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

구 조 계 산 서 (18/20)

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2015. 4.

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노반 기본 및 실시설계

구 조 계 산 서 (18/20)

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개 정 현 황					
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중앙선 도담~영천 복선전철 제5공구 노반 기본 및 실시설계

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C(함) 산운제3

- 2.0 x 2.00 x 1
- 토피 = 4.1m 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) : 57.00 ° 연 장 (L) : 36.00 m

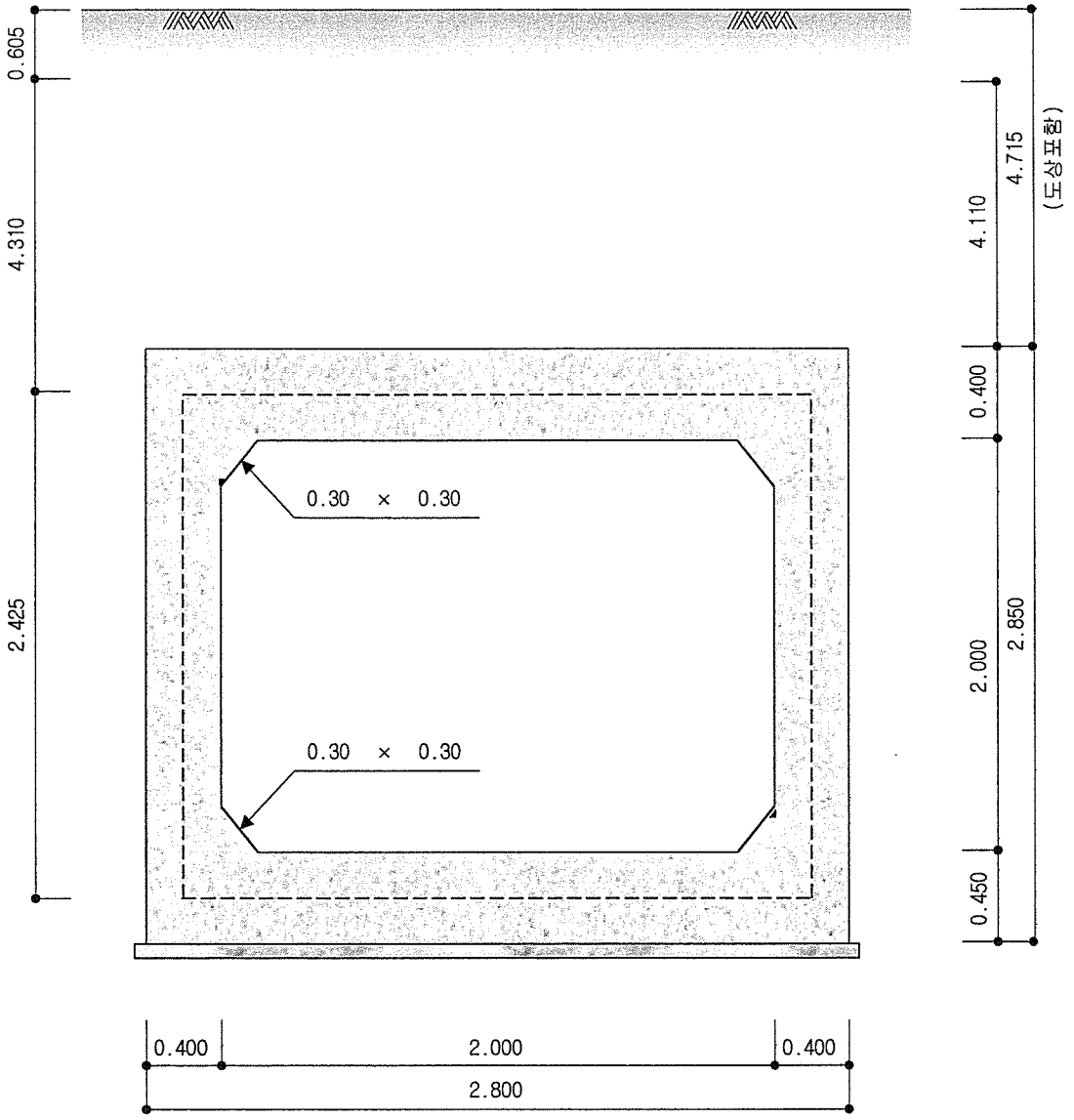
9) 설계방법

- 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

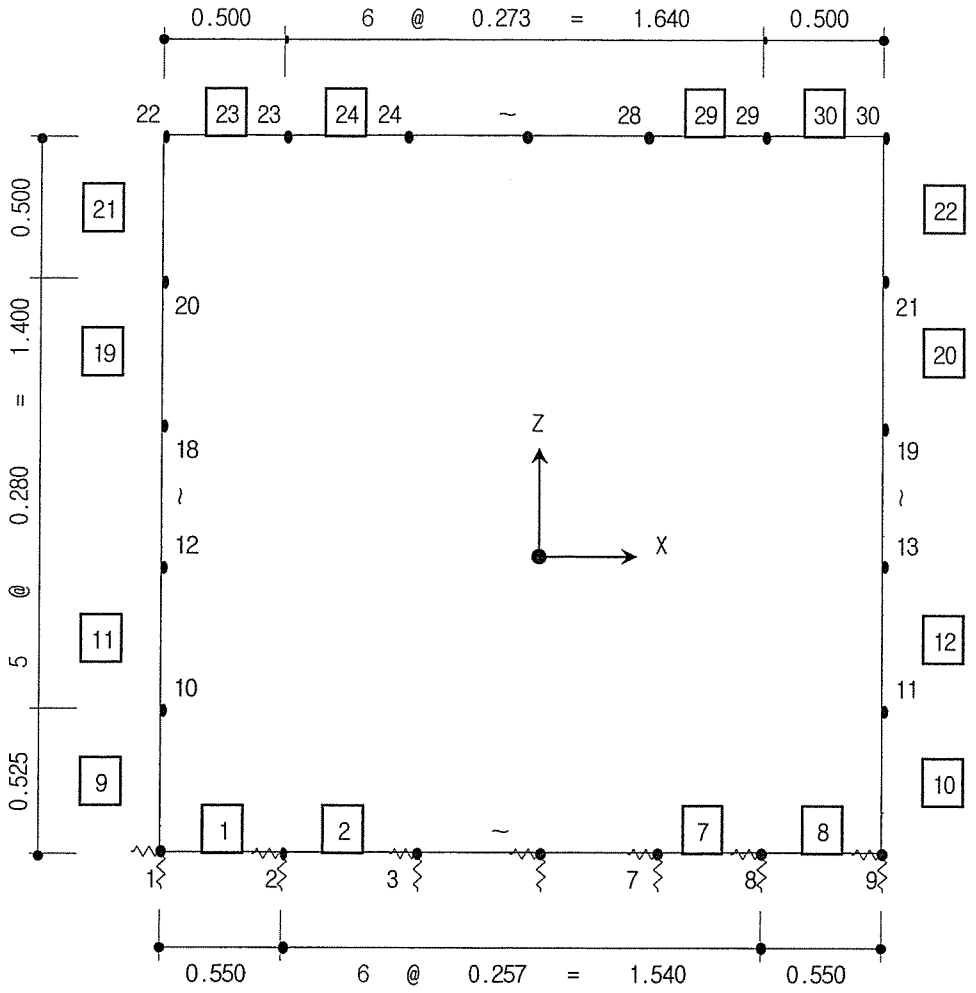
2. 단면 가정



※ 유효경간

Skew =	57.0	°					
Ln =	2.400	m					
Ls =	2.862	m					
Ls/B =	2.862	/	18.000	=	0.159	<	1.500
L =	2.640	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	2.640	0.000	0.805
2	0.550	0.000	0.000	14	0.000	0.000	1.085
3	0.807	0.000	0.000	15	2.640	0.000	1.085
4	1.063	0.000	0.000	16	0.000	0.000	1.365
5	1.320	0.000	0.000	17	2.640	0.000	1.365
6	1.577	0.000	0.000	18	0.000	0.000	1.645
7	1.833	0.000	0.000	19	2.640	0.000	1.645
8	2.090	0.000	0.000	20	0.000	0.000	1.925
9	2.640	0.000	0.000	21	2.640	0.000	1.925
10	0.000	0.000	0.525	22	0.000	0.000	2.425
11	2.640	0.000	0.525	23	0.500	0.000	2.425
12	0.000	0.000	0.805	24	0.773	0.000	2.425

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
25	1.047	0.000	2.425	28	1.867	0.000	2.425
26	1.320	0.000	2.425	29	2.140	0.000	2.425
27	1.593	0.000	2.425	30	2.640	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	12148		3 ~ 7	6564	
2 . 8	10315				

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)

