)	J[30]	-379.640	0.000	171.560	0.00E+00	-101.010	0.000
22	USD(min)	I[21]	-483.760	0.000	28.800	0.00E+00	-122.550	0.000
22	USD(min)	1/4	-481.800	0.000	28.800	0.00E+00	-124.300	0.000
22	USD(min)	2/4	-479.840	0.000	28.800	0.00E+00	-126.060	0.000
22	USD(min)	3/4	-477.880	0.000	28.800	0.00E+00	-127.810	0.000
22	USD(min)	J[30]	-475.920	0.000	28.800	0.00E+00	-129.570	0.000
22	WSD(max)	I[21]	-276.290	0.000	86.710	0.00E+00	-50.630	0.000
22	WSD(max)	1/4	-275.060	0.000	91.870	0.00E+00	-54.730	0.000
22	WSD(max)	2/4	-273.840	0.000	97.010	0.00E+00	-59.070	0.000
22	WSD(max)	3/4	-272.610	0.000	102.130	0.00E+00	-63.640	0.000
22	WSD(max)	J[30]	-271.390	0.000	107.230	0.00E+00	-68.450	0.000
22	WSD(min)	I[21]	-302.350	0.000	19.530	0.00E+00	-76.590	0.000
22	WSD(min)	1/4	-301.120	0.000	19.530	0.00E+00	-77.690	0.000
22	WSD(min)	2/4	-299.900	0.000	19.530	0.00E+00	-78.790	0.000
22	WSD(min)	3/4	-298.670	0.000	19.530	0.00E+00	-79.880	0.000
22	WSD(min)	J[30]	-297.450	0.000	19.530	0.00E+00	-80.980	0.000
23	USD(max)	I[22]	-28.800	0.000	-292.120	0.00E+00	3.170	0.000
23	USD(max)	1/4	-28.800	0.000	-275.860	0.00E+00	18.300	0.000
23	USD(max)	2/4	-28.800	0.000	-259.140	0.00E+00	33.940	0.000
23	USD(max)	3/4	-28.800	0.000	-242.420	0.00E+00	48.610	0.000
23	USD(max)	J[23]	-28.800	0.000	-225.710	0.00E+00	62.320	0.000
23	USD(min)	I[22]	-219.780	0.000	-360.780	0.00E+00	-53.300	0.000
23	USD(min)	1/4	-219.780	0.000	-341.590	0.00E+00	-37.960	0.000
23	USD(min)	2/4	-219.780	0.000	-322.400	0.00E+00	-23.500	0.000
23	USD(min)	3/4	-219.780	0.000	-303.210	0.00E+00	-9.880	0.000
23	USD(min)	J[23]	-219.780	0.000	-284.020	0.00E+00	2.550	0.000
23	WSD(max)	I[22]	-19.530	0.000	-205.730	0.00E+00	1.070	0.000
23	WSD(max)	1/4	-19.530	0.000	-194.790	0.00E+00	11.440	0.000
23	WSD(max)	2/4	-19.530	0.000	-183.840	0.00E+00	21.210	0.000
23	WSD(max)	3/4	-19.530	0.000	-172.900	0.00E+00	30.380	0.000
23	WSD(max)	J[23]	-19.530	0.000	-161.960	0.00E+00	38.950	0.000
23	WSD(min)	I[22]	-137.360	0.000	-225.490	0.00E+00	-33.310	0.000
23	WSD(min)	1/4	-137.360	0.000	-213.490	0.00E+00	-22.340	0.000
23	WSD(min)	2/4	-137.360	0.000	-201.500	0.00E+00	-11.960	0.000
23	WSD(min)	3/4	-137.360	0.000	-189.500	0.00E+00	-2.190	0.000
23	WSD(min)	J[23]	-137.360	0.000	-177.510	0.00E+00	6.180	0.000
24	USD(max)	I[23]	-28.800	0.000	-225.710	0.00E+00	62.320	0.000
24	USD(max)	1/4	-28.800	0.000	-205.060	0.00E+00	77.940	0.000
24	USD(max)	2/4	-28.800	0.000	-184.410	0.00E+00	92.080	0.000
24	USD(max)	3/4	-28.800	0.000	-163.770	0.00E+00	104.780	0.000
24	USD(max)	J[24]	-28.800	0.000	-143.120	0.00E+00	116.170	0.000
24	USD(min)	I[23]	-219.780	0.000	-284.020	0.00E+00	2.550	0.000
24	USD(min)	1/4	-219.780	0.000	-260.320	0.00E+00	16.770	0.000
24	USD(min)	2/4	-219.780	0.000	-236.620	0.00E+00	29.760	0.000
24	USD(min)	3/4	-219.780	0.000	-212.920	0.00E+00	41.510	0.000
24	USD(min)	J[24]	-219.780	0.000	-189.220	0.00E+00	52.020	0.000
24	WSD(max)	I[23]	-19.530	0.000	-161.960	0.00E+00	38.950	0.000
24	WSD(max)	1/4	-19.530	0.000	-148.440	0.00E+00	48.710	0.000
24	WSD(max)	2/4	-19.530	0.000	-134.930	0.00E+00	57.550	0.000
24	WSD(max)	3/4	-19.530	0.000	-120.980	0.00E+00	65.490	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
24	WSD(max)	J[24]	-19.530	0.000	-106.170	0.00E+00	72.580	0.000
24	WSD(min)	I[23]	-137.360	0.000	-177.510	0.00E+00	6.180	0.000
24	WSD(min)	1/4	-137.360	0.000	-162.700	0.00E+00	15.760	0.000
24	WSD(min)	2/4	-137.360	0.000	-147.890	0.00E+00	24.510	0.000
24	WSD(min)	3/4	-137.360	0.000	-133.070	0.00E+00	32.420	0.000
24	WSD(min)	J[24]	-137.360	0.000	-118.260	0.00E+00	39.500	0.000
25	USD(max)	I[24]	-28.800	0.000	-143.120	0.00E+00	116.170	0.000
25	USD(max)	1/4	-28.800	0.000	-122.560	0.00E+00	126.050	0.000
25	USD(max)	2/4	-28.800	0.000	-102.000	0.00E+00	134.480	0.000
25	USD(max)	3/4	-28.800	0.000	-81.430	0.00E+00	141.460	0.000
25	USD(max)	J[25]	-28.800	0.000	-60.870	0.00E+00	146.990	0.000
25	USD(min)	I[24]	-219.780	0.000	-189.220	0.00E+00	52.020	0.000
25	USD(min)	1/4	-219.780	0.000	-165.610	0.00E+00	61.260	0.000
25	USD(min)	2/4	-219.780	0.000	-142.010	0.00E+00	69.260	0.000
25	USD(min)	3/4	-219.780	0.000	-118.400	0.00E+00	75.620	0.000
25	USD(min)	J[25]	-219.780	0.000	-94.800	0.00E+00	80.350	0.000
25	WSD(max)	I[24]	-19.530	0.000	-106.170	0.00E+00	72.580	0.000
25	WSD(max)	1/4	-19.530	0.000	-91.420	0.00E+00	78.740	0.000
25	WSD(max)	2/4	-19.530	0.000	-76.670	0.00E+00	83.990	0.000
25	WSD(max)	3/4	-19.530	0.000	-61.910	0.00E+00	88.330	0.000
25	WSD(max)	J[25]	-19.530	0.000	-47.160	0.00E+00	91.760	0.000
25	WSD(min)	I[24]	-137.360	0.000	-118.260	0.00E+00	39.500	0.000
25	WSD(min)	1/4	-137.360	0.000	-103.510	0.00E+00	45.730	0.000
25	WSD(min)	2/4	-137.360	0.000	-88.760	0.00E+00	51.120	0.000
25	WSD(min)	3/4	-137.360	0.000	-74.000	0.00E+00	55.690	0.000
25	WSD(min)	J[25]	-137.360	0.000	-59.250	0.00E+00	59.430	0.000
26	USD(max)	I[25]	-28.800	0.000	-60.870	0.00E+00	146.990	0.000
26	USD(max)	1/4	-28.800	0.000	-40.230	0.00E+00	151.070	0.000
26	USD(max)	2/4	-28.800	0.000	-19.580	0.00E+00	153.700	0.000
26	USD(max)	3/4	-28.800	0.000	1.070	0.00E+00	154.860	0.000
26	USD(max)	J[26]	-28.800	0.000	21.710	0.00E+00	154.560	0.000
26	USD(min)	I[25]	-219.780	0.000	-94.800	0.00E+00	80.350	0.000
26	USD(min)	1/4	-219.780	0.000	-71.100	0.00E+00	83.870	0.000
26	USD(min)	2/4	-219.780	0.000	-47.400	0.00E+00	86.150	0.000
26	USD(min)	3/4	-219.780	0.000	-23.700	0.00E+00	87.190	0.000
26	USD(min)	J[26]	-219.780	0.000	0.000	0.00E+00	86.990	0.000
26	WSD(max)	I[25]	-19.530	0.000	-47.160	0.00E+00	91.760	0.000
26	WSD(max)	1/4	-19.530	0.000	-32.350	0.00E+00	94.300	0.000
26	WSD(max)	2/4	-19.530	0.000	-17.540	0.00E+00	95.920	0.000
26	WSD(max)	3/4	-19.530	0.000	-2.720	0.00E+00	96.630	0.000
26	WSD(max)	J[26]	-19.530	0.000	12.090	0.00E+00	96.420	0.000
26	WSD(min)	I[25]	-137.360	0.000	-59.250	0.00E+00	59.430	0.000
26	WSD(min)	1/4	-137.360	0.000	-44.440	0.00E+00	62.350	0.000
26	WSD(min)	2/4	-137.360	0.000	-29.630	0.00E+00	64.430	0.000
26	WSD(min)	3/4	-137.360	0.000	-14.810	0.00E+00	65.680	0.000
26	WSD(min)	J[26]	-137.360	0.000	0.000	0.00E+00	66.100	0.000
27	USD(max)	I[26]	-28.800	0.000	21.710	0.00E+00	154.560	0.000
27	USD(max)	1/4	-28.800	0.000	40.960	0.00E+00	152.860	0.000
27	USD(max)	2/4	-28.800	0.000	62.590	0.00E+00	149.820	0.000
27	USD(max)	3/4	-28.800	0.000	84.210	0.00E+00	145.450	0.000
27	USD(max)	J[27]	-28.800	0.000	105.830	0.00E+00	139.750	0.000
27	USD(min)	I[26]	-219.780	0.000	0.000	0.00E+00	86.990	0.000
27	USD(min)	1/4	-219.780	0.000	20.060	0.00E+00	85.600	0.000
27	USD(min)	2/4	-219.780	0.000	40.120	0.00E+00	83.090	0.000
27	USD(min)	3/4	-219.780	0.000	60.190	0.00E+00	79.460	0.000
27	USD(min)	J[27]	-219.780	0.000	80.250	0.00E+00	74.700	0.000
27	WSD(max)	I[26]	-19.530	0.000	12.090	0.00E+00	96.420	0.000
27	WSD(max)	1/4	-19.530	0.000	25.600	0.00E+00	95.330	0.000
27	WSD(max)	2/4	-19.530	0.000	39.120	0.00E+00	93.420	0.000
27	WSD(max)	3/4	-19.530	0.000	52.630	0.00E+00	90.660	0.000
27	WSD(max)	J[27]	-19.530	0.000	66.150	0.00E+00	87.080	0.000
27	WSD(min)	I[26]	-137.360	0.000	0.000	0.00E+00	66.100	0.000
27	WSD(min)	1/4	-137.360	0.000	13.510	0.00E+00	65.680	0.000
27	WSD(min)	2/4	-137.360	0.000	27.030	0.00E+00	64.430	0.000
27	WSD(min)	3/4	-137.360	0.000	40.540	0.00E+00	62.350	0.000
27	WSD(min)	J[27]	-137.360	0.000	54.060	0.00E+00	59.430	0.000
28	USD(max)	I[27]	-28.800	0.000	105.830	0.00E+00	139.750	0.000
28	USD(max)	1/4	-28.800	0.000	127.370	0.00E+00	132.730	0.000
28	USD(max)	2/4	-28.800	0.000	148.910	0.00E+00	124.400	0.000
28	USD(max)	3/4	-28.800	0.000	170.440	0.00E+00	114.740	0.000
28	USD(max)	J[28]	-28.800	0.000	191.980	0.00E+00	103.760	0.000
28	USD(min)	I[27]	-219.780	0.000	80.250	0.00E+00	74.700	0.000
28	USD(min)	1/4	-219.780	0.000	100.230	0.00E+00	68.830	0.000
28	USD(min)	2/4	-219.780	0.000	120.210	0.00E+00	61.780	0.000
28	USD(min)	3/4	-219.780	0.000	140.190	0.00E+00	53.420	0.000
28	USD(min)	J[28]	-219.780	0.000	158.930	0.00E+00	43.940	0.000
28	WSD(max)	I[27]	-19.530	0.000	66.150	0.00E+00	87.080	0.000
28	WSD(max)	1/4	-19.530	0.000	79.610	0.00E+00	82.680	0.000
28	WSD(max)	2/4	-19.530	0.000	93.070	0.00E+00	77.450	0.000
28	WSD(max)	3/4	-19.530	0.000	106.530	0.00E+00	71.390	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
28	WSD(max)	J[28]	-19.530	0.000	119.990	0.00E+00	64.500	0.000
28	WSD(min)	I[27]	-137.360	0.000	54.060	0.00E+00	59.430	0.000
28	WSD(min)	1/4	-137.360	0.000	67.520	0.00E+00	55.690	0.000
28	WSD(min)	2/4	-137.360	0.000	80.980	0.00E+00	50.950	0.000
28	WSD(min)	3/4	-137.360	0.000	94.440	0.00E+00	44.980	0.000
28	WSD(min)	J[28]	-137.360	0.000	107.900	0.00E+00	38.170	0.000
29	USD(max)	I[28]	-28.800	0.000	191.980	0.00E+00	103.760	0.000
29	USD(max)	1/4	-28.800	0.000	213.600	0.00E+00	91.390	0.000
29	USD(max)	2/4	-28.800	0.000	236.620	0.00E+00	77.700	0.000
29	USD(max)	3/4	-28.800	0.000	260.320	0.00E+00	62.670	0.000
29	USD(max)	J[29]	-28.800	0.000	284.020	0.00E+00	46.300	0.000
29	USD(min)	I[28]	-219.780	0.000	158.930	0.00E+00	43.940	0.000
29	USD(min)	1/4	-219.780	0.000	177.180	0.00E+00	33.300	0.000
29	USD(min)	2/4	-219.780	0.000	195.420	0.00E+00	21.530	0.000
29	USD(min)	3/4	-219.780	0.000	213.670	0.00E+00	8.630	0.000
29	USD(min)	J[29]	-219.780	0.000	231.910	0.00E+00	-5.390	0.000
29	WSD(max)	I[28]	-19.530	0.000	119.990	0.00E+00	64.500	0.000
29	WSD(max)	1/4	-19.530	0.000	133.500	0.00E+00	56.760	0.000
29	WSD(max)	2/4	-19.530	0.000	147.890	0.00E+00	48.180	0.000
29	WSD(max)	3/4	-19.530	0.000	162.700	0.00E+00	38.760	0.000
29	WSD(max)	J[29]	-19.530	0.000	177.510	0.00E+00	28.510	0.000
29	WSD(min)	I[28]	-137.360	0.000	107.900	0.00E+00	38.170	0.000
29	WSD(min)	1/4	-137.360	0.000	121.410	0.00E+00	30.510	0.000
29	WSD(min)	2/4	-137.360	0.000	134.930	0.00E+00	22.010	0.000
29	WSD(min)	3/4	-137.360	0.000	148.440	0.00E+00	12.670	0.000
29	WSD(min)	J[29]	-137.360	0.000	161.960	0.00E+00	2.500	0.000
30	USD(max)	I[29]	-28.800	0.000	284.020	0.00E+00	46.300	0.000
30	USD(max)	1/4	-28.800	0.000	303.210	0.00E+00	32.070	0.000
30	USD(max)	2/4	-28.800	0.000	322.400	0.00E+00	16.960	0.000
30	USD(max)	3/4	-28.800	0.000	341.590	0.00E+00	0.980	0.000
30	USD(max)	J[30]	-28.800	0.000	360.780	0.00E+00	-15.880	0.000
30	USD(min)	I[29]	-219.780	0.000	231.910	0.00E+00	-5.390	0.000
30	USD(min)	1/4	-219.780	0.000	246.690	0.00E+00	-17.560	0.000
30	USD(min)	2/4	-219.780	0.000	261.460	0.00E+00	-30.480	0.000
30	USD(min)	3/4	-219.780	0.000	276.230	0.00E+00	-44.140	0.000
30	USD(min)	J[30]	-219.780	0.000	291.010	0.00E+00	-58.530	0.000
30	WSD(max)	I[29]	-19.530	0.000	177.510	0.00E+00	28.510	0.000
30	WSD(max)	1/4	-19.530	0.000	189.500	0.00E+00	19.600	0.000
30	WSD(max)	2/4	-19.530	0.000	201.500	0.00E+00	10.140	0.000
30	WSD(max)	3/4	-19.530	0.000	213.490	0.00E+00	0.140	0.000
30	WSD(max)	J[30]	-19.530	0.000	225.490	0.00E+00	-10.410	0.000
30	WSD(min)	I[29]	-137.360	0.000	161.960	0.00E+00	2.500	0.000
30	WSD(min)	1/4	-137.360	0.000	172.900	0.00E+00	-6.340	0.000
30	WSD(min)	2/4	-137.360	0.000	183.840	0.00E+00	-15.740	0.000
30	WSD(min)	3/4	-137.360	0.000	194.790	0.00E+00	-25.680	0.000
30	WSD(min)	J[30]	-137.360	0.000	205.730	0.00E+00	-36.160	0.000

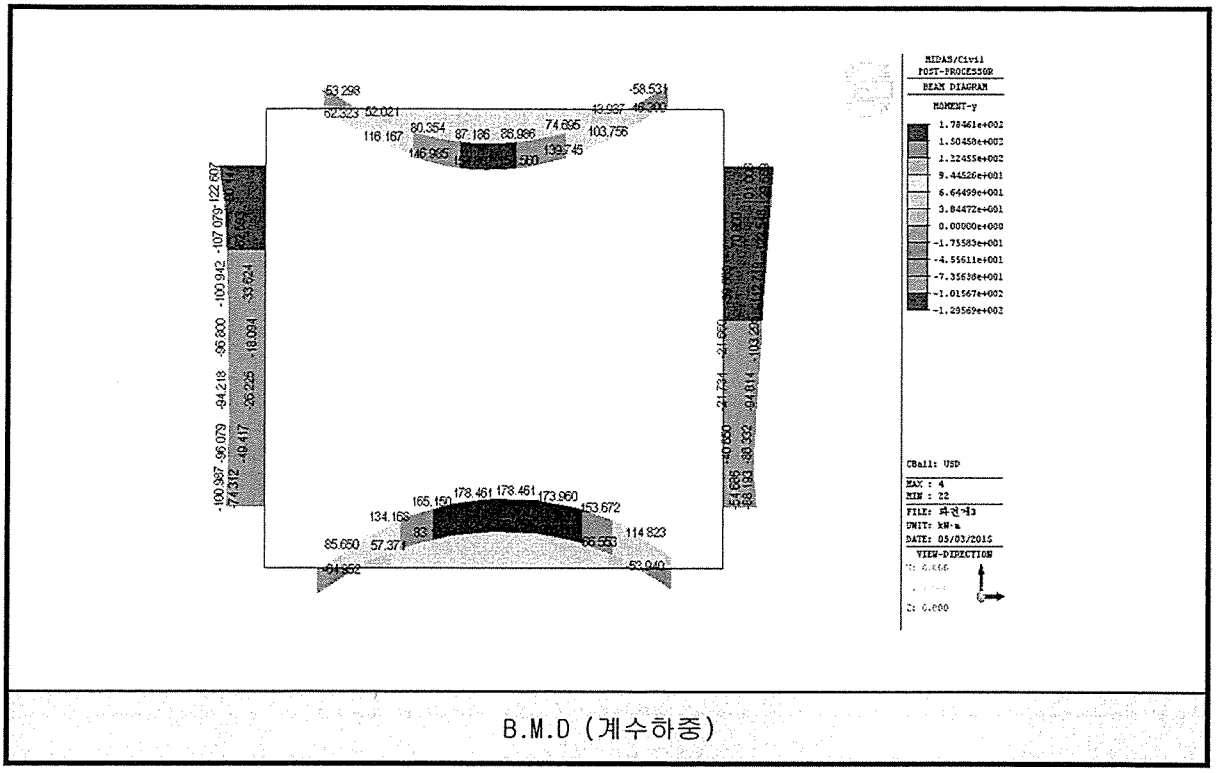
9. 단면력 요약

구분	위치	부재	극한하중			사용하중	비고
			Mu(kN · m)	Su(kN)	Pu(kN)	M(kN · m)	
상부슬래브	단부	23,30	-58.53	360.78	-	-36.16	
	중앙부	26,27	154.86	105.83	-	96.63	
벽체	상단부 (축력최대)	21.22	-89.03	171.56	-483.76	-49.96	
	상단부 (모멘트최대)	21,22	-129.57	171.56	-453.56	-80.98	
	중앙부 (축력최대)	15,16	-32.23	49.09	-496.93	-18.09	
	중앙부 (모멘트최대)	15,16	-103.30	-18.49	-467.57	-64.51	
	하단부 (축력최대)	9,10	-88.19	-158.50	-513.94	-33.95	
	하단부 (모멘트최대)	9,10	-100.99	-158.50	-494.60	-63.12	
하부슬래브	단부	1.8	-64.95	349.30	-	-38.25	
	중앙부	4,5	178.46	70.43	-	111.24	

-'전단력과 사용하중 상태에서의 모멘트는 선택 부재에서의 최대값 적용

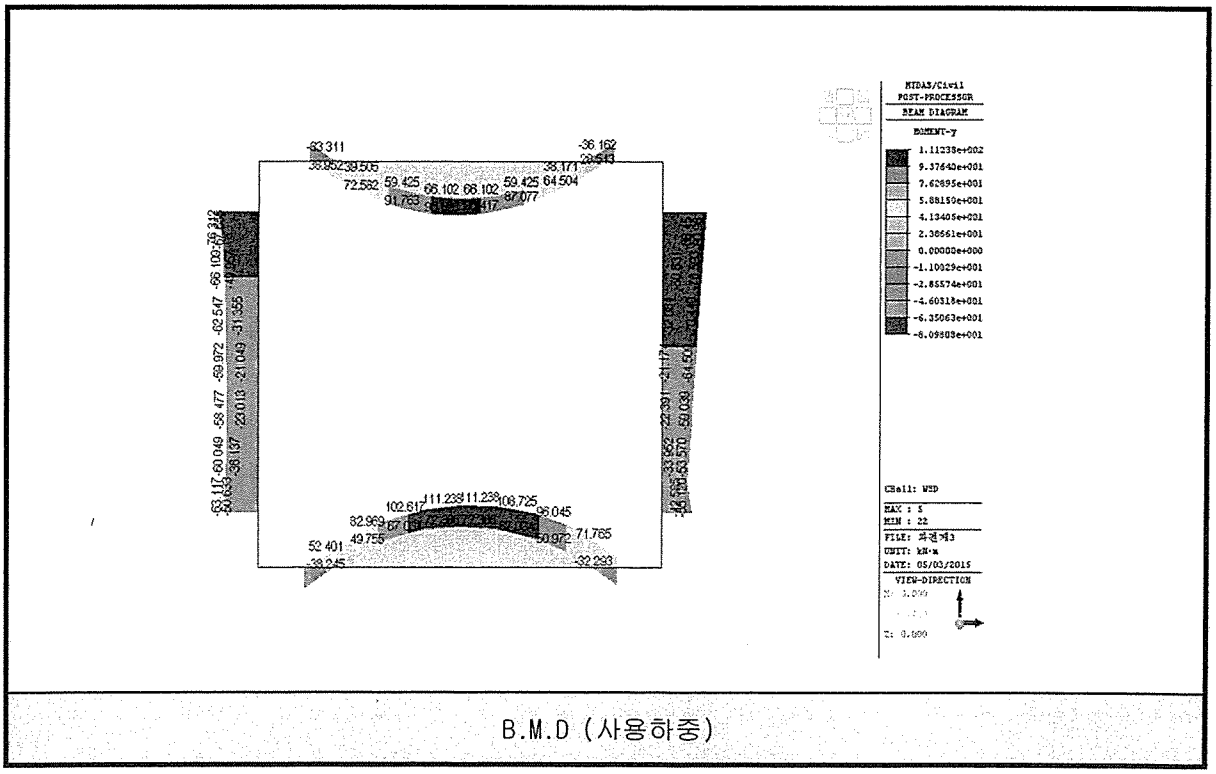
10. 단면력도

(1) 극한하중 모멘트도



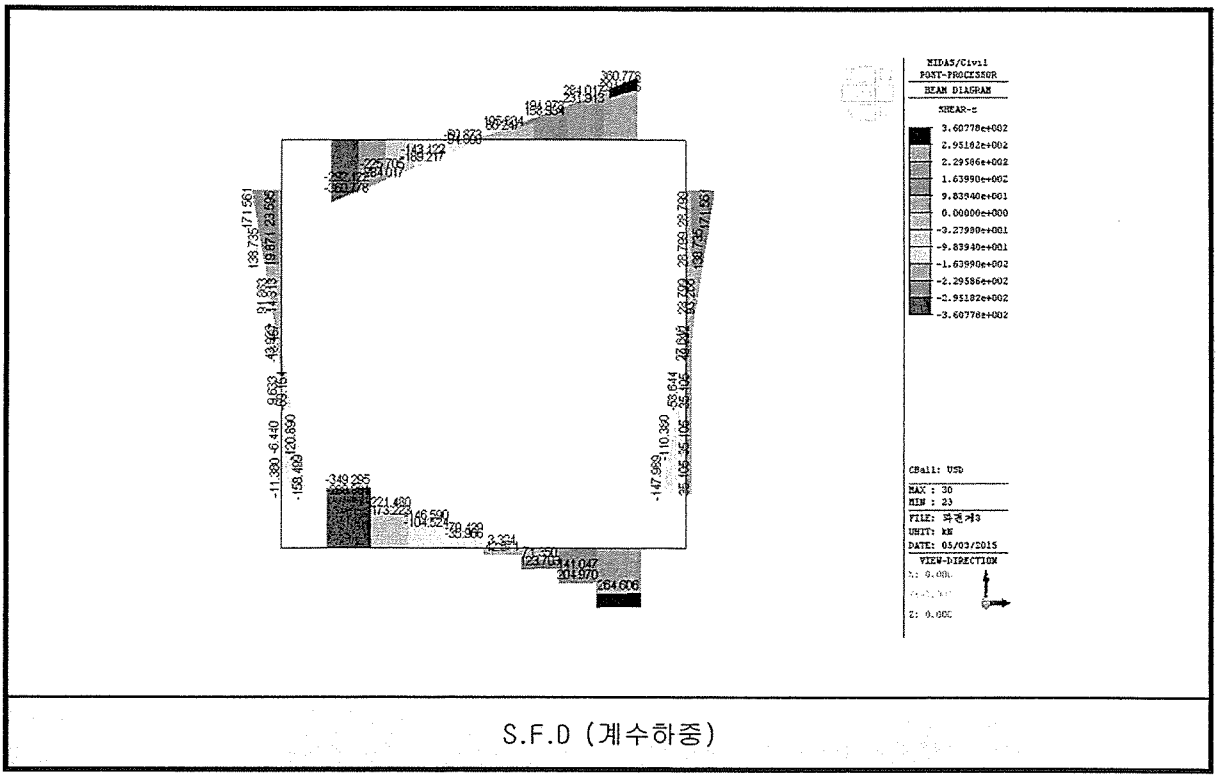
B.M.D (계수하중)

(2) 사용하중 모멘트도



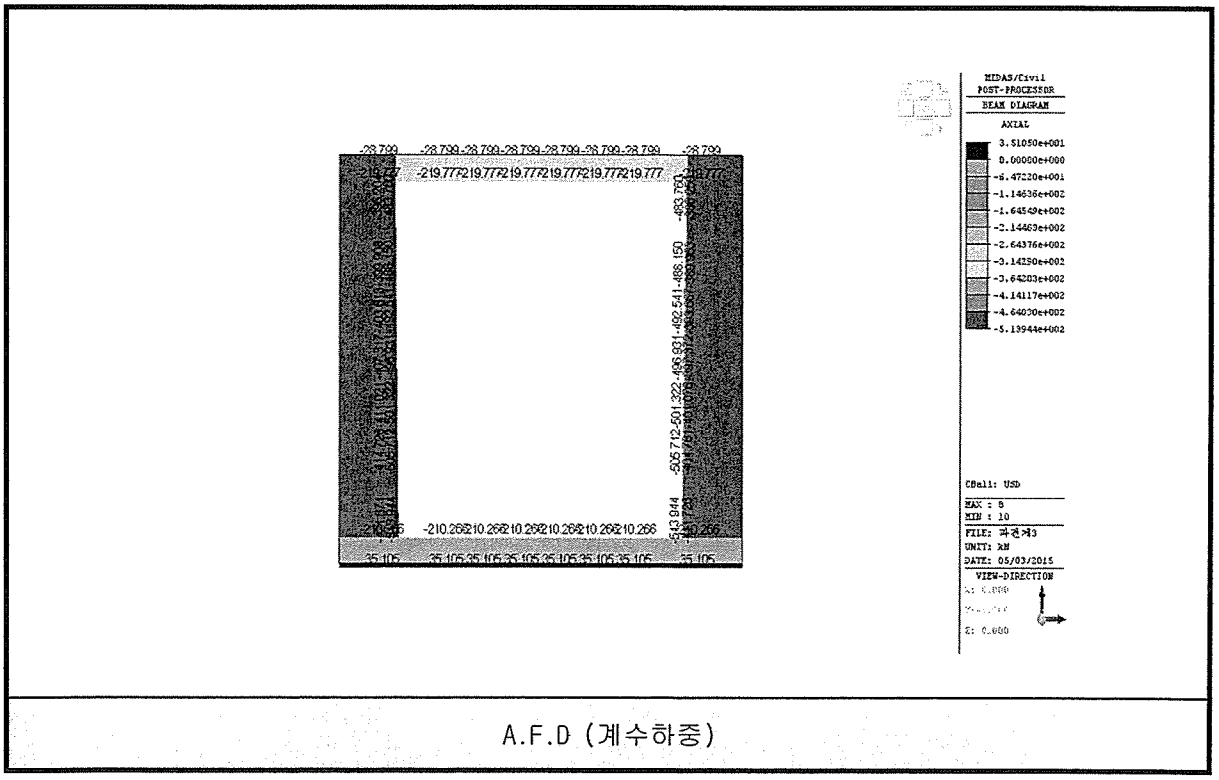
B.M.D (사용하중)

(3) 극한하중 전단력도



S.F.D (계수하중)

(4) 극한하중 축력도



A.F.D (계수하중)

11. 단면검토

① 상부 슬래브 단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	36.160
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Su (kN)
1000.0	500.0	400.0	100.0	58.530	360.780

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K.

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 409.750 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 409.750 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 546.334 mm^2 ※ As = 546.334 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 58.530 kN · m ----- ∴ O.K. [사용률 = 3.787]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (360.8 - 232.782)×10³ ×150.0 / (400.0×300.0×0.85)

= 188.232 ㎟

Use Av = 253.400 ㎟ (H13×2 EA, 간격 s = 150.0 mm)

Øv · As = Øv · Av · fy · D / (s × B) = 172.312 kN

s = 150.0 mm ≥ Min (600, 0.5D) = 150.0 mm ----- ∴ O.K.

Øv · Vn = Øv · Vc + Øv · Vs = 405.094 kN > Vu ----- ∴ O.K.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 36.16 × 1000000 / [1588.8×(400 - 83.857/3)]

= 61.173 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 61.173) - 2.5 × 92 = 1057.330 mm

300 x (210 / fs) = 300 × (210 / 61.173) = 1029.864 mm

Sa는 작은 값인 1029.864 mm 를 적용

S = 125.00 ≤ Sa (= 1029.864 mm) ----- ∴ O.K.

② 상부슬래브 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	96.630
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	154.860	105.830

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.02719 ≥ 0.004 ----- ∴ O.K.

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ---------- (1)

$a = As \times fy / (0.85 \times fck \times b)$ ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b} \times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 1492.094 mm^2

사용철근비 : Puse = As / (B × D) = 0.00530

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 1492.094 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1989.459 mm^2 ※ As = 1492.094 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 164463107 N · mm

= 164.463 kN · m > 154.860 kN · m ----- ∴ O.K. [사용률 = 1.062]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 96.63 × 1000000 / [1588.8×(300 - 71.32/3)]

= 220.180 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 220.18) - 2.5 × 92 = 127.662 mm

300 x (210 / fs) = 300 × (210 / 220.18) = 286.130 mm

Sa는 작은 값인 127.662 mm 를 적용

S = 125.00 ≤ Sa (= 127.662 mm) ----- ∴ O.K.

③ 하부슬래브 단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	38.250
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	550.0	450.0	100.0	64.950	349.300

전단설계시 단면의 유효높이 ds = 350.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.04229 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ---------- (1)

$a = As \times fy / (0.85 \times fck \times b)$ ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b} \times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 403.767 mm^2

사용철근비 : Puse = As / (B × D) = 0.00353

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 403.767 mm^2 As(min) = 1575.000 mm^2

4/3×As(req) = 538.356 mm^2 ※ As = 538.356 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 250258307 N · mm

= 250.258 kN · m > 64.950 kN · m ----- ∴ O.K [사용률 = 3.853]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 271.579 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (349.3 - 271.579)×10³ ×150.0 / (400.0×350.0×0.85)

= 97.968 ㎟

Use Av = 253.400 ㎟ (H13×2 EA, 간격 s = 150.0 mm)

Øv · As = Øv · Av · fy · D / (s × B) = 201.031 kN

s = 150.0 mm < Min (600, 0.5D) = 175.0 mm ----- ∴ O.K

Øv · Vn = Øv · Vc + Øv · Vs = 472.610 kN > Vu ----- ∴ O.K

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 38.25 × 1000000 / [1588.8×(450 - 89.542/3)]

= 57.300 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×450/(7×1588.8)]

= 89.542 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 57.3) - 2.5 × 92 = 1144.344 mm

300 x (210 / fs) = 300 × (210 / 57.3) = 1099.475 mm

Sa는 작은 값인 1099.475 mm 를 적용

S = 125.00 ≤ Sa (= 1099.475 mm) ----- ∴ O.K.

④ 하부슬래브 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	111.240
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	450.0	350.0	100.0	178.460	70.430

전단설계시 단면의 유효높이 ds = 350.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03222 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 1464.405 mm^2

사용철근비 : Puse = As / (B × D) = 0.00454

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 1464.405 mm^2 As(min) = 1225.000 mm^2

4/3×As(req) = 1952.540 mm^2 ※ As = 1464.405 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 193061507 N · mm

= 193.062 kN · m > 178.460 kN · m ----- ∴ O.K [사용률 = 1.082]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 271.579 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 111.24 × 1000000 / [1588.8×(350 - 77.81/3)]

= 216.054 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×350/(7×1588.8)]

= 77.810 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 216.054) - 2.5 × 92 = 134.493 mm

300 x (210 / fs) = 300 × (210 / 216.054) = 291.594 mm

Sa는 작은 값인 134.493 mm 를 적용

S = 125.00 ≤ Sa (= 134.493 mm) ----- ∴ O.K.

⑤ 벽체 상단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	80.980
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	129.570	171.560

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ———————— (1)

$a = As \times fy / (0.85 \times fck \times b)$ ———————— (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2 \times 0.85 \times fck \times b} \times As^2 - fy \times d \times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 916.253 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 916.253 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 1221.670 mm^2 ※ As = 1221.670 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 129.570 kN · m ----- ∴ O.K [사용률 = 1.711]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

1/2 x Φv x Vc = 116.391 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 80.98 × 1000000 / [1588.8×(400 - 83.857/3)]

= 136.997 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 136.997) - 2.5 × 92 = 344.831 mm

300 x (210 / fs) = 300 × (210 / 136.997) = 459.865 mm

Sa는 작은 값인 344.831 mm 를 적용

S = 125.00 ≤ Sa (= 344.831 mm) ----- ∴ O.K.

⑥ 벽체 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	64.510
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	103.300	18.490

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.02719 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ---------- (1)

$a = As \times fy / (0.85 \times fck \times b)$ ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b} \times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 981.676 mm^2

사용철근비 : Puse = As / (B × D) = 0.00530

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 981.676 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1308.901 mm^2 ※ As = 1050.000 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 164463107 N · mm

= 164.463 kN · m > 103.300 kN · m ----- ∴ O.K [사용률 = 1.592]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 64.51 × 1000000 / [1588.8×(300 - 71.32/3)]

= 146.992 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 146.992) - 2.5 × 92 = 305.745 mm

300 x (210 / fs) = 300 × (210 / 146.992) = 428.596 mm

Sa는 작은 값인 305.745 mm 를 적용

S = 125.00 ≤ Sa (= 305.745 mm) ----- ∴ O.K.

⑦ 벽체 하단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	63.120
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	100.990	158.500

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ———————— (1)

$a = As \times fy / (0.85 \times fck \times b)$ ———————— (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b} \times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 711.238 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 711.238 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 948.318 mm^2 ※ As = 948.318 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 100.990 kN · m ----- ∴ O.K [사용률 = 2.195]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

1/2 x Φv x Vc = 116.391 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 63.12 × 1000000 / [1588.8×(400 - 83.857/3)]

= 106.782 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 106.782) - 2.5 × 92 = 507.482 mm

300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 mm

Sa는 작은 값인 507.482 mm 를 적용

S = 125.00 ≤ Sa (= 507.482 mm) ----- ∴ O.K.

⑤ 벽체 상단부 - Pmax 일 경우

설계축력	:	Pu	=	483.76	(kN) ,	설계모멘트	:	Mu	=	89.03	(kN · m)
설계전단력	:	Vu	=	171.56	(kN) ,	사용 모멘트	:	M	=	49.96	(kN.m)
부 재 높 이	:	H	=	500.0	(mm) ,	f_y =	400	MPa	f_{ck} =	30	MPa
폭	:	b	=	1000	(mm) ,	ϕ_f =	0.90	,	ϕ_v =	0.85	
유효높이(휨)	:	d	=	400.0	(mm) ,	d' =	100	(mm),	ϕc =	0.70	
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1 =	0.836	,	e =	184.04	(mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

$\sum$ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 249.482 mm , a = k1 x c = 208.567 mm 사용

fs = 600 x (400.000 - 249.482) / 249.482 = 361.9917 Mpa (fs ≤ fy)

fs' = 600 x (249.482 - 100.000) / 249.482 = 359.5021 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 208.567 x 1000 = 5230867.543 N

Cs = 794.400 x (359.502 - 0.836 x 30) = 265664.895 N

Ts = 1588.800 x 361.992 = 575132.425 N

Pn = 5230867.543 + 265664.895 - 575132.425 = 4921400.013 N

Mn' = 5230867.543 x (400.0 - 208.567 / 2) + 265664.895 x (400.0 - 100.0)

= 1626552561.153 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 330.505114 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4921400.013

ΦPn = 3444980.009 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4921400.013 = 3444.980 kN ≥ Pu = 483.760 kN ------ O.K!!!

ΦMn = ΦPn x 184.038 = 634.006 kN.m ≥ Mu = 89.030 kN.m ------ O.K!!!

○ 전단력 검토

ϕVc = 0.85 × 1/6 × (1 + Pu / (14 x Ag)) x √fck × bo × d = 248869.324 N

여기서 , 1/2ϕVc< Vu ≤ ϕVc 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 49.96 × 1000000 / [1588.8×(400 - 83.857/3)]

= 84.519 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 ㎜

사용철근량 = 1588.800 ㎟ (철근도심 : 100 ㎜)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 ㎜

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(㎜)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 84.519) - 2.5 × 92 = 701.742 ㎜

300 x (210 / fs) = 300 × (210 / 84.519) = 745.394 ㎜

Sa는 작은 값인 701.742 ㎜ 를 적용

S = 125.00 ≤ Sa (= 701.742 ㎜) ----- ∴ O.K.

⑥ 벽체 상단부 - Mmax 일 경우

설계축력	:	Pu	=	453.56	(kN) ,	설계모멘트	:	Mu	=	129.57	(kN·m)	
설계전단력	:	Vu	=	171.56	(kN) ,	사용 모멘트	:	M	=	80.98	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	285.67 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 138.006 mm , a = k1 x c = 115.373 mm 사용

fs = 600 x (400.000 - 138.006) / 138.006 = 400 Mpa (fs ≤ fy)

fs' = 600 x (138.006 - 100.000) / 138.006 = 165.235 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 115.373 x 1000 = 2893546.855 N

Cs = 794.400 x (165.235 - 0.836 x 30) = 111339.159 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2893546.855 + 111339.159 - 635520.000 = 2369366.013 N

Mn' = 2893546.855 x (400.0 - 115.373 / 2) + 111339.159 x (400.0 - 100.0)

= 1023902359.529 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 432.140915 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 2369366.013

ΦPn = 1658556.209 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2369366.013 = 1658.556 kN ≥ Pu = 453.560 kN ------ O.K!!!

ΦMn = ΦPn x 285.673 = 473.805 kN.m ≥ Mu = 129.570 kN.m ------ O.K!!!

○ 전단력 검토

ϕVc = 0.85 × 1/6 × (1 + Pu / (14 x Ag)) x √fck × bo × d = 247865.036 N

여기서 , 1/2ϕVc< Vu ≤ ϕVc 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 80.98 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 136.997 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 136.997) - 2.5 × 92 = 344.831 mm

300 x (210 / fs) = 300 × (210 / 136.997) = 459.865 mm

Sa는 작은 값인 344.831 mm 를 적용

S = 125.00 ≤ Sa (= 344.831 mm) ----- ∴ O.K.