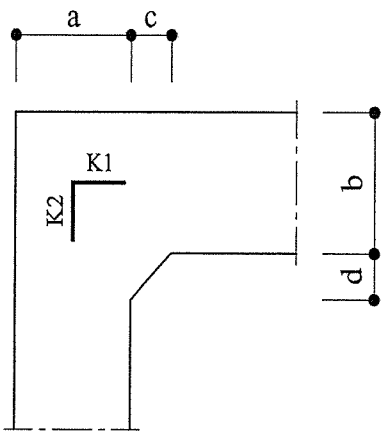
CASE 1 : 부재단부가 다른 부재와 접합할 때는 부재단에서 부재두께의 1/4 안쪽점에서 절점까지

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

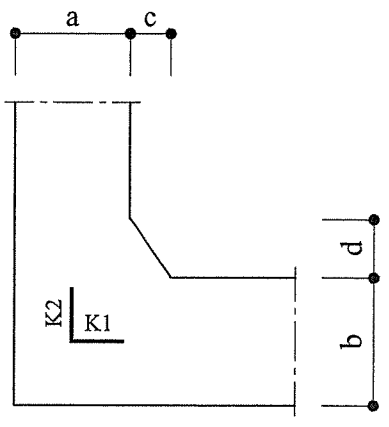
(2) 강역설정

- 절점 22 , 30



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

- 절점 1 , 9

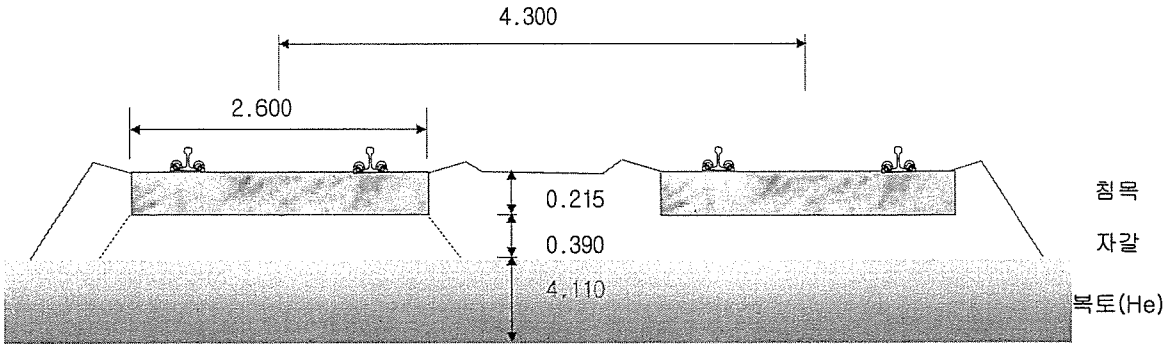


a =	400	mm	c =	300	mm
b =	450	mm	d =	300	mm
K1 =	275	mm	K2 =	325	mm

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 + 4.110) = 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 × 4.110 = 82.200 kN/㎡

∴ $q_1 + q_2 + q_3$ = 1.096 + 14.944 + 82.200 = 98.240 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) = 2.640 m

따라서 i_0 = 0.537 (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 = 4.715 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 × 4.310) = 43.554 kN/㎡

q_2 = 43.554 + 0.426 ×(20.000 × 0.500) = 47.814 kN/㎡

q_3 = 47.814 + 0.426 ×(20.000 × 0.280) = 50.200 kN/㎡

q_4 = 50.200 + 0.426 ×(20.000 × 0.280) = 52.586 kN/㎡

q_5 = 52.586 + 0.426 ×(20.000 × 0.280) = 54.972 kN/㎡

q_6 = 54.972 + 0.426 ×(20.000 × 0.280) = 57.358 kN/㎡

q_7 = 57.358 + 0.426 ×(20.000 × 0.280) = 59.744 kN/㎡

q_8 = 59.744 + 0.426 ×(20.000 × 0.525) = 64.217 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 4.715 m 이므로 장대레일 하중을 무시한다.