⑦ 벽체 중앙부 - Pmax 일 경우

설계축력	:	Pu	=	496.93	(kN) ,	설계모멘트	:	Mu	=	32.23	(kN · m)
설계전단력	:	Vu	=	49.09	(kN) ,	사용 모멘트	:	M	=	18.09	(kN.m)
부 재 높 이	:	H	=	400.0	(mm) ,	f_y =	400	MPa	f_{ck} =	30	MPa
폭	:	b	=	1000	(mm) ,	ϕ_f =	0.90	,	ϕ_v =	0.85	
유효높이(휨)	:	d	=	300.0	(mm) ,	d' =	100	(mm),	ϕc =	0.70	
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1 =	0.836	,	e =	64.86	(mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0060) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 400.00 x 1000.00 = 10032000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (10032000.00 x 200.0 + 635520.0 x 100.0 + 317760.0 x 300.0) / 10985280.000

= 197.107 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 180.000 mm, ab = k1 x cb = 150.480 mm

fs' = 600 x (180.000 - 100.0) / 180.0(= 266.6667 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 150.480 x 1000 = 3774038.400 N

Cs = As' x (fs' - 0.9 x fck) = 190391.200 N

Ts = As x fs = 635520.000 N

Pb = 3774038.400 + 190391.200 - 635520.000 = 3328909.600 N

Mb = 3774038.400x(300.0-150.480/2)+190391.200x(300.0-100.0)-3328909.600x(197.107-100.0)

= 563069348.351 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 169.145 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 329.377 mm , a = k1 x c = 275.359 mm 사용

fs = 600 x (300.000 - 329.377) / 329.377 = -53.5139 Mpa (fs ≤ fy)

fs' = 600 x (329.377 - 100.000) / 329.377 = 400 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 275.359 x 1000 = 6906010.130 N

Cs = 794.400 x (400.000 - 0.836 x 30) = 297836.448 N

Ts = 1588.800 x -53.514 = -85022.917 N

Pn = 6906010.130 + 297836.448 - -85022.917 = 7288869.496 N

Mn' = 6906010.130 x (300.0 - 275.359 / 2) + 297836.448 x (300.0 - 100.0)

= 1180553424.391 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 161.965631 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 7288869.496

ΦPn = 5102208.647 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 7288869.496 = 5102.209 kN ≥ Pu = 496.930 kN ——— O.K!!!

ΦMn = ΦPn x 64.858 = 330.920 kN.m ≥ Mu = 32.230 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 253438.587 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 18.09 × 1000000 / [1588.8×(300 - 71.32/3)]

= 41.220 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2\times1000\times300/(7\times1588.8)]}$

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 41.22) - 2.5 × 92 = 1680.50 mm

300 x (210 / fs) = 300 × (210 / 41.22) = 1528.40 mm

Sa는 작은 값인 1528.40 mm 를 적용

S = 125.00 ≤ Sa (= 1528.399 mm) ----- ∴ O.K.

⑧ 벽체 중앙부 - Mmax 일 경우

설계축력	:	Pu	=	467.57	(kN) ,	설계모멘트	:	Mu	=	103.30	(kN · m)
설계전단력	:	Vu	=	18.49	(kN) ,	사용 모멘트	:	M	=	64.51	(kN.m)
부 재 높 이	:	H	=	400.0	(mm) ,	f_y	=	400	MPa	f_{ck} =	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v =	0.85
유효높이(휨)	:	d	=	300.0	(mm) ,	d'	=	100	(mm),	ϕc =	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e =	220.93 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

$\sum$ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0060) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 400.00 x 1000.00 = 10032000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (10032000.00 x 200.0 + 635520.0 x 100.0 + 317760.0 x 300.0) / 10985280.000

= 197.107 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 180.000 mm, ab = k1 x cb = 150.480 mm

fs' = 600 x (180.000 - 100.0) / 180.0(= 266.6667 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 150.480 x 1000 = 3774038.400 N

Cs = As' x (fs' - 0.9 x fck) = 190391.200 N

Ts = As x fs = 635520.000 N

Pb = 3774038.400 + 190391.200 - 635520.000 = 3328909.600 N

Mb = 3774038.400x(300.0-150.480/2)+190391.200x(300.0-100.0)-3328909.600x(197.107-100.0)

= 563069348.351 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 169.145 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 128.055 mm , a = k1 x c = 107.054 mm 사용

fs = 600 x (300.000 - 128.055) / 128.055 = 400 Mpa (fs ≤ fy)

fs' = 600 x (128.055 - 100.000) / 128.055 = 131.451 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 107.054 x 1000 = 2684911.722 N

Cs = 794.400 x (131.451 - 0.836 x 30) = 84501.093 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2684911.722 + 84501.093 - 635520.000 = 2133892.815 N

Mn' = 2684911.722 x (300.0 - 107.054 / 2) + 84501.093 x (300.0 - 100.0)

= 678658604.562 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 318.036888 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 2133892.815

ΦPn = 1493724.971 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2133892.815 = 1493.725 kN ≥ Pu = 467.570 kN ------ O.K!!!

ΦMn = ΦPn x 220.929 = 330.008 kN.m ≥ Mu = 103.300 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 252218.144 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 64.51 \times 1000000 / [1588.8 \times (300 - 71.32/3)]$

= 146.992 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 300/(7 \times 1588.8)]}$

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 146.992) - 2.5 × 92 = 305.75 mm

300 x (210 / fs) = 300 × (210 / 146.992) = 428.60 mm

Sa는 작은 값인 305.75 mm 를 적용

S = 125.00 ≤ Sa (= 305.745 mm) ----- ∴ O.K.

⑨ 벽체 하단부 - Pmax 일 경우

설계축력	:	Pu	=	513.94	(kN) ,	설계모멘트	:	Mu	=	88.19	(kN · m)	
설계전단력	:	Vu	=	158.50	(kN) ,	사용 모멘트	:	M	=	33.95	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	171.60 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

$\sum$ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 262.694 mm , a = k1 x c = 219.612 mm 사용

fs = 600 x (400.000 - 262.694) / 262.694 = 313.6105 Mpa (fs ≤ fy)

fs' = 600 x (262.694 - 100.000) / 262.694 = 371.5974 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 219.612 x 1000 = 5507873.575 N

Cs = 794.400 x (371.597 - 0.836 x 30) = 275273.400 N

Ts = 1588.800 x 313.611 = 498264.382 N

Pn = 5507873.575 + 275273.400 - 498264.382 = 5284882.592 N

Mn' = 5507873.575 x (400.0 - 219.612 / 2) + 275273.400 x (400.0 - 100.0)

= 1680933377.477 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 318.063481 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 5284882.592

ΦPn = 3699417.815 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 5284882.592 = 3699.418 kN ≥ Pu = 513.940 kN ——— O.K!!!

ΦMn = ΦPn x 171.596 = 634.805 kN.m ≥ Mu = 88.190 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 249872.948 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 33.95 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 57.434 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 57.434) - 2.5 × 92 = 1141.13 mm

300 x (210 / fs) = 300 × (210 / 57.434) = 1096.90 mm

Sa는 작은 값인 1096.90 mm 를 적용

S = 125.00 ≤ Sa (= 1096.904 mm) ----- ∴ O.K.

⑩ 벽체 하단부 - Mmax 일 경우

설계축력	:	Pu	=	494.60	(kN) ,	설계모멘트	:	Mu	=	100.99	(kN · m)
설계전단력	:	Vu	=	158.50	(kN) ,	사용 모멘트	:	M	=	63.12	(kN.m)
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck} =	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v =	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc =	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e =	204.19 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 224.848 mm , a = k1 x c = 187.973 mm 사용

fs = 600 x (400.000 - 224.848) / 224.848 = 400 Mpa (fs ≤ fy)

fs' = 600 x (224.848 - 100.000) / 224.848 = 333.1534 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 187.973 x 1000 = 4714366.276 N

Cs = 794.400 x (333.153 - 0.836 x 30) = 244733.477 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 4714366.276 + 244733.477 - 635520.000 = 4323579.753 N

Mn' = 4714366.276 x (400.0 - 187.973 / 2) + 244733.477 x (400.0 - 100.0)

= 1516079444.633 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 350.652775 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4323579.753

ΦPn = 3026505.827 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4323579.753 = 3026.506 kN ≥ Pu = 494.600 kN ——— O.K!!!

ΦMn = ΦPn x 204.185 = 617.968 kN.m ≥ Mu = 100.990 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 249229.804 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 63.12 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 106.782 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 ㎜

사용철근량 = 1588.800 ㎟ (철근도심 : 100 ㎜)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 ㎜

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(㎜)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 106.782) - 2.5 × 92 = 507.482 ㎜

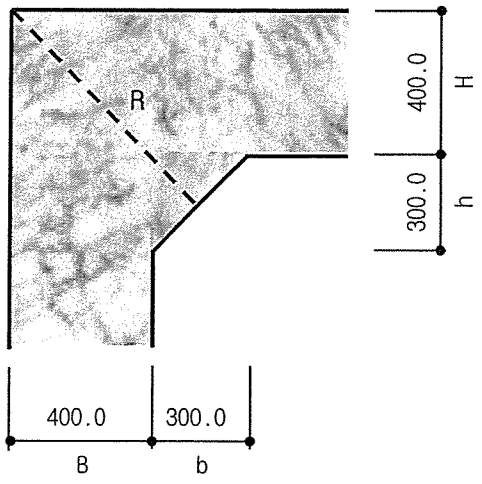
300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 ㎜

Sa는 작은 값인 507.482 ㎜ 를 적용

S = 125.00 ≤ Sa (= 507.482 ㎜) ------ ∴ O.K.

12. 우각부 검토

1) 상부 슬래브



CON'C 설계기준강도(fck) : 30.0 MPa

CON'C 허용휨인장응력(fta) = 0.13√fck Mpa

: 0.712 MPa

철근 항복강도(fy) : 400.0 MPa

철근 허용응력 : 180.0 MPa

사용 모멘트 Mo : 80.98 kN · m

$R = \sqrt{2} \times b / (b+h) \times [B + h + (H \times h/b)]$

$= 777.82$ mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 80980000}{777.82^2 \times 1000.0} = 0.669 \text{ MPa}$$

f_{tmax} = 0.669 MPa < f_{ta} = 0.712 MPa 이므로 보강철근 필요없음.

② 소요 철근량

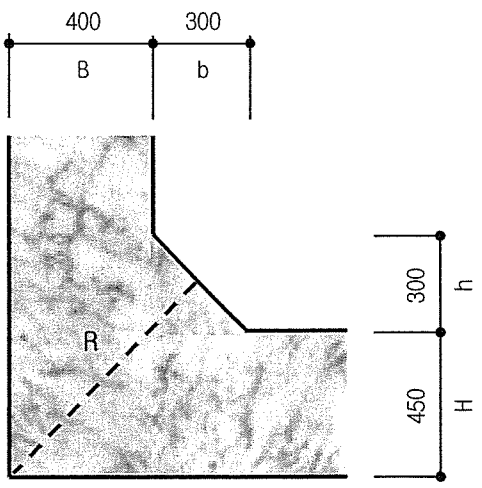
외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 0}{777.82 \times 180.0} = 0.00 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 0.00 - 794.4 = -794.40 ㎟

----- 우각부 보강철근 필요없음

2) 하부 슬래브



CON'C 설계기준강도(fck)	:	30.0	MPa
CON'C 허용휨인장응력(fta) = 0.13√fck Mpa			
	:	0.712	MPa
철근 항복강도(fy)	:	400.0	MPa
철근 허용응력	:	180.0	MPa
사용 모멘트 Mo	:	63.12	kN·m

R = √ (B2 + H2) = 602.08 mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 63120000}{602.08^{\,2} \times 1000.0} = 0.871 \text{ MPa}$$

f_{tmax} = 0.871 MPa > f_{ta} = 0.712 MPa 이므로 보강철근 필요.

② 소요 철근량

외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 63120000}{602.08 \times 180.0} = 1164.85 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 1164.85 - 794.4 = 370.45 ㎟

----- 우각부 보강철근 필요

외측인장에 대한 보강 사용철근량(As)

As = H16 @ 250 - 1 단 = 794.40 ㎟

Asf = 370.45 ㎟ < As = 794.40 ㎟ ----- ∴ O.K.

13. 배력철근 검토

1) 구조상세 - 철도설계기준(노반편) p.5-19

다. 종방향으로 영향을 받는 경우로써 상부슬래브, 하부슬래브와 벽체에 있어서 종방향 최소철근량은 복토의 깊이가 3.0 m 이하인 경우에는 콘크리트 단면적의 0.4%, 복토가 3.0m 이상인 경우에는 복토 깊이가 30m인 경우의 사용량인 1.0%를 기준으로 선형변화량을 사용하되, 종방향 철근량은 주철근량 미만이어야 한다.

라. 단단한 지반 위에 놓인 경우와 말뚝기초로 지지되는 경우로써 종방향 부등침하가 우려되지 않은 경우에는 다.항의 기준을 적용하지 않는다. 따라서 어느 정도 견고한 지반위에 놓이는 일반적인 구교로써 적적한 신축이음매가 설치되어 상세한 종방향해석이 필요하지 않다고 판단되는 경우 종방향 철근량은 슬래브의 경우 콘크리트단면적의 0.25%, 벽체의 경우 0.3%를 적용한다.

마. 배력철근은 단위폭주변의 인장 주철근량의 1/5 이상으로 하여 종단방향에 계산외의 응력이 발생하는 것을 고려하여야 한다.

2) 배력철근의 최소 철근비

슬래브의 배력 철근비 = 0.25 %　　벽체의 배력 철근비 = 0.30 %

① 상부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 400.0 × 0.25 = 1000.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1000.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

② 하부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 450.0 × 0.25 = 1125.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1125.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

③ 벽체

배력철근 최소 철근비 (Asreq) = 1,000.0 × 400.0 × 0.30 = 1200.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1200.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

14. 사용성검토

1) 상부슬래브 최소 두께

1.2(L+3)/30 = 1.2 × (2.520 + 3) / 30 = 220.8 mm

상부슬래브 두께 = 400.0 mm

Tuse = 400.0 mm > Tmin = 220.8 mm ----- ∴ O.K.

2) 철근 피로검토

피로응력한계 : 사용하중하에서 활하중과 충격에 의해 야기되는 직선철근의 최대 인장응력과 최소 응력 상이의 범위는 다음 값을 초과할수 없다.

$f_f = 165 - 0.33fmin$

여기서, f_f : 응력범위(Mpa)

fmin : 최소응력 수준으로 인장은 정(+), 압축은 부(-)의 값(Mpa)

① 상부슬래브 단부

2.52 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 3.053 kN · m Mmin = -0.562 kN · m

- 사용철근량 = H16 × 8ea = 1588.800 ㎟

n = 7

p = As / bd = 1588.80 / (1000 × 400) = 0.00397

$K = -np + \sqrt{\{(np)^2 + 2np\}}$

$= -7 \times 0.00397 + \sqrt{\{ (7 \times 0.00397)^2 + 2 \times 7 \times 0.00397 \}}$

= 0.210

J = 1 - K / 3 = 1 - 0.210 / 3 = 0.930

$$fs\ max = \frac{M}{As \times j \times d} = \frac{3.053 \times 10^6}{1588.80 \times 0.930 \times 400} = 5.160 \text{ Mpa}$$

$$fs\ min = \frac{-0.562 \times 10^6}{1588.80 \times 0.930 \times 400} = -1 \text{ Mpa}$$

Δf = fs max - fs min = 6.111 Mpa

$f_f = 165 - 0.33fmin$

= 165 - 0.33 × -0.95 = 165.314 Mpa > 6.111 Mpa O.K.

② 상부슬래브 중앙부

2.52 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 9.123 kN · m Mmin = 8.451 kN · m

- 사용철근량 = H16 × 8ea = 1588.800 ㎟

n = 7

p = As / bd = 1588.80 / (1000 × 300) = 0.00530

$K = -np + \sqrt{\{(np)^2 + 2np\}}$

$= -7 \times 0.0053 + \sqrt{\{ (7 \times 0.0053)^2 + 2 \times 7 \times 0.0053 \}}$

= 0.238

J = 1 - K / 3 = 1 - 0.238 / 3 = 0.921

$$fs\ max = \frac{M}{As \times j \times d} = \frac{9.123 \times 10^6}{1588.80 \times 0.921 \times 300} = 20.790\ Mpa$$

$$fs\ min = \frac{8.451 \times 10^6}{1588.80 \times 0.921 \times 300} = 19\ Mpa$$

Δf = fs max - fs min = 1.534 Mpa

$f_f = 165 - 0.33 fmin$

= 165 - 0.33 × 19.26 = 158.645 Mpa > 1.534 Mpa O.K.

15. 기초지지력 검토

1) 구체자중

-	2.800	x	0.450	x	24.500				=	30.870	kN/m
-	2.800	x	0.400	x	24.500				=	27.440	kN/m
-	2.000	x	0.400	x	24.500				=	19.600	kN/m
-	2.000	x	0.400	x	24.500				=	19.600	kN/m
-	0.300	x	0.300	x	1/2	x	4	x 24.500	=	4.410	kN/m
								∴ Total	=	101.920	kN/m

101.920 / 2.800 = 36.400 kN/m²

2) 상부연직하중

= 208.24 kN/m²

3) 활하중

= 21.019 kN/m²

4) 최대 지반 반력

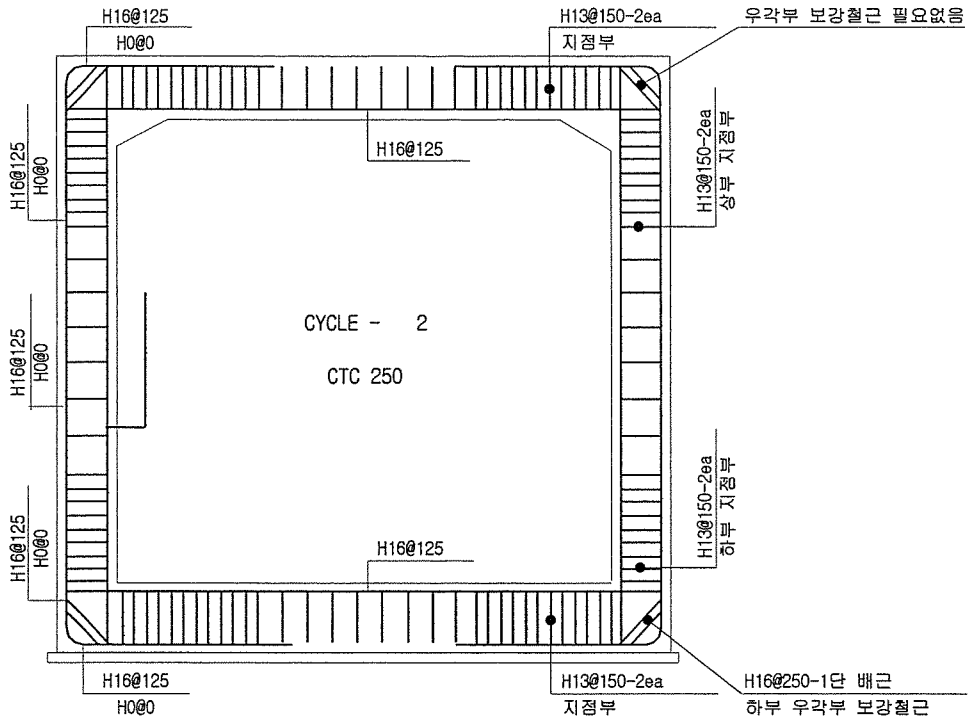
Qmax = 36.400 + 208.240 + 21.019

= 265.659 kN/m²

5) 지지력 검토

Qmax = 265.659 kN/m² < 300.00 kN/m² --- ∴ O.K.

16. 주철근 조립도



▶ 배력철근

- 상부 지점부 : H13, 인장측:150, 압축측:300
- 하부 지점부 : H13, 인장측:150, 압축측:300
- 벽체부 : H13, 인장측:150, 압축측:300

U-Type 개거 2.0x2.4

구조계산서

목 차

1. 설계개요 및 조건

1.1 설계개요

1.2 설계방법

1.3 일반사항

1.4 설계하중

1.5 참고문헌

2. 단면가정

3. 구조해석 모델링

3.1 해석모형

3.2 단면제원

3.3 지반반력계수 산정

4. 하중산정

5. 하중조합

6. 구조해석 결과

6.1 부재력도

6.2 부재력 집계

7. 단면설계

7.1 하부슬래브

7.2 좌측벽체

7.3 우측벽체

7.4 배력철근

7.5 우각부

8. 사용성검토

9. 지지력 검토

■ 해석결과 요약

* 기초 검토

구분	q_{max}(kN/m^2)	Qu(kN)	qa(kN/m^2)	비 고
직접기초	34.840	2240.680	287.267	∴ O.K

* 휨 검토

구분		B(m)	H(m)	dc(m)	헌치(m)	Mu(kn.m)	ΦMn(kn.m)	BENDING Bar(mm)	휨검토		최소철근비 검토	주철근간격 검토
									판정	S.F		
하부슬래브	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		59.672	90.378	H 16 @ 150	O.K	1.515	O.K	O.K
좌측 벽체	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		26.358	46.427	H 16 @ 300	O.K	1.761	O.K	O.K
우측 벽체	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		26.383	46.427	H 16 @ 300	O.K	1.760	O.K	O.K

* 전단검토

구분		ΦVc	Vu	판정	전단철근				전단검토	
					사용철근		다리수	간격	판정	S.F
하부슬래브	단부	155.188	30.052	전단철근 불필요	H 0	× 0	@	0	O.K	-
	중앙부	-	-	-	H -	× -	@	-	-	-
좌측 벽체	단부	155.188	84.550	전단철근 불필요	H 0	× 0	@	0	O.K	-
	중앙부	-	-	-	H -	× -	@	-	-	-
우측 벽체	단부	155.188	84.550	전단철근 불필요	H 0	× 0	@	0	O.K	-
	중앙부	-	-	-	H -	× -	@	-	-	-

1. 설계개요 및 조건

1.1 설계개요

• 구조해석 프로그램 : MIDAS CIVIL

1.2 설계방법

(1) 부재의 단면검토 : 강도설계법

(2) 사용성 검토 : 허용응력설계법

1.3 일반사항

(1) 사용재료의 강도

① 콘크리트의 압축강도 : f_{ck} = 30 MPa

② 철근의 항복강도 : f_y = 400 MPa

(2) 사용재료의 탄성계수

① 콘크리트의 탄성계수 : E_c = 27,537 MPa

② 철근의 탄성계수 : E_s = 200,000 MPa

(3) 토사 내부마찰각 : Φ = 35°

(4) 토압 : K_o = 0.426

(5) 사 각(Skew) : 71.00 °

1.4 설계하중

(1) 고정하중

재 료	단위중량(kN/m^3)	재 료	단위중량(kN/m^3)
철근콘크리트	24.5	아스팔트 포장	23.0
흙(지하수위 이상)	20.0	흙(지하수위 이하)	11.0
지하수	10.0		

(2) 상재 하중(kN/m^2)

q_L = 15.0 kN/m^2

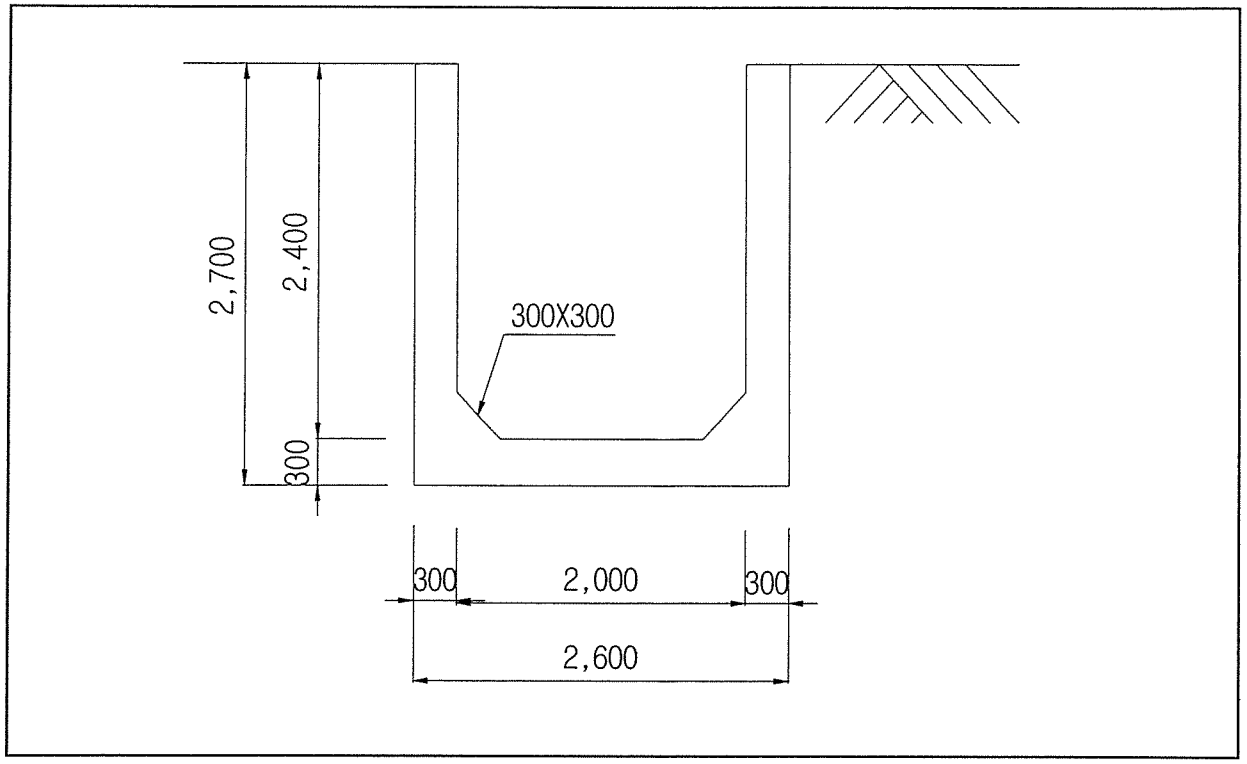
1.5 참고문헌

(1) 콘크리트 구조설계기준 (한국콘크리트 학회, 2012)

(2) 도로교 설계기준 (건설교통부, 2010)

(3) 철도설계기준 (노반편) (건설교통부 2013)

2. 단면가정

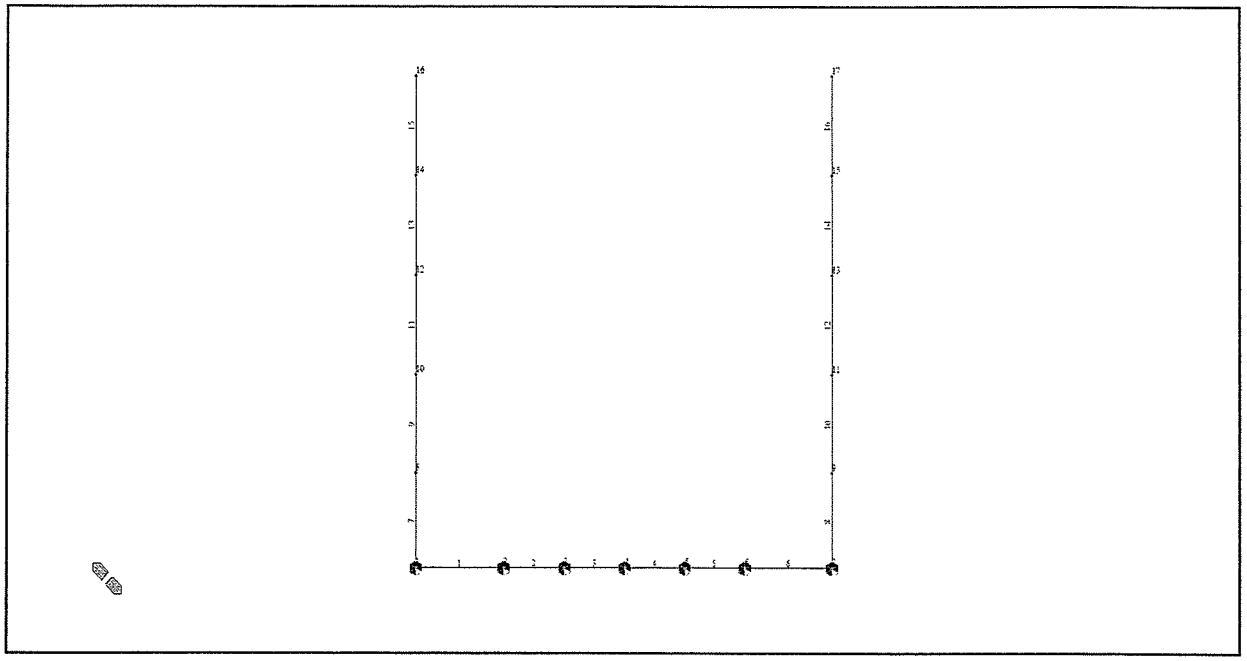


* N=15, Φ=35° 적용 함.

* 지하수위는 극한 지하수위(GL -1.0m) 로 적용 함.

3. 구조해석 모델링

3.1 해석모형



3.2 단면제원

구 분	폭(m)	높이(m)	C.T.C(m)	단면적(m^2)	단면2차모멘트(m^4)	비 고
1	1.00	0.30	-	0.300	0.002250	하부슬래브
2	1.00	0.30	-	0.300	0.002250	좌측벽체
3	1.00	0.30	-	0.300	0.002250	우측벽체

3.3 지반반력계수

$Kv = Kvo \times (Bv / 30)^n$ (n = -3/4)

$Kvo = 1/30 \times \alpha \times Eo$

Bv : 구조물의 환산재하폭

Eo = 2800 x N = 2800 × 9 = 25,200.000 kN/m^2

α = 1

Kvo = 1 × 1 / 0.3 × 25200 = 84000.000 kN/m^3

Bv = √ (2.600 × 1.000) = 1.612 m

∴ Kv = 84000.000 × (1.6 / 0.3) ^ (-3/4) = 23796.069 kN/m^3

절점번호	지반반력계수					비고
1,7	23796.069	×	0.3750	=	8923.526 kN/m^2	
2,6	23796.069	×	0.3750	=	8923.526 kN/m^2	
3,4,5	23796.069	×	0.4000	=	9518.428 kN/m^2	

※ 지반스프링은 압축력에만 저항하는 비선형 경계조건을 사용하여 부반력 발생시 자동제거함.

4. 하중산정

4.1 고정하중

(1) 구조물 자중 : 프로그램내 자동입력 ---------- LC 1

4.2 활하중에 의한 측압 ---------- LC 2

Lh = 0.426 × 15.000 = 6.390 kN/m^2

4.3 토압

(1) 지하수위 유 ---------- LC 3

Q_{N1L} = 1.000 × 20.000 × 0.426 = 8.520 kN/m^2

Q_{N1R} = 8.520 + 1.700 × 11.000 × 0.426 = 16.486 kN/m^2

(2) 지하수위 무 ---------- LC 4

Q_{N1L} = 2.700 × 20.000 × 0.426 = 23.004 kN/m^2

4.4 수압

(1) 측벽 수압 ---------- LC 5

1) 벽체

Q_{W1L} = 10.000 × 1.700 = 17.000 kN/m^2

4.5 온도하중 ---------- LC 6, LC 7

- 계절적 온도변화 ± 10°C를 프로그램내 SYSTEM TEMPERRATURE 기능을 이용하여 이상화 한다.

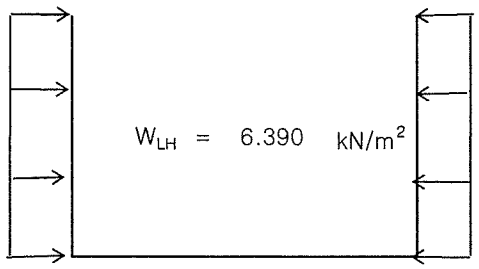
4.6 건조수축 ---------- LC 8

- 15^0c 의 온도하중으로 변환 설계
  - 건조수축계수 : $\varepsilon = 15 \times 10^{-5}$
  - 온도선팽찰 계수 : $\alpha = 1.0 \times 10^{-5}$
  - $\Delta T = -\frac{\varepsilon}{\alpha} = 15\ °C$

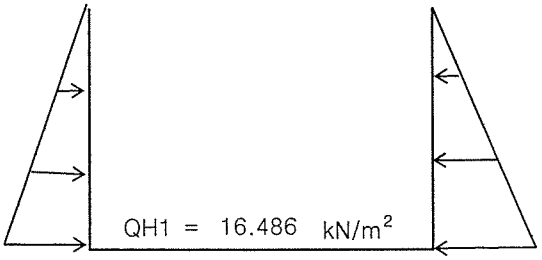
4.7 하중재하도

(1) LC 1 : 프로그램내 자동재하

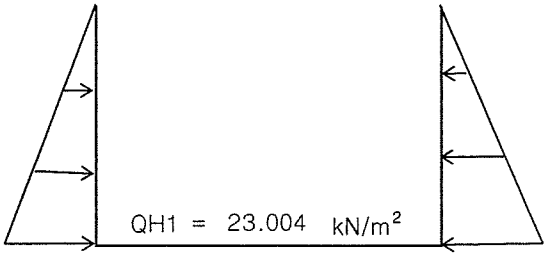
(2) LC 2



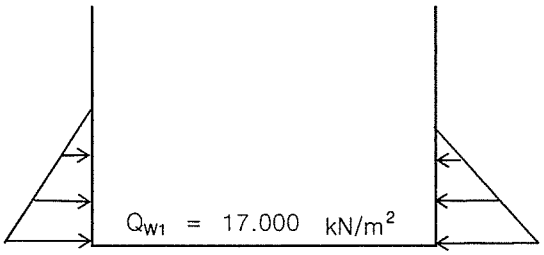
(3) LC 3



(4) LC 4



(5) LC 5



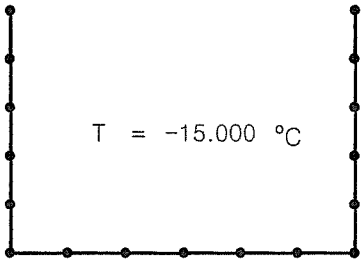
(6) LC 6

- 프래그램내 System Temperature 기능을 이용
10 °C 온도하중 재하

(7) LC 7

- 프래그램내 System Temperature 기능을 이용
-10 °C 온도하중 재하

(8) LC 8



5. 하중조합

5.1 계수하중

구분	고정하중 (D	활하중측압	수평토압		수압	온도하중		건조수축	비고
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	
CB1	1.35	1.85	1.60		1.60				계수하중
CB2	1.35	1.85		1.60					
CB3	1.35	1.85	0.80		0.80				
CB4	1.35	1.85		0.80					
CB5	1.60	1.60	1.60		1.60				
CB6	1.60	1.60		1.60					
CB7	1.60	1.60	0.80		0.80				
CB8	1.60	1.60		0.80					
CB9	1.35	1.40	1.60		1.60	1.35			
CB10	1.35	1.40		1.60		1.35			
CB11	1.35	1.40	0.80		0.80	1.35			
CB12	1.35	1.40		0.80		1.35			
CB13	1.35	1.40	1.60		1.60		1.35	1.35	
CB14	1.35	1.40		1.60			1.35	1.35	
CB15	1.35	1.40	0.80		0.80		1.35	1.35	
CB16	1.35	1.40		0.80			1.35	1.35	

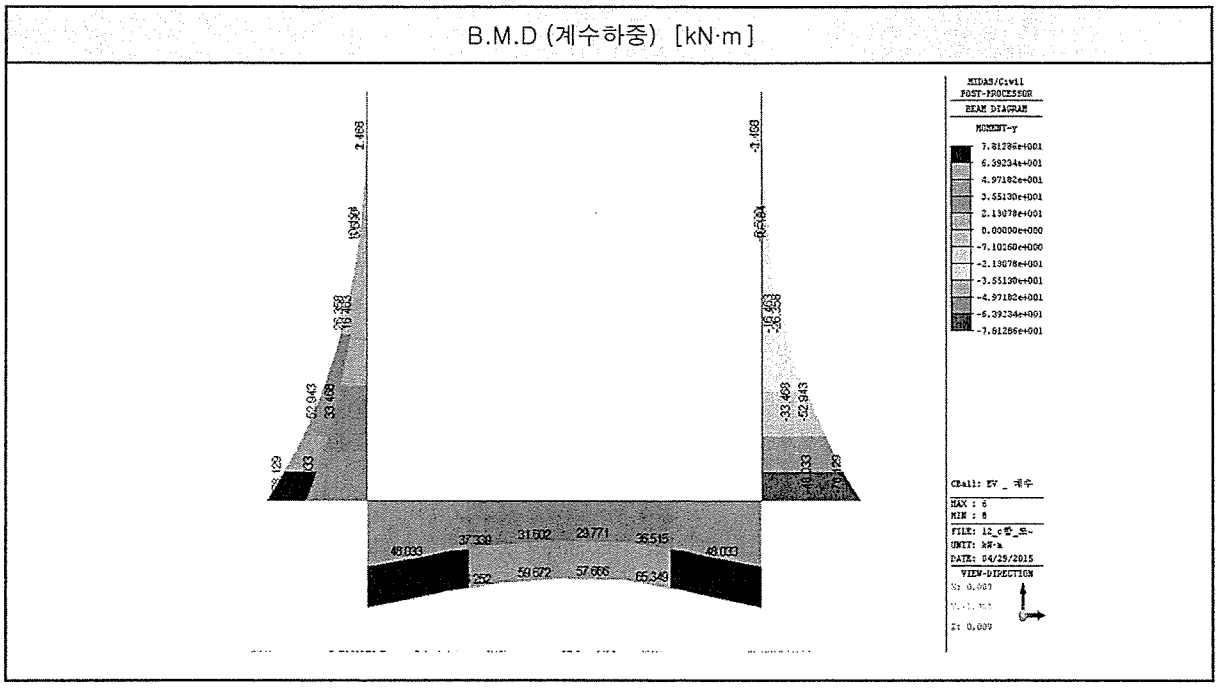
5.2 사용하중

구분	고정하중 (D	활하중측압	수평토압		수압	온도하중		건조수축	비고
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	
CB17	1.00	1.00	1.00		1.00				사용하중
CB18	1.00	1.00		1.00					
CB19	1.00	1.00	0.50		0.50				
CB20	1.00	1.00		0.50					
CB21	1.00	1.00	1.00		1.00	1.00			
CB22	1.00	1.00		1.00		1.00			
CB23	1.00	1.00	0.50		0.50	1.00			
CB24	1.00	1.00		0.50		1.00			
CB25	1.00	1.00	1.00		1.00		1.00	1.00	
CB26	1.00	1.00		1.00			1.00	1.00	
CB27	1.00	1.00	0.50		0.50		1.00	1.00	
CB28	1.00	1.00		0.50			1.00	1.00	
CB29	1.00		1.00		1.00				
CB30	1.00			1.00					

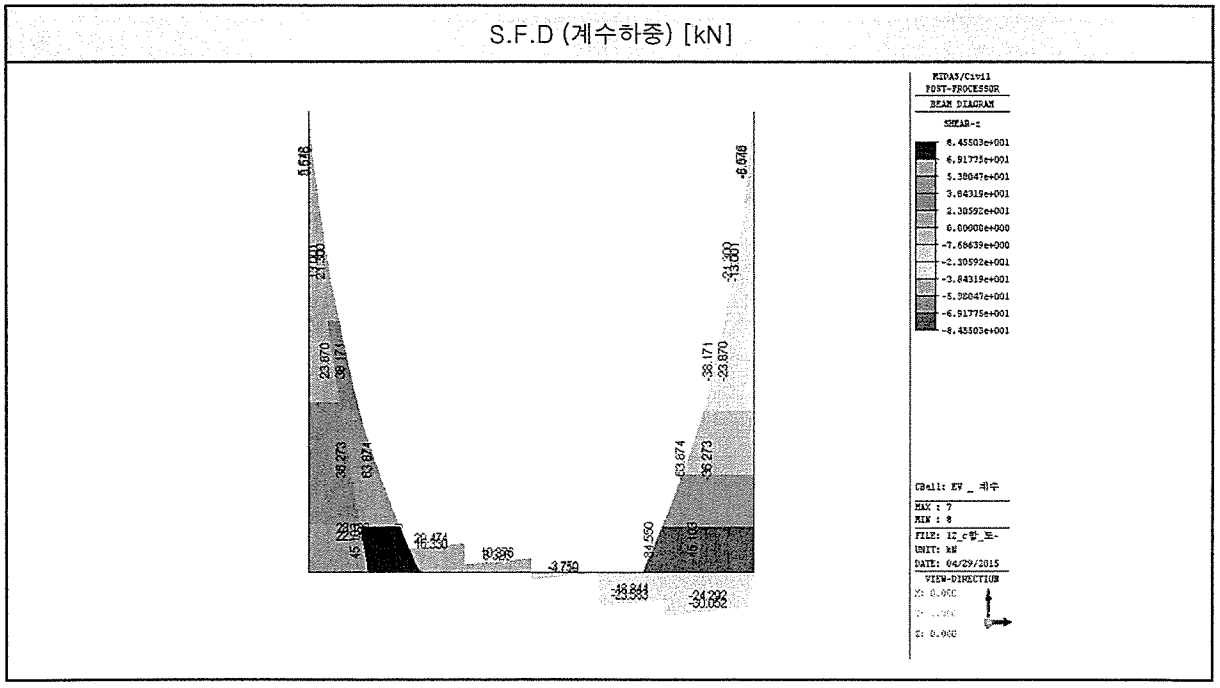
6. 구조해석 결과

6.1 부재력도 (ENVELOPE)

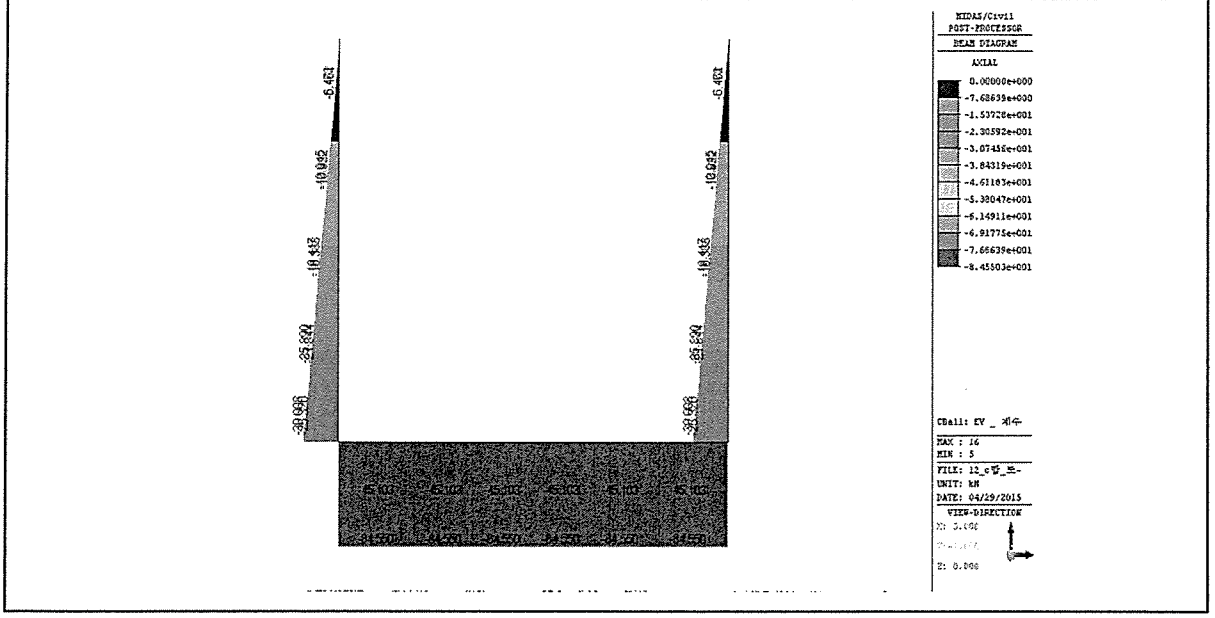
B.M.D (계수하중) [kN·m]