H_r = 0.000 × 4 / 14.590 = 0.000 kN/㎡

7) 상시 지반반력 계수

지지 지반 N치 = 14

Eo = 2800 × N = 2800 × 14 = 39200

Kvo = 1 / 0.3 x α x Eo = 1 / 0.3 × 1 x 39200 = 130667

Bv = √ Av = √ (2.640 × 2.640) = 2.640

Kv = Kvo (Bv/0.3)^-3/4 = 25574 kN/㎡

25574 × (0.400 / 2 + 0.550 / 2) = 12148 kN/㎡ - 저판 단부 스프링

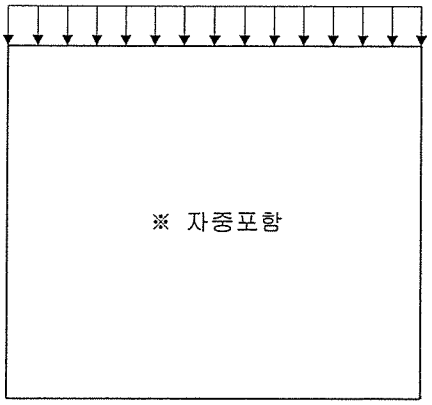
25574 × (0.550 / 2 + 0.257 / 2) = 10315 kN/㎡ - 저판 전단검토위치

25574 × (0.257 / 2 + 0.257 / 2) = 6564 kN/㎡ - 저판 중앙부 스프링

5. 하중재하도

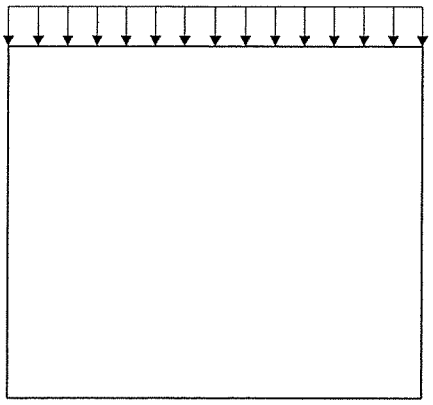
① 고정하중

W_D = 98.240 kN/㎡



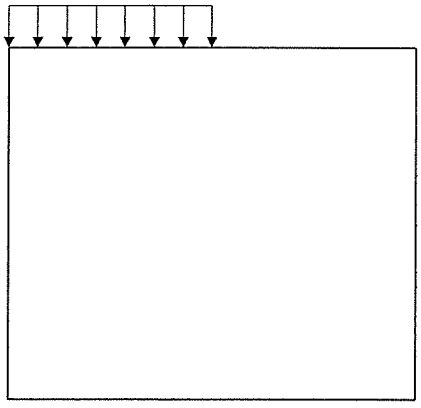
② 활하중(만재하)

W_L = 21.019 kN/㎡



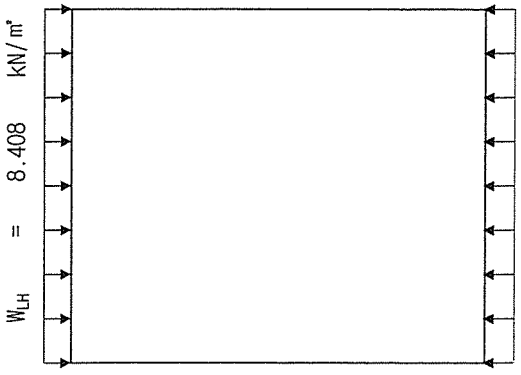
③ 활하중(편재하)

W_L = 21.019 kN/㎡



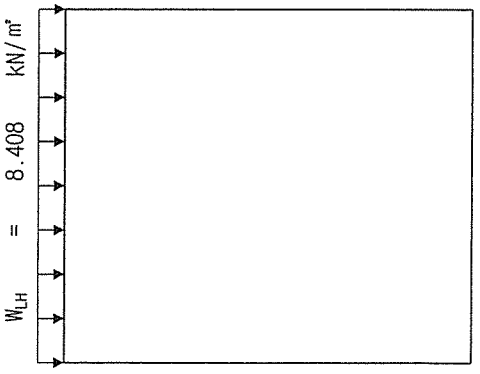
④ 활하중에 의한 측압(만재하)

W_{LH} = 8.408 kN/㎡

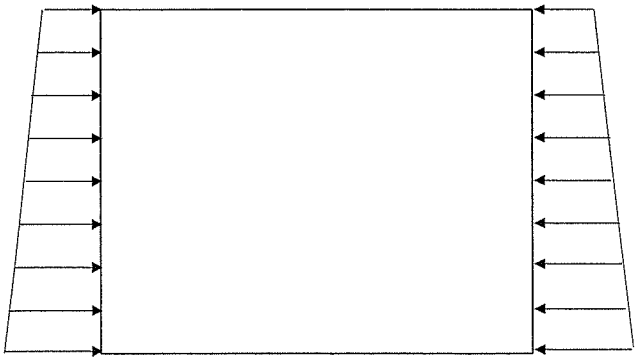


⑤ 활하중에 의한 측압(편재하)