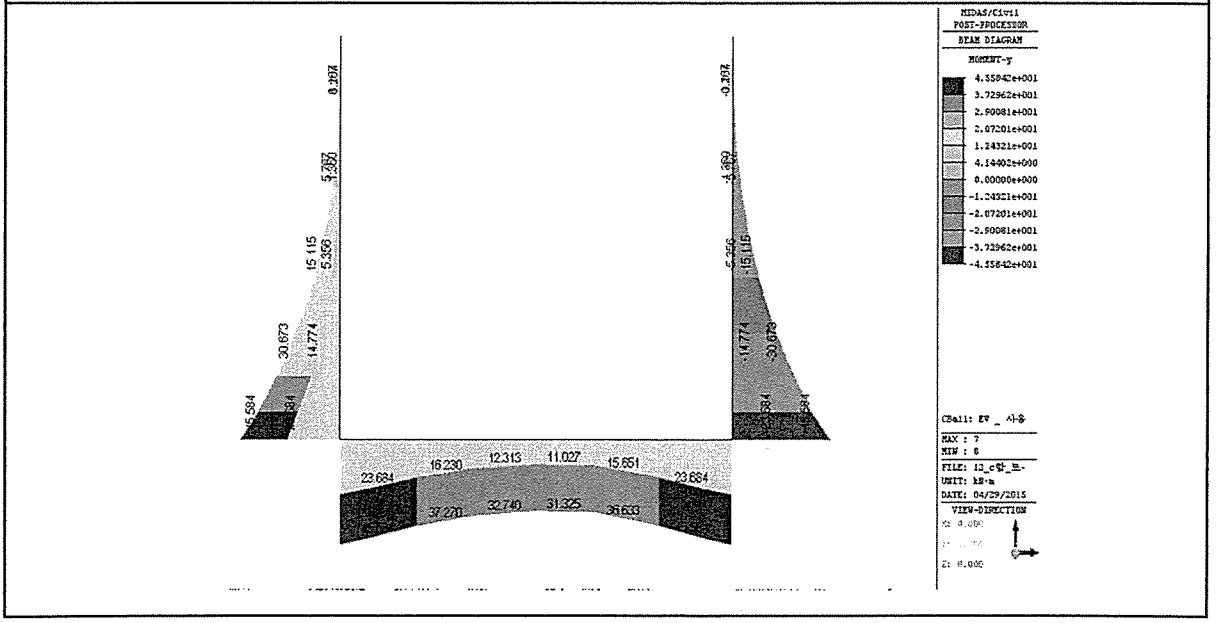
S.F.D (계수하중) [kN]



A.F.D (계수하중) [kN]



B.M.D (사용하중) [kN·m]



6.2 부재력 집계

구 분		단면제원		Mu[kN·m]	Vu[kN]	Mo[kN·m]	비고
		B (mm)	H (mm)				
하 부 슬래브	단 부	1,000	400	78.129	30.052	45.584	
	중앙부	1,000	300	59.672		32.740	
좌측벽체	단 부	1,000	400	78.129	84.550	45.584	
	중앙부	1,000	300	26.358		15.115	
우측벽체	단 부	1,000	400	78.129	84.550	45.584	
	중앙부	1,000	300	26.383		15.115	

7. 단면설계

7.1 하부슬래브

7.1.1 하부슬래브 단부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	78.129 kN.m	Vu	=	30.052 kN	Mo	=	45.584 kN.m	d (휨)	=	300 mm
B	=	1000 mm	H	=	400 mm	헌치	=	300 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1 단 배치		d_t	=	300 mm

Use A_s = 1단 1CYCL H 16 @ 150 , 2CYCLI H 0 @ 0 = 1,324 mm^2

2단 1CYCL H @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 1,324 mm^2 [p = 0.00441]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 1,050 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 1,027 mm^2

$A_{s,\,min}$ = 1,050 mm^2

$A_{s,\,Req}$ = 738 mm^2 , 4/3 $A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s,min}$, 4/3 $A_{s,req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 30.052 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 7 = 30{,}000\ mm^2$

$k = - np + \sqrt{[\,2np + (np)^2\,]}$ [∵ $n = Es / Ec$ = 7.3 ≒ 7]

$= - 7 \times 0.00441 + \sqrt{[\,2 \times 0.031 + 0.031^2\,]} = 0.22$

$j = 1 - k / 3 = 1 - 0.22 / 3 = 0.927$

$fs = M / [As \cdot d \cdot j]$ = 123.801 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.1.2 하부슬래브 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	59.672 kN.m	Vu	=	0.000 kN	Mo	=	32.740 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCL H	16 @	150	, 2CYCLI H	0 @	0	=	1,324	mm^2
	2단	1CYCL H	@		, 2CYCLI H	0 @	0	=	-	mm^2
		TOTAL	=	1,324	mm^2	[p =	0.00662	]		

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 25) / 25

= 0.02115 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.02115 - 0.002)$$

= 2.246 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 700 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 685 mm^2

$A_{s,\,min}$ = 700 mm^2

$A_{s,\,Req}$ = 858 mm^2 , $4/3\ A_{s,\,Req}$ = 1,143 mm^2

MIN ($A_{s.min}$, $4/3\ A_{s.req}$) = 700 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (200 - 21 / 2) / 10 E+6

= 90.378 kN.m > Mu = 59.672 kN.m ∴ O.K [S.F = 1.515]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[\,2np + (np)^2\,]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00662 + √ [2 × 0.046 + 0.046^2] = 0.261

$j = 1 - k / 3 = 1 - 0.261 / 3 = 0.913$

$fs = M / [As \cdot d \cdot j]$ = 135.422 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 351 mm

$s_2 = 300 (210 / fs)$ = 465 mm > s = 150 mm ∴ O.K

7.2 좌측벽체

7.2.1 좌측벽체 단부

(1) 휨 검토

f_{ck} =	30 MPa	f_y =	400 MPa	d_t' =	100 mm	d' =	100 mm
Mu =	78.129 kN.m	Vu =	84.550 kN	Mo =	45.584 kN.m	d (휨) =	300 mm
B =	1000 mm	H =	400 mm	헌치 =	300 mm	d (전단) =	200 mm
ϕ_f =	0.900	ϕ_v =	0.85	주철근	1 단 배치	d_t =	300 mm

Use A_s =	1단	1CYCL H	16 @	150 ,	2CYCLI H	0 @	0 =	1,324	mm^2
	2단	1CYCL H	0 @	,	2CYCLI H	0 @	0 =	-	mm^2
			TOTAL =	1,324 mm^2	[p =	0.00441]			

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $\quad C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 1,050 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 1,027 mm^2

$A_{s,\,min}$ = 1,050 mm^2

$A_{s,\,Req}$ = 738 mm^2 , 4/3 $A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 84.550 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

A = 2 × 100 × 1,000 / 7 = 30,000 mm^2

k = - np + √ [2 np + (np)²] [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00441 + √ [2 × 0.031 + 0.0309 ²] = 0.22

j = 1 - k / 3 = 1 - 0.22 / 3 = 0.927

fs = M / [As·d·j] = 123.801 MPa

◈ 주철근 간격

Cc = $d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

s_1 = 375 (210 / fs) - 2.5 Cc = 406 mm > s = 150 mm ∴ O.K

s_2 = 300 (210 / fs) = 509 mm

7.2.2 좌측벽체 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	26.358 kN.m	Vu	=	0.000 kN	Mo	=	15.115 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCL H	16 @	300	,	2CYCLI H	0 @	0	=	662 mm^2
	2단	1CYCL H	@		,	2CYCLI H	0 @	0	=	- mm^2
			TOTAL	=	662 mm^2		[p =	0.00331	]	

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 264,800 N

$C = 0.85 f_{ck} a b$ = 25,500 a $\quad C = T$; a = 10 mm

▶ $c = a / \beta_1$ = 10 / 0.84 = 12 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 12) / 12

= 0.04530 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.04530 - 0.002)$$

= 4.259 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,min}$ = 700 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,min}$ = 685 mm^2

$A_{s,min}$ = 700 mm^2

$A_{s,Req}$ = 371 mm^2 , $4/3 A_{s,Req}$ = 495 mm^2

MIN ($A_{s,min}$, $4/3 A_{s,req}$) = 495 mm^2 < Use As = 662 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a/2)$ = 0.900 × 264,800 × (200 - 10 / 2) / 10 E+6

= 46.427 kN.m > Mu = 26.358 kN.m ∴ O.K [S.F = 1.761]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 3$ = 60,000 mm^2

$k = -np + \sqrt{[2np + (np)^2]}$ [∵ $n = Es / Ec$ = 7.3 ≒ 7]

$= -7 \times 0.00331 + \sqrt{[2 \times 0.023 + 0.0232^2]}$ = 0.193

$j = 1 - k / 3 = 1 - 0.193 / 3$ = 0.936

$fs = M / [As \cdot d \cdot j]$ = 121.966 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 416 mm

$s_2 = 300 (210 / fs)$ = 517 mm

> s = 300 mm ∴ O.K

7.3 우측벽체

7.3.1 우측벽체 단부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	78.129 kN.m	Vu	=	84.550 kN	Mo	=	45.584 kN.m	d (휨)	=	300 mm
B	=	1000 mm	H	=	400 mm	헌치	=	300 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	300 mm

Use A_s =	1단	1CYCLE H	16 @	150	,	2CYCLE H	0 @	0	=	1,324 mm^2
	2단	1CYCLE H	@		,	2CYCLE H	0 @	0	=	- mm^2
		TOTAL	=	1,324 mm^2		[p =	0.00441	]		

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $\quad C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 − 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,min}$ = 1,050 mm^2]

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,min}$ = 1,027 mm^2] $A_{s,min}$ = 1,050 mm^2

$A_{s,Req}$ = 738 mm^2 , 4/3 $A_{s,Req}$ = 984 mm^2

MIN ($A_{s,min}$, 4/3 $A_{s,req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 − 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 84.550 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1,000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[2 np + (np)^2]}$ [∵ $n = Es / Ec$ = 7.3 ≒ 7]

$= - 7 \times 0.00441 + \sqrt{[2 \times 0.031 + 0.0309^2]}$ = 0.22

$j = 1 - k / 3 = 1 - 0.22 / 3$ = 0.927

$fs = M / [As \cdot d \cdot j]$ = 123.801 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 − 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.3.2 우측벽체 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	26.383 kN.m	Vu	=	0.000 kN	Mo	=	15.115 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCL H	16 @	300	, 2CYCLE H	0 @	0	=	662	mm^2
	2단	1CYCL H	@		, 2CYCLE H	0 @	0	=	-	mm^2
			TOTAL	=	662 mm^2	[p =	0.00331	]		

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 264,800 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 10 mm

▶ $c = a / \beta_1$ = 10 / 0.84 = 12 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 12) / 12

= 0.04530 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.04530 - 0.002)$$

= 4.259 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,min}$ = 700 mm^2]

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,min}$ = 685 mm^2] $A_{s,min}$ = 700 mm^2

$A_{s,Req}$ = 372 mm^2 , 4/3 $A_{s,Req}$ = 496 mm^2

MIN ($A_{s,min}$, 4/3 $A_{s,req}$) = 496 mm^2 < Use As = 662 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a/2)$ = 0.900 × 264,800 × (200 - 10 / 2) / 10 E+6

= 46.427 kN.m > Mu = 26.383 kN.m ∴ O.K [S.F = 1.760]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 3$ = 60,000 mm^2

$k = -np + \sqrt{[2np + (np)^2]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

$= -7 \times 0.00331 + \sqrt{[2 \times 0.023 + 0.0232^2]}$ = 0.193

$j = 1 - k / 3 = 1 - 0.193 / 3$ = 0.936

$fs = M / [As \cdot d \cdot j]$ = 121.966 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 416 mm > s = 300 mm ∴ O.K

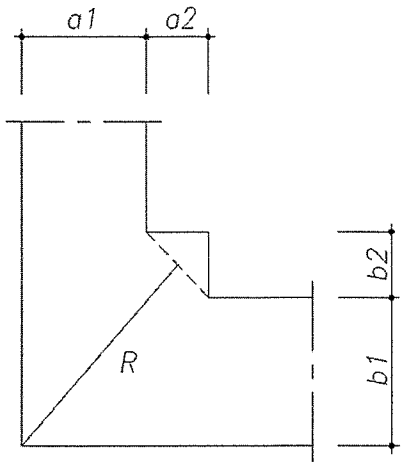
$s_2 = 300 (210 / fs)$ = 517 mm

7.4 온도 및 배력철근 설계

구 분		단면제원		사 용 주철근	소요 배력철근량 (mm^2)		사용 배력철근량 (mm^2)			판정
		B (mm)	H (mm)		주철근 20%	온도철근				
하 부 슬래브	단 부	1,000	300	H16@150	265	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@150	265	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
좌측 벽체	단부	1,000	300	H16@150	265	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@300	132	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
우측 벽체	단부	1,000	300	H16@150	265	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@300	132	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		

7.5 우각부 보강 설계

(1) 하부슬래브 (좌,우측)



f_{ck}	=	30	MPa
f_y	=	400	MPa
Mo	=	45.584	kN·m
a1	=	300	mm
a2	=	300	mm
b1	=	300	mm
b2	=	300	mm

$$R = \{(a2 \times b1 + b2 \times a1 + a2 \times b2) / (a2 + b2)\} \times \sqrt{2}$$

$$= 636 \quad mm$$

- 주철근 (절곡하여 보강철근으로 고려할 수 있는 주철근량)

As' = H 16 @ 300 = 662 mm^2

H 0 @ 0 = 0 mm^2

1) 최대인장응력, f_{tmax}

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 45.584 \times 10^6}{(636.396)^2 \times 1{,}000}$$

$$= 0.563 \text{ Mpa} > 0.08\sqrt{fck} = 0.438 \text{ Mpa}$$ 보강철근 필요 !

2) 보강철근량 산정, As

- 필요철근량

$$As = \frac{2 \times Mo}{R \times f_{sa}} - As'$$

$$= \frac{2 \times 45.584 \times 10^6}{636 \times 180} - 662$$

$$= 796 \ mm^2 - 662 \ mm^2$$

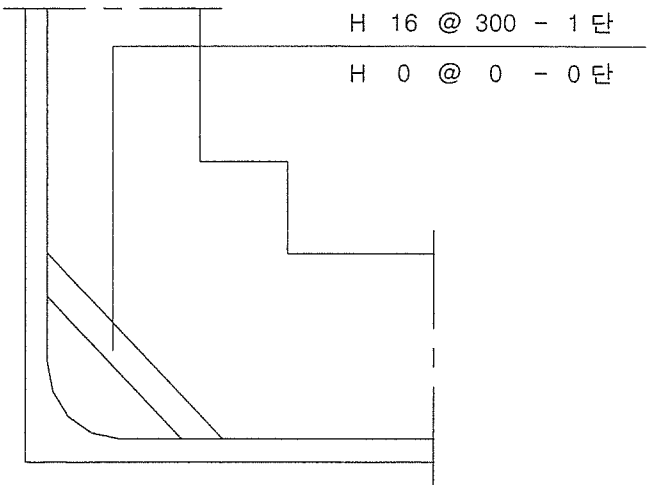
$$= 134 \ mm^2$$

- 사용철근량

As = H 16 @ 300 - 1 단

+ H 0 @ 0 - 0 단

= 662 mm^2 O.K



8. 사용성 검토

8.1 처짐 검토

1) 하부 슬래브 : 최소부재두께 적용

철근의 항복응력 fy = 400 MPa

부재의 지간길이 L = 2.300 m

슬래브 양단 연속의 경우

T = L / 28 = 0.082 m

(보정계수) FACTOR = 1.000

처짐계산을 하지않는 경우의 최소두께

T = 0.082m < H = 0.300m (처짐검토 생략)

9. 기초지반 지지력 검토

9.1 작용하중

9.1.1 구 체 자 중 (W1) :

(0.3 × 2.4 + 0.3 × 2 × 1 EA + 0.3 × 0.3 / 2
× 2 EA + 0.3 × 2.4) × 24.500 / 2.6 = 20.071 kN/m²

9.1.2 상재고정하중(W2)

(1) 상재토

되메움토 : 0.000 × 20.000 = 0.000 kN/m²

아스콘 : 0.000 × 23.000 = 0.000 kN/m²

9.1.3 활 하 중(L)

(1) 활 하 중 :

= 0.000 kN/m²

9.1.4 수로개거내의 물의자중(w3)

2.000 × 1.920 × 1.000 / 2.600 / 1.000 × 10.000 = 14.769 kN/m²

9.2 지지력 검토

9.2.1 최대지반반력 (qmax) : W1 + W2 + L + W3

20.071 + 0.000 + 0.000 + 14.769 = 34.840 kN/m²

9.2.2 허용지반반력 (qa)

- 정역학 공식에 의한 지반의 허용 연직 지지력 (Terzaghi식 사용)

Qu = A · [c · Nc + q · Nq + 0.5 · r1 · B · Nr]

Qu : 하중의 편심 및 경사가 없는 연속기초지반의 극한지지력 (kN)

· A : 재하면적 = 2.600 m²

· c : 지반의 점착력 = 0.000 kN/m²

· q : 상재하중, (q = r2 · Df) = 48.000 kN/m²

· r1 : 지지 지반의 흙의 단위중량 = 20.000 kN/m³

· r2 : 근입 지반의 흙의 단위중량 = 20.000 kN/m³

· B : 확대기초의 폭 = 2.600 m

· L : 확대기초의 길이 = 1.000 m

· Φ : 지반의 전단 저항각

Φ = √ (12 × N) + 15 = √ (12 × 15) + 15 = 28 °

· Nc = 25.100 , Nq = 12.700 , Nr = 9.700 (전단 저항각 28 ° 일때)

· Qu = 2.600 × [0.000 × 25.100 + 48.000 × 12.700 +
0.500 × 20.000 × 2.600 × 9.700] = 2240.680 kN

· Qa = 2240.680 / 3 = 746.893 kN

· qa = 746.893 / 2.600 = 287.267 kN/m²

* 평상시 최대 지반반력 (도.설.해 2008) = 400.000 kN/m²

∴ q_{max} = 34.840 kN/m² < q_a = 287.267 kN/m² ∴ O.K

C(함) 파전제5

- 2.0 x 2.00 x 1
- 토피 = 9.6m 이하

1. 설 계 조 건
2. 단 면 가 정
3. 해석모델 및 단면제원
4. 하중산정
5. 하중재하도
6. 하중계수 및 하중조합
7. INPUT DATA
8. OUTPUT
9. 단면력요약
10. 단 면 력 도
11. 단 면 검 토
12. 우각부 검토
13. 배력철근 검토
14. 사용성 검토
15. 기초지지력 검토
16. 주철근조립도
17. 날개벽 설계

1. 설계 조건

1) 구조물명 : c (함)

2) 구조형식 : 철근 콘크리트 구조

3) 설계하중 : KRL2012 (복 선)

4) 재료중량

- 철근 콘크리트(γ_c)	=	24.5	kN/m^3
- 무근 콘크리트(γ_{con})	=	23.0	kN/m^3
- 뒷채움 토사(γ_t)	=	20.0	kN/m^3
- 뒷채움 토사(γ_{sub})	=	11.0	kN/m^3
- 지하수(γ_w)	=	10.0	kN/m^3

5) 사용재료의 성질

- 콘크리트 설계기준 강도(fck)	=	30.0	MPa
- 콘크리트 탄성계수(Ec)	=	27537	MPa
- 철근의 항복강도(fy)	=	400.0	MPa
- 철근의 탄성계수(Es)	=	200000	MPa

6) 토 사

- 흙의 내부마찰각 (ϕ)	=	35.0	°
- 정지 토압계수 (Ko)	=	0.426	

7) 기 초 형 식 : 직접기초

8) 사 각(Skew) : 66.00 ° 연 장 (L) : 55.00 m

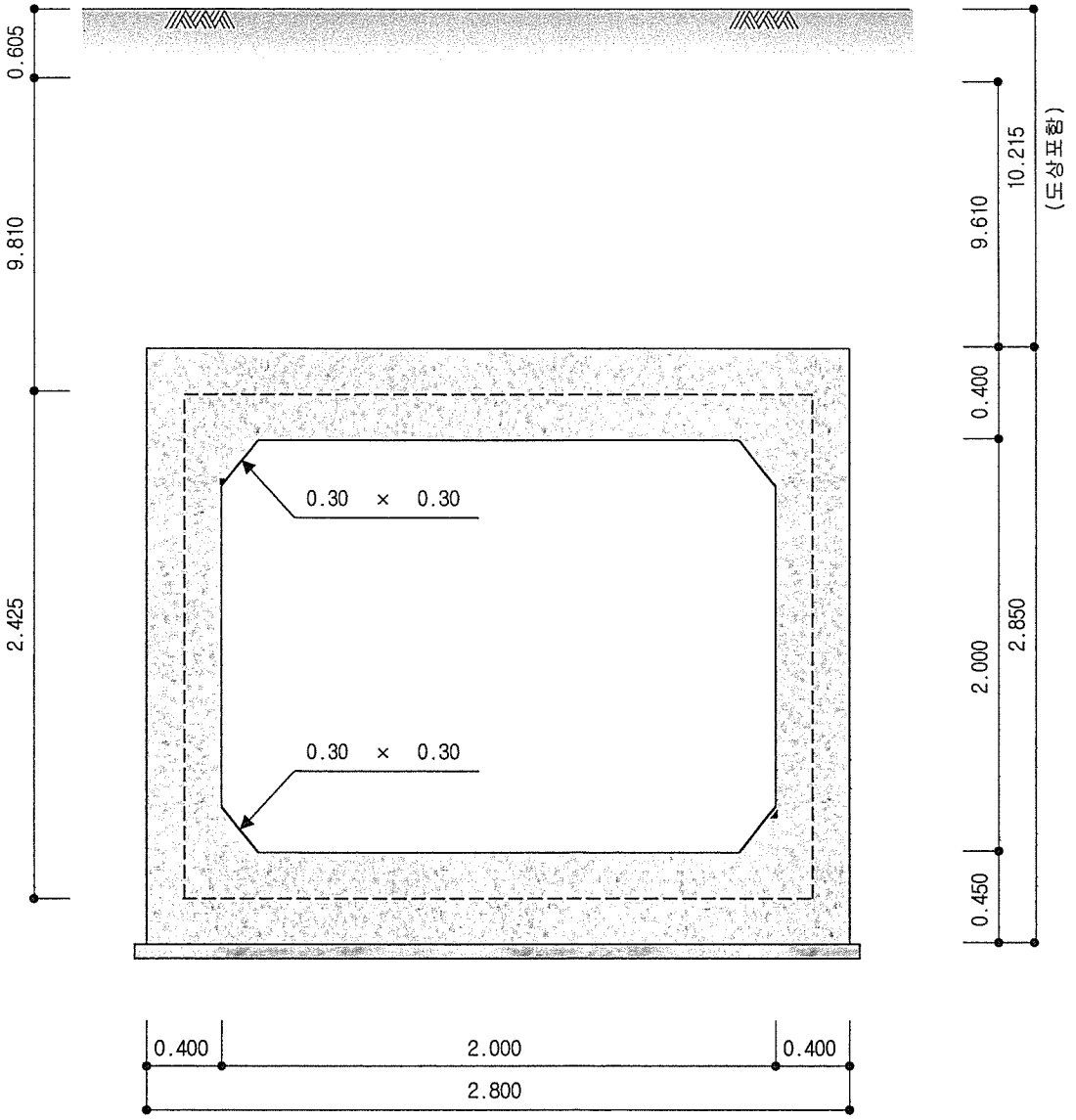
9) 설계방법

- 강도 설계법 : 부재 단면검토(슬래브, 벽체, 보, 기둥 등)
- 허용응력 설계법 : 사용성 검토(처짐, 균열, 우각부 검토)

10) 참고문헌

- 철도설계기준(노반편), 국토해양부, 2013
- 콘크리트 구조설계기준해설, 한국콘크리트 학회, 2012

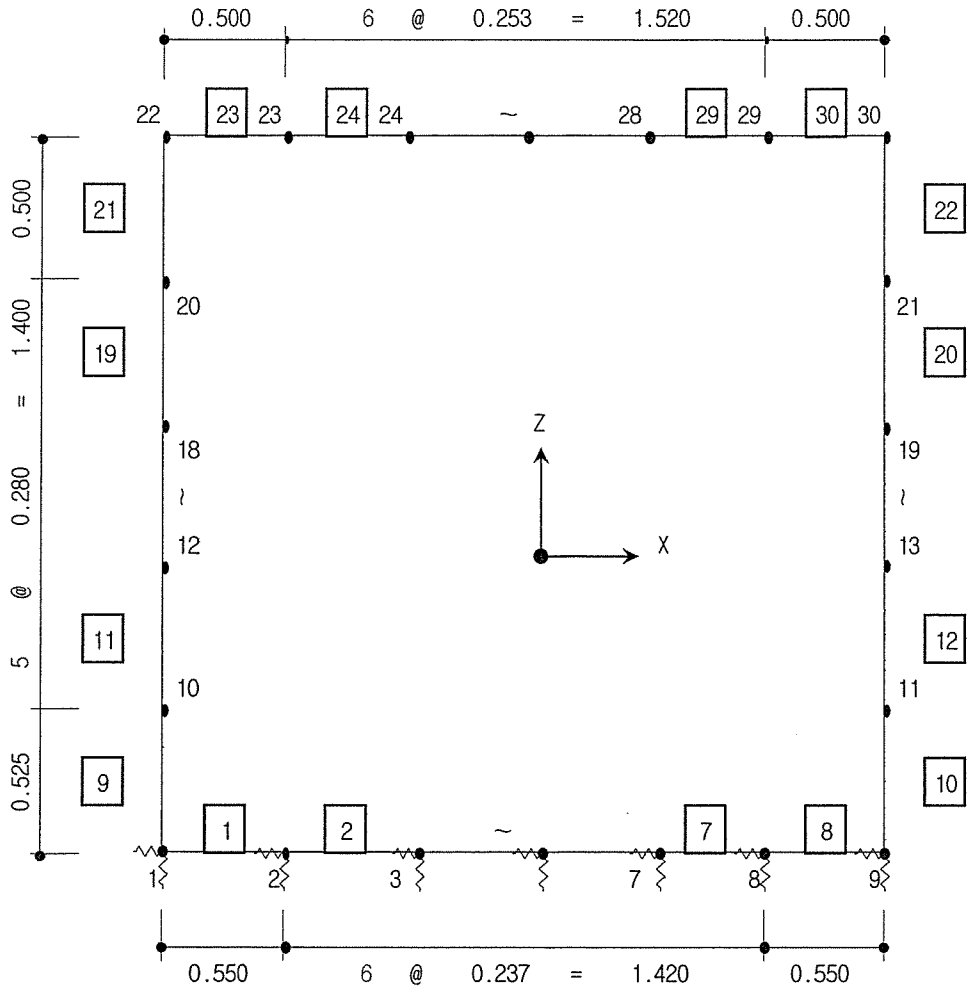
2. 단면 가정



※ 유효경간

Skew =	66.0	°					
Ln =	2.400	m					
Ls =	2.627	m					
Ls/B =	2.627	/	18.000	=	0.146	<	1.500
L =	2.520	m					

3. 해석모델 및 단면제원



1) 절점 좌표

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
1	0.000	0.000	0.000	13	2.520	0.000	0.805
2	0.550	0.000	0.000	14	0.000	0.000	1.085
3	0.787	0.000	0.000	15	2.520	0.000	1.085
4	1.023	0.000	0.000	16	0.000	0.000	1.365
5	1.260	0.000	0.000	17	2.520	0.000	1.365
6	1.497	0.000	0.000	18	0.000	0.000	1.645
7	1.733	0.000	0.000	19	2.520	0.000	1.645
8	1.970	0.000	0.000	20	0.000	0.000	1.925
9	2.520	0.000	0.000	21	2.520	0.000	1.925
10	0.000	0.000	0.525	22	0.000	0.000	2.425
11	2.520	0.000	0.525	23	0.500	0.000	2.425
12	0.000	0.000	0.805	24	0.753	0.000	2.425

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
25	1.007	0.000	2.425	28	1.767	0.000	2.425
26	1.260	0.000	2.425	29	2.020	0.000	2.425
27	1.513	0.000	2.425	30	2.520	0.000	2.425

2) 경계 조건

joint	spring계수 (kN/m²)		joint	spring계수 (kN/m²)	
	z방향(수직)	x방향(수평)		z방향(수직)	x방향(수평)
1 . 9	5391		3 ~ 7	2686	
2 . 8	4464				

3) 단면제원

Element	두께	폭	비 고
23 ~ 30	0.400	1.000	상부슬래브
1 ~ 8	0.450	1.000	하부슬래브
9 ~ 22	0.400	1.000	벽 체

4) 강역설정

(1) 강역설정기준(콘크리트구조설계기준 2012)

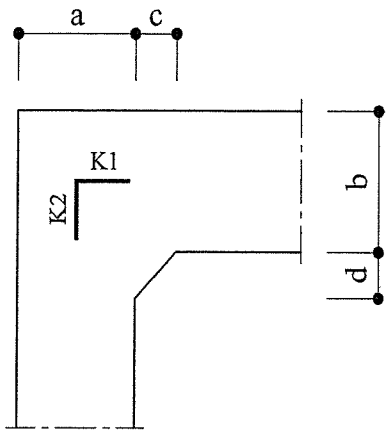
CASE 1 : 부재단부가 다른 부재와 접합할 때는 부재단에서 부재두께의 1/4 안쪽점에서 절점까지

CASE 2 : 부재가 그 축선에 대해 25° 이상 60° 미만인 경사진 헌치를 갖는 경우에는 부재두께가 1.5배가 되는 점에서 부터 절점까지

CASE 3 : 헌치의 경사가 60° 이상의 경우는 헌치의 시점에서 부재두께의 1/4 안쪽 점에서부터 절점까지

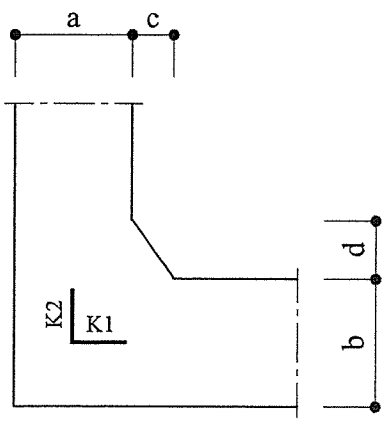
(2) 강역설정

- 절점 22 , 30



a =	400	mm	c =	300	mm
b =	400	mm	d =	300	mm
K1 =	300	mm	K2 =	300	mm

- 절점 1 , 9

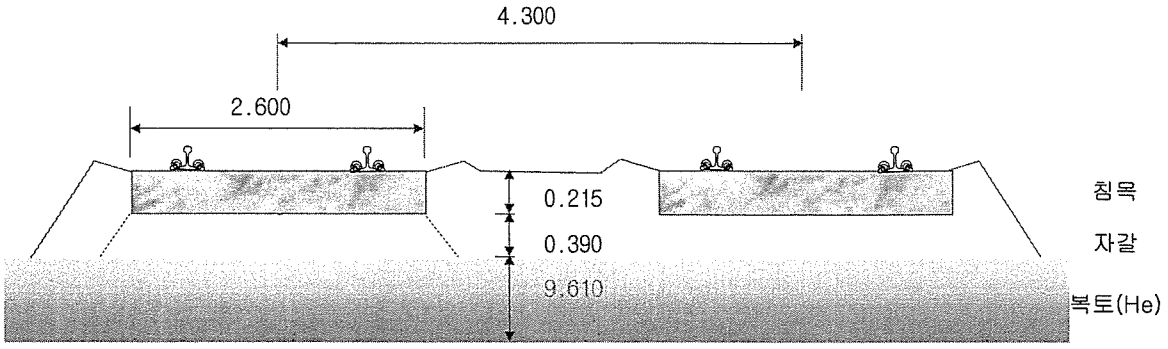


a =	400	mm	c =	300	mm
b =	450	mm	d =	300	mm
K1 =	275	mm	K2 =	325	mm

4. 하중산정

4.1 상시

1) 상부 고정하중(지하수 無)



① 하중 분포폭 산정 (b')

① He < 0.5m 경우 : b + d

b_1 = 2.600 + 0.390 = 2.990 m

② He ≥ 0.5m 경우 : c + b + (d + He)

b_2 = 4.300 + 2.600 + (0.390 + 9.610) = 14.590 m

여기서, He : 시공기면에서의 토피고(m)

a : 동륜간 축간거리(m) c : 복선선로 중심간격(m)

b : 침목길이(m) d : 침목하면의 도상두께(m)

H : 상부슬래브 두께

He ≥ 0.5 m

∴ b' = 14.590 m

② 구조물 자중 : 프로그램 상에서 Self Weight 기능을 이용하여 자동 고려

③ 궤도 중량

- 레일 : 레일당 1.5kN/m를 적용

q_1 = 4 × 1.500 / 14.590 = 0.411 kN/㎡

- 침목 : 고속철도용 5.0kN/m

q_2 = 5.000 × 2 / 14.590 = 0.685 kN/㎡

= 1.096 kN/㎡

④ 도상 (q_2)

TCL = 0.215 × 19.000 × 1.3 = 5.311 kN/㎡

HSB = 0.390 × 19.000 × 1.3 = 9.633 kN/㎡

= 14.944 kN/㎡

⑤ 복토하중 (q_3) = 20.000 × 9.610 = 192.200 kN/㎡

∴ $q_1 + q_2 + q_3$ = 1.096 + 14.944 + 192.200 = 208.240 kN/㎡

2) 활하중

① 활하중 산정 : KRL 2012

$$W_{HL} = \frac{2P}{a \times b'} = \frac{2\times(220+80x3)}{3.000 \times 14.590} = 21.019 \text{ kN/㎡}$$

∴ W = 21.019 kN/㎡

② 충격계수

1) 단선 (i_0) (철도설계기준 노반편(2013) p.5-7)

지 간 L (m)	0	5	10	20	30	40	50	70	100
충격계수 (i)	0.60	0.48	0.43	0.37	0.34	0.32	0.30	0.27	0.24

* 상기표에 없는 지간의 충격 계수는 보간법으로 구한다.

지 간 L (m) = 2.520 m

따라서 i_0 = 0.540 (보간법에 의하여 산정된 충격계수)

2) 구조물 상면의 복토높이에 따른 충격 계수

H ≥ 1.0일 경우 $i = io \cdot \{(2.5 - H)/1.5\}$

여기서, H ≤ 1.0 m 에서는 $i = i_o$

H ≥ 2.5 m 에서는 i = 0

따라서, 본 구조물의 H = 10.215 m i = 0.000

W_L = 21.019 ×(1 + 0.000) = 21.019 kN/㎡

③ 활하중에 의한 측압 (충격비고려)(철도설계기준 노반편(2013) p.5-6)

W_{LH} = 21.019 × 0.4 = 8.408 kN/㎡

3) 토 압

- 지하수가 없는 경우 작용 토압

q_1 = 0.426 ×(16.040 + 20.000 × 9.810) = 90.414 kN/㎡

q_2 = 90.414 + 0.426 ×(20.000 × 0.500) = 94.674 kN/㎡

q_3 = 94.674 + 0.426 ×(20.000 × 0.280) = 97.060 kN/㎡

q_4 = 97.060 + 0.426 ×(20.000 × 0.280) = 99.446 kN/㎡

q_5 = 99.446 + 0.426 ×(20.000 × 0.280) = 101.832 kN/㎡

q_6 = 101.832 + 0.426 ×(20.000 × 0.280) = 104.218 kN/㎡

q_7 = 104.218 + 0.426 ×(20.000 × 0.280) = 106.604 kN/㎡

q_8 = 106.604 + 0.426 ×(20.000 × 0.525) = 111.077 kN/㎡

- 시공중 편토압 산정 (지하수가 없는 경우 작용 토압)

q_1 = 0.426 × (0.000 + 20.000 × 0.200) = 1.704 kN/㎡

q_2 = 1.704 + 0.426 × (20.000 × 0.500) = 5.964 kN/㎡

q_3 = 5.964 + 0.426 × (20.000 × 0.280) = 8.350 kN/㎡

q_4 = 8.350 + 0.426 × (20.000 × 0.280) = 10.736 kN/㎡

q_5 = 10.736 + 0.426 × (20.000 × 0.280) = 13.122 kN/㎡

q_6 = 13.122 + 0.426 × (20.000 × 0.280) = 15.508 kN/㎡

q_7 = 15.508 + 0.426 × (20.000 × 0.280) = 17.894 kN/㎡

q_8 = 17.894 + 0.426 × (20.000 × 0.525) = 22.367 kN/㎡

4) 온도하중

토피가 1.0m 이상일 경우에는 온도변화를 고려치 않으며, 토피가 1.0m 이하일 경우에는 다음식을 따른다.

$t = a \times t_0$ = 0.000 × 15.0 = 0.000 ℃

t : 박스 구조물의 상부 슬래브에 작용하는 온도변화

a : 토피심도(m)에 따른 저감률 $a=1-h_0$ (h_0:토피심도)

t_0 : 지표면에서의 기본온도 변화

상부슬래브의 두께가 700mm 이상인 경우 $t_0 = \pm 10$℃

상부슬래브의 두께가 700mm 미만인 경우 $t_0 = \pm 15$℃

토피고 H > 1.0m 이므로 온도변화는 고려하지 않는다.

5) 건조수축

$$\Delta Tx = \frac{\varepsilon}{\alpha} = \frac{-0.00015}{0.00001} = -15\,^{\circ}C$$

6) 장대레일 하중

장대레일 종하중은 필요시에 고려하여야 하며, 1궤도당 10 kN/m로 하고 작용위치는 상부슬래브 축선으로 한다. (단, 토피가 1.0m 이상인 경우는 이를 무시한다.)

토피가 10.215 m 이므로 장대레일 하중을 무시한다.