W_{LH} = 8.408 kN/㎡



⑥ 수평토압(지하수 없는 경우)

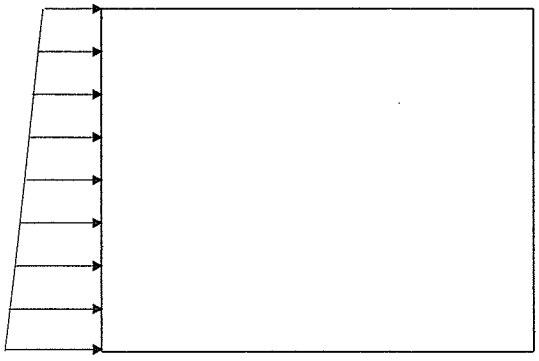


q_1 = 43.554 kN/㎡

q_7 = 64.217 kN/㎡

⑦ 편측토압(지하수 없는 경우)

q_1 = 1.704 kN/㎡



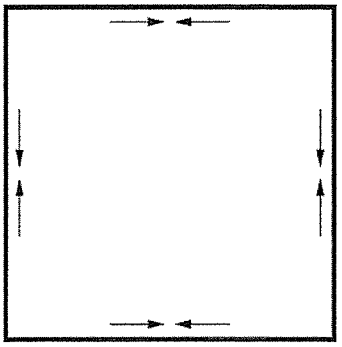
q_7 = 22.367 kN/㎡

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, 0.772, 0, 0
     4, 0.993, 0, 0
     5, 1.215, 0, 0
     6, 1.437, 0, 0
     7, 1.658, 0, 0
     8, 1.88, 0, 0
     9, 2.43, 0, 0
    10, 0, 0, 0.525
    11, 2.43, 0, 0.525
    12, 0, 0, 0.805
    13, 2.43, 0, 0.805
    14, 0, 0, 1.085
    15, 2.43, 0, 1.085
    16, 0, 0, 1.365
    17, 2.43, 0, 1.365
    18, 0, 0, 1.645
    19, 2.43, 0, 1.645
    20, 0, 0, 1.925
    21, 2.43, 0, 1.925
    22, 0, 0, 2.425
    23, 0.5, 0, 2.425
    24, 0.738, 0, 2.425
    25, 0.977, 0, 2.425
    26, 1.215, 0, 2.425
    27, 1.453, 0, 2.425
    28, 1.692, 0, 2.425
    29, 1.93, 0, 2.425
    30, 2.43, 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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     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
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    2, USER , CONC              , 0, 0, , C, NO, 0, 2, 2.7537e+007,  0.18, 1.0000e-005,  24.5,     0