H_r = 0.000 × 4 / 14.590 = 0.000 kN/㎡

7) 상시 지반반력 계수

지지 지반 N치 = 6

Eo = 2800 × N = 2800 × 6 = 16800

Kvo = 1 / 0.3 x α x Eo = 1 / 0.3 × 1 x 16800 = 56000

Bv = √ Av = √ (2.520 × 2.520) = 2.520

Kv = Kvo (Bv/0.3)^-3/4 = 11350 kN/㎡

11350 × (0.400 / 2 + 0.550 / 2) = 5391 kN/m² - 저판 단부 스프링

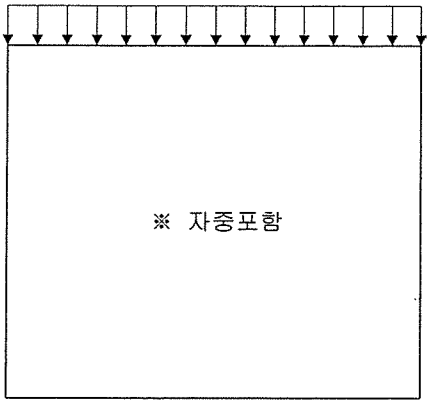
11350 × (0.550 / 2 + 0.237 / 2) = 4464 kN/m² - 저판 전단검토위치

11350 × (0.237 / 2 + 0.237 / 2) = 2686 kN/m² - 저판 중앙부 스프링

5. 하중재하도

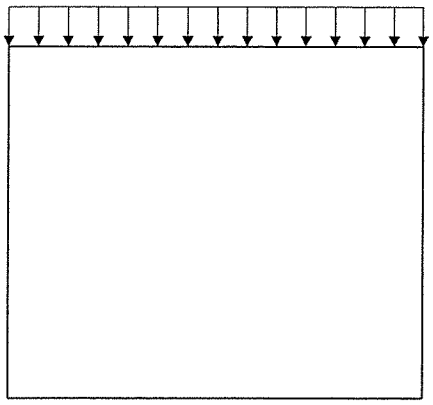
① 고정하중

W_D = 208.240 kN/㎡



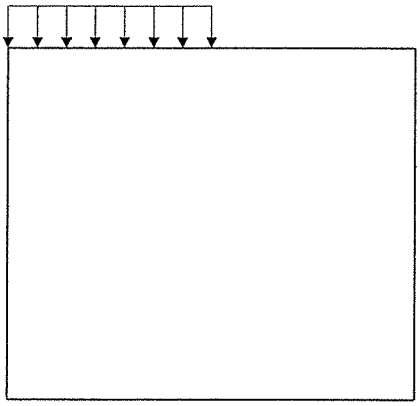
② 활하중(만재하)

W_L = 21.019 kN/㎡

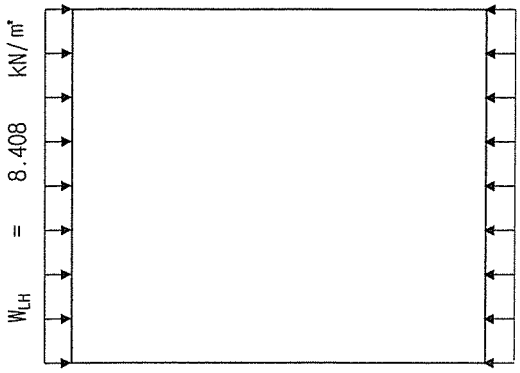


③ 활하중(편재하)

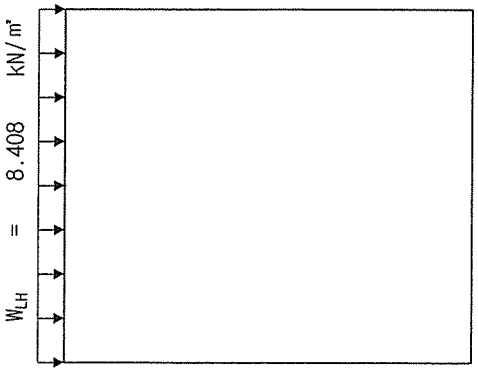
W_L = 21.019 kN/㎡



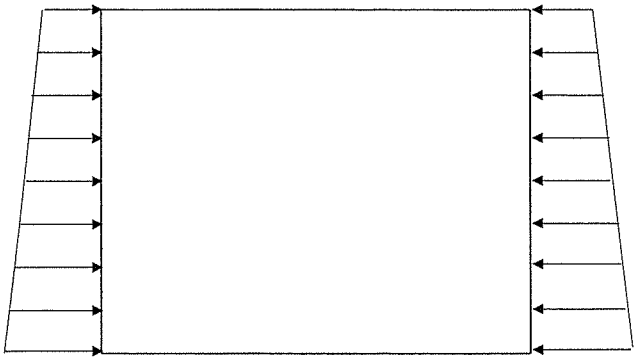
④ 활하중에 의한 측압(만재하)



⑤ 활하중에 의한 측압(편재하)



⑥ 수평토압(지하수 없는 경우)

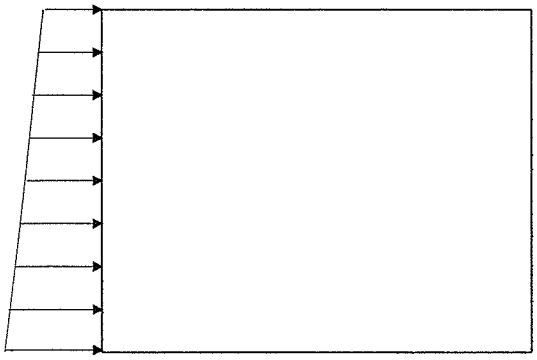


q_1 = 90.414 kN/㎡

q_7 = 111.077 kN/㎡

⑦ 편측토압(지하수 없는 경우)

q_1 = 1.704 kN/㎡



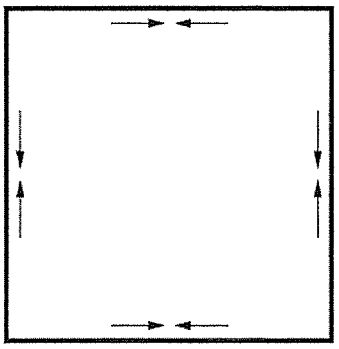
q_7 = 22.367 kN/㎡

⑧ 온도하중

△T = 0 °

⑨ 건조수축

△T = -15 °



⑩ 장대레일 종하중

Hr = 0.000 kN/m²

6. 하중계수 및 하중조합

1) 극한하중 검토시

구분	고정하중	활하중		활하중 측압		수평토압 (지하수無)		온도하중		건조수축	장대레일	비고
				양측재하	편측재하	양측재하	편측재하					
		전경간	1/2	수평	수평	수평	수평	온도상승	온도하강			
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11	
1	1.35	1.85		1.85		1.6						
2	1.35	1.85		1.85		0.6						
3	1.35		1.85		1.85	1.6						
4	1.35		1.85		1.85	0.6						
5	1.6	1.60		1.60		1.6						
6	1.6	1.60		1.60		0.6						
7	1.6		1.6		1.6	1.6						
8	1.6		1.6		1.6	0.6						
9	1.35	1.40		1.40		1.6		1.35		1.35		
10	1.35	1.40		1.40		0.6		1.35		1.35		
11	1.35	1.40		1.40		1.6			1.35	1.35	1.40	
12	1.35	1.40		1.40		0.6			1.35	1.35	1.40	
13	1.35		1.40		1.40	1.6		1.35		1.35		
14	1.35		1.40		1.40	0.6		1.35		1.35		
15	1.35		1.40		1.40	1.6			1.35	1.35	1.4	
16	1.35		1.40		1.40	0.6			1.35	1.35	1.4	
17	1.35		1.85		1.85		1.60					
18	1.35		1.85		1.85		0.60					
19	1.60		1.60		1.60		1.60					
20	1.60		1.60		1.60		0.60					

2) 사용하중 검토시

구분	고정하중	활하중		활하중 측압		수평토압 (지하수無)		온도하중		건조수축	장대레일	비고
				양측재하	편측재하	양측재하	편측재하					
		전경간	1/2	수평	수평	수평	수평	온도상승	온도하강			
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	LC9	LC10	LC11	
21	1.0	1.0		1.0		1.0						
22	1.0	1.0		1.0		0.5						
23	1.0		1.0		1.0	1.0						
24	1.0		1.0		1.0	0.5						
25	1.0	1.0		1.0		1.0		1.0			1.0	
26	1.0	1.0		1.0		0.5		1.0			1.0	
27	1.0	1.0		1.0		1.0			1.0	1.0	1.0	
28	1.0	1.0		1.0		0.5			1.0	1.0	1.0	
29	1.0		1.0		1.0	1.0		1.0			1.0	
30	1.0		1.0		1.0	0.5		1.0			1.0	
31	1.0		1.0		1.0	1.0			1.0	1.0	1.0	
32	1.0		1.0		1.0	0.5			1.0	1.0	1.0	
33	1.0					1.0						
34	1.0		1.0		1.0		1.0					
35	1.0		1.0		1.0		0.5					

7. INPUT DATA

```
*VERSION
   8.3.1

*UNIT    ; Unit System
; FORCE, LENGTH, HEAT, TEMPER
   KN   , M, J, C

*STRUCTYPE    ; Structure Type
; iSTYP, iMASS, iSMAS, bMASSOFFSET, bSELFWEIGHT, GRAV, TEMPER, bALIGNBEAM, bALIGNSLAB, bROTRIGID
     1, 1, 1, NO, YES, 9.806, 0, NO, NO, NO

*REBAR-MATL-CODE    ; Rebar Material Code
; CONC_CODE, CONC_MDB, SRC_CODE, SRC_MDB
 KS01-Civil(RC), SD300, KS01-Civil(RC), SD300

*NODE    ; Nodes
; iNO, X, Y, Z
     1, 0, 0, 0
     2, 0.55, 0, 0
     3, 0.78, 0, 0
     4, 1.01, 0, 0
     5, 1.24, 0, 0
     6, 1.47, 0, 0
     7, 1.7, 0, 0
     8, 1.93, 0, 0
     9, 2.48, 0, 0
    10, 0, 0, 0.525
    11, 2.48, 0, 0.525
    12, 0, 0, 0.805
    13, 2.48, 0, 0.805
    14, 0, 0, 1.085
    15, 2.48, 0, 1.085
    16, 0, 0, 1.365
    17, 2.48, 0, 1.365
    18, 0, 0, 1.645
    19, 2.48, 0, 1.645
    20, 0, 0, 1.925
    21, 2.48, 0, 1.925
    22, 0, 0, 2.425
    23, 0.5, 0, 2.425
    24, 0.747, 0, 2.425
    25, 0.993, 0, 2.425
    26, 1.24, 0, 2.425
    27, 1.487, 0, 2.425
    28, 1.733, 0, 2.425
    29, 1.98, 0, 2.425
    30, 2.48, 0, 2.425

*ELEMENT    ; Elements
; iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, iOPT(EXVAL2) ; Frame  Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, ANGLE, iSUB, EXVAL, EXVAL2, bLMT ; Comp/Tens Truss
; iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iSUB, iWID             ; Planar Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, iN3, iN4, iN5, iN6, iN7, iN8     ; Solid  Element
; iEL, TYPE, iMAT, iPRO, iN1, iN2, REF, RPX, RPY, RPZ, iSUB, EXVAL  ; Frame(Ref. Point)
     1, BEAM  ,    2,    2,    1,    2,   180
     2, BEAM  ,    2,    2,    2,    3,   180
     3, BEAM  ,    2,    2,    3,    4,   180
     4, BEAM  ,    2,    2,    4,    5,   180
     5, BEAM  ,    2,    2,    5,    6,   180
     6, BEAM  ,    2,    2,    6,    7,   180
     7, BEAM  ,    2,    2,    7,    8,   180
     8, BEAM  ,    2,    2,    8,    9,   180
     9, BEAM  ,    2,    3,    1,   10,   180
    10, BEAM  ,    2,    3,    9,   11,     0
    11, BEAM  ,    2,    3,   10,   12,   180
    12, BEAM  ,    2,    3,   11,   13,     0
    13, BEAM  ,    2,    3,   12,   14,   180
    14, BEAM  ,    2,    3,   13,   15,     0
    15, BEAM  ,    2,    3,   14,   16,   180
    16, BEAM  ,    2,    3,   15,   17,     0
    17, BEAM  ,    2,    3,   16,   18,   180
    18, BEAM  ,    2,    3,   17,   19,     0
    19, BEAM  ,    2,    3,   18,   20,   180
    20, BEAM  ,    2,    3,   19,   21,     0
    21, BEAM  ,    2,    3,   20,   22,   180
    22, BEAM  ,    2,    3,   21,   30,     0
    23, BEAM  ,    2,    1,   22,   23,     0
    24, BEAM  ,    2,    1,   23,   24,     0
    25, BEAM  ,    2,    1,   24,   25,     0
    26, BEAM  ,    2,    1,   25,   26,     0
    27, BEAM  ,    2,    1,   26,   27,     0
    28, BEAM  ,    2,    1,   27,   28,     0
    29, BEAM  ,    2,    1,   28,   29,     0
```

```
    30, BEAM  ,    2,     1,    29,    30,     0

*MATERIAL    ; Material
; iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, DAMPRATIO, [DATA1]          ; STEEL, CONC, USER
; iMAT, TYPE, MNAME, SPHEAT, HEATCO, PLAST, TUNIT, bMASS, DAMPRATIO, [DATA2], [DATA2] ; SRC
; [DATA1] : 1, DB, NAME, CODE
; [DATA1] : 2, ELAST, POISN, THERMAL, DEN, MASS
; [DATA1] : 3, Ex, Ey, Ez, Tx, Ty, Tz, Sxy, Sxz, Syz, Pxy, Pxz, Pyz, DEN, MASS   ; Orthotropic
; [DATA2] : 1, DB, NAME, CODE or 2, ELAST, POISN, THERMAL, DEN, MASS
    1, USER , STEEL              , 0, 0, , C, NO, 0, 2, 2.0000e+008,   0.3, 1.1700e-005, 76.8196,     0
    2, USER , CONC               , 0, 0, , C, NO, 0, 2, 2.7537e+007,  0.18, 1.0000e-005,  24.5,     0

*MATL-COLOR
; iMAT, W_R, W_G, W_B, HF_R, HF_G, HF_B, HE_R, HE_G, HE_B, bBLEND, FACT
    1, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
    2, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5


*SECTION    ; Section
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2]                    ; 1st line - DB/USER
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL              ; 1st line - VALUE
;       AREA, ASy, ASz, Ixx, Iyy, Izz                                         ; 2nd line
;       CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz               ; 3rd line
;       Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz                              ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF          ; 1st line - SRC
;       D1, D2, [SRC]                                                         ; 2nd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2        ; 1st line - COMBINED
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24
; iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, iyVAR, izVAR, STYPE                ; 1st line - TAPERED
;       DB, NAME1, NAME2                                                      ; 2nd line(STYPE=DB)
;       [DIM1], [DIM2]                                                        ; 2nd line(STYPE=USER)
;       D11, D12, D13, D14, D15, D16, D17, D18                                ; 2nd line(STYPE=VALUE)
;       AREA1, ASy1, ASz1, Ixx1, Iyy1, Izz1                                   ; 3rd line(STYPE=VALUE)
;       CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1     ; 4th line(STYPE=VALUE)
;       Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2                    ; 5th line(STYPE=VALUE)
;       D21, D22, D23, D24, D25, D26, D27, D28                                ; 6th line(STYPE=VALUE)
;       AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2                                   ; 7th line(STYPE=VALUE)
;       CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2     ; 8th line(STYPE=VALUE)
;       Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2                    ; 9th line(STYPE=VALUE)
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line(STYPE=PSC)
;       ELAST, DEN, POIS, POIC                                                ; 2nd line(STYPE=PSC-CMPW)
;       bSHEARCHK, [SCHK-I], [SCHK-J], [WT-I], [WT-J], WI, WJ, bSYM, bSIDEHOLE ; 3rd line(STYPE=PSC)
;       bSHEARCHK, bSYM, bHUNCH, [CMPWEB-I], [CMPWEB-J]                       ; 3rd line(STYPE=PSC-CMPW)
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF-I], [STIFF-J]       ; 4th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 5th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 6th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 7th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 8th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 9th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 10th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 11th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 12th line(STYPE=PSC)
;       GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMULTI, EsEc-L, EsEc-S       ; 2nd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 3rd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 4th line(STYPE=CMP-B/I)
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 5th line(STYPE=CMP-B)
;       GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb, bSYM, SW_i, SW_i       ; 2nd line(STYPE=CMP-CI/CT)
;       OPT1, OPT2, [JOINT]                                                   ; 3rd line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 4th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 5th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 6th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 7th line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 11th line(STYPE=CMP-CI/CT)
; iSEC, TYPE, SNAME, [OFFSET], bSD, STYPE1, STYPE2                            ; 1st line - CONSTRUCT
;       SHAPE, ...(same with other type data from shape)                      ; Before (STYPE1)
;       SHAPE, ...(same with other type data from shape)                      ; After  (STYPE2)
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SB
;       Hw, tw, B, Bf1, tf1, B2, Bf2, tf2                                     ; 2nd line
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 3rd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SI
;       Hw, tw, B, tf1, B2, tf2                                               ; 2nd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 3rd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-CI/CT
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line
;       [SIZE-A]                                                              ; 3rd line
;       [SIZE-B]                                                              ; 4th line
;       [SIZE-C]                                                              ; 5th line
;       [SIZE-D]                                                              ; 6th line
;       SW, GN, CTC, Bc, Tc, Hh, EgdEsb, DgdDsb, Pgd, Psb                     ; 7th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - PSC
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line
;       bSHEARCHK, [SCHK], [WT], WIDTH, bSYM, bSIDEHOLE                       ; 3rd line
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF]                    ; 4th line
```

```
;       [SIZE-A]                                                                ; 5th line
;       [SIZE-B]                                                                ; 6th line
;       [SIZE-C]                                                                ; 7th line
;       [SIZE-D]                                                                ; 8th line
; [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10
; [DATA2] : CCSHAPE or iCEL or iN1, iN2
; [SRC]  : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2
; [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8
; [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER
; [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ
; [JOINT]  :  8(1CELL, 2CELL), 13(3CELL),  9(PSCM),  8(PSCH), 9(PSCT),  2(PSCB), 0(nCELL),  2(nCEL2)
; [SIZE-A] :  6(1CELL, 2CELL), 10(3CELL), 10(PSCM),  6(PSCH), 8(PSCT), 10(PSCB), 5(nCELL), 11(nCEL2)
; [SIZE-B] :  6(1CELL, 2CELL), 12(3CELL),  6(PSCM),  6(PSCH), 8(PSCT),  6(PSCB), 8(nCELL), 18(nCEL2)
; [SIZE-C] : 10(1CELL, 2CELL), 13(3CELL),  9(PSCM), 10(PSCH), 7(PSCT),  8(PSCB), 0(nCELL), 11(nCEL2)
; [SIZE-D] :  8(1CELL, 2CELL), 13(3CELL),  6(PSCM),  7(PSCH), 8(PSCT),  5(PSCB), 0(nCELL), 18(nCEL2)
; [STIFF]  : AREA, ASy, ASz, Ixx, Iyy, Izz
; [SCHK]   : bAUTO_Z1, Z1, bAUTO_Z3, Z3
; [WT]     : bAUTO_TOR, TOR, bAUTO_SHR1, SHR1, bAUTO_SHR2, SHR2, bAUTO_SHR3, SHR3
; [CMPWEB] : EFD, LRF, A, B, H, T
   1, DBUSER    , TOPSLAB           , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB           , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.45, 1, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL              , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0

*SECT-COLOR
; iSEC, W_R, W_G, W_B, HF_R, HF_G, HF_B, HE_R, HE_G, HE_B, bBLEND, FACT
   1, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
   2, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5
   3, 255,   0,   0,    0, 255,   0,    0,   0, 255,  NO, 0.5

*DGN-SECT
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, [DATA1], [DATA2]                    ; 1st line - DB/USER
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, BLT, D1, ..., D8, iCEL             ; 1st line - VALUE
;       AREA, ASy, ASz, Ixx, Iyy, Izz                                         ; 2nd line
;       CyP, CyM, CzP, CzM, QyB, QzB, PERI_OUT, PERI_IN, Cy, Cz               ; 3rd line
;       Y1, Y2, Y3, Y4, Z1, Z2, Z3, Z4, Zyy, Zzz                              ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, ELAST, DEN, POIS, POIC, SF         ; 1st line - SRC
;       D1, D2, [SRC]                                                         ; 2nd line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 1, DB, NAME1, NAME2, D1, D2        ; 1st line - COMBINED
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE, 2, D11, D12, D13, D14, D15, D21, D22, D23, D24
; iSEC, TYPE, SNAME, [OFFSET2], bSD, SHAPE, iyVAR, izVAR, STYPE               ; 1st line - TAPERED
;       DB, NAME1, NAME2                                                      ; 2nd line(STYPE=DB)
;       [DIM1], [DIM2]                                                        ; 2nd line(STYPE=USER)
;       D11, D12, D13, D14, D15, D16, D17, D18                                ; 2nd line(STYPE=VALUE)
;       AREA1, ASy1, ASz1, Ixx1, Iyy1, Izz1                                   ; 3rd line(STYPE=VALUE)
;       CyP1, CyM1, CzP1, CzM1, QyB1, QzB1, PERI_OUT1, PERI_IN1, Cy1, Cz1     ; 4th line(STYPE=VALUE)
;       Y11, Y12, Y13, Y14, Z11, Z12, Z13, Z14, Zyy1, Zyy2                    ; 5th line(STYPE=VALUE)
;       D21, D22, D23, D24, D25, D26, D27, D28                                ; 6th line(STYPE=VALUE)
;       AREA2, ASy2, ASz2, Ixx2, Iyy2, Izz2                                   ; 7th line(STYPE=VALUE)
;       CyP2, CyM2, CzP2, CzM2, QyB2, QzB2, PERI_OUT2, PERI_IN2, Cy2, Cz2     ; 8th line(STYPE=VALUE)
;       Y21, Y22, Y23, Y24, Z21, Z22, Z23, Z24, Zyy2, Zzz2                    ; 9th line(STYPE=VALUE)
;       OPT1, OPT2, [JOINT]                                                   ; 2nd line(STYPE=PSC)
;       ELAST, DEN, POIS, POIC                                                ; 2nd line(STYPE=PSC-CMPW)
;       bSHEARCHK, [SCHK-I], [SCHK-J], [WT-I], [WT-J], WI, WJ, bSYM, bSIDEHOLE ; 3rd line(STYPE=PSC)
;       bSHEARCHK, bSYM, bHUNCH, [CMPWEB-I], [CMPWEB-J]                       ; 3rd line(STYPE=PSC-CMPW)
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF-I], [STIFF-J]       ; 4th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 5th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 6th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 7th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 8th line(STYPE=PSC)
;       [SIZE-A]-i                                                            ; 9th line(STYPE=PSC)
;       [SIZE-B]-i                                                            ; 10th line(STYPE=PSC)
;       [SIZE-C]-i                                                            ; 11th line(STYPE=PSC)
;       [SIZE-D]-i                                                            ; 12th line(STYPE=PSC)
;       GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMULTI, EsEc-L, EsEc-S       ; 2nd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 3rd line(STYPE=CMP-B/I)
;       SW_i, Hw_i, tw_i, B_i, Bf1_i, tf1_i, B2_i, Bf2_i, tf2_i               ; 4th line(STYPE=CMP-B/I)
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 5th line(STYPE=CMP-B)
;       GN, CTC, Bc, Tc, Hh, EqdEsb, DqdDsb, Pqd, Psb, bSYM, SW_i, SW_i       ; 2nd line(STYPE=CMP-CI/CT)
;       OPT1, OPT2, [JOINT]                                                   ; 3rd line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 4th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 5th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 6th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 7th line(STYPE=CMP-CI/CT)
;       [SIZE-A]-i                                                            ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-i                                                            ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-i                                                            ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-i                                                            ; 11th line(STYPE=CMP-CI/CT)
; iSEC, TYPE, SNAME, [OFFSET], bSD, STYPE1, STYPE2                            ; 1st line - CONSTRUCT
;       SHAPE, ...(same with other type data from shape)                      ; Before (STYPE1)
;       SHAPE, ...(same with other type data from shape)                      ; After  (STYPE2)
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SB
;       Hw, tw, B, Bf1, tf1, B2, Bf2, tf2                                     ; 2nd line
;       N1, N2, Hr, Hr2, tr1, tr2                                             ; 3rd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 4th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                     ; 1st line - COMPOSITE-SI
;       Hw, tw, B, tf1, B2, tf2                                               ; 2nd line
;       SW, GN, CTC, Bc, Tc, Hh, EsEc, DsDc, Ps, Pc, bMulti, Elong, Esh       ; 3rd line
```

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; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                    ; 1st line - COMPOSITE-CI/CT
;       OPT1, OPT2, [JOINT]                                                  ; 2nd line
;       [SIZE-A]                                                             ; 3rd line
;       [SIZE-B]                                                             ; 4th line
;       [SIZE-C]                                                             ; 5th line
;       [SIZE-D]                                                             ; 6th line
;       SW, GN, CTC, Bc, Tc, Hh, EqdEsb, DqdDsb, Pqd, Psb                    ; 7th line
; iSEC, TYPE, SNAME, [OFFSET], bSD, SHAPE                                    ; 1st line - PSC
;       OPT1, OPT2, [JOINT]                                                  ; 2nd line
;       bSHEARCHK, [SCHK], [WT], WIDTH, bSYM, bSIDEHOLE                      ; 3rd line
;       bUSERDEFMESHSIZE, MESHSIZE, bUSERINPSTIFF, [STIFF]                   ; 4th line
;       [SIZE-A]                                                             ; 5th line
;       [SIZE-B]                                                             ; 6th line
;       [SIZE-C]                                                             ; 7th line
;       [SIZE-D]                                                             ; 8th line
; [DATA1] : 1, DB, NAME or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10
; [DATA2] : CCSHAPE or iCEL or iN1, iN2
; [SRC]   : 1, DB, NAME1, NAME2 or 2, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, iN1, iN2
; [DIM1], [DIM2] : D1, D2, D3, D4, D5, D6, D7, D8
; [OFFSET] : OFFSET, iCENT, iREF, iHORZ, HUSER, iVERT, VUSER
; [OFFSET2]: OFFSET, iCENT, iREF, iHORZ, HUSERI, HUSERJ, iVERT, VUSERI, VUSERJ
; [JOINT]  :  8(1CELL, 2CELL), 13(3CELL),  9(PSCM),  8(PSCH), 9(PSCT),  2(PSCB), 0(nCELL),  2(nCEL2)
; [SIZE-A] :  6(1CELL, 2CELL), 10(3CELL), 10(PSCM),  6(PSCH), 8(PSCT), 10(PSCB), 5(nCELL), 11(nCEL2)
; [SIZE-B] :  6(1CELL, 2CELL), 12(3CELL),  6(PSCM),  6(PSCH), 8(PSCT),  6(PSCB), 8(nCELL), 18(nCEL2)
; [SIZE-C] : 10(1CELL, 2CELL), 13(3CELL),  9(PSCM), 10(PSCH), 7(PSCT),  8(PSCB), 0(nCELL), 11(nCEL2)
; [SIZE-D] :  8(1CELL, 2CELL), 13(3CELL),  6(PSCM),  7(PSCH), 8(PSCT),  5(PSCB), 0(nCELL), 18(nCEL2)
; [STIFF]  : AREA, ASy, ASz, Ixx, Iyy, Izz
; [SCHK]   : bAUTO_Z1, Z1, bAUTO_Z3, Z3
; [WT]     : bAUTO_TOR, TOR, bAUTO_SHR1, SHR1, bAUTO_SHR2, SHR2, bAUTO_SHR3, SHR3
; [CMPWEB] : EFD, LRF, A, B, H, T
   1, DBUSER    , TOPSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.45, 1, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL             , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.4, 1, 0, 0, 0, 0, 0, 0, 0, 0


*STLDCASE    ; Static Load Cases
; LCNAME, LCTYPE, DESC
   LC1  , USER,
   LC2  , USER,
   LC3  , USER,
   LC4  , USER,
   LC5  , USER,
   LC6  , USER,
   LC7  , USER,
   LC8  , USER,
   LC9  , USER,
   LC10 , USER,
   LC11 , USER,
   NCOMB1, USER,
   NCOMB2, USER,
   NCOMB3, USER,
   NCOMB4, USER,
   NCOMB5, USER,
   NCOMB6, USER,
   NCOMB7, USER,
   NCOMB8, USER,
   NCOMB9, USER,
   NCOMB10, USER,
   NCOMB11, USER,
   NCOMB12, USER,
   NCOMB13, USER,
   NCOMB14, USER,
   NCOMB15, USER,
   NCOMB16, USER,
   NCOMB17, USER,
   NCOMB18, USER,
   NCOMB19, USER,
   NCOMB20, USER,
   NCOMB21, USER,
   NCOMB22, USER,
   NCOMB23, USER,
   NCOMB24, USER,
   NCOMB25, USER,
   NCOMB26, USER,
   NCOMB27, USER,
   NCOMB28, USER,
   NCOMB29, USER,
   NCOMB30, USER,
   NCOMB31, USER,
   NCOMB32, USER,
   NCOMB33, USER,
   NCOMB34, USER,
   NCOMB35, USER,


*SPRING    ; Point Spring Supports
; NODE_LIST, Type, SDx, SDy, SDz, SRx, SRy, SRz, GROUP, FROMTYPE, EFFAREA, Kx, Ky, Kz
```

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; NODE_LIST, Type, Direction, Vx, Vy, Vz, Stiffness, GROUP, FROMTYPE, EFFAREA
; NODE_LIST, Type, Multi-Linear Type, Direction, Vx, Vy, Vz, ax, ay, bx, by, cx, cy, dx, dy, ex, ey, fx, fy, GROUP, FROMTYPE, EFFAREA
   2 8, COMP  ,  5, 0, 0, 0, 4480, , 0, 0, 0, 0, 0
   3to7, COMP  ,  5, 0, 0, 0, 2642, , 0, 0, 0, 0, 0
   1, LINEAR, 1e+014, 0, 0, 0, 0, 0, NO, 0, 0, 0, 0, 0, 0, , 0, 0, 0, 0, 0
   1 9, COMP  ,  5, 0, 0, 0, 5456, , 0, 0, 0, 0, 0

*OFFSET    ; Beam End Offsets
; ELEM_LIST, TYPE, RGDXi, RGDYi, RGDZi, RGDXj, RGDYj, RGDZj, GROUP  ; TYPE=GLOBAL
; ELEM_LIST, TYPE, RGDi, RGDj, GROUP                                ; TYPE=ELEMENT
     1, ELEMENT, 0.275, 0,
     8, ELEMENT, 0, 0.275,
     9, ELEMENT, 0.325, 0,
    10, ELEMENT, 0.325, 0,
    21, ELEMENT, 0, 0.3,
    22, ELEMENT, 0, 0.3,
    23, ELEMENT, 0.3, 0,
    30, ELEMENT, 0, 0.3,

*USE-STLD, LC1

; *SELFWEIGHT, X, Y, Z, GROUP
*SELFWEIGHT, 0, 0, -1,

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -209.06, 1, -209.06, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC1] ------------------------

*USE-STLD, LC2

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC2] ------------------------

*USE-STLD, LC3

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
    23, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -21.019, 1, -21.019, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC3] ------------------------

*USE-STLD, LC4

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
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    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -8.408, 1, -8.408, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC4] ----------

*USE-STLD, LC5

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.408, 1, 8.408, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC5] ----------

*USE-STLD, LC6

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 111.427, 1, 106.954, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -111.427, 1, -106.954, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 106.954, 1, 104.568, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -106.954, 1, -104.568, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 104.568, 1, 102.182, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -104.568, 1, -102.182, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 102.182, 1, 99.796, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -102.182, 1, -99.796, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 99.796, 1, 97.41, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -99.796, 1, -97.41, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 97.41, 1, 95.024, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -97.41, 1, -95.024, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 95.024, 1, 90.764, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -95.024, 1, -90.764, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC6] ----------

*USE-STLD, LC7

*BEAMLOAD    ; Element Beam Loads
; ELEM_LIST, CMD, TYPE, DIR, bPROJ, [ECCEN], [VALUE], GROUP
; ELEM_LIST, CMD, TYPE, TYPE, DIR, VX, VY, VZ, bPROJ, [ECCEN], [VALUE], GROUP
; [VALUE]       : D1, P1, D2, P2, D3, P3, D4, P4
; [ECCEN]       : bECCEN, ECCDIR, I-END, J-END, bJ-END
; [ADDITIONAL]  : bADDITIONAL, ADDITIONAL_I-END, ADDITIONAL_J-END, bADDITIONAL_J-END
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 22.367, 1, 17.894, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 17.894, 1, 15.508, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 15.508, 1, 13.122, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 13.122, 1, 10.736, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 10.736, 1, 8.35, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 8.35, 1, 5.964, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 5.964, 1, 1.704, 0, 0, 0, 0, , NO, 0, 0, NO

; End of data for load case [LC7] ----------

*USE-STLD, LC10

*ELTEMPER    ; Element Temperatures
; ELEM LIST, TEMPER, GROUP
     1, -15.
     2, -15.
     3, -15.
     4, -15.
     5, -15.
     6, -15.
     7, -15.
     8, -15.
     9, -15.
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    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [LC10] ------------------------

*USE-STLD. NCOMB1

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. N(
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. N(
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. N(
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. N(
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. N(
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. N(
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. N(
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB1] ------------------------

*USE-STLD. NCOMB2

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.
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*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB2] ------------------------

*USE-STLD. NCOMB3

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB3] ------------------------

*USE-STLD. NCOMB4

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB4] ------------------------

*USE-STLD. NCOMB5

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
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    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB5] ------------------------

*USE-STLD. NCOMB6

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
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; End of data for load case [NCOMB6] ------------------------

*USE-STLD. NCOMB7

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB7] ------------------------

*USE-STLD. NCOMB8

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
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     26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
     26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
     28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
     29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
     30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB8] ------------------------

*USE-STLD. NCOMB9

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
      9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
      9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
     12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
     12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
     14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
     14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
     15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
     17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
     18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
     19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
     20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
     20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
     21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
     22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
     23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
     24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
     24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
     25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
     25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
     26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
     26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
     27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
     27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
     28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
     28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
     29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
     29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
     30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
     30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB9] ------------------------

*USE-STLD. NCOMB10

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
      9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
      9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
     10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
     11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
     13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
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    13 BEAM    UNILOAD GX NO NO aDir[1]    0 62.7408 1 61.3092 0 0 0 0  NO 0 0 NO
    14 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    14 BEAM    UNILOAD GX NO NO aDir[1]    0 -62.7408 1 -61.3092 0 0 0 0  NO 0 0 NO
    15 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
    15 BEAM    UNILOAD GX NO NO aDir[1]    0 61.3092 1 59.8776 0 0 0 0  NO 0 0 NO
    16 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    16 BEAM    UNILOAD GX NO NO aDir[1]    0 -61.3092 1 -59.8776 0 0 0 0  NO 0 0 NO
    17 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
    17 BEAM    UNILOAD GX NO NO aDir[1]    0 59.8776 1 58.446 0 0 0 0  NO 0 0 NO
    18 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    18 BEAM    UNILOAD GX NO NO aDir[1]    0 -59.8776 1 -58.446 0 0 0 0  NO 0 0 NO
    19 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
    19 BEAM    UNILOAD GX NO NO aDir[1]    0 58.446 1 57.0144 0 0 0 0  NO 0 0 NO
    20 BEAM    UNILOAD GX NO NO aDir[1]    0 -58.446 1 -57.0144 0 0 0 0  NO 0 0 NO
    20 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    21 BEAM    UNILOAD GX NO NO aDir[1]    0 57.0144 1 54.4584 0 0 0 0  NO 0 0 NO
    21 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
    22 BEAM    UNILOAD GX NO NO aDir[1]    0 -57.0144 1 -54.4584 0 0 0 0  NO 0 0 NO
    22 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    23 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    23 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    24 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    24 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    25 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    25 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    26 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    26 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    27 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    27 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    28 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    28 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    29 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    29 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    30 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    30 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO

; End of data for load case [NCOMB10] ------------------------

*USE-STLD NCOMB11

; *SELFWEIGHT X Y Z GROUP
*SELFWEIGHT 0 0 -1.35

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST CMD TYPE DIR bPROJ [ECCEN] [VALUE] GROUP
; ELEM LIST CMD TYPE TYPE DIR VX VY VZ bPROJ [ECCEN] [VALUE] GROUP
; [VALUE]       : D1 P1 D2 P2 D3 P3 D4 P4
; [ECCEN]       : bECCEN ECCDIR I-END J-END bJ-END
; [ADDITIONAL]  : bADDITIONAL ADDITIONAL I-END ADDITIONAL J-END bADDITIONAL J-END
     9 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
     9 BEAM    UNILOAD GX NO NO aDir[1]    0 178.283 1 171.126 0 0 0 0  NO 0 0 NO
    10 BEAM    UNILOAD GX NO NO aDir[1]    0 -178.283 1 -171.126 0 0 0 0  NO 0 0 NO
    10 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    11 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
    11 BEAM    UNILOAD GX NO NO aDir[1]    0 171.126 1 167.309 0 0 0 0  NO 0 0 NO
    12 BEAM    UNILOAD GX NO NO aDir[1]    0 -171.126 1 -167.309 0 0 0 0  NO 0 0 NO
    12 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    13 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
    13 BEAM    UNILOAD GX NO NO aDir[1]    0 167.309 1 163.491 0 0 0 0  NO 0 0 NO
    14 BEAM    UNILOAD GX NO NO aDir[1]    0 -167.309 1 -163.491 0 0 0 0  NO 0 0 NO
    14 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    15 BEAM    UNILOAD GX NO NO aDir[1]    0 163.491 1 159.674 0 0 0 0  NO 0 0 NO
    15 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
    16 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    16 BEAM    UNILOAD GX NO NO aDir[1]    0 -163.491 1 -159.674 0 0 0 0  NO 0 0 NO
    17 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
    17 BEAM    UNILOAD GX NO NO aDir[1]    0 159.674 1 155.856 0 0 0 0  NO 0 0 NO
    18 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    18 BEAM    UNILOAD GX NO NO aDir[1]    0 -159.674 1 -155.856 0 0 0 0  NO 0 0 NO
    19 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
    19 BEAM    UNILOAD GX NO NO aDir[1]    0 155.856 1 152.038 0 0 0 0  NO 0 0 NO
    20 BEAM    UNILOAD GX NO NO aDir[1]    0 -155.856 1 -152.038 0 0 0 0  NO 0 0 NO
    20 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    21 BEAM    UNILOAD GX NO NO aDir[1]    0 152.038 1 145.222 0 0 0 0  NO 0 0 NO
    21 BEAM    UNILOAD GX NO NO aDir[1]    0 11.7712 1 11.7712 0 0 0 0  NO 0 0 NO
    22 BEAM    UNILOAD GX NO NO aDir[1]    0 -152.038 1 -145.222 0 0 0 0  NO 0 0 NO
    22 BEAM    UNILOAD GX NO NO aDir[1]    0 -11.7712 1 -11.7712 0 0 0 0  NO 0 0 NO
    23 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    23 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    24 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    24 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    25 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    25 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    26 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    26 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
    27 BEAM    UNILOAD GZ NO NO aDir[1]    0 -29.4266 1 -29.4266 0 0 0 0  NO 0 0 NO
    27 BEAM    UNILOAD GZ NO NO aDir[1]    0 -282.231 1 -282.231 0 0 0 0  NO 0 0 NO
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    28. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB11] ------------------------

*USE-STLD. NCOMB12

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB12] ----------------------------

*USE-STLD. NCOMB13

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB13] ------------------------

*USE-STLD. NCOMB14

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB14] ------------------------

*USE-STLD. NCOMB15

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 178.283. 1. 171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -178.283. 1. -171.126. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 171.126. 1. 167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -171.126. 1. -167.309. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 167.309. 1. 163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -167.309. 1. -163.491. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 163.491. 1. 159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -163.491. 1. -159.674. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 159.674. 1. 155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -159.674. 1. -155.856. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 155.856. 1. 152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -155.856. 1. -152.038. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 152.038. 1. 145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -152.038. 1. -145.222. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB15] ------------------------

*USE-STLD. NCOMB16

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 66.8562. 1. 64.1724. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -66.8562. 1. -64.1724. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 64.1724. 1. 62.7408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -64.1724. 1. -62.7408. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.7408. 1. 61.3092. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.7408. 1. -61.3092. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 61.3092. 1. 59.8776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -61.3092. 1. -59.8776. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 59.8776. 1. 58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -59.8776. 1. -58.446. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.446. 1. 57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.446. 1. -57.0144. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 57.0144. 1. 54.4584. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -57.0144. 1. -54.4584. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -20.25.
     2. -20.25.
     3. -20.25.
     4. -20.25.
     5. -20.25.
     6. -20.25.
     7. -20.25.
     8. -20.25.
     9. -20.25.
    10. -20.25.
    11. -20.25.
    12. -20.25.
    13. -20.25.
    14. -20.25.
    15. -20.25.
    16. -20.25.
    17. -20.25.
    18. -20.25.
    19. -20.25.
    20. -20.25.
    21. -20.25.
    22. -20.25.
    23. -20.25.
    24. -20.25.
    25. -20.25.
    26. -20.25.
    27. -20.25.
    28. -20.25.
    29. -20.25.
    30. -20.25.

; End of data for load case [NCOMB16] ------------------------

*USE-STLD. NCOMB17

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 28.6304. 1. 24.8128. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.8128. 1. 20.9952. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 20.9952. 1. 17.1776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.1776. 1. 13.36. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.36. 1. 9.5424. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.5424. 1. 2.7264. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB17] ------------------------

*USE-STLD. NCOMB18

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.35.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
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; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4202. 1. 10.7364. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.7364. 1. 9.3048. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.3048. 1. 7.8732. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.8732. 1. 6.4416. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.4416. 1. 5.01. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.01. 1. 3.5784. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 3.5784. 1. 1.0224. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -282.231. 1. -282.231. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB18] ------------------------

*USE-STLD. NCOMB19

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 28.6304. 1. 24.8128. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.8128. 1. 20.9952. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 20.9952. 1. 17.1776. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.1776. 1. 13.36. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.36. 1. 9.5424. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.5424. 1. 2.7264. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. N(

; End of data for load case [NCOMB19] ------------------------

*USE-STLD. NCOMB20

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.6.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4202. 1. 10.7364. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.7364. 1. 9.3048. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
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    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 9.3048. 1. 7.8732. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.8732. 1. 6.4416. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.4416. 1. 5.01. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.01. 1. 3.5784. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 3.5784. 1. 1.0224. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -334.496. 1. -334.496. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB20] ------------------------

*USE-STLD. NCOMB21

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB21] ------------------------

*USE-STLD. NCOMB22

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.
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*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB22] ------------------------

*USE-STLD. NCOMB23

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
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    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB23] ------------------------

*USE-STLD. NCOMB24

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB24] ------------------------

*USE-STLD. NCOMB25

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
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    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB25] ------------------------

*USE-STLD. NCOMB26

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
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; End of data for load case [NCOMB26] ------------------------

*USE-STLD. NCOMB27

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
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    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB27] ------------------------

*USE-STLD. NCOMB28

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -8.408. 1. -8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
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    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
    30. -15.

; End of data for load case [NCOMB28] ------------------------

*USE-STLD. NCOMB29

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB29] ------------------------

*USE-STLD. NCOMB30

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
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    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB30] ------------------------

*USE-STLD. NCOMB31

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
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     23. -15.
     24. -15.
     25. -15.
     26. -15.
     27. -15.
     28. -15.
     29. -15.
     30. -15.

; End of data for load case [NCOMB31] ------------------------

*USE-STLD. NCOMB32

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.7135. 1. 53.477. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.7135. 1. -53.477. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.477. 1. 52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.477. 1. -52.284. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.284. 1. 51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.284. 1. -51.091. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 51.091. 1. 49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -51.091. 1. -49.898. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 49.898. 1. 48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -49.898. 1. -48.705. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.705. 1. 47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.705. 1. -47.512. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 47.512. 1. 45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.512. 1. -45.382. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

*ELTEMPER    ; Element Temperatures
; ELEM LIST. TEMPER. GROUP
     1. -15.
     2. -15.
     3. -15.
     4. -15.
     5. -15.
     6. -15.
     7. -15.
     8. -15.
     9. -15.
    10. -15.
    11. -15.
    12. -15.
    13. -15.
    14. -15.
    15. -15.
    16. -15.
    17. -15.
    18. -15.
    19. -15.
    20. -15.
    21. -15.
    22. -15.
    23. -15.
    24. -15.
    25. -15.
    26. -15.
    27. -15.
    28. -15.
    29. -15.
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    30. -15.

; End of data for load case [NCOMB32] ------------------------

*USE-STLD. NCOMB33

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 111.427. 1. 106.954. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -111.427. 1. -106.954. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 106.954. 1. 104.568. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -106.954. 1. -104.568. 0. 0. 0. 0. . NO. 0. 0. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.568. 1. 102.182. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.568. 1. -102.182. 0. 0. 0. 0. . NO. 0. 0. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 102.182. 1. 99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -102.182. 1. -99.796. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 99.796. 1. 97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -99.796. 1. -97.41. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 97.41. 1. 95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -97.41. 1. -95.024. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 95.024. 1. 90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -95.024. 1. -90.764. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB33] ------------------------

*USE-STLD. NCOMB34

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 22.367. 1. 17.894. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 17.894. 1. 15.508. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 15.508. 1. 13.122. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 13.122. 1. 10.736. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 10.736. 1. 8.35. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.35. 1. 5.964. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.964. 1. 1.704. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB34] ------------------------

*USE-STLD. NCOMB35

; *SELFWEIGHT. X. Y. Z. GROUP
*SELFWEIGHT. 0. 0. -1.

*BEAMLOAD    ; Element Beam Loads
; ELEM LIST. CMD. TYPE. DIR. bPROJ. [ECCEN]. [VALUE]. GROUP
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; ELEM LIST. CMD. TYPE. TYPE. DIR. VX. VY. VZ. bPROJ. [ECCEN]. [VALUE]. GROUP
; [VALUE]       : D1. P1. D2. P2. D3. P3. D4. P4
; [ECCEN]       : bECCEN. ECCDIR. I-END. J-END. bJ-END
; [ADDITIONAL]  : bADDITIONAL. ADDITIONAL I-END. ADDITIONAL J-END. bADDITIONAL J-END
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 11.1835. 1. 8.947. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.947. 1. 7.754. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 7.754. 1. 6.561. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 6.561. 1. 5.368. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 5.368. 1. 4.175. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 4.175. 1. 2.982. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 2.982. 1. 0.852. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -21.019. 1. -21.019. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -209.06. 1. -209.06. 0. 0. 0. 0. . NO. 0. 0. NO

; End of data for load case [NCOMB35] ------------------------


*LOADCOMB    ; Combinations
; NAME=NAME. KIND. ACTIVE. bES. iTYPE. DESC. iSERV-TYPE. nLCOMTYPE   ; line 1
;       ANAL1. LCNAME1. FACT1. ...                                  ; from line 2
   NAME=COMB1. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.85. ST. LC4. 1.85. ST. LC6. 1.6
   NAME=COMB2. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.85. ST. LC4. 1.85. ST. LC6. 0.6
   NAME=COMB3. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC6. 1.6
   NAME=COMB4. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC6. 0.6
   NAME=COMB5. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC2. 1.6. ST. LC4. 1.6. ST. LC6. 1.6
   NAME=COMB6. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC2. 1.6. ST. LC4. 1.6. ST. LC6. 0.6
   NAME=COMB7. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC6. 1.6
   NAME=COMB8. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC6. 0.6
   NAME=COMB9. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 1.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB10. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 0.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB11. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 1.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB12. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC2. 1.4. ST. LC4. 1.4. ST. LC6. 0.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB13. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 1.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB14. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 0.6. ST. LC8. 1.35
        ST. LC11. 1.35
   NAME=COMB15. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 1.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB16. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.4. ST. LC5. 1.4. ST. LC6. 0.6. ST. LC9. 1.35
        ST. LC10. 1.35. ST. LC11. 1.4
   NAME=COMB17. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC7. 1.6
   NAME=COMB18. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.35. ST. LC3. 1.85. ST. LC5. 1.85. ST. LC7. 0.6
   NAME=COMB19. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC7. 1.6
   NAME=COMB20. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1.6. ST. LC3. 1.6. ST. LC5. 1.6. ST. LC7. 0.6
   NAME=COMB21. GEN. INACTIVE. 0. 0. . 0. 0
        ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1
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NAME=COMB22. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5
NAME=COMB23. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1
NAME=COMB24. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5
NAME=COMB25. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1. ST. LC8. 1. ST. LC11. 1
NAME=COMB26. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5. ST. LC8. 1
     ST. LC11. 1
NAME=COMB27. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 1. ST. LC9. 1. ST. LC10. 1
     ST. LC11. 1
NAME=COMB28. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC2. 1. ST. LC4. 1. ST. LC6. 0.5. ST. LC9. 1
     ST. LC10. 1. ST. LC11. 1
NAME=COMB29. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1. ST. LC8. 1. ST. LC11. 1
NAME=COMB30. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5. ST. LC8. 1
     ST. LC11. 1
NAME=COMB31. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 1. ST. LC9. 1. ST. LC10. 1
     ST. LC11. 1
NAME=COMB32. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC6. 0.5. ST. LC9. 1
     ST. LC10. 1. ST. LC11. 1
NAME=COMB33. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC6. 1
NAME=COMB34. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC7. 1
NAME=COMB35. GEN. INACTIVE. 0. 0. . 0. 0
     ST. LC1. 1. ST. LC3. 1. ST. LC5. 1. ST. LC7. 0.5
NAME=USD. GEN. ACTIVE. 0. 1. . 0. 0
     ST. NCOMB1. 1. ST. NCOMB2. 1. ST. NCOMB3. 1. ST. NCOMB4. 1
     ST. NCOMB5. 1. ST. NCOMB6. 1. ST. NCOMB7. 1. ST. NCOMB8. 1
     ST. NCOMB9. 1. ST. NCOMB10. 1. ST. NCOMB11. 1. ST. NCOMB12. 1
     ST. NCOMB13. 1. ST. NCOMB14. 1. ST. NCOMB15. 1. ST. NCOMB16. 1
     ST. NCOMB17. 1. ST. NCOMB18. 1. ST. NCOMB19. 1. ST. NCOMB20. 1
NAME=WSD. GEN. ACTIVE. 0. 1. . 0. 0
     ST. NCOMB21. 1. ST. NCOMB22. 1. ST. NCOMB23. 1. ST. NCOMB24. 1
     ST. NCOMB25. 1. ST. NCOMB26. 1. ST. NCOMB27. 1. ST. NCOMB28. 1
     ST. NCOMB29. 1. ST. NCOMB30. 1. ST. NCOMB31. 1. ST. NCOMB32. 1
     ST. NCOMB33. 1. ST. NCOMB34. 1. ST. NCOMB35. 1
NAME=NCOMB1. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB1. 1
NAME=NCOMB2. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB2. 1
NAME=NCOMB3. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB3. 1
NAME=NCOMB4. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB4. 1
NAME=NCOMB5. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB5. 1
NAME=NCOMB6. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB6. 1
NAME=NCOMB7. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB7. 1
NAME=NCOMB8. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB8. 1
NAME=NCOMB9. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB9. 1
NAME=NCOMB10. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB10. 1
NAME=NCOMB11. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB11. 1
NAME=NCOMB12. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB12. 1
NAME=NCOMB13. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB13. 1
NAME=NCOMB14. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB14. 1
NAME=NCOMB15. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB15. 1
NAME=NCOMB16. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB16. 1
NAME=NCOMB17. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB17. 1
NAME=NCOMB18. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB18. 1
NAME=NCOMB19. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB19. 1
NAME=NCOMB20. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB20. 1
NAME=NCOMB21. CONC. STRENGTH. 0. 0. . 0. 0
     ST. NCOMB21. 1
```

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   NAME=NCOMB22. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB22. 1
   NAME=NCOMB23. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB23. 1
   NAME=NCOMB24. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB24. 1
   NAME=NCOMB25. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB25. 1
   NAME=NCOMB26. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB26. 1
   NAME=NCOMB27. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB27. 1
   NAME=NCOMB28. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB28. 1
   NAME=NCOMB29. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB29. 1
   NAME=NCOMB30. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB30. 1
   NAME=NCOMB31. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB31. 1
   NAME=NCOMB32. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB32. 1
   NAME=NCOMB33. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB33. 1
   NAME=NCOMB34. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB34. 1
   NAME=NCOMB35. CONC. STRENGTH. 0. 0. . 0. 0
         ST. NCOMB35. 1

*LOADCONST    ; Load Constribution for Nonlinear Load Case
; NAME=STLDCASE. DESC                                          ; 1st line
;       LCNAME1. LCTYPE1. FACTOR1. LCNAME2. LCTYPE2. FACTOR2. ...   ; from line 2
   NAME=NCOMB1.
         LC1. ST. 1.35. LC2. ST. 1.85. LC4. ST. 1.85. LC6. ST. 1.6
   NAME=NCOMB2.
         LC1. ST. 1.35. LC2. ST. 1.85. LC4. ST. 1.85. LC6. ST. 0.6
   NAME=NCOMB3.
         LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC6. ST. 1.6
   NAME=NCOMB4.
         LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC6. ST. 0.6
   NAME=NCOMB5.
         LC1. ST. 1.6. LC2. ST. 1.6. LC4. ST. 1.6. LC6. ST. 1.6
   NAME=NCOMB6.
         LC1. ST. 1.6. LC2. ST. 1.6. LC4. ST. 1.6. LC6. ST. 0.6
   NAME=NCOMB7.
         LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC6. ST. 1.6
   NAME=NCOMB8.
         LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC6. ST. 0.6
   NAME=NCOMB9.
         LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 1.6. LC8. ST. 1.35
         LC11. ST. 1.35
   NAME=NCOMB10.
         LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 0.6. LC8. ST. 1.35
         LC11. ST. 1.35
   NAME=NCOMB11.
         LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 1.6. LC9. ST. 1.35
         LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB12.
         LC1. ST. 1.35. LC2. ST. 1.4. LC4. ST. 1.4. LC6. ST. 0.6. LC9. ST. 1.35
         LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB13.
         LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 1.6. LC8. ST. 1.35
         LC11. ST. 1.35
   NAME=NCOMB14.
         LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 0.6. LC8. ST. 1.35
         LC11. ST. 1.35
   NAME=NCOMB15.
         LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 1.6. LC9. ST. 1.35
         LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB16.
         LC1. ST. 1.35. LC3. ST. 1.4. LC5. ST. 1.4. LC6. ST. 0.6. LC9. ST. 1.35
         LC10. ST. 1.35. LC11. ST. 1.4
   NAME=NCOMB17.
         LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC7. ST. 1.6
   NAME=NCOMB18.
         LC1. ST. 1.35. LC3. ST. 1.85. LC5. ST. 1.85. LC7. ST. 0.6
   NAME=NCOMB19.
         LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC7. ST. 1.6
   NAME=NCOMB20.
         LC1. ST. 1.6. LC3. ST. 1.6. LC5. ST. 1.6. LC7. ST. 0.6
   NAME=NCOMB21.
         LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1
   NAME=NCOMB22.
         LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5
   NAME=NCOMB23.
         LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1
   NAME=NCOMB24.
```

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        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 0.5
    NAME=NCOMB25.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1. LC8. ST. 1. LC11. ST. 1
    NAME=NCOMB26.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5. LC8. ST. 1
        LC11. ST. 1
    NAME=NCOMB27.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 1. LC9. ST. 1. LC10. ST. 1
        LC11. ST. 1
    NAME=NCOMB28.
        LC1. ST. 1. LC2. ST. 1. LC4. ST. 1. LC6. ST. 0.5. LC9. ST. 1
        LC10. ST. 1. LC11. ST. 1
    NAME=NCOMB29.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1. LC8. ST. 1. LC11. ST. 1
    NAME=NCOMB30.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 0.5. LC8. ST. 1
        LC11. ST. 1
    NAME=NCOMB31.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 1. LC9. ST. 1. LC10. ST. 1
        LC11. ST. 1
    NAME=NCOMB32.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC6. ST. 0.5. LC9. ST. 1
        LC10. ST. 1. LC11. ST. 1
    NAME=NCOMB33.
        LC1. ST. 1. LC6. ST. 1
    NAME=NCOMB34.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC7. ST. 1
    NAME=NCOMB35.
        LC1. ST. 1. LC3. ST. 1. LC5. ST. 1. LC7. ST. 0.5

*LC-COLOR    ; Diagram Color for Load Case
; ANAL. LCNAME. iR1(ALL). iG1(ALL). iB1(ALL). iR2(MIN). iG2(MIN). iB2(MIN). iR3(MAX). iG2(MAX). iB2(MAX)
 CB. COMB1. 85. 0. 192. 255. 255. 87. 146. 0. 255
 CB. COMB2. 192. 72. 0. 0. 128. 128. 93. 255. 87
 CB. COMB3. 255. 87. 128. 255. 192. 87. 160. 255. 255
 CB. COMB4. 255. 160. 255. 255. 192. 87. 163. 160. 255
 CB. COMB5. 0. 192. 192. 85. 0. 192. 85. 192. 0
 CB. COMB6. 0. 128. 255. 160. 255. 255. 192. 72. 0
 CB. COMB7. 255. 192. 160. 192. 0. 128. 192. 192. 192
 CB. COMB8. 255. 87. 128. 160. 255. 255. 192. 128. 0
 CB. COMB9. 255. 160. 255. 192. 0. 128. 255. 192. 87
 CB. COMB10. 163. 160. 255. 255. 255. 87. 255. 192. 160
 CB. COMB11. 192. 0. 128. 255. 192. 160. 255. 160. 255
 CB. COMB12. 255. 128. 0. 192. 0. 128. 210. 210. 210
 CB. COMB13. 192. 192. 192. 85. 192. 0. 212. 160. 255
 CB. COMB14. 255. 192. 160. 0. 157. 192. 255. 192. 87
 CB. COMB15. 0. 157. 192. 192. 192. 192. 160. 255. 255
 CB. COMB16. 0. 128. 128. 160. 255. 255. 255. 87. 87
 CB. COMB17. 255. 0. 192. 78. 0. 255. 255. 128. 0
 CB. COMB18. 85. 192. 0. 255. 192. 160. 255. 192. 87
 CB. COMB19. 160. 255. 255. 255. 128. 0. 0. 192. 192
 CB. COMB20. 192. 192. 0. 160. 255. 255. 255. 87. 87
 CB. COMB21. 192. 192. 192. 192. 192. 192. 85. 0. 192
 CB. COMB22. 255. 192. 87. 192. 128. 0. 212. 160. 255
 CB. COMB23. 255. 255. 255. 0. 128. 128. 192. 128. 0
 CB. COMB24. 192. 192. 0. 85. 0. 192. 255. 0. 192
 CB. COMB25. 128. 192. 0. 210. 210. 210. 255. 255. 255
 CB. COMB26. 192. 0. 192. 148. 87. 255. 0. 192. 128
 CB. COMB27. 93. 255. 87. 255. 255. 255. 192. 0. 192
 CB. COMB28. 192. 128. 0. 255. 255. 87. 255. 192. 160
 CB. COMB29. 255. 192. 160. 212. 160. 255. 192. 192. 0
 CB. COMB30. 255. 255. 87. 163. 160. 255. 148. 87. 255
 CB. COMB31. 192. 192. 0. 255. 87. 128. 0. 192. 192
 CB. COMB32. 128. 192. 0. 85. 192. 0. 192. 128. 0
 CB. COMB33. 255. 255. 255. 192. 192. 192. 148. 87. 255
 CB. COMB34. 192. 0. 192. 255. 87. 128. 212. 160. 255
 CB. COMB35. 255. 160. 255. 85. 192. 0. 255. 255. 87
 CB. USD. 255. 192. 87. 163. 255. 160. 192. 128. 0
 CB. WSD. 212. 160. 255. 255. 0. 192. 93. 255. 87
 ST. LC1. 212. 160. 255. 210. 210. 210. 212. 160. 255
 ST. LC2. 212. 160. 255. 0. 128. 57. 255. 255. 87
 ST. LC3. 210. 210. 210. 212. 160. 255. 146. 0. 255
 ST. LC4. 0. 128. 57. 128. 192. 0. 0. 157. 192
 ST. LC5. 128. 192. 0. 148. 87. 255. 160. 255. 255
 ST. LC6. 192. 0. 192. 255. 160. 255. 163. 160. 255
 ST. LC7. 192. 192. 192. 0. 128. 255. 255. 160. 255
 ST. LC8. 192. 128. 0. 192. 0. 128. 128. 192. 0
 ST. LC9. 192. 0. 192. 78. 0. 255. 85. 0. 192
 ST. LC10. 210. 210. 210. 255. 255. 255. 0. 128. 128
 ST. LC11. 255. 255. 87. 255. 0. 128. 210. 210. 210
 CBC. NCOMB1. 192. 72. 0. 255. 192. 160. 0. 192. 128
 CBC. NCOMB2. 78. 0. 255. 192. 0. 192. 255. 160. 255
 CBC. NCOMB3. 163. 255. 160. 78. 0. 255. 85. 0. 192
 CBC. NCOMB4. 0. 192. 128. 85. 0. 192. 212. 160. 255
 CBC. NCOMB5. 0. 128. 255. 255. 87. 87. 0. 192. 128
 CBC. NCOMB6. 78. 0. 255. 0. 128. 128. 93. 255. 87
 CBC. NCOMB7. 160. 192. 255. 160. 255. 255. 210. 210. 210
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  CBC. NCOMB8. 192. 72. 0. 192. 0. 192. 192. 72. 0
  CBC. NCOMB9. 148. 87. 255. 212. 160. 255. 210. 210. 210
  CBC. NCOMB10. 0. 128. 57. 192. 72. 0. 255. 0. 128
  CBC. NCOMB11. 0. 128. 192. 212. 160. 255. 255. 255. 87
  CBC. NCOMB12. 192. 0. 128. 255. 87. 87. 0. 157. 192
  CBC. NCOMB13. 255. 160. 255. 255. 0. 128. 0. 128. 128
  CBC. NCOMB14. 93. 255. 87. 255. 192. 160. 255. 255. 87
  CBC. NCOMB15. 255. 255. 87. 192. 192. 192. 192. 0. 192
  CBC. NCOMB16. 0. 128. 128. 255. 255. 255. 163. 255. 160
  CBC. NCOMB17. 163. 255. 160. 160. 192. 255. 163. 255. 160
  CBC. NCOMB18. 255. 255. 87. 0. 157. 192. 255. 87. 87
  CBC. NCOMB19. 0. 128. 255. 0. 128. 192. 0. 157. 192
  CBC. NCOMB20. 192. 0. 192. 255. 128. 0. 255. 87. 87
  CBC. NCOMB21. 255. 255. 255. 160. 255. 255. 78. 0. 255
  CBC. NCOMB22. 85. 0. 192. 255. 255. 87. 148. 87. 255
  CBC. NCOMB23. 255. 128. 0. 255. 255. 255. 255. 0. 192
  CBC. NCOMB24. 192. 128. 0. 160. 255. 255. 78. 0. 255
  CBC. NCOMB25. 163. 160. 255. 192. 192. 192. 255. 87. 128
  CBC. NCOMB26. 212. 160. 255. 192. 0. 128. 210. 210. 210
  CBC. NCOMB27. 148. 87. 255. 128. 192. 0. 93. 255. 87
  CBC. NCOMB28. 0. 192. 128. 255. 87. 128. 0. 128. 192
  CBC. NCOMB29. 255. 255. 255. 192. 128. 0. 192. 0. 192
  CBC. NCOMB30. 163. 160. 255. 255. 255. 87. 78. 0. 255
  CBC. NCOMB31. 85. 0. 192. 255. 160. 255. 148. 87. 255
  CBC. NCOMB32. 212. 160. 255. 192. 128. 0. 85. 0. 192
  CBC. NCOMB33. 192. 192. 0. 85. 192. 0. 163. 160. 255
  CBC. NCOMB34. 255. 192. 87. 255. 87. 128. 0. 128. 128
  CBC. NCOMB35. 0. 128. 192. 192. 128. 0. 192. 0. 192
  ST. NCOMB1. 93. 255. 87. 255. 255. 255. 255. 87. 87
  ST. NCOMB2. 78. 0. 255. 255. 192. 160. 0. 157. 192
  ST. NCOMB3. 255. 192. 87. 146. 0. 255. 0. 128. 192
  ST. NCOMB4. 128. 192. 0. 192. 128. 0. 192. 192. 192
  ST. NCOMB5. 160. 255. 255. 85. 0. 192. 255. 128. 0
  ST. NCOMB6. 146. 0. 255. 255. 128. 0. 148. 87. 255
  ST. NCOMB7. 212. 160. 255. 0. 192. 192. 146. 0. 255
  ST. NCOMB8. 85. 0. 192. 85. 0. 192. 160. 255. 255
  ST. NCOMB9. 0. 157. 192. 160. 255. 255. 255. 192. 160
  ST. NCOMB10. 0. 192. 192. 0. 157. 192. 255. 87. 128
  ST. NCOMB11. 255. 128. 0. 255. 255. 255. 0. 157. 192
  ST. NCOMB12. 0. 128. 255. 255. 0. 192. 255. 87. 87
  ST. NCOMB13. 85. 0. 192. 0. 192. 128. 192. 72. 0
  ST. NCOMB14. 0. 157. 192. 0. 128. 57. 148. 87. 255
  ST. NCOMB15. 0. 192. 128. 0. 128. 192. 146. 0. 255
  ST. NCOMB16. 192. 72. 0. 255. 192. 160. 255. 0. 192
  ST. NCOMB17. 0. 192. 128. 192. 72. 0. 212. 160. 255
  ST. NCOMB18. 255. 255. 87. 0. 128. 57. 0. 128. 192
  ST. NCOMB19. 93. 255. 87. 192. 0. 192. 78. 0. 255
  ST. NCOMB20. 160. 192. 255. 255. 255. 87. 255. 0. 192
  ST. NCOMB21. 210. 210. 210. 212. 160. 255. 128. 192. 0
  ST. NCOMB22. 160. 192. 255. 128. 192. 0. 93. 255. 87
  ST. NCOMB23. 255. 87. 128. 255. 87. 87. 192. 192. 0
  ST. NCOMB24. 192. 192. 0. 255. 255. 87. 148. 87. 255
  ST. NCOMB25. 93. 255. 87. 192. 192. 192. 93. 255. 87
  ST. NCOMB26. 160. 192. 255. 192. 0. 192. 160. 192. 255
  ST. NCOMB27. 192. 72. 0. 255. 0. 128. 255. 255. 255
  ST. NCOMB28. 0. 192. 128. 163. 160. 255. 255. 160. 255
  ST. NCOMB29. 0. 157. 192. 93. 255. 87. 148. 87. 255
  ST. NCOMB30. 0. 157. 192. 160. 192. 255. 163. 160. 255
  ST. NCOMB31. 192. 72. 0. 255. 87. 87. 255. 160. 255
  ST. NCOMB32. 0. 128. 128. 163. 160. 255. 0. 128. 57
  ST. NCOMB33. 146. 0. 255. 146. 0. 255. 0. 128. 192
  ST. NCOMB34. 93. 255. 87. 85. 192. 0. 255. 192. 160
  ST. NCOMB35. 163. 255. 160. 192. 0. 128. 255. 160. 255

*ANAL-CTRL
; bARDC. bANRC. iITER. TOL. bCSECF. bTRS. bCRBAR. bTPF. bCSO. bSCS. bCLATS
    YES. YES. 20. 0.001. YES. YES. YES. NO. NO. NO. NO


*ENDDATA
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8.OUPUT

FRAME ELEMENT FORCES

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
1	USD(max)	I[1]	35.110	0.000	-284.790	0.00E+00	-8.350	0.000
1	USD(max)	1/4	35.110	0.000	-285.810	0.00E+00	15.020	0.000
1	USD(max)	2/4	35.110	0.000	-286.830	0.00E+00	38.480	0.000
1	USD(max)	3/4	35.110	0.000	-287.860	0.00E+00	62.020	0.000
1	USD(max)	J[2]	35.110	0.000	-288.880	0.00E+00	85.650	0.000
1	USD(min)	I[1]	-210.270	0.000	-344.440	0.00E+00	-64.950	0.000
1	USD(min)	1/4	-210.270	0.000	-345.660	0.00E+00	-44.850	0.000
1	USD(min)	2/4	-210.270	0.000	-346.870	0.00E+00	-24.680	0.000
1	USD(min)	3/4	-210.270	0.000	-348.080	0.00E+00	-4.440	0.000
1	USD(min)	J[2]	-210.270	0.000	-349.300	0.00E+00	15.870	0.000
1	WSD(max)	I[1]	21.940	0.000	-195.770	0.00E+00	-6.520	0.000
1	WSD(max)	1/4	21.940	0.000	-196.530	0.00E+00	8.130	0.000
1	WSD(max)	2/4	21.940	0.000	-197.280	0.00E+00	22.830	0.000
1	WSD(max)	3/4	21.940	0.000	-198.040	0.00E+00	37.590	0.000
1	WSD(max)	J[2]	21.940	0.000	-198.800	0.00E+00	52.400	0.000
1	WSD(min)	I[1]	-128.190	0.000	-215.280	0.00E+00	-38.250	0.000
1	WSD(min)	1/4	-128.190	0.000	-216.040	0.00E+00	-23.740	0.000
1	WSD(min)	2/4	-128.190	0.000	-216.790	0.00E+00	-9.180	0.000
1	WSD(min)	3/4	-128.190	0.000	-217.550	0.00E+00	5.430	0.000
1	WSD(min)	J[2]	-128.190	0.000	-218.310	0.00E+00	20.090	0.000
2	USD(max)	I[2]	35.110	0.000	-169.800	0.00E+00	85.650	0.000
2	USD(max)	1/4	35.110	0.000	-170.660	0.00E+00	97.690	0.000
2	USD(max)	2/4	35.110	0.000	-171.510	0.00E+00	109.790	0.000
2	USD(max)	3/4	35.110	0.000	-172.370	0.00E+00	121.950	0.000
2	USD(max)	J[3]	35.110	0.000	-173.220	0.00E+00	134.170	0.000
2	USD(min)	I[2]	-210.270	0.000	-217.420	0.00E+00	15.870	0.000
2	USD(min)	1/4	-210.270	0.000	-218.440	0.00E+00	26.170	0.000
2	USD(min)	2/4	-210.270	0.000	-219.450	0.00E+00	36.520	0.000
2	USD(min)	3/4	-210.270	0.000	-220.470	0.00E+00	46.920	0.000
2	USD(min)	J[3]	-210.270	0.000	-221.480	0.00E+00	57.370	0.000
2	WSD(max)	I[2]	21.940	0.000	-115.210	0.00E+00	52.400	0.000
2	WSD(max)	1/4	21.940	0.000	-115.850	0.00E+00	59.990	0.000
2	WSD(max)	2/4	21.940	0.000	-116.480	0.00E+00	67.610	0.000
2	WSD(max)	3/4	21.940	0.000	-117.110	0.00E+00	75.270	0.000
2	WSD(max)	J[3]	21.940	0.000	-117.750	0.00E+00	82.970	0.000
2	WSD(min)	I[2]	-128.190	0.000	-135.890	0.00E+00	20.090	0.000
2	WSD(min)	1/4	-128.190	0.000	-136.520	0.00E+00	27.450	0.000
2	WSD(min)	2/4	-128.190	0.000	-137.160	0.00E+00	34.850	0.000
2	WSD(min)	3/4	-128.190	0.000	-137.790	0.00E+00	42.280	0.000
2	WSD(min)	J[3]	-128.190	0.000	-138.420	0.00E+00	49.750	0.000
3	USD(max)	I[3]	35.110	0.000	-101.100	0.00E+00	134.170	0.000
3	USD(max)	1/4	35.110	0.000	-101.960	0.00E+00	141.830	0.000
3	USD(max)	2/4	35.110	0.000	-102.810	0.00E+00	149.540	0.000
3	USD(max)	3/4	35.110	0.000	-103.670	0.00E+00	157.320	0.000
3	USD(max)	J[4]	35.110	0.000	-104.520	0.00E+00	165.150	0.000
3	USD(min)	I[3]	-210.270	0.000	-142.530	0.00E+00	57.370	0.000
3	USD(min)	1/4	-210.270	0.000	-143.550	0.00E+00	63.880	0.000
3	USD(min)	2/4	-210.270	0.000	-144.560	0.00E+00	70.420	0.000
3	USD(min)	3/4	-210.270	0.000	-145.580	0.00E+00	76.740	0.000
3	USD(min)	J[4]	-210.270	0.000	-146.590	0.00E+00	83.120	0.000
3	WSD(max)	I[3]	21.940	0.000	-68.570	0.00E+00	82.970	0.000
3	WSD(max)	1/4	21.940	0.000	-69.200	0.00E+00	87.830	0.000
3	WSD(max)	2/4	21.940	0.000	-69.840	0.00E+00	92.720	0.000
3	WSD(max)	3/4	21.940	0.000	-70.470	0.00E+00	97.650	0.000
3	WSD(max)	J[4]	21.940	0.000	-71.100	0.00E+00	102.620	0.000
3	WSD(min)	I[3]	-128.190	0.000	-89.080	0.00E+00	49.750	0.000
3	WSD(min)	1/4	-128.190	0.000	-89.720	0.00E+00	54.340	0.000
3	WSD(min)	2/4	-128.190	0.000	-90.350	0.00E+00	58.930	0.000
3	WSD(min)	3/4	-128.190	0.000	-90.980	0.00E+00	62.960	0.000
3	WSD(min)	J[4]	-128.190	0.000	-91.620	0.00E+00	67.030	0.000
4	USD(max)	I[4]	35.110	0.000	-32.540	0.00E+00	165.150	0.000
4	USD(max)	1/4	35.110	0.000	-33.400	0.00E+00	168.390	0.000
4	USD(max)	2/4	35.110	0.000	-34.250	0.00E+00	171.690	0.000
4	USD(max)	3/4	35.110	0.000	-35.110	0.00E+00	175.050	0.000
4	USD(max)	J[5]	35.110	0.000	-35.970	0.00E+00	178.460	0.000
4	USD(min)	I[4]	-210.270	0.000	-66.370	0.00E+00	83.120	0.000
4	USD(min)	1/4	-210.270	0.000	-67.390	0.00E+00	85.580	0.000
4	USD(min)	2/4	-210.270	0.000	-68.400	0.00E+00	88.090	0.000
4	USD(min)	3/4	-210.270	0.000	-69.410	0.00E+00	90.650	0.000
4	USD(min)	J[5]	-210.270	0.000	-70.430	0.00E+00	93.250	0.000
4	WSD(max)	I[4]	21.940	0.000	-22.000	0.00E+00	102.620	0.000
4	WSD(max)	1/4	21.940	0.000	-22.640	0.00E+00	104.720	0.000
4	WSD(max)	2/4	21.940	0.000	-23.270	0.00E+00	106.850	0.000
4	WSD(max)	3/4	21.940	0.000	-23.900	0.00E+00	109.030	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
4	WSD(max)	J[5]	21.940	0.000	-24.540	0.00E+00	111.240	0.000
4	WSD(min)	I[4]	-128.190	0.000	-41.480	0.00E+00	67.030	0.000
4	WSD(min)	1/4	-128.190	0.000	-42.120	0.00E+00	68.320	0.000
4	WSD(min)	2/4	-128.190	0.000	-42.750	0.00E+00	69.640	0.000
4	WSD(min)	3/4	-128.190	0.000	-43.380	0.00E+00	70.990	0.000
4	WSD(min)	J[5]	-128.190	0.000	-44.020	0.00E+00	72.390	0.000
5	USD(max)	I[5]	35.110	0.000	42.570	0.00E+00	178.460	0.000
5	USD(max)	1/4	35.110	0.000	41.560	0.00E+00	177.240	0.000
5	USD(max)	2/4	35.110	0.000	40.540	0.00E+00	176.080	0.000
5	USD(max)	3/4	35.110	0.000	39.530	0.00E+00	174.980	0.000
5	USD(max)	J[6]	35.110	0.000	38.510	0.00E+00	173.960	0.000
5	USD(min)	I[5]	-210.270	0.000	3.320	0.00E+00	93.250	0.000
5	USD(min)	1/4	-210.270	0.000	2.470	0.00E+00	91.930	0.000
5	USD(min)	2/4	-210.270	0.000	1.610	0.00E+00	90.660	0.000
5	USD(min)	3/4	-210.270	0.000	0.750	0.00E+00	89.440	0.000
5	USD(min)	J[6]	-210.270	0.000	-0.100	0.00E+00	88.270	0.000
5	WSD(max)	I[5]	21.940	0.000	26.610	0.00E+00	111.240	0.000
5	WSD(max)	1/4	21.940	0.000	25.970	0.00E+00	110.550	0.000
5	WSD(max)	2/4	21.940	0.000	25.340	0.00E+00	109.900	0.000
5	WSD(max)	3/4	21.940	0.000	24.710	0.00E+00	109.290	0.000
5	WSD(max)	J[6]	21.940	0.000	24.070	0.00E+00	108.730	0.000
5	WSD(min)	I[5]	-128.190	0.000	6.990	0.00E+00	72.390	0.000
5	WSD(min)	1/4	-128.190	0.000	6.350	0.00E+00	70.990	0.000
5	WSD(min)	2/4	-128.190	0.000	5.720	0.00E+00	69.640	0.000
5	WSD(min)	3/4	-128.190	0.000	5.080	0.00E+00	68.320	0.000
5	WSD(min)	J[6]	-128.190	0.000	4.450	0.00E+00	67.030	0.000
6	USD(max)	I[6]	35.110	0.000	123.700	0.00E+00	173.960	0.000
6	USD(max)	1/4	35.110	0.000	122.690	0.00E+00	168.800	0.000
6	USD(max)	2/4	35.110	0.000	121.670	0.00E+00	163.700	0.000
6	USD(max)	3/4	35.110	0.000	120.660	0.00E+00	158.660	0.000
6	USD(max)	J[7]	35.110	0.000	119.650	0.00E+00	153.670	0.000
6	USD(min)	I[6]	-210.270	0.000	71.350	0.00E+00	88.270	0.000
6	USD(min)	1/4	-210.270	0.000	70.490	0.00E+00	83.140	0.000
6	USD(min)	2/4	-210.270	0.000	69.640	0.00E+00	78.070	0.000
6	USD(min)	3/4	-210.270	0.000	68.780	0.00E+00	72.400	0.000
6	USD(min)	J[7]	-210.270	0.000	67.930	0.00E+00	66.550	0.000
6	WSD(max)	I[6]	21.940	0.000	77.310	0.00E+00	108.730	0.000
6	WSD(max)	1/4	21.940	0.000	76.680	0.00E+00	105.500	0.000
6	WSD(max)	2/4	21.940	0.000	76.050	0.00E+00	102.310	0.000
6	WSD(max)	3/4	21.940	0.000	75.410	0.00E+00	99.160	0.000
6	WSD(max)	J[7]	21.940	0.000	74.780	0.00E+00	96.050	0.000
6	WSD(min)	I[6]	-128.190	0.000	56.400	0.00E+00	67.030	0.000
6	WSD(min)	1/4	-128.190	0.000	55.760	0.00E+00	62.960	0.000
6	WSD(min)	2/4	-128.190	0.000	55.130	0.00E+00	58.930	0.000
6	WSD(min)	3/4	-128.190	0.000	54.500	0.00E+00	54.930	0.000
6	WSD(min)	J[7]	-128.190	0.000	53.860	0.00E+00	50.970	0.000
7	USD(max)	I[7]	35.110	0.000	204.970	0.00E+00	153.670	0.000
7	USD(max)	1/4	35.110	0.000	203.960	0.00E+00	143.870	0.000
7	USD(max)	2/4	35.110	0.000	202.940	0.00E+00	134.130	0.000
7	USD(max)	3/4	35.110	0.000	201.930	0.00E+00	124.450	0.000
7	USD(max)	J[8]	35.110	0.000	200.910	0.00E+00	114.820	0.000
7	USD(min)	I[7]	-210.270	0.000	141.050	0.00E+00	66.550	0.000
7	USD(min)	1/4	-210.270	0.000	140.190	0.00E+00	56.600	0.000
7	USD(min)	2/4	-210.270	0.000	139.340	0.00E+00	46.690	0.000
7	USD(min)	3/4	-210.270	0.000	138.480	0.00E+00	36.840	0.000
7	USD(min)	J[8]	-210.270	0.000	137.620	0.00E+00	27.030	0.000
7	WSD(max)	I[7]	21.940	0.000	128.110	0.00E+00	96.050	0.000
7	WSD(max)	1/4	21.940	0.000	127.470	0.00E+00	89.920	0.000
7	WSD(max)	2/4	21.940	0.000	126.840	0.00E+00	83.830	0.000
7	WSD(max)	3/4	21.940	0.000	126.200	0.00E+00	77.780	0.000
7	WSD(max)	J[8]	21.940	0.000	125.570	0.00E+00	71.760	0.000
7	WSD(min)	I[7]	-128.190	0.000	106.840	0.00E+00	50.970	0.000
7	WSD(min)	1/4	-128.190	0.000	106.200	0.00E+00	44.220	0.000
7	WSD(min)	2/4	-128.190	0.000	105.570	0.00E+00	37.500	0.000
7	WSD(min)	3/4	-128.190	0.000	104.930	0.00E+00	30.820	0.000
7	WSD(min)	J[8]	-128.190	0.000	104.300	0.00E+00	24.180	0.000
8	USD(max)	I[8]	35.110	0.000	345.940	0.00E+00	114.820	0.000
8	USD(max)	1/4	35.110	0.000	344.730	0.00E+00	93.310	0.000
8	USD(max)	2/4	35.110	0.000	343.520	0.00E+00	71.870	0.000
8	USD(max)	3/4	35.110	0.000	342.300	0.00E+00	50.530	0.000
8	USD(max)	J[9]	35.110	0.000	341.090	0.00E+00	29.260	0.000
8	USD(min)	I[8]	-210.270	0.000	264.610	0.00E+00	27.030	0.000
8	USD(min)	1/4	-210.270	0.000	263.580	0.00E+00	6.930	0.000
8	USD(min)	2/4	-210.270	0.000	262.560	0.00E+00	-13.090	0.000
8	USD(min)	3/4	-210.270	0.000	261.540	0.00E+00	-33.510	0.000
8	USD(min)	J[9]	-210.270	0.000	260.510	0.00E+00	-53.940	0.000
8	WSD(max)	I[8]	21.940	0.000	216.210	0.00E+00	71.760	0.000
8	WSD(max)	1/4	21.940	0.000	215.460	0.00E+00	58.320	0.000
8	WSD(max)	2/4	21.940	0.000	214.700	0.00E+00	44.920	0.000
8	WSD(max)	3/4	21.940	0.000	213.940	0.00E+00	31.580	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
8	WSD(max)	J[9]	21.940	0.000	213.180	0.00E+00	18.290	0.000
8	WSD(min)	I[8]	-128.190	0.000	195.980	0.00E+00	24.180	0.000
8	WSD(min)	1/4	-128.190	0.000	195.220	0.00E+00	10.540	0.000
8	WSD(min)	2/4	-128.190	0.000	194.460	0.00E+00	-3.050	0.000
8	WSD(min)	3/4	-128.190	0.000	193.710	0.00E+00	-17.610	0.000
8	WSD(min)	J[9]	-128.190	0.000	192.950	0.00E+00	-32.290	0.000
9	USD(max)	I[1]	-421.670	0.000	-11.380	0.00E+00	-74.310	0.000
9	USD(max)	1/4	-419.940	0.000	-10.130	0.00E+00	-67.720	0.000
9	USD(max)	2/4	-418.200	0.000	-8.880	0.00E+00	-61.160	0.000
9	USD(max)	3/4	-416.460	0.000	-7.660	0.00E+00	-55.060	0.000
9	USD(max)	J[10]	-414.730	0.000	-6.440	0.00E+00	-49.420	0.000
9	USD(min)	I[1]	-513.940	0.000	-158.500	0.00E+00	-100.990	0.000
9	USD(min)	1/4	-511.890	0.000	-149.050	0.00E+00	-99.600	0.000
9	USD(min)	2/4	-509.830	0.000	-139.630	0.00E+00	-98.320	0.000
9	USD(min)	3/4	-507.770	0.000	-130.240	0.00E+00	-97.140	0.000
9	USD(min)	J[10]	-505.710	0.000	-120.890	0.00E+00	-96.080	0.000
9	WSD(max)	I[1]	-295.150	0.000	-9.310	0.00E+00	-50.630	0.000
9	WSD(max)	1/4	-293.870	0.000	-8.400	0.00E+00	-46.600	0.000
9	WSD(max)	2/4	-292.580	0.000	-7.510	0.00E+00	-42.850	0.000
9	WSD(max)	3/4	-291.290	0.000	-6.620	0.00E+00	-39.360	0.000
9	WSD(max)	J[10]	-290.010	0.000	-5.750	0.00E+00	-36.140	0.000
9	WSD(min)	I[1]	-321.210	0.000	-95.370	0.00E+00	-63.120	0.000
9	WSD(min)	1/4	-319.930	0.000	-89.530	0.00E+00	-62.250	0.000
9	WSD(min)	2/4	-318.640	0.000	-83.710	0.00E+00	-61.450	0.000
9	WSD(min)	3/4	-317.360	0.000	-77.910	0.00E+00	-60.710	0.000
9	WSD(min)	J[10]	-316.070	0.000	-72.130	0.00E+00	-60.050	0.000
10	USD(max)	I[9]	-411.730	0.000	35.110	0.00E+00	-53.010	0.000
10	USD(max)	1/4	-409.990	0.000	35.110	0.00E+00	-54.690	0.000
10	USD(max)	2/4	-408.250	0.000	35.110	0.00E+00	-50.640	0.000
10	USD(max)	3/4	-406.520	0.000	35.110	0.00E+00	-45.430	0.000
10	USD(max)	J[11]	-404.780	0.000	35.110	0.00E+00	-40.650	0.000
10	USD(min)	I[9]	-513.940	0.000	-147.990	0.00E+00	-88.190	0.000
10	USD(min)	1/4	-511.890	0.000	-138.540	0.00E+00	-85.420	0.000
10	USD(min)	2/4	-509.830	0.000	-129.120	0.00E+00	-83.290	0.000
10	USD(min)	3/4	-507.770	0.000	-119.730	0.00E+00	-81.340	0.000
10	USD(min)	J[11]	-505.710	0.000	-110.380	0.00E+00	-79.590	0.000
10	WSD(max)	I[9]	-295.150	0.000	21.940	0.00E+00	-41.490	0.000
10	WSD(max)	1/4	-293.870	0.000	21.940	0.00E+00	-42.580	0.000
10	WSD(max)	2/4	-292.580	0.000	21.940	0.00E+00	-40.100	0.000
10	WSD(max)	3/4	-291.290	0.000	21.940	0.00E+00	-36.890	0.000
10	WSD(max)	J[11]	-290.010	0.000	21.940	0.00E+00	-33.950	0.000
10	WSD(min)	I[9]	-321.210	0.000	-89.690	0.00E+00	-55.120	0.000
10	WSD(min)	1/4	-319.930	0.000	-83.850	0.00E+00	-52.870	0.000
10	WSD(min)	2/4	-318.640	0.000	-78.030	0.00E+00	-50.990	0.000
10	WSD(min)	3/4	-317.360	0.000	-72.230	0.00E+00	-49.270	0.000
10	WSD(min)	J[11]	-316.070	0.000	-66.450	0.00E+00	-48.100	0.000
11	USD(max)	I[10]	-414.730	0.000	-6.440	0.00E+00	-49.420	0.000
11	USD(max)	1/4	-413.800	0.000	-4.760	0.00E+00	-42.290	0.000
11	USD(max)	2/4	-412.870	0.000	-3.100	0.00E+00	-36.050	0.000
11	USD(max)	3/4	-411.950	0.000	-1.470	0.00E+00	-30.700	0.000
11	USD(max)	J[12]	-411.020	0.000	0.130	0.00E+00	-26.220	0.000
11	USD(min)	I[10]	-505.710	0.000	-120.890	0.00E+00	-96.080	0.000
11	USD(min)	1/4	-504.610	0.000	-107.860	0.00E+00	-94.760	0.000
11	USD(min)	2/4	-503.520	0.000	-94.890	0.00E+00	-93.650	0.000
11	USD(min)	3/4	-502.420	0.000	-81.990	0.00E+00	-93.350	0.000
11	USD(min)	J[12]	-501.320	0.000	-69.150	0.00E+00	-93.310	0.000
11	WSD(max)	I[10]	-290.010	0.000	-5.750	0.00E+00	-36.140	0.000
11	WSD(max)	1/4	-289.320	0.000	-4.550	0.00E+00	-32.080	0.000
11	WSD(max)	2/4	-288.630	0.000	-3.360	0.00E+00	-28.540	0.000
11	WSD(max)	3/4	-287.950	0.000	-2.200	0.00E+00	-25.520	0.000
11	WSD(max)	J[12]	-287.260	0.000	-1.060	0.00E+00	-23.010	0.000
11	WSD(min)	I[10]	-316.070	0.000	-72.130	0.00E+00	-60.050	0.000
11	WSD(min)	1/4	-315.380	0.000	-64.070	0.00E+00	-59.230	0.000
11	WSD(min)	2/4	-314.700	0.000	-56.060	0.00E+00	-58.530	0.000
11	WSD(min)	3/4	-314.010	0.000	-48.090	0.00E+00	-58.270	0.000
11	WSD(min)	J[12]	-313.330	0.000	-40.160	0.00E+00	-58.150	0.000
12	USD(max)	I[11]	-404.780	0.000	35.110	0.00E+00	-40.650	0.000
12	USD(max)	1/4	-403.850	0.000	35.110	0.00E+00	-34.670	0.000
12	USD(max)	2/4	-402.930	0.000	35.110	0.00E+00	-29.530	0.000
12	USD(max)	3/4	-402.000	0.000	35.110	0.00E+00	-25.220	0.000
12	USD(max)	J[13]	-401.080	0.000	35.110	0.00E+00	-21.730	0.000
12	USD(min)	I[11]	-505.710	0.000	-110.380	0.00E+00	-79.590	0.000
12	USD(min)	1/4	-504.610	0.000	-97.350	0.00E+00	-79.970	0.000
12	USD(min)	2/4	-503.520	0.000	-84.380	0.00E+00	-82.090	0.000
12	USD(min)	3/4	-502.420	0.000	-71.480	0.00E+00	-84.210	0.000
12	USD(min)	J[13]	-501.320	0.000	-58.640	0.00E+00	-86.330	0.000
12	WSD(max)	I[11]	-290.010	0.000	21.940	0.00E+00	-33.950	0.000
12	WSD(max)	1/4	-289.320	0.000	21.940	0.00E+00	-30.280	0.000
12	WSD(max)	2/4	-288.630	0.000	21.940	0.00E+00	-27.140	0.000
12	WSD(max)	3/4	-287.950	0.000	21.940	0.00E+00	-24.510	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
12	WSD(max)	J[13]	-287.260	0.000	21.940	0.00E+00	-22.390	0.000
12	WSD(min)	I[11]	-316.070	0.000	-66.450	0.00E+00	-48.100	0.000
12	WSD(min)	1/4	-315.380	0.000	-58.390	0.00E+00	-49.470	0.000
12	WSD(min)	2/4	-314.700	0.000	-50.380	0.00E+00	-50.840	0.000
12	WSD(min)	3/4	-314.010	0.000	-42.410	0.00E+00	-52.200	0.000
12	WSD(min)	J[13]	-313.330	0.000	-34.480	0.00E+00	-53.570	0.000
13	USD(max)	I[12]	-411.020	0.000	0.130	0.00E+00	-26.220	0.000
13	USD(max)	1/4	-410.100	0.000	1.710	0.00E+00	-22.630	0.000
13	USD(max)	2/4	-409.170	0.000	3.270	0.00E+00	-19.740	0.000
13	USD(max)	3/4	-408.240	0.000	4.800	0.00E+00	-17.330	0.000
13	USD(max)	J[14]	-407.320	0.000	9.630	0.00E+00	-15.790	0.000
13	USD(min)	I[12]	-501.320	0.000	-69.150	0.00E+00	-93.310	0.000
13	USD(min)	1/4	-500.220	0.000	-56.390	0.00E+00	-93.370	0.000
13	USD(min)	2/4	-499.130	0.000	-43.690	0.00E+00	-93.550	0.000
13	USD(min)	3/4	-498.030	0.000	-31.050	0.00E+00	-93.830	0.000
13	USD(min)	J[14]	-496.930	0.000	-18.490	0.00E+00	-94.220	0.000
13	WSD(max)	I[12]	-287.260	0.000	-1.060	0.00E+00	-23.010	0.000
13	WSD(max)	1/4	-286.580	0.000	0.060	0.00E+00	-21.020	0.000
13	WSD(max)	2/4	-285.890	0.000	1.160	0.00E+00	-19.540	0.000
13	WSD(max)	3/4	-285.200	0.000	2.240	0.00E+00	-18.560	0.000
13	WSD(max)	J[14]	-284.520	0.000	4.180	0.00E+00	-18.090	0.000
13	WSD(min)	I[12]	-313.330	0.000	-40.160	0.00E+00	-58.150	0.000
13	WSD(min)	1/4	-312.640	0.000	-32.270	0.00E+00	-58.120	0.000
13	WSD(min)	2/4	-311.950	0.000	-24.430	0.00E+00	-58.160	0.000
13	WSD(min)	3/4	-311.270	0.000	-16.620	0.00E+00	-58.280	0.000
13	WSD(min)	J[14]	-310.580	0.000	-8.860	0.00E+00	-58.480	0.000
14	USD(max)	I[13]	-401.080	0.000	35.110	0.00E+00	-21.730	0.000
14	USD(max)	1/4	-400.150	0.000	35.110	0.00E+00	-19.070	0.000
14	USD(max)	2/4	-399.220	0.000	35.110	0.00E+00	-17.140	0.000
14	USD(max)	3/4	-398.300	0.000	35.110	0.00E+00	-15.920	0.000
14	USD(max)	J[15]	-397.370	0.000	35.110	0.00E+00	-15.510	0.000
14	USD(min)	I[13]	-501.320	0.000	-58.640	0.00E+00	-86.330	0.000
14	USD(min)	1/4	-500.220	0.000	-45.880	0.00E+00	-88.450	0.000
14	USD(min)	2/4	-499.130	0.000	-33.180	0.00E+00	-90.570	0.000
14	USD(min)	3/4	-498.030	0.000	-20.540	0.00E+00	-92.690	0.000
14	USD(min)	J[15]	-496.930	0.000	-7.980	0.00E+00	-94.810	0.000
14	WSD(max)	I[13]	-287.260	0.000	21.940	0.00E+00	-22.390	0.000
14	WSD(max)	1/4	-286.580	0.000	21.940	0.00E+00	-20.790	0.000
14	WSD(max)	2/4	-285.890	0.000	21.940	0.00E+00	-19.540	0.000
14	WSD(max)	3/4	-285.200	0.000	21.940	0.00E+00	-18.560	0.000
14	WSD(max)	J[15]	-284.520	0.000	21.940	0.00E+00	-18.090	0.000
14	WSD(min)	I[13]	-313.330	0.000	-34.480	0.00E+00	-53.570	0.000
14	WSD(min)	1/4	-312.640	0.000	-26.590	0.00E+00	-54.940	0.000
14	WSD(min)	2/4	-311.950	0.000	-18.750	0.00E+00	-56.300	0.000
14	WSD(min)	3/4	-311.270	0.000	-10.940	0.00E+00	-57.670	0.000
14	WSD(min)	J[15]	-310.580	0.000	-3.180	0.00E+00	-59.040	0.000
15	USD(max)	I[14]	-407.320	0.000	9.630	0.00E+00	-15.790	0.000
15	USD(max)	1/4	-406.390	0.000	14.850	0.00E+00	-15.100	0.000
15	USD(max)	2/4	-405.460	0.000	20.050	0.00E+00	-15.270	0.000
15	USD(max)	3/4	-404.540	0.000	31.770	0.00E+00	-16.290	0.000
15	USD(max)	J[16]	-403.610	0.000	43.920	0.00E+00	-18.090	0.000
15	USD(min)	I[14]	-496.930	0.000	-18.490	0.00E+00	-94.220	0.000
15	USD(min)	1/4	-495.830	0.000	-5.990	0.00E+00	-94.710	0.000
15	USD(min)	2/4	-494.740	0.000	1.860	0.00E+00	-95.310	0.000
15	USD(min)	3/4	-493.640	0.000	4.250	0.00E+00	-96.000	0.000
15	USD(min)	J[16]	-492.540	0.000	6.580	0.00E+00	-96.800	0.000
15	WSD(max)	I[14]	-284.520	0.000	4.180	0.00E+00	-18.090	0.000
15	WSD(max)	1/4	-283.830	0.000	8.340	0.00E+00	-18.120	0.000
15	WSD(max)	2/4	-283.150	0.000	12.470	0.00E+00	-18.640	0.000
15	WSD(max)	3/4	-282.460	0.000	19.860	0.00E+00	-19.660	0.000
15	WSD(max)	J[16]	-281.770	0.000	27.450	0.00E+00	-21.050	0.000
15	WSD(min)	I[14]	-310.580	0.000	-8.860	0.00E+00	-58.480	0.000
15	WSD(min)	1/4	-309.900	0.000	-1.140	0.00E+00	-58.740	0.000
15	WSD(min)	2/4	-309.210	0.000	3.670	0.00E+00	-59.080	0.000
15	WSD(min)	3/4	-308.520	0.000	5.070	0.00E+00	-59.490	0.000
15	WSD(min)	J[16]	-307.840	0.000	6.440	0.00E+00	-59.970	0.000
16	USD(max)	I[15]	-397.370	0.000	35.110	0.00E+00	-15.510	0.000
16	USD(max)	1/4	-396.450	0.000	35.110	0.00E+00	-15.900	0.000
16	USD(max)	2/4	-395.520	0.000	35.110	0.00E+00	-17.090	0.000
16	USD(max)	3/4	-394.590	0.000	37.880	0.00E+00	-19.060	0.000
16	USD(max)	J[17]	-393.670	0.000	49.090	0.00E+00	-21.660	0.000
16	USD(min)	I[15]	-496.930	0.000	-7.980	0.00E+00	-94.810	0.000
16	USD(min)	1/4	-495.830	0.000	4.260	0.00E+00	-96.930	0.000
16	USD(min)	2/4	-494.740	0.000	16.430	0.00E+00	-99.050	0.000
16	USD(min)	3/4	-493.640	0.000	21.980	0.00E+00	-101.180	0.000
16	USD(min)	J[17]	-492.540	0.000	27.010	0.00E+00	-103.300	0.000
16	WSD(max)	I[15]	-284.520	0.000	21.940	0.00E+00	-18.090	0.000
16	WSD(max)	1/4	-283.830	0.000	21.940	0.00E+00	-18.120	0.000
16	WSD(max)	2/4	-283.150	0.000	21.940	0.00E+00	-18.640	0.000
16	WSD(max)	3/4	-282.460	0.000	23.680	0.00E+00	-19.660	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
16	WSD(max)	J[17]	-281.770	0.000	30.680	0.00E+00	-21.170	0.000
16	WSD(min)	I[15]	-310.580	0.000	-3.180	0.00E+00	-59.040	0.000
16	WSD(min)	1/4	-309.900	0.000	3.960	0.00E+00	-60.410	0.000
16	WSD(min)	2/4	-309.210	0.000	11.050	0.00E+00	-61.770	0.000
16	WSD(min)	3/4	-308.520	0.000	16.580	0.00E+00	-63.140	0.000
16	WSD(min)	J[17]	-307.840	0.000	19.530	0.00E+00	-64.510	0.000
17	USD(max)	I[16]	-403.610	0.000	43.920	0.00E+00	-18.090	0.000
17	USD(max)	1/4	-402.690	0.000	56.010	0.00E+00	-20.700	0.000
17	USD(max)	2/4	-401.760	0.000	68.030	0.00E+00	-24.160	0.000
17	USD(max)	3/4	-400.830	0.000	79.980	0.00E+00	-28.470	0.000
17	USD(max)	J[18]	-399.910	0.000	91.860	0.00E+00	-33.620	0.000
17	USD(min)	I[16]	-492.540	0.000	6.580	0.00E+00	-96.800	0.000
17	USD(min)	1/4	-491.440	0.000	8.830	0.00E+00	-97.690	0.000
17	USD(min)	2/4	-490.350	0.000	11.020	0.00E+00	-98.680	0.000
17	USD(min)	3/4	-489.250	0.000	12.860	0.00E+00	-99.770	0.000
17	USD(min)	J[18]	-488.150	0.000	14.310	0.00E+00	-100.940	0.000
17	WSD(max)	I[16]	-281.770	0.000	27.450	0.00E+00	-21.050	0.000
17	WSD(max)	1/4	-281.090	0.000	35.000	0.00E+00	-22.840	0.000
17	WSD(max)	2/4	-280.400	0.000	42.520	0.00E+00	-25.150	0.000
17	WSD(max)	3/4	-279.720	0.000	49.990	0.00E+00	-27.990	0.000
17	WSD(max)	J[18]	-279.030	0.000	57.410	0.00E+00	-31.350	0.000
17	WSD(min)	I[16]	-307.840	0.000	6.440	0.00E+00	-59.970	0.000
17	WSD(min)	1/4	-307.150	0.000	7.750	0.00E+00	-60.520	0.000
17	WSD(min)	2/4	-306.470	0.000	9.030	0.00E+00	-61.130	0.000
17	WSD(min)	3/4	-305.780	0.000	10.120	0.00E+00	-61.810	0.000
17	WSD(min)	J[18]	-305.090	0.000	11.010	0.00E+00	-62.550	0.000
18	USD(max)	I[17]	-393.670	0.000	49.090	0.00E+00	-21.660	0.000
18	USD(max)	1/4	-392.740	0.000	60.240	0.00E+00	-24.920	0.000
18	USD(max)	2/4	-391.820	0.000	71.310	0.00E+00	-29.010	0.000
18	USD(max)	3/4	-390.890	0.000	82.320	0.00E+00	-33.940	0.000
18	USD(max)	J[19]	-389.960	0.000	93.270	0.00E+00	-39.690	0.000
18	USD(min)	I[17]	-492.540	0.000	27.010	0.00E+00	-103.300	0.000
18	USD(min)	1/4	-491.440	0.000	28.800	0.00E+00	-105.420	0.000
18	USD(min)	2/4	-490.350	0.000	28.800	0.00E+00	-107.800	0.000
18	USD(min)	3/4	-489.250	0.000	28.800	0.00E+00	-110.260	0.000
18	USD(min)	J[19]	-488.150	0.000	28.800	0.00E+00	-112.720	0.000
18	WSD(max)	I[17]	-281.770	0.000	30.680	0.00E+00	-21.170	0.000
18	WSD(max)	1/4	-281.090	0.000	37.650	0.00E+00	-23.180	0.000
18	WSD(max)	2/4	-280.400	0.000	44.570	0.00E+00	-25.660	0.000
18	WSD(max)	3/4	-279.720	0.000	51.450	0.00E+00	-28.630	0.000
18	WSD(max)	J[19]	-279.030	0.000	58.290	0.00E+00	-32.080	0.000
18	WSD(min)	I[17]	-307.840	0.000	19.530	0.00E+00	-64.510	0.000
18	WSD(min)	1/4	-307.150	0.000	19.530	0.00E+00	-65.880	0.000
18	WSD(min)	2/4	-306.470	0.000	19.530	0.00E+00	-67.380	0.000
18	WSD(min)	3/4	-305.780	0.000	19.530	0.00E+00	-68.910	0.000
18	WSD(min)	J[19]	-305.090	0.000	19.530	0.00E+00	-70.450	0.000
19	USD(max)	I[18]	-399.910	0.000	91.860	0.00E+00	-33.620	0.000
19	USD(max)	1/4	-398.980	0.000	103.680	0.00E+00	-39.620	0.000
19	USD(max)	2/4	-398.060	0.000	115.430	0.00E+00	-46.450	0.000
19	USD(max)	3/4	-397.130	0.000	127.120	0.00E+00	-54.110	0.000
19	USD(max)	J[20]	-396.200	0.000	138.740	0.00E+00	-62.590	0.000
19	USD(min)	I[18]	-488.150	0.000	14.310	0.00E+00	-100.940	0.000
19	USD(min)	1/4	-487.050	0.000	15.740	0.00E+00	-102.210	0.000
19	USD(min)	2/4	-485.960	0.000	17.140	0.00E+00	-103.560	0.000
19	USD(min)	3/4	-484.860	0.000	18.520	0.00E+00	-105.010	0.000
19	USD(min)	J[20]	-483.760	0.000	19.870	0.00E+00	-107.080	0.000
19	WSD(max)	I[18]	-279.030	0.000	57.410	0.00E+00	-31.350	0.000
19	WSD(max)	1/4	-278.340	0.000	64.800	0.00E+00	-35.230	0.000
19	WSD(max)	2/4	-277.660	0.000	72.150	0.00E+00	-39.630	0.000
19	WSD(max)	3/4	-276.970	0.000	79.450	0.00E+00	-44.540	0.000
19	WSD(max)	J[20]	-276.290	0.000	86.710	0.00E+00	-49.960	0.000
19	WSD(min)	I[18]	-305.090	0.000	11.010	0.00E+00	-62.550	0.000
19	WSD(min)	1/4	-304.410	0.000	11.890	0.00E+00	-63.350	0.000
19	WSD(min)	2/4	-303.720	0.000	12.730	0.00E+00	-64.210	0.000
19	WSD(min)	3/4	-303.040	0.000	13.560	0.00E+00	-65.130	0.000
19	WSD(min)	J[20]	-302.350	0.000	14.370	0.00E+00	-66.110	0.000
20	USD(max)	I[19]	-389.960	0.000	93.270	0.00E+00	-39.690	0.000
20	USD(max)	1/4	-389.040	0.000	104.140	0.00E+00	-46.260	0.000
20	USD(max)	2/4	-388.110	0.000	115.430	0.00E+00	-53.650	0.000
20	USD(max)	3/4	-387.180	0.000	127.120	0.00E+00	-61.850	0.000
20	USD(max)	J[21]	-386.260	0.000	138.740	0.00E+00	-70.860	0.000
20	USD(min)	I[19]	-488.150	0.000	28.800	0.00E+00	-112.720	0.000
20	USD(min)	1/4	-487.050	0.000	28.800	0.00E+00	-115.180	0.000
20	USD(min)	2/4	-485.960	0.000	28.800	0.00E+00	-117.630	0.000
20	USD(min)	3/4	-484.860	0.000	28.800	0.00E+00	-120.090	0.000
20	USD(min)	J[21]	-483.760	0.000	28.800	0.00E+00	-122.550	0.000
20	WSD(max)	I[19]	-279.030	0.000	58.290	0.00E+00	-32.080	0.000
20	WSD(max)	1/4	-278.340	0.000	65.090	0.00E+00	-36.010	0.000
20	WSD(max)	2/4	-277.660	0.000	72.150	0.00E+00	-40.410	0.000
20	WSD(max)	3/4	-276.970	0.000	79.450	0.00E+00	-45.290	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
20	WSD(max)	J[21]	-276.290	0.000	86.710	0.00E+00	-50.630	0.000
20	WSD(min)	I[19]	-305.090	0.000	19.530	0.00E+00	-70.450	0.000
20	WSD(min)	1/4	-304.410	0.000	19.530	0.00E+00	-71.990	0.000
20	WSD(min)	2/4	-303.720	0.000	19.530	0.00E+00	-73.520	0.000
20	WSD(min)	3/4	-303.040	0.000	19.530	0.00E+00	-75.060	0.000
20	WSD(min)	J[21]	-302.350	0.000	19.530	0.00E+00	-76.590	0.000
21	USD(max)	I[20]	-396.200	0.000	138.740	0.00E+00	-62.590	0.000
21	USD(max)	1/4	-394.550	0.000	146.990	0.00E+00	-69.160	0.000
21	USD(max)	2/4	-392.900	0.000	155.220	0.00E+00	-76.140	0.000
21	USD(max)	3/4	-391.240	0.000	163.410	0.00E+00	-83.540	0.000
21	USD(max)	J[22]	-389.590	0.000	171.560	0.00E+00	-90.440	0.000
21	USD(min)	I[20]	-483.760	0.000	19.870	0.00E+00	-107.080	0.000
21	USD(min)	1/4	-481.800	0.000	20.820	0.00E+00	-110.700	0.000
21	USD(min)	2/4	-479.840	0.000	21.760	0.00E+00	-114.490	0.000
21	USD(min)	3/4	-477.880	0.000	22.680	0.00E+00	-118.460	0.000
21	USD(min)	J[22]	-475.920	0.000	23.600	0.00E+00	-122.610	0.000
21	WSD(max)	I[20]	-276.290	0.000	86.710	0.00E+00	-49.960	0.000
21	WSD(max)	1/4	-275.060	0.000	91.870	0.00E+00	-54.140	0.000
21	WSD(max)	2/4	-273.840	0.000	97.010	0.00E+00	-58.580	0.000
21	WSD(max)	3/4	-272.610	0.000	102.130	0.00E+00	-63.270	0.000
21	WSD(max)	J[22]	-271.390	0.000	107.230	0.00E+00	-67.660	0.000
21	WSD(min)	I[20]	-302.350	0.000	14.370	0.00E+00	-66.110	0.000
21	WSD(min)	1/4	-301.120	0.000	14.940	0.00E+00	-67.370	0.000
21	WSD(min)	2/4	-299.900	0.000	15.490	0.00E+00	-70.210	0.000
21	WSD(min)	3/4	-298.670	0.000	16.030	0.00E+00	-73.190	0.000
21	WSD(min)	J[22]	-297.450	0.000	16.560	0.00E+00	-76.310	0.000
22	USD(max)	I[21]	-386.260	0.000	138.740	0.00E+00	-70.860	0.000
22	USD(max)	1/4	-384.600	0.000	146.990	0.00E+00	-77.790	0.000
22	USD(max)	2/4	-382.950	0.000	155.220	0.00E+00	-85.120	0.000
22	USD(max)	3/4	-381.300	0.000	163.410	0.00E+00	-92.860	0.000
22	USD(max)	J[30]	-379.640	0.000	171.560	0.00E+00	-101.010	0.000
22	USD(min)	I[21]	-483.760	0.000	28.800	0.00E+00	-122.550	0.000
22	USD(min)	1/4	-481.800	0.000	28.800	0.00E+00	-124.300	0.000
22	USD(min)	2/4	-479.840	0.000	28.800	0.00E+00	-126.060	0.000
22	USD(min)	3/4	-477.880	0.000	28.800	0.00E+00	-127.810	0.000
22	USD(min)	J[30]	-475.920	0.000	28.800	0.00E+00	-129.570	0.000
22	WSD(max)	I[21]	-276.290	0.000	86.710	0.00E+00	-50.630	0.000
22	WSD(max)	1/4	-275.060	0.000	91.870	0.00E+00	-54.730	0.000
22	WSD(max)	2/4	-273.840	0.000	97.010	0.00E+00	-59.070	0.000
22	WSD(max)	3/4	-272.610	0.000	102.130	0.00E+00	-63.640	0.000
22	WSD(max)	J[30]	-271.390	0.000	107.230	0.00E+00	-68.450	0.000
22	WSD(min)	I[21]	-302.350	0.000	19.530	0.00E+00	-76.590	0.000
22	WSD(min)	1/4	-301.120	0.000	19.530	0.00E+00	-77.690	0.000
22	WSD(min)	2/4	-299.900	0.000	19.530	0.00E+00	-78.790	0.000
22	WSD(min)	3/4	-298.670	0.000	19.530	0.00E+00	-79.880	0.000
22	WSD(min)	J[30]	-297.450	0.000	19.530	0.00E+00	-80.980	0.000
23	USD(max)	I[22]	-28.800	0.000	-292.120	0.00E+00	3.170	0.000
23	USD(max)	1/4	-28.800	0.000	-275.860	0.00E+00	18.300	0.000
23	USD(max)	2/4	-28.800	0.000	-259.140	0.00E+00	33.940	0.000
23	USD(max)	3/4	-28.800	0.000	-242.420	0.00E+00	48.610	0.000
23	USD(max)	J[23]	-28.800	0.000	-225.710	0.00E+00	62.320	0.000
23	USD(min)	I[22]	-219.780	0.000	-360.780	0.00E+00	-53.300	0.000
23	USD(min)	1/4	-219.780	0.000	-341.590	0.00E+00	-37.960	0.000
23	USD(min)	2/4	-219.780	0.000	-322.400	0.00E+00	-23.500	0.000
23	USD(min)	3/4	-219.780	0.000	-303.210	0.00E+00	-9.880	0.000
23	USD(min)	J[23]	-219.780	0.000	-284.020	0.00E+00	2.550	0.000
23	WSD(max)	I[22]	-19.530	0.000	-205.730	0.00E+00	1.070	0.000
23	WSD(max)	1/4	-19.530	0.000	-194.790	0.00E+00	11.440	0.000
23	WSD(max)	2/4	-19.530	0.000	-183.840	0.00E+00	21.210	0.000
23	WSD(max)	3/4	-19.530	0.000	-172.900	0.00E+00	30.380	0.000
23	WSD(max)	J[23]	-19.530	0.000	-161.960	0.00E+00	38.950	0.000
23	WSD(min)	I[22]	-137.360	0.000	-225.490	0.00E+00	-33.310	0.000
23	WSD(min)	1/4	-137.360	0.000	-213.490	0.00E+00	-22.340	0.000
23	WSD(min)	2/4	-137.360	0.000	-201.500	0.00E+00	-11.960	0.000
23	WSD(min)	3/4	-137.360	0.000	-189.500	0.00E+00	-2.190	0.000
23	WSD(min)	J[23]	-137.360	0.000	-177.510	0.00E+00	6.180	0.000
24	USD(max)	I[23]	-28.800	0.000	-225.710	0.00E+00	62.320	0.000
24	USD(max)	1/4	-28.800	0.000	-205.060	0.00E+00	77.940	0.000
24	USD(max)	2/4	-28.800	0.000	-184.410	0.00E+00	92.080	0.000
24	USD(max)	3/4	-28.800	0.000	-163.770	0.00E+00	104.780	0.000
24	USD(max)	J[24]	-28.800	0.000	-143.120	0.00E+00	116.170	0.000
24	USD(min)	I[23]	-219.780	0.000	-284.020	0.00E+00	2.550	0.000
24	USD(min)	1/4	-219.780	0.000	-260.320	0.00E+00	16.770	0.000
24	USD(min)	2/4	-219.780	0.000	-236.620	0.00E+00	29.760	0.000
24	USD(min)	3/4	-219.780	0.000	-212.920	0.00E+00	41.510	0.000
24	USD(min)	J[24]	-219.780	0.000	-189.220	0.00E+00	52.020	0.000
24	WSD(max)	I[23]	-19.530	0.000	-161.960	0.00E+00	38.950	0.000
24	WSD(max)	1/4	-19.530	0.000	-148.440	0.00E+00	48.710	0.000
24	WSD(max)	2/4	-19.530	0.000	-134.930	0.00E+00	57.550	0.000
24	WSD(max)	3/4	-19.530	0.000	-120.980	0.00E+00	65.490	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
24	WSD(max)	J[24]	-19.530	0.000	-106.170	0.00E+00	72.580	0.000
24	WSD(min)	I[23]	-137.360	0.000	-177.510	0.00E+00	6.180	0.000
24	WSD(min)	1/4	-137.360	0.000	-162.700	0.00E+00	15.760	0.000
24	WSD(min)	2/4	-137.360	0.000	-147.890	0.00E+00	24.510	0.000
24	WSD(min)	3/4	-137.360	0.000	-133.070	0.00E+00	32.420	0.000
24	WSD(min)	J[24]	-137.360	0.000	-118.260	0.00E+00	39.500	0.000
25	USD(max)	I[24]	-28.800	0.000	-143.120	0.00E+00	116.170	0.000
25	USD(max)	1/4	-28.800	0.000	-122.560	0.00E+00	126.050	0.000
25	USD(max)	2/4	-28.800	0.000	-102.000	0.00E+00	134.480	0.000
25	USD(max)	3/4	-28.800	0.000	-81.430	0.00E+00	141.460	0.000
25	USD(max)	J[25]	-28.800	0.000	-60.870	0.00E+00	146.990	0.000
25	USD(min)	I[24]	-219.780	0.000	-189.220	0.00E+00	52.020	0.000
25	USD(min)	1/4	-219.780	0.000	-165.610	0.00E+00	61.260	0.000
25	USD(min)	2/4	-219.780	0.000	-142.010	0.00E+00	69.260	0.000
25	USD(min)	3/4	-219.780	0.000	-118.400	0.00E+00	75.620	0.000
25	USD(min)	J[25]	-219.780	0.000	-94.800	0.00E+00	80.350	0.000
25	WSD(max)	I[24]	-19.530	0.000	-106.170	0.00E+00	72.580	0.000
25	WSD(max)	1/4	-19.530	0.000	-91.420	0.00E+00	78.740	0.000
25	WSD(max)	2/4	-19.530	0.000	-76.670	0.00E+00	83.990	0.000
25	WSD(max)	3/4	-19.530	0.000	-61.910	0.00E+00	88.330	0.000
25	WSD(max)	J[25]	-19.530	0.000	-47.160	0.00E+00	91.760	0.000
25	WSD(min)	I[24]	-137.360	0.000	-118.260	0.00E+00	39.500	0.000
25	WSD(min)	1/4	-137.360	0.000	-103.510	0.00E+00	45.730	0.000
25	WSD(min)	2/4	-137.360	0.000	-88.760	0.00E+00	51.120	0.000
25	WSD(min)	3/4	-137.360	0.000	-74.000	0.00E+00	55.690	0.000
25	WSD(min)	J[25]	-137.360	0.000	-59.250	0.00E+00	59.430	0.000
26	USD(max)	I[25]	-28.800	0.000	-60.870	0.00E+00	146.990	0.000
26	USD(max)	1/4	-28.800	0.000	-40.230	0.00E+00	151.070	0.000
26	USD(max)	2/4	-28.800	0.000	-19.580	0.00E+00	153.700	0.000
26	USD(max)	3/4	-28.800	0.000	1.070	0.00E+00	154.860	0.000
26	USD(max)	J[26]	-28.800	0.000	21.710	0.00E+00	154.560	0.000
26	USD(min)	I[25]	-219.780	0.000	-94.800	0.00E+00	80.350	0.000
26	USD(min)	1/4	-219.780	0.000	-71.100	0.00E+00	83.870	0.000
26	USD(min)	2/4	-219.780	0.000	-47.400	0.00E+00	86.150	0.000
26	USD(min)	3/4	-219.780	0.000	-23.700	0.00E+00	87.190	0.000
26	USD(min)	J[26]	-219.780	0.000	0.000	0.00E+00	86.990	0.000
26	WSD(max)	I[25]	-19.530	0.000	-47.160	0.00E+00	91.760	0.000
26	WSD(max)	1/4	-19.530	0.000	-32.350	0.00E+00	94.300	0.000
26	WSD(max)	2/4	-19.530	0.000	-17.540	0.00E+00	95.920	0.000
26	WSD(max)	3/4	-19.530	0.000	-2.720	0.00E+00	96.630	0.000
26	WSD(max)	J[26]	-19.530	0.000	12.090	0.00E+00	96.420	0.000
26	WSD(min)	I[25]	-137.360	0.000	-59.250	0.00E+00	59.430	0.000
26	WSD(min)	1/4	-137.360	0.000	-44.440	0.00E+00	62.350	0.000
26	WSD(min)	2/4	-137.360	0.000	-29.630	0.00E+00	64.430	0.000
26	WSD(min)	3/4	-137.360	0.000	-14.810	0.00E+00	65.680	0.000
26	WSD(min)	J[26]	-137.360	0.000	0.000	0.00E+00	66.100	0.000
27	USD(max)	I[26]	-28.800	0.000	21.710	0.00E+00	154.560	0.000
27	USD(max)	1/4	-28.800	0.000	40.960	0.00E+00	152.860	0.000
27	USD(max)	2/4	-28.800	0.000	62.590	0.00E+00	149.820	0.000
27	USD(max)	3/4	-28.800	0.000	84.210	0.00E+00	145.450	0.000
27	USD(max)	J[27]	-28.800	0.000	105.830	0.00E+00	139.750	0.000
27	USD(min)	I[26]	-219.780	0.000	0.000	0.00E+00	86.990	0.000
27	USD(min)	1/4	-219.780	0.000	20.060	0.00E+00	85.600	0.000
27	USD(min)	2/4	-219.780	0.000	40.120	0.00E+00	83.090	0.000
27	USD(min)	3/4	-219.780	0.000	60.190	0.00E+00	79.460	0.000
27	USD(min)	J[27]	-219.780	0.000	80.250	0.00E+00	74.700	0.000
27	WSD(max)	I[26]	-19.530	0.000	12.090	0.00E+00	96.420	0.000
27	WSD(max)	1/4	-19.530	0.000	25.600	0.00E+00	95.330	0.000
27	WSD(max)	2/4	-19.530	0.000	39.120	0.00E+00	93.420	0.000
27	WSD(max)	3/4	-19.530	0.000	52.630	0.00E+00	90.660	0.000
27	WSD(max)	J[27]	-19.530	0.000	66.150	0.00E+00	87.080	0.000
27	WSD(min)	I[26]	-137.360	0.000	0.000	0.00E+00	66.100	0.000
27	WSD(min)	1/4	-137.360	0.000	13.510	0.00E+00	65.680	0.000
27	WSD(min)	2/4	-137.360	0.000	27.030	0.00E+00	64.430	0.000
27	WSD(min)	3/4	-137.360	0.000	40.540	0.00E+00	62.350	0.000
27	WSD(min)	J[27]	-137.360	0.000	54.060	0.00E+00	59.430	0.000
28	USD(max)	I[27]	-28.800	0.000	105.830	0.00E+00	139.750	0.000
28	USD(max)	1/4	-28.800	0.000	127.370	0.00E+00	132.730	0.000
28	USD(max)	2/4	-28.800	0.000	148.910	0.00E+00	124.400	0.000
28	USD(max)	3/4	-28.800	0.000	170.440	0.00E+00	114.740	0.000
28	USD(max)	J[28]	-28.800	0.000	191.980	0.00E+00	103.760	0.000
28	USD(min)	I[27]	-219.780	0.000	80.250	0.00E+00	74.700	0.000
28	USD(min)	1/4	-219.780	0.000	100.230	0.00E+00	68.830	0.000
28	USD(min)	2/4	-219.780	0.000	120.210	0.00E+00	61.780	0.000
28	USD(min)	3/4	-219.780	0.000	140.190	0.00E+00	53.420	0.000
28	USD(min)	J[28]	-219.780	0.000	158.930	0.00E+00	43.940	0.000
28	WSD(max)	I[27]	-19.530	0.000	66.150	0.00E+00	87.080	0.000
28	WSD(max)	1/4	-19.530	0.000	79.610	0.00E+00	82.680	0.000
28	WSD(max)	2/4	-19.530	0.000	93.070	0.00E+00	77.450	0.000
28	WSD(max)	3/4	-19.530	0.000	106.530	0.00E+00	71.390	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
28	WSD(max)	J[28]	-19.530	0.000	119.990	0.00E+00	64.500	0.000
28	WSD(min)	I[27]	-137.360	0.000	54.060	0.00E+00	59.430	0.000
28	WSD(min)	1/4	-137.360	0.000	67.520	0.00E+00	55.690	0.000
28	WSD(min)	2/4	-137.360	0.000	80.980	0.00E+00	50.950	0.000
28	WSD(min)	3/4	-137.360	0.000	94.440	0.00E+00	44.980	0.000
28	WSD(min)	J[28]	-137.360	0.000	107.900	0.00E+00	38.170	0.000
29	USD(max)	I[28]	-28.800	0.000	191.980	0.00E+00	103.760	0.000
29	USD(max)	1/4	-28.800	0.000	213.600	0.00E+00	91.390	0.000
29	USD(max)	2/4	-28.800	0.000	236.620	0.00E+00	77.700	0.000
29	USD(max)	3/4	-28.800	0.000	260.320	0.00E+00	62.670	0.000
29	USD(max)	J[29]	-28.800	0.000	284.020	0.00E+00	46.300	0.000
29	USD(min)	I[28]	-219.780	0.000	158.930	0.00E+00	43.940	0.000
29	USD(min)	1/4	-219.780	0.000	177.180	0.00E+00	33.300	0.000
29	USD(min)	2/4	-219.780	0.000	195.420	0.00E+00	21.530	0.000
29	USD(min)	3/4	-219.780	0.000	213.670	0.00E+00	8.630	0.000
29	USD(min)	J[29]	-219.780	0.000	231.910	0.00E+00	-5.390	0.000
29	WSD(max)	I[28]	-19.530	0.000	119.990	0.00E+00	64.500	0.000
29	WSD(max)	1/4	-19.530	0.000	133.500	0.00E+00	56.760	0.000
29	WSD(max)	2/4	-19.530	0.000	147.890	0.00E+00	48.180	0.000
29	WSD(max)	3/4	-19.530	0.000	162.700	0.00E+00	38.760	0.000
29	WSD(max)	J[29]	-19.530	0.000	177.510	0.00E+00	28.510	0.000
29	WSD(min)	I[28]	-137.360	0.000	107.900	0.00E+00	38.170	0.000
29	WSD(min)	1/4	-137.360	0.000	121.410	0.00E+00	30.510	0.000
29	WSD(min)	2/4	-137.360	0.000	134.930	0.00E+00	22.010	0.000
29	WSD(min)	3/4	-137.360	0.000	148.440	0.00E+00	12.670	0.000
29	WSD(min)	J[29]	-137.360	0.000	161.960	0.00E+00	2.500	0.000
30	USD(max)	I[29]	-28.800	0.000	284.020	0.00E+00	46.300	0.000
30	USD(max)	1/4	-28.800	0.000	303.210	0.00E+00	32.070	0.000
30	USD(max)	2/4	-28.800	0.000	322.400	0.00E+00	16.960	0.000
30	USD(max)	3/4	-28.800	0.000	341.590	0.00E+00	0.980	0.000
30	USD(max)	J[30]	-28.800	0.000	360.780	0.00E+00	-15.880	0.000
30	USD(min)	I[29]	-219.780	0.000	231.910	0.00E+00	-5.390	0.000
30	USD(min)	1/4	-219.780	0.000	246.690	0.00E+00	-17.560	0.000
30	USD(min)	2/4	-219.780	0.000	261.460	0.00E+00	-30.480	0.000
30	USD(min)	3/4	-219.780	0.000	276.230	0.00E+00	-44.140	0.000
30	USD(min)	J[30]	-219.780	0.000	291.010	0.00E+00	-58.530	0.000
30	WSD(max)	I[29]	-19.530	0.000	177.510	0.00E+00	28.510	0.000
30	WSD(max)	1/4	-19.530	0.000	189.500	0.00E+00	19.600	0.000
30	WSD(max)	2/4	-19.530	0.000	201.500	0.00E+00	10.140	0.000
30	WSD(max)	3/4	-19.530	0.000	213.490	0.00E+00	0.140	0.000
30	WSD(max)	J[30]	-19.530	0.000	225.490	0.00E+00	-10.410	0.000
30	WSD(min)	I[29]	-137.360	0.000	161.960	0.00E+00	2.500	0.000
30	WSD(min)	1/4	-137.360	0.000	172.900	0.00E+00	-6.340	0.000
30	WSD(min)	2/4	-137.360	0.000	183.840	0.00E+00	-15.740	0.000
30	WSD(min)	3/4	-137.360	0.000	194.790	0.00E+00	-25.680	0.000
30	WSD(min)	J[30]	-137.360	0.000	205.730	0.00E+00	-36.160	0.000

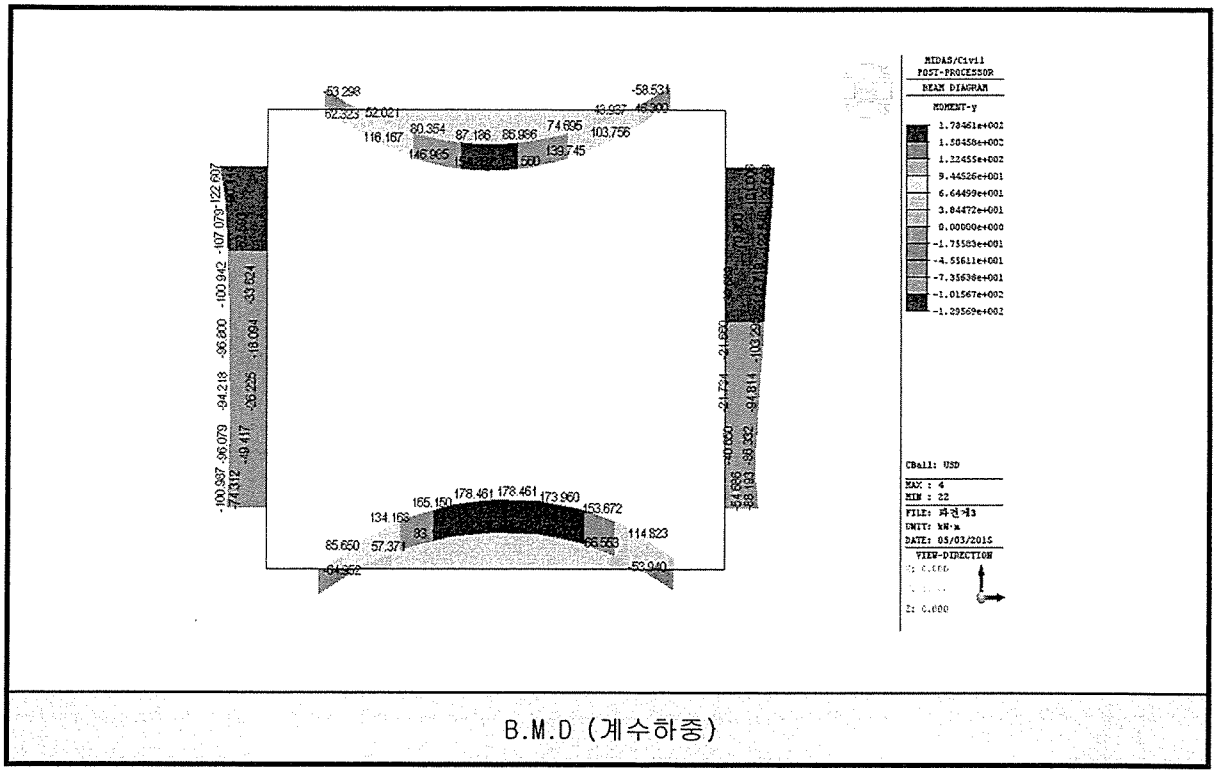
9. 단면력 요약

구분	위치	부재	극한하중			사용하중	비고
			Mu(kN · m)	Su(kN)	Pu(kN)	M(kN · m)	
상부슬래브	단부	23,30	-58.53	360.78	-	-36.16	
	중앙부	26,27	154.86	105.83	-	96.63	
벽체	상단부 (축력최대)	21.22	-89.03	171.56	-483.76	-49.96	
	상단부 (모멘트최대)	21,22	-129.57	171.56	-453.56	-80.98	
	중앙부 (축력최대)	15,16	-32.23	49.09	-496.93	-18.09	
	중앙부 (모멘트최대)	15,16	-103.30	-18.49	-467.57	-64.51	
	하단부 (축력최대)	9,10	-88.19	-158.50	-513.94	-33.95	
	하단부 (모멘트최대)	9,10	-100.99	-158.50	-494.60	-63.12	
하부슬래브	단부	1,8	-64.95	349.30	-	-38.25	
	중앙부	4,5	178.46	70.43	-	111.24	

-'전단력과 사용하중 상태에서의 모멘트는 선택 부재에서의 최대값 적용

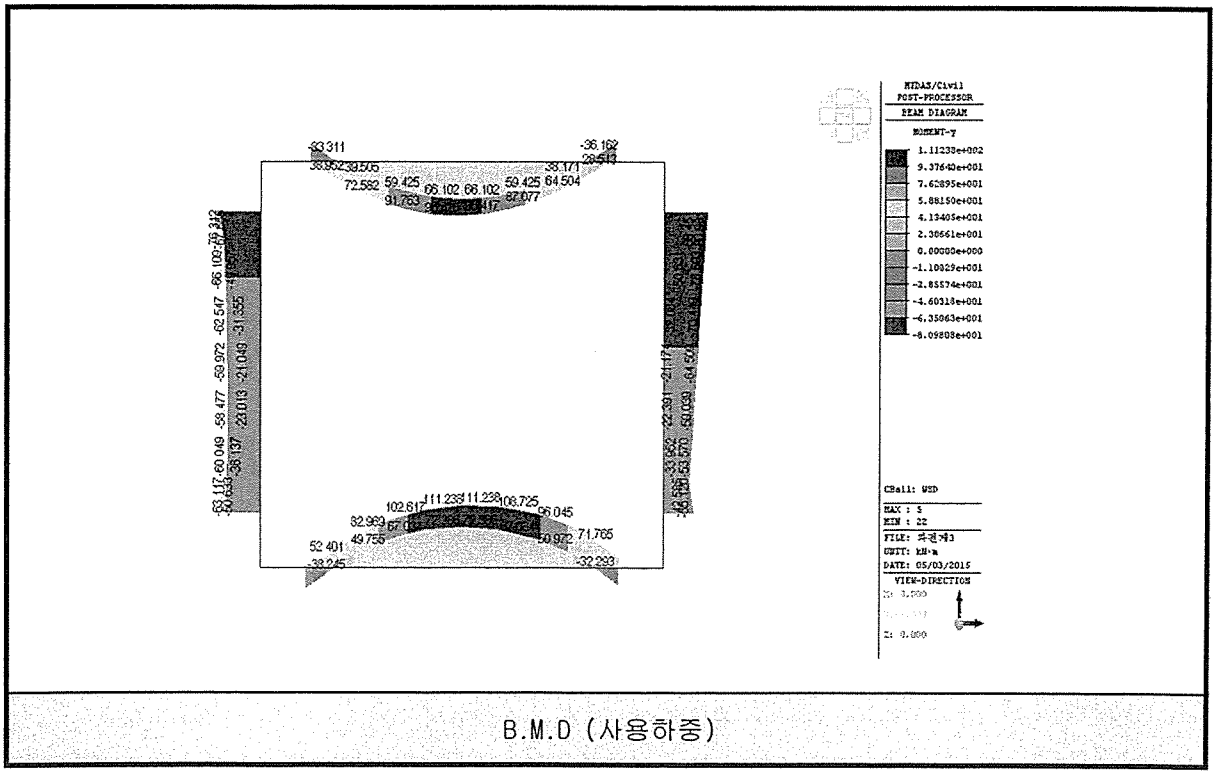
10. 단면력도

(1) 극한하중 모멘트도



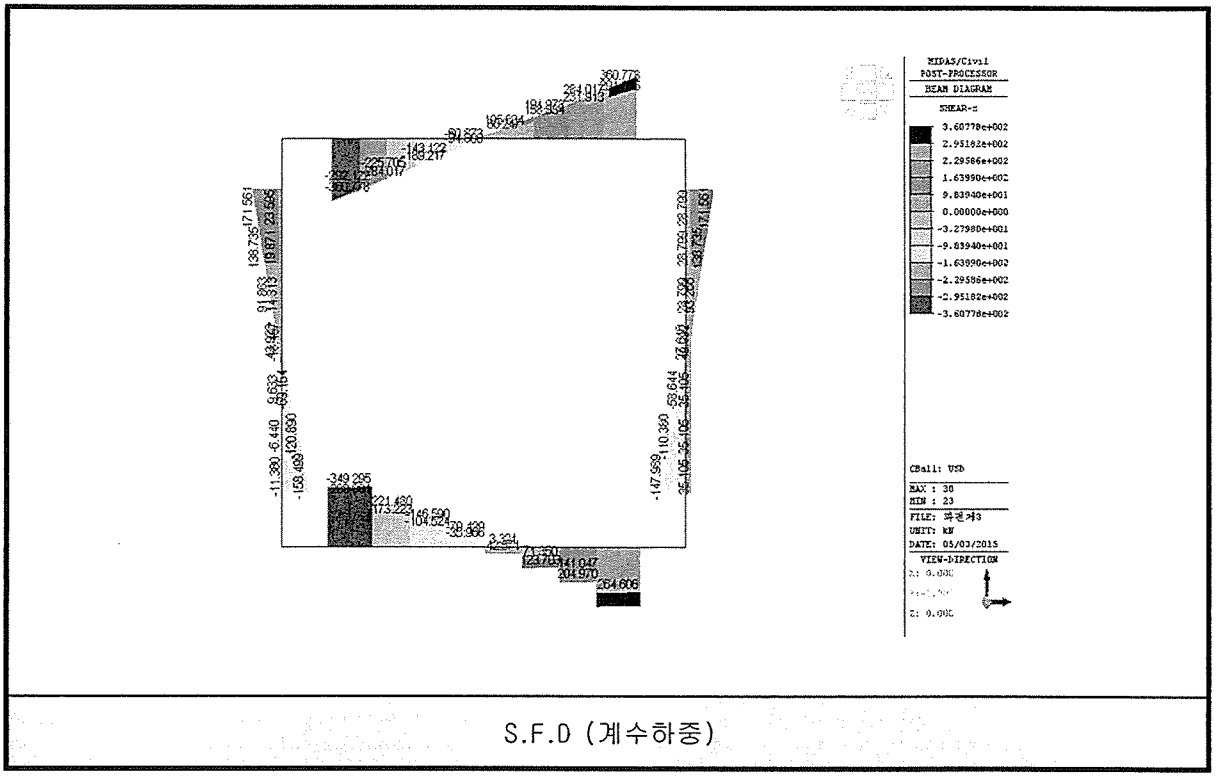
B.M.D (계수하중)

(2) 사용하중 모멘트도



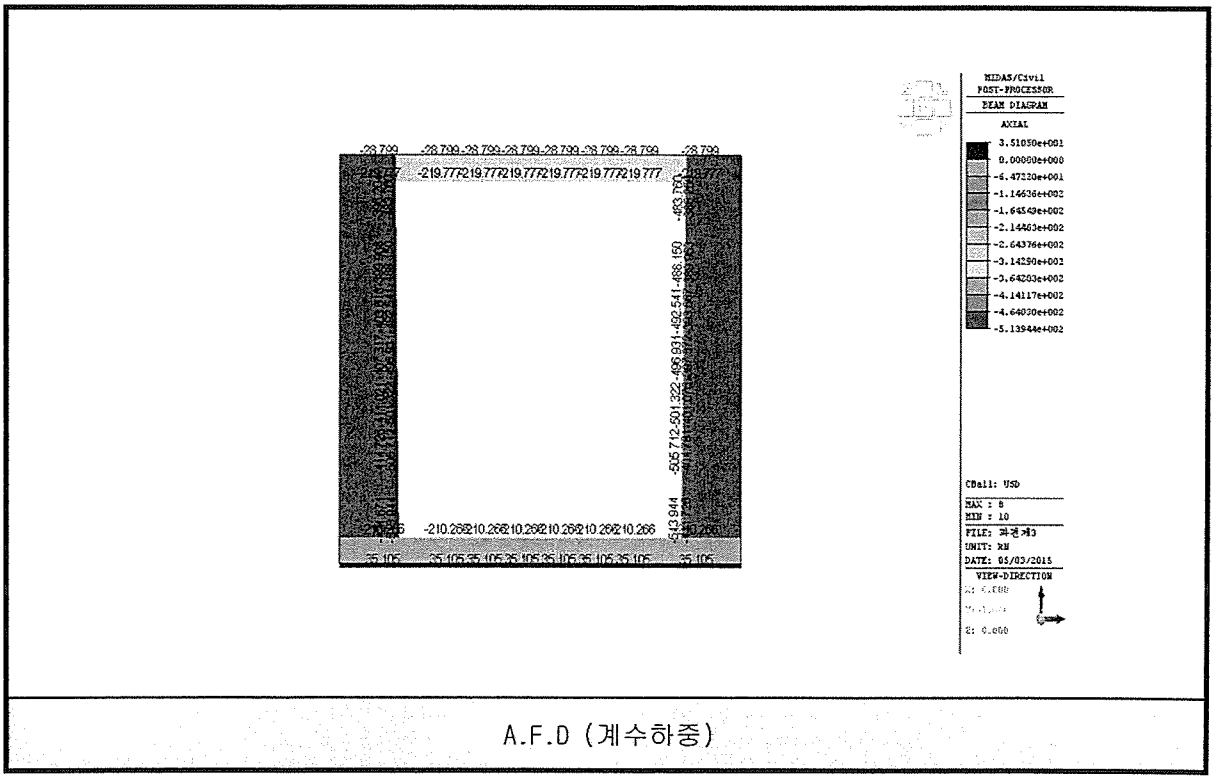
B.M.D (사용하중)

(3) 극한하중 전단력도



S.F.D (계수하중)

(4) 극한하중 축력도



A.F.D (계수하중)

11. 단면검토

① 상부 슬래브 단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	36.160
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Su (kN)
1000.0	500.0	400.0	100.0	58.530	360.780

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K.

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ———————— (1)

$a = As \times fy / (0.85 \times fck \times b)$ ———————— (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b} \times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 409.750 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350

Pmin = 0.25 √fck / fy = 0.00342

적용 = 0.0035

As(req) = 409.750 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 546.334 mm^2 ※ As = 546.334 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 58.530 kN · m ----- ∴ O.K. [사용률 = 3.787]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (360.8 - 232.782)×10³ ×150.0 / (400.0×300.0×0.85)

= 188.232 ㎟

Use Av = 253.400 ㎟ (H13×2 EA, 간격 s = 150.0 ㎜)

Øv · As = Øv · Av · fy · D / (s × B) = 172.312 kN

s = 150.0 ㎜ ≥ Min (600, 0.5D) = 150.0 ㎜ ----- ∴ O.K.

Øv · Vn = Øv · Vc + Øv · Vs = 405.094 kN > Vu ----- ∴ O.K.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 36.16 × 1000000 / [1588.8×(400 - 83.857/3)]

= 61.173 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 ㎜

사용철근량 = 1588.800 $㎜^2$ (철근도심 : 100 ㎜)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 ㎜

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(㎜)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 61.173) - 2.5 × 92 = 1057.330 ㎜

300 x (210 / fs) = 300 × (210 / 61.173) = 1029.864 ㎜

Sa는 작은 값인 1029.864 ㎜ 를 적용

S = 125.00 ≤ Sa (= 1029.864 ㎜) ----- ∴ O.K.

② 상부슬래브 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	96.630
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	154.860	105.830

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.02719 ≥ 0.004 ----- ∴ O.K.

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 1492.094 mm^2

사용철근비 : Puse = As / (B × D) = 0.00530

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 1492.094 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1989.459 mm^2 ※ As = 1492.094 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 164463107 N · mm

= 164.463 kN · m > 154.860 kN · m ----- ∴ O.K. [사용률 = 1.062]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 96.63 × 1000000 / [1588.8×(300 - 71.32/3)]

= 220.180 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 220.18) - 2.5 × 92 = 127.662 mm

300 x (210 / fs) = 300 × (210 / 220.18) = 286.130 mm

Sa는 작은 값인 127.662 mm 를 적용

S = 125.00 ≤ Sa (= 127.662 mm) ----- ∴ O.K.

③ 하부슬래브 단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	38.250
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	550.0	450.0	100.0	64.950	349.300

전단설계시 단면의 유효높이 ds = 350.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.04229 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 403.767 mm^2

사용철근비 : Puse = As / (B × D) = 0.00353

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 403.767 mm^2 As(min) = 1575.000 mm^2

4/3×As(req) = 538.356 mm^2 ※ As = 538.356 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 250258307 N · mm

= 250.258 kN · m > 64.950 kN · m ----- ∴ O.K [사용률 = 3.853]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 271.579 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (349.3 - 271.579)×10³ ×150.0 / (400.0×350.0×0.85)

= 97.968 ㎟

Use Av = 253.400 ㎟ (H13×2 EA, 간격 s = 150.0 mm)

Øv · As = Øv · Av · fy · D / (s × B) = 201.031 kN

s = 150.0 mm < Min (600, 0.5D) = 175.0 mm ----- ∴ O.K

Øv · Vn = Øv · Vc + Øv · Vs = 472.610 kN > Vu ----- ∴ O.K

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 38.25 × 1000000 / [1588.8×(450 - 89.542/3)]

= 57.300 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×450/(7×1588.8)]

= 89.542 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 57.3) - 2.5 × 92 = 1144.344 mm

300 x (210 / fs) = 300 × (210 / 57.3) = 1099.475 mm

Sa는 작은 값인 1099.475 mm 를 적용

S = 125.00 ≤ Sa (= 1099.475 mm) ----- ∴ O.K.

④ 하부슬래브 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	111.240
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	450.0	350.0	100.0	178.460	70.430

전단설계시 단면의 유효높이 ds = 350.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03222 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ———————— (1)

$a = As \times fy / (0.85 \times fck \times b)$ ———————— (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b} \times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 1464.405 mm^2

사용철근비 : Puse = As / (B × D) = 0.00454

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 : Pmin = 1.4 / fy = 0.00350
Pmin = 0.25 √fck / fy = 0.00342
적용 = 0.0035

As(req) = 1464.405 mm^2 As(min) = 1225.000 mm^2

4/3×As(req) = 1952.540 mm^2 ※ As = 1464.405 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 193061507 N · mm

= 193.062 kN · m > 178.460 kN · m ----- ∴ O.K [사용률 = 1.082]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 271.579 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 111.24 × 1000000 / [1588.8×(350 - 77.81/3)]

= 216.054 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×350/(7×1588.8)]

= 77.810 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 216.054) - 2.5 × 92 = 134.493 mm

300 x (210 / fs) = 300 × (210 / 216.054) = 291.594 mm

Sa는 작은 값인 134.493 mm 를 적용

S = 125.00 ≤ Sa (= 134.493 mm) ----- ∴ O.K.

⑤ 벽체 상단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	80.980
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	129.570	171.560

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ---------- (1)

$a = As \times fy / (0.85 \times fck \times b)$ ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 916.253 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 916.253 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 1221.670 mm^2 ※ As = 1221.670 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 129.570 kN · m ----- ∴ O.K [사용률 = 1.711]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

1/2 x Φv x Vc = 116.391 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 80.98 × 1000000 / [1588.8×(400 - 83.857/3)]

= 136.997 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 136.997) - 2.5 × 92 = 344.831 mm

300 x (210 / fs) = 300 × (210 / 136.997) = 459.865 mm

Sa는 작은 값인 344.831 mm 를 적용

S = 125.00 ≤ Sa (= 344.831 mm) ----- ∴ O.K.

⑥ 벽체 중앙부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	64.510
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	103.300	18.490

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.02719 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

$Mu / \Phi = As \times fy / (d - a/2)$ ---------- (1)

$a = As \times fy / (0.85 \times fck \times b)$ ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b} \times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 981.676 mm^2

사용철근비 : Puse = As / (B × D) = 0.00530

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 981.676 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1308.901 mm^2 ※ As = 1050.000 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 164463107 N · mm

= 164.463 kN · m > 103.300 kN · m ----- ∴ O.K [사용률 = 1.592]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 64.51 × 1000000 / [1588.8×(300 - 71.32/3)]

= 146.992 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 146.992) - 2.5 × 92 = 305.745 mm

300 x (210 / fs) = 300 × (210 / 146.992) = 428.596 mm

Sa는 작은 값인 305.745 mm 를 적용

S = 125.00 ≤ Sa (= 305.745 mm) ----- ∴ O.K.

⑦ 벽체 하단부

* 검토 조건

pmin = max(0.25√fck / fy, 1.4/fy) = 0.00350

fck (Mpa)	fy (Mpa)	β1	Φf	Φv	Mo (kN.m)
30.0	400.0	0.836	0.900	0.850	63.120
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	100.990	158.500

전단설계시 단면의 유효높이 ds = 300.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 24.922 mm

최외단 인장철근 변형률 εt = 0.03725 ≥ 0.004 ----- ∴ O.K

여기서 εt = 0.003×(H - a/β1 - Dc_min) / (a/β1)

0.005 ≤ εt 이므로 인장지배단면, Φf = 0.900 를 적용한다.

ⓐ 필요철근량 및 철근비 검토

Mu / Φ = As×fy / (d - a/2) ---------- (1)

a = As×fy / (0.85×fck×b) ---------- (2)

式(2)를 式(1)에 대입하여 2차방정식으로 As를 구한다.

$$\frac{fy^2}{2\times 0.85\times fck\times b}\times As^2 - fy\times d\times As + \frac{Mu}{\Phi} = 0$$

필요 철근량 req.As = 711.238 mm^2

사용철근비 : Puse = As / (B × D) = 0.00397

최대철근비 : Pmax = 0.714 x k1 x Φx (fck / fy) x {600 / (600 + fy)} = 0.02283

최소철근비 :
- Pmin = 1.4 / fy = 0.00350
- Pmin = 0.25 √fck / fy = 0.00342
- 적용 = 0.0035

As(req) = 711.238 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 948.318 mm^2 ※ As = 948.318 mm^2

사용철근량 = H16 × 8ea = 1588.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 221659907 N · mm

= 221.660 kN · m > 100.990 kN · m ----- ∴ O.K [사용률 = 2.195]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 232.782 kN

1/2 x Φv x Vc = 116.391 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 63.12 × 1000000 / [1588.8×(400 - 83.857/3)]

= 106.782 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×400/(7×1588.8)]

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 106.782) - 2.5 × 92 = 507.482 mm

300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 mm

Sa는 작은 값인 507.482 mm 를 적용

S = 125.00 ≤ Sa (= 507.482 mm) ----- ∴ O.K.

⑤ 벽체 상단부 - Pmax 일 경우

설계축력	:	Pu	=	483.76	(kN) ,	설계모멘트	:	Mu	=	89.03	(kN · m)
설계전단력	:	Vu	=	171.56	(kN) ,	사용 모멘트	:	M	=	49.96	(kN.m)
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck} =	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v =	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc =	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e =	184.04 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

$\sum$ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 249.482 mm , a = k1 x c = 208.567 mm 사용

fs = 600 x (400.000 - 249.482) / 249.482 = 361.9917 Mpa (fs ≤ fy)

fs' = 600 x (249.482 - 100.000) / 249.482 = 359.5021 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 208.567 x 1000 = 5230867.543 N

Cs = 794.400 x (359.502 - 0.836 x 30) = 265664.895 N

Ts = 1588.800 x 361.992 = 575132.425 N

Pn = 5230867.543 + 265664.895 - 575132.425 = 4921400.013 N

Mn' = 5230867.543 x (400.0 - 208.567 / 2) + 265664.895 x (400.0 - 100.0)

= 1626552561.153 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 330.505114 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4921400.013

ΦPn = 3444980.009 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4921400.013 = 3444.980 kN ≥ Pu = 483.760 kN ------- O.K!!!

ΦMn = ΦPn x 184.038 = 634.006 kN.m ≥ Mu = 89.030 kN.m ------- O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 248869.324 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 49.96 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 84.519 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 84.519) - 2.5 × 92 = 701.742 mm

300 x (210 / fs) = 300 × (210 / 84.519) = 745.394 mm

Sa는 작은 값인 701.742 mm 를 적용

S = 125.00 ≤ Sa (= 701.742 mm) ----- ∴ O.K.

⑥ 벽체 상단부 - Mmax 일 경우

설계축력	:	Pu	=	453.56	(kN) ,	설계모멘트	:	Mu	=	129.57	(kN·m)	
설계전단력	:	Vu	=	171.56	(kN) ,	사용 모멘트	:	M	=	80.98	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	285.67 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

$\sum$ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 138.006 mm , a = k1 x c = 115.373 mm 사용

fs = 600 x (400.000 - 138.006) / 138.006 = 400 Mpa (fs ≤ fy)

fs' = 600 x (138.006 - 100.000) / 138.006 = 165.235 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 115.373 x 1000 = 2893546.855 N

Cs = 794.400 x (165.235 - 0.836 x 30) = 111339.159 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2893546.855 + 111339.159 - 635520.000 = 2369366.013 N

Mn' = 2893546.855 x (400.0 - 115.373 / 2) + 111339.159 x (400.0 - 100.0)

= 1023902359.529 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 432.140915 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 2369366.013

ΦPn = 1658556.209 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2369366.013 = 1658.556 kN ≥ Pu = 453.560 kN ------- O.K!!!

ΦMn = ΦPn x 285.673 = 473.805 kN.m ≥ Mu = 129.570 kN.m ------- O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 247865.036 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 80.98 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 136.997 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 136.997) - 2.5 × 92 = 344.831 mm

300 x (210 / fs) = 300 × (210 / 136.997) = 459.865 mm

Sa는 작은 값인 344.831 mm 를 적용

S = 125.00 ≤ Sa (= 344.831 mm) ----- ∴ O.K.

⑦ 벽체 중앙부 - Pmax 일 경우

설계축력	:	Pu	=	496.93	(kN) ,	설계모멘트	:	Mu	=	32.23	(kN · m)
설계전단력	:	Vu	=	49.09	(kN) ,	사용 모멘트	:	M	=	18.09	(kN.m)
부 재 높 이	:	H	=	400.0	(mm) ,	f_y	=	400	MPa	f_{ck}	= 30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	= 0.85
유효높이(휨)	:	d	=	300.0	(mm) ,	d'	=	100	(mm),	ϕc	= 0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	= 64.86 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0060) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 400.00 x 1000.00 = 10032000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (10032000.00 x 200.0 + 635520.0 x 100.0 + 317760.0 x 300.0) / 10985280.000

= 197.107 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 180.000 mm, ab = k1 x cb = 150.480 mm

fs' = 600 x (180.000 - 100.0) / 180.0(= 266.6667 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 150.480 x 1000 = 3774038.400 N

Cs = As' x (fs' - 0.9 x fck) = 190391.200 N

Ts = As x fs = 635520.000 N

Pb = 3774038.400 + 190391.200 - 635520.000 = 3328909.600 N

Mb = 3774038.400x(300.0-150.480/2)+190391.200x(300.0-100.0)-3328909.600x(197.107-100.0)

= 563069348.351 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 169.145 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 329.377 mm , a = k1 x c = 275.359 mm 사용

fs = 600 x (300.000 - 329.377) / 329.377 = -53.5139 Mpa (fs ≤ fy)

fs' = 600 x (329.377 - 100.000) / 329.377 = 400 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 275.359 x 1000 = 6906010.130 N

Cs = 794.400 x (400.000 - 0.836 x 30) = 297836.448 N

Ts = 1588.800 x -53.514 = -85022.917 N

Pn = 6906010.130 + 297836.448 - -85022.917 = 7288869.496 N

Mn' = 6906010.130 x (300.0 - 275.359 / 2) + 297836.448 x (300.0 - 100.0)

= 1180553424.391 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 161.965631 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 7288869.496

ΦPn = 5102208.647 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 7288869.496 = 5102.209 kN ≥ Pu = 496.930 kN ——— O.K!!!

ΦMn = ΦPn x 64.858 = 330.920 kN.m ≥ Mu = 32.230 kN.m ——— O.K!!!

○ 전단력 검토

ϕVc = 0.85 × 1/6 × (1 + Pu / (14 x Ag)) x √fck × bo × d = 253438.587 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 18.09 × 1000000 / [1588.8×(300 - 71.32/3)]

= 41.220 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 1588.8/1000 + 7 × 1588.8/1000 × √[(1 + 2×1000×300/(7×1588.8)]

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 mm^2)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 41.22) - 2.5 × 92 = 1680.50 mm

300 x (210 / fs) = 300 × (210 / 41.22) = 1528.40 mm

Sa는 작은 값인 1528.40 mm 를 적용

S = 125.00 ≤ Sa (= 1528.399 mm) ----- ∴ O.K.

⑧ 벽체 중앙부 - Mmax 일 경우

설계축력	:	Pu	=	467.57	(kN) ,	설계모멘트	:	Mu	=	103.30	(kN·m)	
설계전단력	:	Vu	=	18.49	(kN) ,	사용 모멘트	:	M	=	64.51	(kN.m)	
부 재 높 이	:	H	=	400.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	300.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	220.93 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

$\sum$ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0060) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 400.00 x 1000.00 = 10032000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (10032000.00 x 200.0 + 635520.0 x 100.0 + 317760.0 x 300.0) / 10985280.000

= 197.107 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 180.000 mm, ab = k1 x cb = 150.480 mm

fs' = 600 x (180.000 - 100.0) / 180.0(= 266.6667 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 150.480 x 1000 = 3774038.400 N

Cs = As' x (fs' - 0.9 x fck) = 190391.200 N

Ts = As x fs = 635520.000 N

Pb = 3774038.400 + 190391.200 - 635520.000 = 3328909.600 N

Mb = 3774038.400x(300.0-150.480/2)+190391.200x(300.0-100.0)-3328909.600x(197.107-100.0)

= 563069348.351 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 169.145 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 128.055 mm , a = k1 x c = 107.054 mm 사용

fs = 600 x (300.000 - 128.055) / 128.055 = 400 Mpa (fs ≤ fy)

fs' = 600 x (128.055 - 100.000) / 128.055 = 131.451 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 107.054 x 1000 = 2684911.722 N

Cs = 794.400 x (131.451 - 0.836 x 30) = 84501.093 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2684911.722 + 84501.093 - 635520.000 = 2133892.815 N

Mn' = 2684911.722 x (300.0 - 107.054 / 2) + 84501.093 x (300.0 - 100.0)

= 678658604.562 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 318.036888 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 2133892.815

ΦPn = 1493724.971 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2133892.815 = 1493.725 kN ≥ Pu = 467.570 kN ——— O.K!!!

ΦMn = ΦPn x 220.929 = 330.008 kN.m ≥ Mu = 103.300 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 252218.144 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 64.51 \times 1000000 / [1588.8 \times (300 - 71.32/3)]$

= 146.992 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 300/(7 \times 1588.8)]}$

= 71.320 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 146.992) - 2.5 × 92 = 305.75 mm

300 x (210 / fs) = 300 × (210 / 146.992) = 428.60 mm

Sa는 작은 값인 305.75 mm 를 적용

S = 125.00 ≤ Sa (= 305.745 mm) ----- ∴ O.K.

⑨ 벽체 하단부 - Pmax 일 경우

설계축력	:	Pu	=	513.94	(kN) ,	설계모멘트	:	Mu	=	88.19	(kN · m)
설계전단력	:	Vu	=	158.50	(kN) ,	사용 모멘트	:	M	=	33.95	(kN.m)
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck} =	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v =	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc =	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e =	171.60 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 262.694 mm , a = k1 x c = 219.612 mm 사용

fs = 600 x (400.000 - 262.694) / 262.694 = 313.6105 Mpa (fs ≤ fy)

fs' = 600 x (262.694 - 100.000) / 262.694 = 371.5974 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 219.612 x 1000 = 5507873.575 N

Cs = 794.400 x (371.597 - 0.836 x 30) = 275273.400 N

Ts = 1588.800 x 313.611 = 498264.382 N

Pn = 5507873.575 + 275273.400 - 498264.382 = 5284882.592 N

Mn' = 5507873.575 x (400.0 - 219.612 / 2) + 275273.400 x (400.0 - 100.0)

= 1680933377.477 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 318.063481 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 5284882.592

ΦPn = 3699417.815 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 5284882.592 = 3699.418 kN ≥ Pu = 513.940 kN ——— O.K!!!

ΦMn = ΦPn x 171.596 = 634.805 kN.m ≥ Mu = 88.190 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 249872.948 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 cm^2 O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 33.95 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 57.434 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 57.434) - 2.5 × 92 = 1141.13 mm

300 x (210 / fs) = 300 × (210 / 57.434) = 1096.90 mm

Sa는 작은 값인 1096.90 mm 를 적용

S = 125.00 ≤ Sa (= 1096.904 mm) ------ ∴ O.K.

⑩ 벽체 하단부 - Mmax 일 경우

설계축력	:	Pu	=	494.60	(kN) ,	설계모멘트	:	Mu	=	100.99	(kN · m)	
설계전단력	:	Vu	=	158.50	(kN) ,	사용 모멘트	:	M	=	63.12	(kN.m)	
부 재 높 이	:	H	=	500.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	400.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	300.0	(mm) ,	k_1	=	0.836	,	e	=	204.19 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 16 @ 8 EA = 15.888 cm^2 , d1 = 10.0 cm

Σ = 15.888 cm^2

Asf = H 16 @ 4 EA = 7.944 cm^2 , d'1 = 10.0 cm

Pmin (0.0012) < Puse (0.0048) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 500.00 x 1000.00 = 12540000.000 N

Cs = As x fy = 635520.00 N , Cs' = Asf x fy = 317760.000 N

Xp = (12540000.00 x 250.0 + 635520.0 x 100.0 + 317760.0 x 400.0) / 13493280.000

= 246.468 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 240.000 mm, ab = k1 x cb = 200.640 mm

fs' = 600 x (240.000 - 100.0) / 240.0(= 350 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 200.640 x 1000 = 5032051.200 N

Cs = As' x (fs' - 0.9 x fck) = 256591.200 N

Ts = As x fs = 635520.000 N

Pb = 5032051.200 + 256591.200 - 635520.000 = 4653122.400 N

Mb = 5032051.200x(400.0-200.640/2)+256591.200x(400.0-100.0)-4653122.400x(246.468-100.0)

= 903450909.646 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 224.848 mm , a = k1 x c = 187.973 mm 사용

fs = 600 x (400.000 - 224.848) / 224.848 = 400 Mpa (fs ≤ fy)

fs' = 600 x (224.848 - 100.000) / 224.848 = 333.1534 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 187.973 x 1000 = 4714366.276 N

Cs = 794.400 x (333.153 - 0.836 x 30) = 244733.477 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 4714366.276 + 244733.477 - 635520.000 = 4323579.753 N

Mn' = 4714366.276 x (400.0 - 187.973 / 2) + 244733.477 x (400.0 - 100.0)

= 1516079444.633 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 350.652775 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4323579.753

ΦPn = 3026505.827 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4323579.753 = 3026.506 kN ≥ Pu = 494.600 kN ------ O.K!!!

ΦMn = ΦPn x 204.185 = 617.968 kN.m ≥ Mu = 100.990 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 249229.804 N

여기서 , $1/2\phi Vc < Vu \leq \phi Vc$ 이므로 최소 전단 철근 필요

- 계산된 스터럽 : min.Av = 0.35x(bo x s / fy)= 1.31㎠

- 배근할 스터럽 : H 13 다리수: N = 2 스터럽 간격 : s = 15 cm O.K !!!

Av(req)= 1.31㎠ < Av = 2.534 ㎠ O.K !!!

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

$fs = M / [As \times (d - \chi/3)]$

$= 63.12 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 106.782 Mpa

$\chi = -nAs/b + nAs/b\sqrt{[1 + 2bd/(nAs)]}$

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 400/(7 \times 1588.8)]}$

= 83.857 mm

사용철근량 = 1588.800 mm^2 (철근도심 : 100 mm)

1단 H16 @ 125 (= 1588.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 16 / 2 = 92.00 mm

여기서 Cc ; 인장철근이나 긴장재의 표면과 콘크리트 표면사이의 두께(mm)

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 106.782) - 2.5 × 92 = 507.482 mm

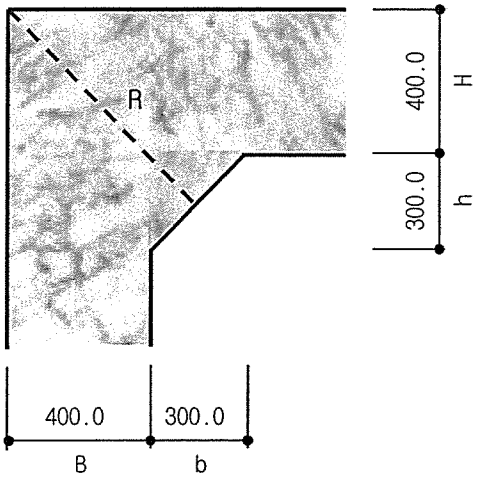
300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 mm

Sa는 작은 값인 507.482 mm 를 적용

S = 125.00 ≤ Sa (= 507.482 mm) ----- ∴ O.K.

12. 우각부 검토

1) 상부 슬래브



CON'C 설계기준강도(fck) : 30.0 MPa

CON'C 허용휨인장응력(fta) = 0.13√fck Mpa

: 0.712 MPa

철근 항복강도(fy) : 400.0 MPa

철근 허용응력 : 180.0 MPa

사용 모멘트 Mo : 80.98 kN·m

$R = \sqrt{2} \times b / (b+h) \times [B + h + (H \times h/b)]$

$= 777.82$ mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 80980000}{777.82^2 \times 1000.0} = 0.669 \text{ MPa}$$

f_{tmax} = 0.669 MPa < f_{ta} = 0.712 MPa 이므로 보강철근 필요없음.

② 소요 철근량

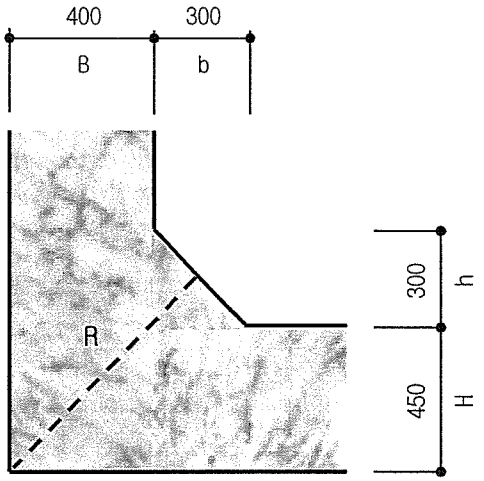
외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 0}{777.82 \times 180.0} = 0.00 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 0.00 - 794.4 = -794.40 ㎟

----- 우각부 보강철근 필요없음

2) 하부 슬래브



CON'C 설계기준강도(fck) : 30.0 MPa

CON'C 허용휨인장응력(fta) = 0.13√fck Mpa

: 0.712 MPa

철근 항복강도(fy) : 400.0 MPa

철근 허용응력 : 180.0 MPa

사용 모멘트 Mo : 63.12 kN·m

R = √ (B2 + H2) = 602.08 mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 63120000}{602.08^2 \times 1000.0} = 0.871 \text{ MPa}$$

f_{tmax} = 0.871 MPa > f_{ta} = 0.712 MPa 이므로 보강철근 필요.

② 소요 철근량

외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 63120000}{602.08 \times 180.0} = 1164.85 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 1164.85 - 794.4 = 370.45 ㎟

——— 우각부 보강철근 필요

외측인장에 대한 보강 사용철근량(As)

As = H16 @ 250 - 1 단 = 794.40 ㎟

Asf = 370.45 ㎟ < As = 794.40 ㎟ ----- ∴ O.K.

13. 배력철근 검토

1) 구조상세 - 철도설계기준(노반편) p.5-19

다. 종방향으로 영향을 받는 경우로써 상부슬래브, 하부슬래브와 벽체에 있어서 종방향 최소철근량은 복토의 깊이가 3.0 m 이하인 경우에는 콘크리트 단면적의 0.4%, 복토가 3.0m 이상인 경우에는 복토 깊이가 30m인 경우의 사용량인 1.0%를 기준으로 선형변화량을 사용하되, 종방향 철근량은 주철근량 미만이어야 한다.

라. 단단한 지반 위에 놓인 경우와 말뚝기초로 지지되는 경우로써 종방향 부등침하가 우려되지 않은 경우에는 다.항의 기준을 적용하지 않는다. 따라서 어느 정도 견고한 지반위에 놓이는 일반적인 구교로써 적적한 신축이음매가 설치되어 상세한 종방향해석이 필요하지 않다고 판단되는 경우 종방향 철근량은 슬래브의 경우 콘크리트단면적의 0.25%, 벽체의 경우 0.3%를 적용한다.

마. 배력철근은 단위폭주변의 인장 주철근량의 1/5 이상으로 하여 종단방향에 계산외의 응력이 발생하는 것을 고려하여야 한다.

2) 배력철근의 최소 철근비

슬래브의 배력 철근비 = 0.25 %　　벽체의 배력 철근비 = 0.30 %

① 상부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 400.0 × 0.25 = 1000.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1000.00 ㎟ ------ ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ------ ∴ O.K.

② 하부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 450.0 × 0.25 = 1125.00 ㎟

사용철근 인장측 ; H 13 @ 150 = 844.67 ㎟

압축측 ; H 13 @ 300 = 422.33 ㎟

∑ As = 1267.00 ㎟

따라서, As = 1267.00 ㎟ > Asreq = 1125.00 ㎟ ------ ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ------ ∴ O.K.

③ 벽체

배력철근 최소 철근비 (Asreq) = 1,000.0 × 400.0 × 0.30					=	1200.00	㎟
사용철근 인장측 ;	H	13	@	150	=	844.67	㎟
압축측 ;	H	13	@	300	=	422.33	㎟
					∑ As =	1267.00	㎟

따라서, As = 1267.00 ㎟ > Asreq = 1200.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 317.760 ㎟

따라서, As = 844.67 ㎟ > Asreq = 317.76 ㎟ ----- ∴ O.K.

14. 사용성검토

1) 상부슬래브 최소 두께

1.2(L+3)/30 = 1.2 × (2.520 + 3) / 30 = 220.8 mm

상부슬래브 두께 = 400.0 mm

Tuse = 400.0 mm > Tmin = 220.8 mm ------ ∴ O.K.

2) 철근 피로검토

피로응력한계 : 사용하중하에서 활하중과 충격에 의해 야기되는 직선철근의 최대 인장응력과 최소 응력 상이의 범위는 다음 값을 초과할수 없다.

$f_f = 165 - 0.33fmin$

여기서, f_f : 응력범위(Mpa)

fmin : 최소응력 수준으로 인장은 정(+), 압축은 부(-)의 값(Mpa)

① 상부슬래브 단부

2.52 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 3.053 kN ·m Mmin = -0.562 kN ·m

- 사용철근량 = H16 × 8ea = 1588.800 ㎟

n = 7

p = As / bd = 1588.80 / (1000 × 400) = 0.00397

$K = -np + \sqrt{\{(np)^2 + 2np\}}$

$= -7 \times 0.00397 + \sqrt{\{ (7 \times 0.00397)^2 + 2 \times 7 \times 0.00397 \}}$

= 0.210

J = 1 - K / 3 = 1 - 0.210 / 3 = 0.930

$$fs\ max = \frac{M}{As \times j \times d} = \frac{3.053 \times 10^6}{1588.80 \times 0.930 \times 400} = 5.160 \text{ Mpa}$$

$$fs\ min = \frac{-0.562 \times 10^6}{1588.80 \times 0.930 \times 400} = -1 \text{ Mpa}$$

Δf = fs max - fs min = 6.111 Mpa

$f_f = 165 - 0.33fmin$

= 165 - 0.33 × -0.95 = 165.314 Mpa > 6.111 Mpa O.K.

② 상부슬래브 중앙부

2.52 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 9.123 kN · m Mmin = 8.451 kN · m

- 사용철근량 = H16 × 8ea = 1588.800 ㎟

n = 7

p = As / bd = 1588.80 / (1000 × 300) = 0.00530

$K = -np + \sqrt{\{(np)^2 + 2np\}}$

$= -7 \times 0.0053 + \sqrt{\{ (7 \times 0.0053)^2 + 2 \times 7 \times 0.0053 \}}$

= 0.238

J = 1 - K / 3 = 1 - 0.238 / 3 = 0.921

$$fs\ max = \frac{M}{As \times j \times d} = \frac{9.123 \times 10^6}{1588.80 \times 0.921 \times 300} = 20.790\ Mpa$$

$$fs\ min = \frac{8.451 \times 10^6}{1588.80 \times 0.921 \times 300} = 19\ Mpa$$

Δf = fs max - fs min = 1.534 Mpa

$f_f = 165 - 0.33 fmin$

= 165 - 0.33 × 19.26 = 158.645 Mpa > 1.534 Mpa O.K.

15. 기초지지력 검토

1) 구체자중

-	2.800	x	0.450	x	24.500					=	30.870	kN/m
-	2.800	x	0.400	x	24.500					=	27.440	kN/m
-	2.000	x	0.400	x	24.500					=	19.600	kN/m
-	2.000	x	0.400	x	24.500					=	19.600	kN/m
-	0.300	x	0.300	x	1/2	x	4	x	24.500	=	4.410	kN/m
								∴	Total	=	101.920	kN/m

101.920 / 2.800 = 36.400 kN/m²

2) 상부연직하중

= 208.24 kN/m²

3) 활하중

= 21.019 kN/m²

4) 최대 지반 반력

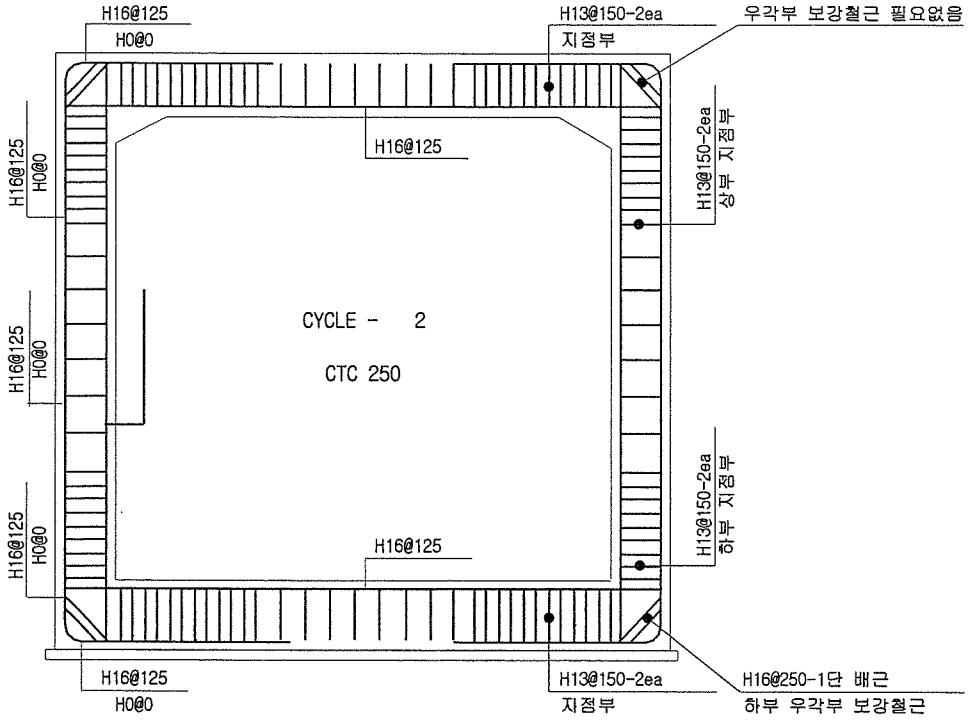
Qmax = 36.400 + 208.240 + 21.019

= 265.659 kN/m²

5) 지지력 검토

Qmax = 265.659 kN/m² < 300.00 kN/m² --- ∴ O.K.

16. 주철근 조립도



▶ 배력철근

- 상부 지정부 : H13, 인장측:150, 압축측:300
- 하부 지정부 : H13, 인장측:150, 압축측:300
- 벽체부 : H13, 인장측:150, 압축측:300

U-Type 개거 2.0x2.4

구조계산서

목 차

1. 설계개요 및 조건

1.1 설계개요

1.2 설계방법

1.3 일반사항

1.4 설계하중

1.5 참고문헌

2. 단면가정

3. 구조해석 모델링

3.1 해석모형

3.2 단면제원

3.3 지반반력계수 산정

4. 하중산정

5. 하중조합

6. 구조해석 결과

6.1 부재력도

6.2 부재력 집계

7. 단면설계

7.1 하부슬래브

7.2 좌측벽체

7.3 우측벽체

7.4 배력철근

7.5 우각부

8. 사용성검토

9. 지지력 검토

■ 해석결과 요약

* 기초 검토

구분	q_{max}(kN/m^2)	Qu(kN)	qa(kN/m^2)	비 고
직접기초	34.840	2240.680	287.267	∴ O.K

* 휨 검토

구분		B(m)	H(m)	dc(m)	헌치(m)	Mu(kn.m)	ΦMn(kn.m)	BENDING Bar(mm)	휨검토		최소철근비 검토	주철근간격 검토
									판정	S.F		
하부슬래브	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		59.672	90.378	H 16 @ 150	O.K	1.515	O.K	O.K
좌측 벽체	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		26.358	46.427	H 16 @ 300	O.K	1.761	O.K	O.K
우측 벽체	단부	1.000	0.300	0.100	0.300	78.129	138.042	H 16 @ 150	O.K	1.767	O.K	O.K
	중앙부	1.000	0.300	0.100		26.383	46.427	H 16 @ 300	O.K	1.760	O.K	O.K

* 전단검토

구분		ΦVc	Vu	판정	전단철근			전단검토	
					사용철근	다리수	간격	판정	S.F
하부슬래브	단부	155.188	30.052	전단철근 불필요	H 0	× 0	@ 0	O.K	-
	중앙부	-	-	-	H -	× -	@ -	-	-
좌측 벽체	단부	155.188	84.550	전단철근 불필요	H 0	× 0	@ 0	O.K	-
	중앙부	-	-	-	H -	× -	@ -	-	-
우측 벽체	단부	155.188	84.550	전단철근 불필요	H 0	× 0	@ 0	O.K	-
	중앙부	-	-	-	H -	× -	@ -	-	-

1. 설계개요 및 조건

1.1 설계개요

• 구조해석 프로그램 : MIDAS CIVIL

1.2 설계방법

(1) 부재의 단면검토 : 강도설계법

(2) 사용성 검토 : 허용응력설계법

1.3 일반사항

(1) 사용재료의 강도

① 콘크리트의 압축강도 : f_{ck} = 30 MPa

② 철근의 항복강도 : f_y = 400 MPa

(2) 사용재료의 탄성계수

① 콘크리트의 탄성계수 : E_c = 27,537 MPa

② 철근의 탄성계수 : E_s = 200,000 MPa

(3) 토사 내부마찰각 : Φ = 35°

(4) 토압 : K_o = 0.426

(5) 사 각(Skew) : 71.00 °

1.4 설계하중

(1) 고정하중

재 료	단위중량(kN/m^3)	재 료	단위중량(kN/m^3)
철근콘크리트	24.5	아스팔트 포장	23.0
흙(지하수위 이상)	20.0	흙(지하수위 이하)	11.0
지하수	10.0		

(2) 상재 하중(kN/m^2)

q_L = 15.0 kN/m^2

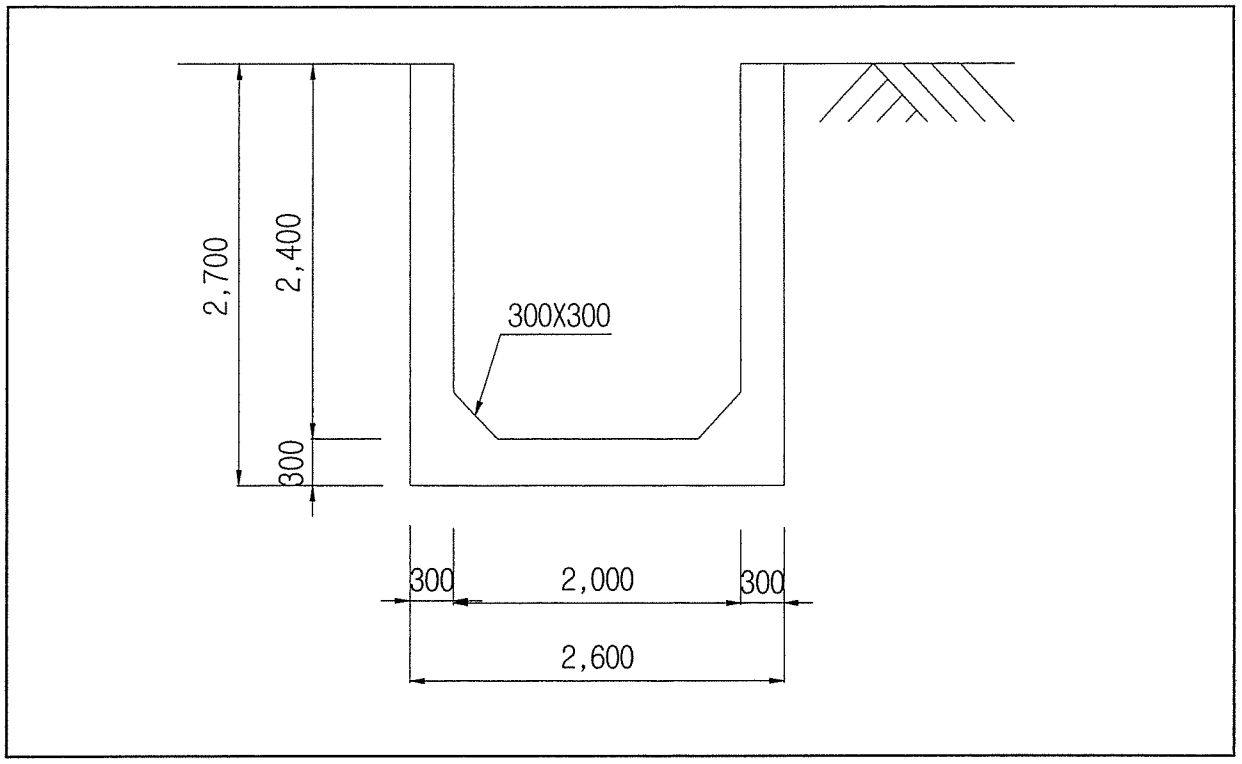
1.5 참고문헌

(1) 콘크리트 구조설계기준 (한국콘크리트 학회, 2012)

(2) 도로교 설계기준 (건설교통부, 2010)

(3) 철도설계기준 (노반편) (건설교통부 2013)

2. 단면가정

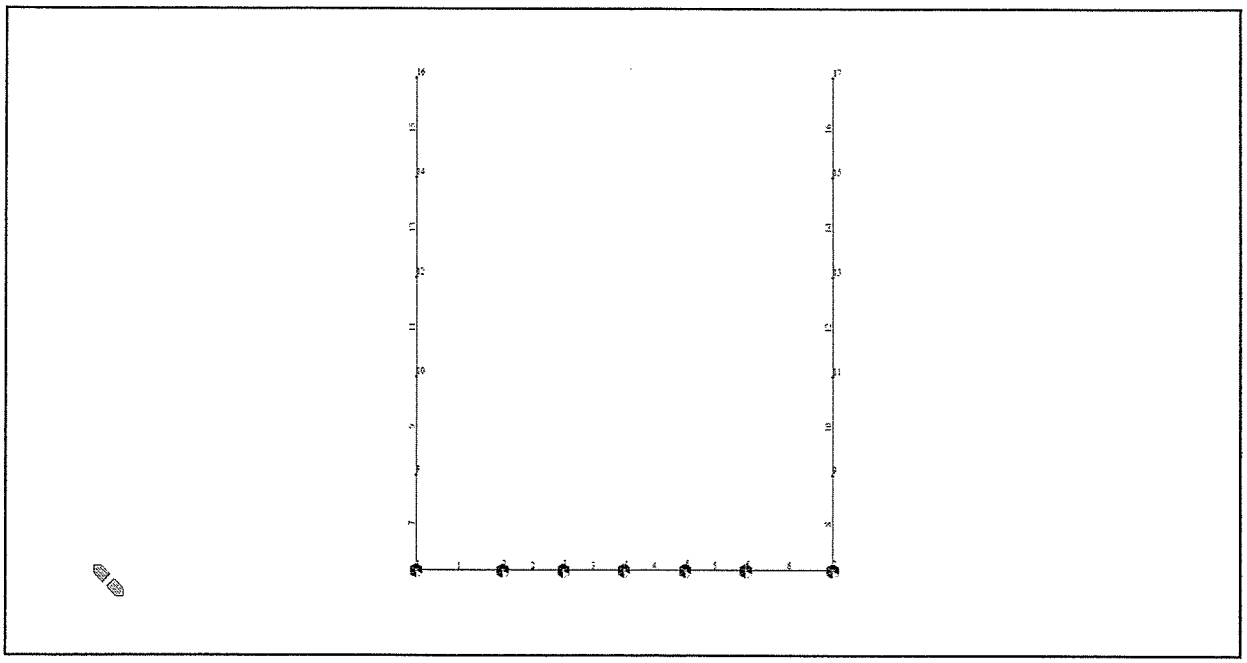


* N=15, Φ=35° 적용 함.

* 지하수위는 극한 지하수위(GL -1.0m) 로 적용 함.

3. 구조해석 모델링

3.1 해석모형



3.2 단면제원

구 분	폭(m)	높이(m)	C.T.C(m)	단면적(m^2)	단면2차모멘트(m^4)	비 고
1	1.00	0.30	-	0.300	0.002250	하부슬래브
2	1.00	0.30	-	0.300	0.002250	좌측벽체
3	1.00	0.30	-	0.300	0.002250	우측벽체

3.3 지반반력계수

$Kv = Kvo \times (Bv / 30)^n$ (n = -3/4)

$Kvo = 1/30 \times \alpha \times Eo$

Bv : 구조물의 환산재하폭

Eo = 2800 x N = 2800 × 9 = 25,200.000 kN/m^2

α = 1

Kvo = 1 × 1 / 0.3 × 25200 = 84000.000 kN/m^3

Bv = √ (2.600 × 1.000) = 1.612 m

∴ Kv = 84000.000 × (1.6 / 0.3) ^ (-3/4) = 23796.069 kN/m^3

절점번호	지반반력계수					비고
1,7	23796.069	×	0.3750	=	8923.526 kN/m^2	
2,6	23796.069	×	0.3750	=	8923.526 kN/m^2	
3,4,5	23796.069	×	0.4000	=	9518.428 kN/m^2	

※ 지반스프링은 압축력에만 저항하는 비선형 경계조건을 사용하여 부반력 발생시 자동제거함.

4. 하중산정

4.1 고정하중

(1) 구조물 자중 : 프로그램내 자동입력 ---------- LC 1

4.2 활하중에 의한 측압 ---------- LC 2

Lh = 0.426 × 15.000 = 6.390 kN/m^2

4.3 토압

(1) 지하수위 유 ---------- LC 3

Q_{N1L} = 1.000 × 20.000 × 0.426 = 8.520 kN/m^2

Q_{N1R} = 8.520 + 1.700 × 11.000 × 0.426 = 16.486 kN/m^2

(2) 지하수위 무 ---------- LC 4

Q_{N1L} = 2.700 × 20.000 × 0.426 = 23.004 kN/m^2

4.4 수압

(1) 측벽 수압 ---------- LC 5

1) 벽체

Q_{W1L} = 10.000 × 1.700 = 17.000 kN/m^2

4.5 온도하중 ---------- LC 6, LC 7

- 계절적 온도변화 ± 10°C를 프로그램내 SYSTEM TEMPERRATURE 기능을 이용하여 이상화 한다.

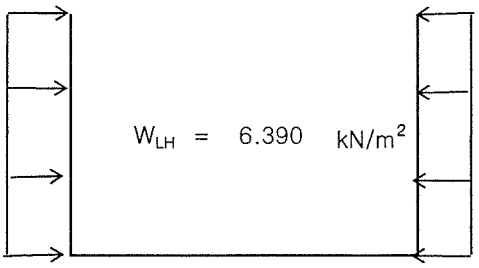
4.6 건조수축 ---------- LC 8

- 15^0c 의 온도하중으로 변환 설계
  - 건조수축계수 : $\varepsilon = 15 \times 10^{-5}$
  - 온도선팽창 계수 : $\alpha = 1.0 \times 10^{-5}$
  - $\Delta T = -\frac{\varepsilon}{\alpha} = 15\ ^{\circ}C$

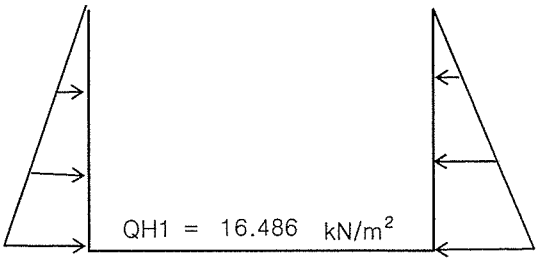
4.7 하중재하도

(1) LC 1 : 프로그램내 자동재하

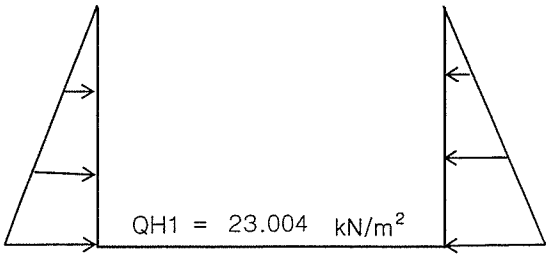
(2) LC 2



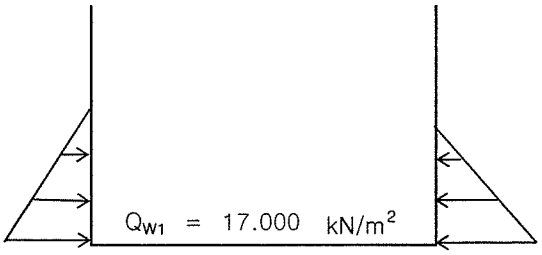
(3) LC 3



(4) LC 4



(5) LC 5



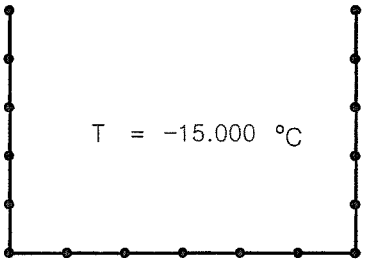
(6) LC 6

- 프래그램내 System Temperature 기능을 이용
10 °C 온도하중 재하

(7) LC 7

- 프래그램내 System Temperature 기능을 이용
-10 °C 온도하중 재하

(8) LC 8



5. 하중조합

5.1 계수하중

구분	고정하중 (D	활하중측압	수평토압		수압	온도하중		건조수축	비고
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	
CB1	1.35	1.85	1.60		1.60				계수하중
CB2	1.35	1.85		1.60					
CB3	1.35	1.85	0.80		0.80				
CB4	1.35	1.85		0.80					
CB5	1.60	1.60	1.60		1.60				
CB6	1.60	1.60		1.60					
CB7	1.60	1.60	0.80		0.80				
CB8	1.60	1.60		0.80					
CB9	1.35	1.40	1.60		1.60	1.35			
CB10	1.35	1.40		1.60		1.35			
CB11	1.35	1.40	0.80		0.80	1.35			
CB12	1.35	1.40		0.80		1.35			
CB13	1.35	1.40	1.60		1.60		1.35	1.35	
CB14	1.35	1.40		1.60			1.35	1.35	
CB15	1.35	1.40	0.80		0.80		1.35	1.35	
CB16	1.35	1.40		0.80			1.35	1.35	

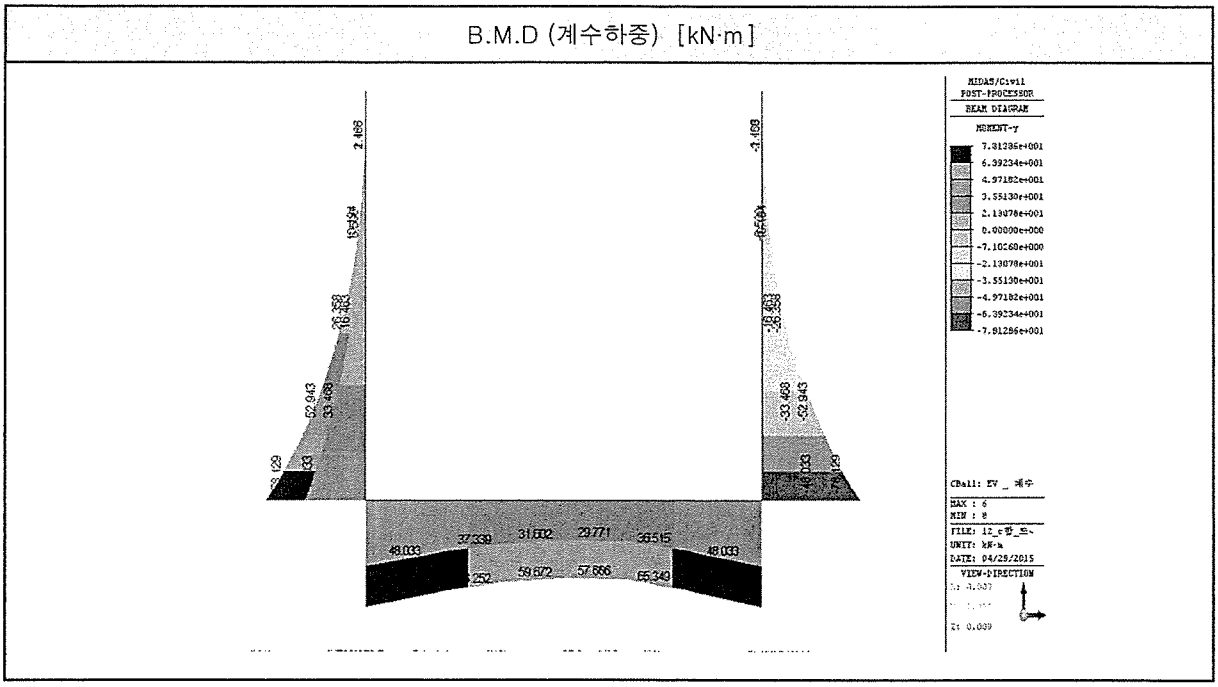
5.2 사용하중

구분	고정하중 (D	활하중측압	수평토압		수압	온도하중		건조수축	비고
	LC1	LC2	LC3	LC4	LC5	LC6	LC7	LC8	
CB17	1.00	1.00	1.00		1.00				사용하중
CB18	1.00	1.00		1.00					
CB19	1.00	1.00	0.50		0.50				
CB20	1.00	1.00		0.50					
CB21	1.00	1.00	1.00		1.00	1.00			
CB22	1.00	1.00		1.00		1.00			
CB23	1.00	1.00	0.50		0.50	1.00			
CB24	1.00	1.00		0.50		1.00			
CB25	1.00	1.00	1.00		1.00		1.00	1.00	
CB26	1.00	1.00		1.00			1.00	1.00	
CB27	1.00	1.00	0.50		0.50		1.00	1.00	
CB28	1.00	1.00		0.50			1.00	1.00	
CB29	1.00		1.00		1.00				
CB30	1.00			1.00					

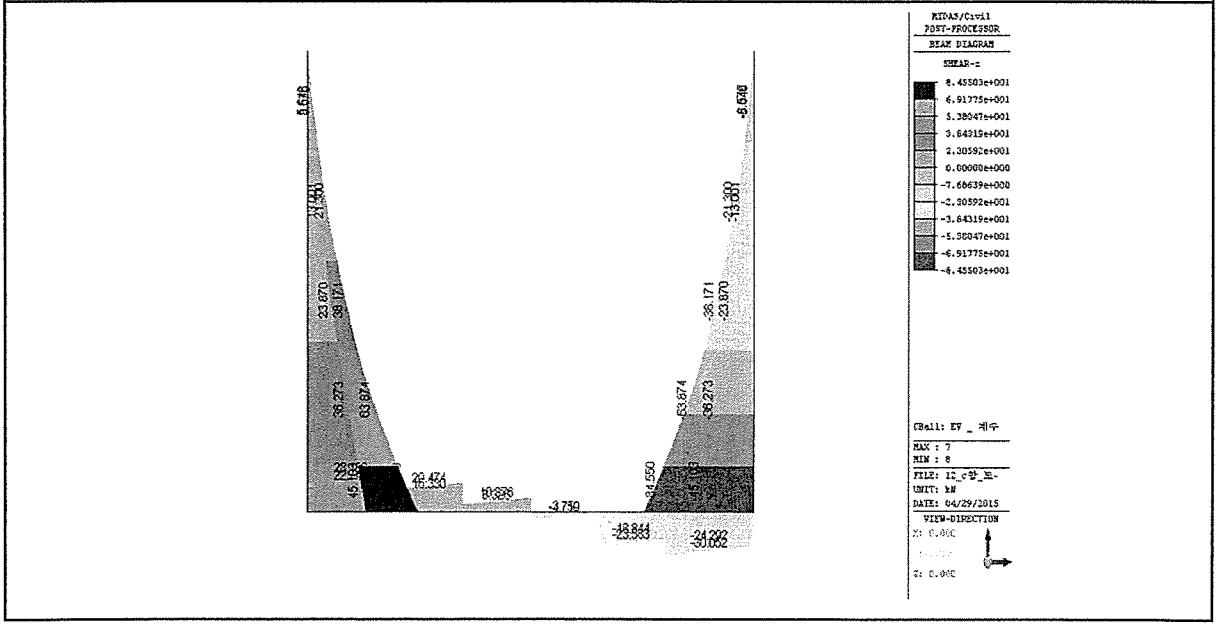
6. 구조해석 결과

6.1 부재력도 (ENVELOPE)

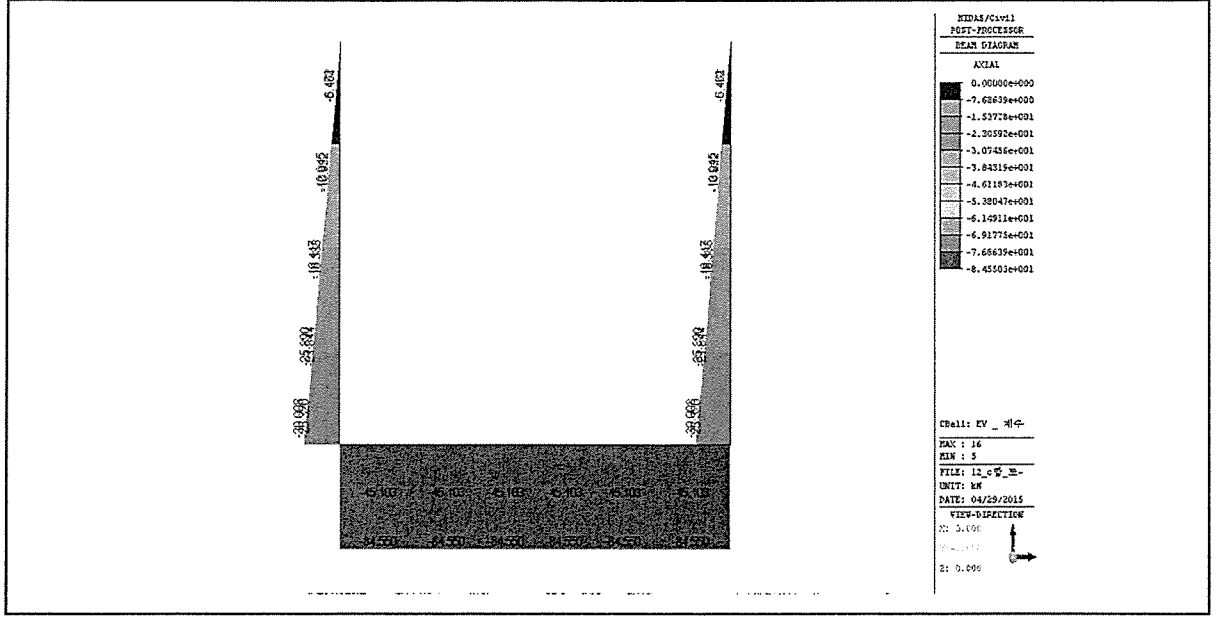
B.M.D (계수하중) [kN·m]



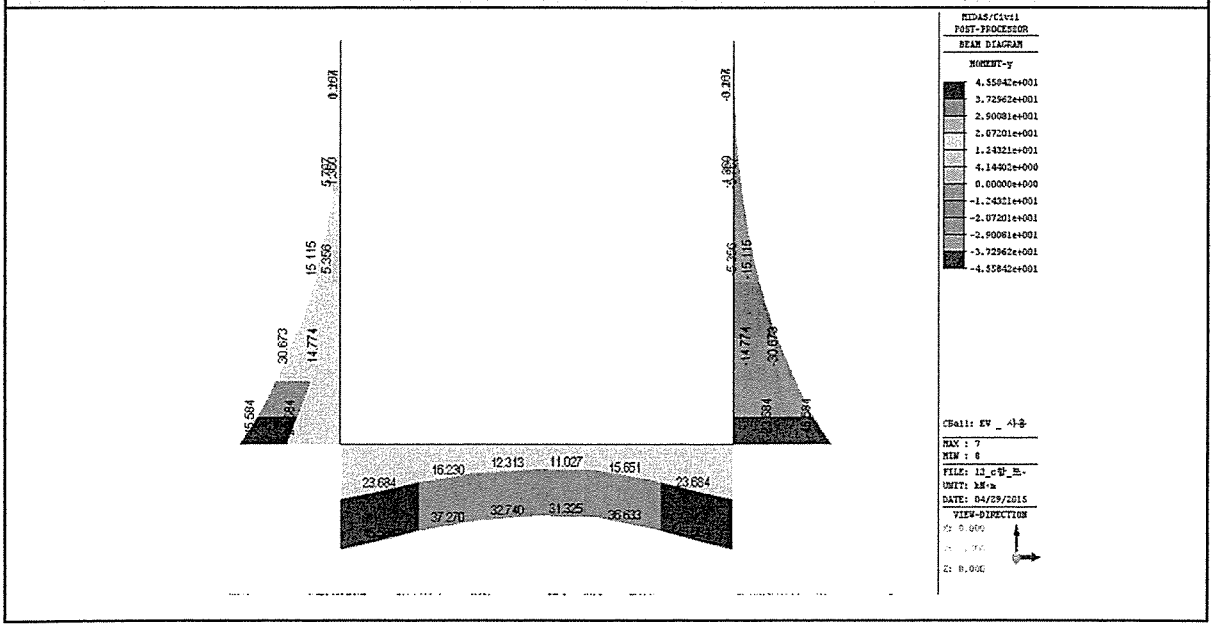
S.F.D (계수하중) [kN]



A.F.D (계수하중) [kN]



B.M.D (사용하중) [kN·m]



6.2 부재력 집계

구 분		단면제원		Mu[kN·m]	Vu[kN]	Mo[kN·m]	비고
		B (mm)	H (mm)				
하 부 슬래브	단 부	1,000	400	78.129	30.052	45.584	
	중앙부	1,000	300	59.672		32.740	
좌측벽체	단 부	1,000	400	78.129	84.550	45.584	
	중앙부	1,000	300	26.358		15.115	
우측벽체	단 부	1,000	400	78.129	84.550	45.584	
	중앙부	1,000	300	26.383		15.115	

7. 단면설계

7.1 하부슬래브

7.1.1 하부슬래브 단부

(1) 휨 검토

f_{ck} =	30 MPa	f_y =	400 MPa	d_t' =	100 mm	d' =	100 mm
Mu =	78.129 kN.m	Vu =	30.052 kN	Mo =	45.584 kN.m	d (휨) =	300 mm
B =	1000 mm	H =	400 mm	헌치 =	300 mm	d (전단) =	200 mm
ϕ_f =	0.900	ϕ_v =	0.85	주철근	1 단 배치	d_t =	300 mm

Use A_s = 1단 1CYCL H 16 @ 150 , 2CYCLI H 0 @ 0 = 1,324 mm^2

2단 1CYCL H @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 1,324 mm^2 [p = 0.00441]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

P_{min1} = 1.4 / f_y = 0.00350 ⇒ $A_{s1.\,min}$ = 1,050 mm^2

P_{min2} = 0.25 $\sqrt{f_{ck}}$ / f_y = 0.00342 ⇒ $A_{s2.\,min}$ = 1,027 mm^2

$A_{s,\,min}$ = 1,050 mm^2

$A_{s,\,Req}$ = 738 mm^2 , 4/3 $A_{s,\,Req}$ = 984 mm^2

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc$ = $\phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 30.052 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[\,2np + (np)^2\,]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00441 + $\sqrt{[\,2 \times 0.031 + 0.031^2\,]}$ = 0.22

$j = 1 - k / 3 = 1 - 0.22 / 3$ = 0.927

fs = M / [As·d·j] = 123.801 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.1.2 하부슬래브 중앙부

(1) 휨 검토

f_{ck}	=	30	MPa	f_y	=	400	MPa	d_t'	=	100	mm
Mu	=	59.672	kN.m	Vu	=	0.000	kN	Mo	=	32.740	kN.m
B	=	1000	mm	H	=	300	mm	헌치	=	0	mm
ϕ_f	=	0.900		ϕ_v	=	0.85		주철근	1	단 배치	

d'	=	100	mm									
d (휨)	=	200	mm									
d (전단)	=	200	mm									
d_t	=	200	mm									

Use A_s =	1단	1CYCL	H	16 @	150	,	2CYCLI	H	0 @	0	=	1,324	mm^2	
	2단	1CYCL	H	@		,	2CYCLI	H	0 @	0	=	-	mm^2	
				TOTAL	=	1,324	mm^2	[	p =	0.00662	]			

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 − 25) / 25

= 0.02115 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.02115 - 0.002)$$

= 2.246 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1.\,min}$ = 700 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2.\,min}$ = 685 mm^2

$A_{s.\,min}$ = 700 mm^2

$A_{s.\,Req}$ = 858 mm^2 , $4/3\, A_{s.\,Req}$ = 1,143 mm^2

MIN ($A_{s.min}$, $4/3\, A_{s.req}$) = 700 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (200 − 21 / 2) / 10 E+6

= 90.378 kN.m > Mu = 59.672 kN.m ∴ O.K [S.F = 1.515]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 7$ = 30,000 mm^2

$k = - np + \sqrt{[\, 2np + (np)^2 \,]}$ [∵ $n = Es / Ec$ = 7.3 ≒ 7]

$= - 7 \times 0.00662 + \sqrt{[\, 2 \times 0.046 + 0.046^2 \,]}$ = 0.261

$j = 1 - k / 3 = 1 - 0.261 / 3$ = 0.913

$fs = M / [As \cdot d \cdot j]$ = 135.422 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 − 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5\, Cc$ = 351 mm

$s_2 = 300 (210 / fs)$ = 465 mm > s = 150 mm ∴ O.K

7.2 좌측벽체

7.2.1 좌측벽체 단부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	78.129 kN.m	Vu	=	84.550 kN	Mo	=	45.584 kN.m	d (휨)	=	300 mm
B	=	1000 mm	H	=	400 mm	헌치	=	300 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	300 mm

Use A_s = 1단 1CYCL H 16 @ 150 , 2CYCLI H 0 @ 0 = 1,324 mm^2

2단 1CYCL H 0 @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 1,324 mm^2 [p = 0.00441]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1.min}$ = 1,050 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2.min}$ = 1,027 mm^2

$A_{s,min}$ = 1,050 mm^2

$A_{s.Req}$ = 738 mm^2 , 4/3 $A_{s.Req}$ = 984 mm^2

MIN ($A_{s,min}$, 4/3 $A_{s,req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 84.550 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

A = 2 × 100 × 1,000 / 7 = 30,000 mm^2

$k = - np + \sqrt{[\ 2np + (np)^2\ ]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00441 + √ [2 × 0.031 + 0.0309^2] = 0.22

j = 1 - k / 3 = 1 - 0.22 / 3 = 0.927

fs = M / [As·d·j] = 123.801 MPa

◈ 주철근 간격

Cc = $d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.2.2 좌측벽체 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	26.358 kN.m	Vu	=	0.000 kN	Mo	=	15.115 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCL	H	16 @	300	, 2CYCLI	H	0 @	0	= 662 mm^2
	2단	1CYCL	H	@		, 2CYCLI	H	0 @	0	= - mm^2
				TOTAL	=	662 mm^2	[	p =	0.00331	]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 264,800 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 10 mm

▶ $c = a / \beta_1$ = 10 / 0.84 = 12 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 12) / 12

= 0.04530 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.04530 - 0.002)$$

= 4.259 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,min}$ = 700 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,min}$ = 685 mm^2

$A_{s,min}$ = 700 mm^2

$A_{s,Req}$ = 371 mm^2 , $4/3 A_{s,Req}$ = 495 mm^2

MIN ($A_{s,min}$, $4/3 A_{s,req}$) = 495 mm^2 < Use As = 662 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 264,800 × (200 - 10 / 2) / 10 E+6

= 46.427 kN.m > Mu = 26.358 kN.m ∴ O.K [S.F = 1.761]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 3$ = 60,000 mm^2

$k = - np + \sqrt{[2np + (np)^2]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

= - 7 × 0.00331 + √ [2 × 0.023 + 0.0232^2] = 0.193

$j = 1 - k / 3 = 1 - 0.193 / 3$ = 0.936

$fs = M / [As \cdot d \cdot j]$ = 121.966 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 416 mm

$s_2 = 300 (210 / fs)$ = 517 mm > s = 300 mm ∴ O.K

7.3 우측벽체

7.3.1 우측벽체 단부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	78.129 kN.m	Vu	=	84.550 kN	Mo	=	45.584 kN.m	d (휨)	=	300 mm
B	=	1000 mm	H	=	400 mm	헌치	=	300 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	300 mm

Use A_s = 1단 1CYCl H 16 @ 150 , 2CYCLI H 0 @ 0 = 1,324 mm^2

2단 1CYCl H @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 1,324 mm^2 [p = 0.00441]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 529,600 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 21 mm

▶ $c = a / \beta_1$ = 21 / 0.84 = 25 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (300 - 25) / 25

= 0.03323 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.03323 - 0.002)$$

= 3.252 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1.min}$ = 1,050 mm^2]

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2.min}$ = 1,027 mm^2] $A_{s,min}$ = 1,050 mm^2

$A_{s.Req}$ = 738 mm^2 , $4/3\ A_{s.Req}$ = 984 mm^2

MIN ($A_{s.min}$, $4/3\ A_{s.req}$) = 984 mm^2 < Use As = 1,324 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a/2)$ = 0.900 × 529,600 × (300 - 21 / 2) / 10 E+6

= 138.042 kN.m > Mu = 78.129 kN.m ∴ O.K [S.F = 1.767]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 84.550 kN

∴ 전단철근 불필요

(3) 주철근 간격 검토

▶ 주철근 응력, fs

$A' = 2 \times 100 \times 1{,}000 / 7 = 30{,}000\ mm^2$

$k = -np + \sqrt{[\,2np + (np)^2\,]}$ [∵ $n = Es / Ec$ = 7.3 ≒ 7]

$= -7 \times 0.00441 + \sqrt{[\,2 \times 0.031 + 0.0309^2\,]} = 0.22$

$j = 1 - k / 3 = 1 - 0.22 / 3 = 0.927$

$fs = M / [As \cdot d \cdot j]$ = 123.801 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 406 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 509 mm

7.3.2 우측벽체 중앙부

(1) 휨 검토

f_{ck}	=	30 MPa	f_y	=	400 MPa	d_t'	=	100 mm	d'	=	100 mm
Mu	=	26.383 kN.m	Vu	=	0.000 kN	Mo	=	15.115 kN.m	d (휨)	=	200 mm
B	=	1000 mm	H	=	300 mm	헌치	=	0 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	200 mm

Use A_s =	1단	1CYCL H	16 @	300	, 2CYCLI H	0 @	0	=	662	mm^2
	2단	1CYCL H	@		, 2CYCLI H	0 @	0	=	-	mm^2
			TOTAL	=	662 mm^2	[p =	0.00331	]		

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 264,800 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 10 mm

▶ $c = a / \beta_1$ = 10 / 0.84 = 12 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 12) / 12

= 0.04530 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.04530 - 0.002)$$

= 4.259 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,min}$ = 700 mm^2]

$P_{min2} = 0.25\sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,min}$ = 685 mm^2] $A_{s,min}$ = 700 mm^2

$A_{s,Req}$ = 372 mm^2 , 4/3 $A_{s,Req}$ = 496 mm^2

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 496 mm^2 < Use As = 662 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 264,800 × (200 - 10 / 2) / 10 E+6

= 46.427 kN.m > Mu = 26.383 kN.m ∴ O.K [S.F = 1.760]

(2) 주철근 간격 검토

▶ 주철근 응력, fs

$A = 2 \times 100 \times 1{,}000 / 3$ = 60,000 mm^2

$k = -np + \sqrt{[\,2np + (np)^2\,]}$ [∵ n = Es / Ec = 7.3 ≒ 7]

$= -7 \times 0.00331 + \sqrt{[\,2 \times 0.023 + 0.0232^2\,]}$ = 0.193

$j = 1 - k / 3 = 1 - 0.193 / 3$ = 0.936

$fs = M / [As \cdot d \cdot j]$ = 121.966 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 15.9 / 2 = 92 mm (여기서, d_b = 16)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 416 mm > s = 300 mm ∴ O.K

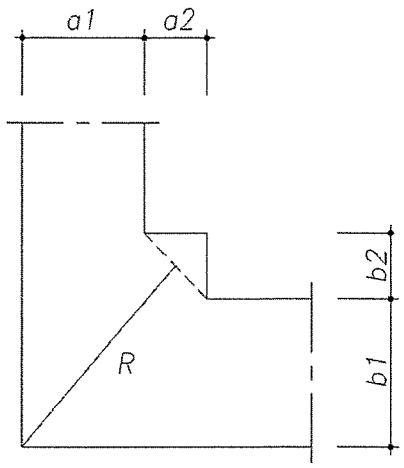
$s_2 = 300 (210 / fs)$ = 517 mm

7.4 온도 및 배력철근 설계

구 분		단면제원		사 용 주철근	소요 배력철근량 (mm^2)		사용 배력철근량 (mm^2)			판정
		B (mm)	H (mm)		주철근 20%	온도철근				
하 부 슬래브	단 부	1,000	300	H16@150	265	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@150	265	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
좌측 벽체	단부	1,000	300	H16@150	265	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@300	132	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
우측 벽체	단부	1,000	300	H16@150	265	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H16@300	132	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		

7.5 우각부 보강 설계

(1) 하부슬래브 (좌,우측)



f_{ck}	=	30	MPa
f_y	=	400	MPa
Mo	=	45.584	kN·m
a1	=	300	mm
a2	=	300	mm
b1	=	300	mm
b2	=	300	mm

$$R = \{(a2 \times b1 + b2 \times a1 + a2 \times b2) / (a2 + b2)\} \times \sqrt{2}$$

$$= 636 \quad mm$$

- 주철근 (절곡하여 보강철근으로 고려할 수 있는 주철근량)

As' = H 16 @ 300 = 662 mm^2

H 0 @ 0 = 0 mm^2

1) 최대인장응력, f_{tmax}

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 45.584 \times 10^6}{(636.396)^2 \times 1{,}000}$$

$$= 0.563 \text{ Mpa} > 0.08\sqrt{fck} = 0.438 \text{ Mpa}$$ 보강철근 필요 !

2) 보강철근량 산정, As

- 필요철근량

$$As = \frac{2 \times Mo}{R \times f_{sa}} - As'$$

$$= \frac{2 \times 45.584 \times 10^6}{636 \times 180} - 662$$

$$= 796 \ mm^2 - 662 \ mm^2$$

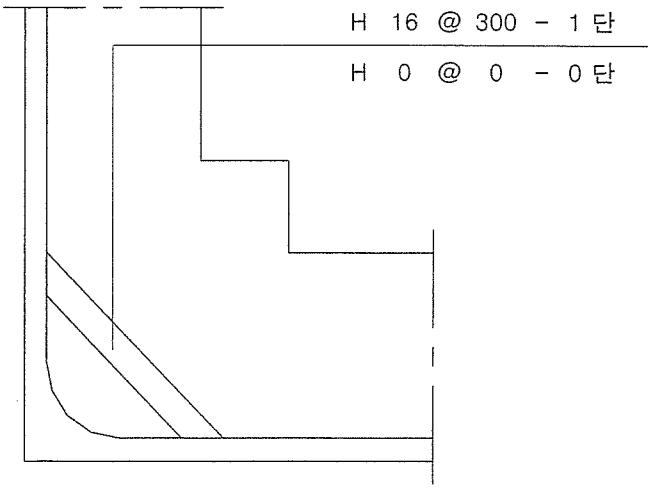
$$= 134 \ mm^2$$

- 사용철근량

As = H 16 @ 300 - 1 단

+ H 0 @ 0 - 0 단

= 662 mm^2 O.K



8. 사용성 검토

8.1 처짐 검토

1) 하부 슬래브 : 최소부재두께 적용

철근의 항복응력 fy = 400 MPa

부재의 지간길이 L = 2.300 m

슬래브 양단 연속의 경우

T = L / 28 = 0.082 m

(보정계수) FACTOR = 1.000

처짐계산을 하지않는 경우의 최소두께

T = 0.082m < H = 0.300m (처짐검토 생략)

9. 기초지반 지지력 검토

9.1 작용하중

9.1.1 구 체 자 중 (W1) :

(0.3 × 2.4 + 0.3 × 2 × 1 EA + 0.3 × 0.3 / 2
× 2 EA + 0.3 × 2.4) × 24.500 / 2.6 = 20.071 kN/m²

9.1.2 상재고정하중(W2)

(1) 상재토

되메움토 : 0.000 × 20.000 = 0.000 kN/m²

아스콘 : 0.000 × 23.000 = 0.000 kN/m²

9.1.3 활 하 중(L)

(1) 활 하 중 :

= 0.000 kN/m²

9.1.4 수로개거내의 물의자중(w3)

2.000 × 1.920 × 1.000 / 2.600 / 1.000 × 10.000 = 14.769 kN/m²

9.2 지지력 검토

9.2.1 최대지반반력 (qmax) : W1 + W2 + L + W3

20.071 + 0.000 + 0.000 + 14.769 = 34.840 kN/m²

9.2.2 허용지반반력 (qa)

- 정역학 공식에 의한 지반의 허용 연직 지지력 (Terzaghi식 사용)

Qu = A · [c · Nc + q · Nq + 0.5 · r1 · B · Nr]

Qu : 하중의 편심 및 경사가 없는 연속기초지반의 극한지지력 (kN)

· A : 재하면적 = 2.600 m²

· c : 지반의 점착력 = 0.000 kN/m²

· q : 상재하중, (q = r2 · Df) = 48.000 kN/m²

· r1 : 지지 지반의 흙의 단위중량 = 20.000 kN/m³

· r2 : 근입 지반의 흙의 단위중량 = 20.000 kN/m³

· B : 확대기초의 폭 = 2.600 m

· L : 확대기초의 길이 = 1.000 m

· Φ : 지반의 전단 저항각

Φ = √ (12 × N) + 15 = √ (12 × 15) + 15 = 28 °

· Nc = 25.100 , Nq = 12.700 , Nr = 9.700 (전단 저항각 28 ° 일때)

· Qu = 2.600 × [0.000 × 25.100 + 48.000 × 12.700 +
0.500 × 20.000 × 2.600 × 9.700] = 2240.680 kN

· Qa = 2240.680 / 3 = 746.893 kN

· qa = 746.893 / 2.600 = 287.267 kN/m²

* 평상시 최대 지반반력 (도.설.해 2008) = 400.000 kN/m²

∴ q_{max} = 34.840 kN/m² < q_a = 287.267 kN/m² ∴ O.K