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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
    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, 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, LAF, 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
   1, LINEAR, 1e+010, 0, 0, 0, 0, 0, NO, 0, 0, 0, 0, 0, 0, 0, , 0, 0, 0, 0, 0
   2 8, COMP  ,  5, 0, 0, 0, 12000, , 0, 0, 0, 0, 0
   3to7, COMP  ,  5, 0, 0, 0, 6894, , 0, 0, 0, 0, 0
   9, COMP  ,  5, 0, 0, 0, 14774, , 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, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 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, 60.189, 1, 55.716, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -60.189, 1, -55.716, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 55.716, 1, 53.33, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -55.716, 1, -53.33, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 53.33, 1, 50.944, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -53.33, 1, -50.944, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 50.944, 1, 48.558, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -50.944, 1, -48.558, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 48.558, 1, 46.172, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -48.558, 1, -46.172, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 46.172, 1, 43.786, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -46.172, 1, -43.786, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 43.786, 1, 39.526, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -43.786, 1, -39.526, 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. 96.3024. 1. 89.1456. 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. -96.3024. 1. -89.1456. 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. 89.1456. 1. 85.328. 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
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -89.1456. 1. -85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 85.328. 1. 81.5104. 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. -85.328. 1. -81.5104. 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. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 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. 77.6928. 1. 73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 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. 73.8752. 1. 70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 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. 70.0576. 1. 63.2416. 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. -70.0576. 1. -63.2416. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. 36.1134. 1. 33.4296. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -36.1134. 1. -33.4296. 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
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 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. 31.998. 1. 30.5664. 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. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -31.998. 1. -30.5664. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 29.1348. 1. 27.7032. 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
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.1348. 1. -27.7032. 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. 27.7032. 1. 26.2716. 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
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.7032. 1. -26.2716. 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. 26.2716. 1. 23.7156. 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. -26.2716. 1. -23.7156. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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
    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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. 96.3024. 1. 89.1456. 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. -96.3024. 1. -89.1456. 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. 89.1456. 1. 85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -89.1456. 1. -85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 85.328. 1. 81.5104. 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. -85.328. 1. -81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 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. 77.6928. 1. 73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 73.8752. 1. 70.0576. 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. -73.8752. 1. -70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 70.0576. 1. 63.2416. 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. -70.0576. 1. -63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 36.1134. 1. 33.4296. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -36.1134. 1. -33.4296. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 29.1348. 1. 27.7032. 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
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.1348. 1. -27.7032. 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. 27.7032. 1. 26.2716. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.7032. 1. -26.2716. 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. 26.2716. 1. 23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 96.3024. 1. 89.1456. 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. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -96.3024. 1. -89.1456. 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. 89.1456. 1. 85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -89.1456. 1. -85.328. 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
    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. 85.328. 1. 81.5104. 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
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -85.328. 1. -81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 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. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 77.6928. 1. 73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 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. 73.8752. 1. 70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 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. 70.0576. 1. 63.2416. 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
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -70.0576. 1. -63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. 36.1134. 1. 33.4296. 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. -36.1134. 1. -33.4296. 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. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 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. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 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. 29.1348. 1. 27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.1348. 1. -27.7032. 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. 27.7032. 1. 26.2716. 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. -27.7032. 1. -26.2716. 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. 26.2716. 1. 23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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
    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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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
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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. 96.3024. 1. 89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -96.3024. 1. -89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 89.1456. 1. 85.328. 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. -89.1456. 1. -85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 85.328. 1. 81.5104. 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. -85.328. 1. -81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 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. 77.6928. 1. 73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 73.8752. 1. 70.0576. 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. -73.8752. 1. -70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 70.0576. 1. 63.2416. 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
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -70.0576. 1. -63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 36.1134. 1. 33.4296. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -36.1134. 1. -33.4296. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 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. 30.5664. 1. 29.1348. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.5664. 1. -29.1348. 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. 29.1348. 1. 27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.1348. 1. -27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.7032. 1. 26.2716. 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. -27.7032. 1. -26.2716. 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. 26.2716. 1. 23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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
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     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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
     27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
     28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
     29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
     30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. 96.3024. 1. 89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
     10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -96.3024. 1. -89.1456. 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. 89.1456. 1. 85.328. 0. 0. 0. 0. . NO. 0. 0. NO
     12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -89.1456. 1. -85.328. 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(
     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. 85.328. 1. 81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
     14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -85.328. 1. -81.5104. 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(
     15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 0. 0. 0. 0. . NO. 0. 0. N(
     17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 77.6928. 1. 73.8752. 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. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
     18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 0. 0. 0. 0. . NO. 0. 0. N(
     19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 73.8752. 1. 70.0576. 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. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
     20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 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. 70.0576. 1. 63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
     22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -70.0576. 1. -63.2416. 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. -119.86. 1. -119.86. 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. N(
     24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
     25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(
     26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 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. -119.86. 1. -119.86. 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. N(
     28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
     29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(
     30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 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. 36.1134. 1. 33.4296. 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. -36.1134. 1. -33.4296. 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. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 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. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 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. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 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. 29.1348. 1. 27.7032. 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. -29.1348. 1. -27.7032. 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. 27.7032. 1. 26.2716. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.7032. 1. -26.2716. 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. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.2716. 1. 23.7156. 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
    22. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. 96.3024. 1. 89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -96.3024. 1. -89.1456. 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. 89.1456. 1. 85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -89.1456. 1. -85.328. 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. 85.328. 1. 81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -85.328. 1. -81.5104. 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. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 77.6928. 1. 73.8752. 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. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 73.8752. 1. 70.0576. 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. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 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. 70.0576. 1. 63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM   . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -70.0576. 1. -63.2416. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM   . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. 36.1134. 1. 33.4296. 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. -36.1134. 1. -33.4296. 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. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 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. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 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. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 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. 29.1348. 1. 27.7032. 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. -29.1348. 1. -27.7032. 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. 27.7032. 1. 26.2716. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.7032. 1. -26.2716. 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. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.2716. 1. 23.7156. 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
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. 96.3024. 1. 89.1456. 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. -96.3024. 1. -89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 89.1456. 1. 85.328. 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. -89.1456. 1. -85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 85.328. 1. 81.5104. 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. -85.328. 1. -81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 77.6928. 1. 73.8752. 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. -77.6928. 1. -73.8752. 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. 73.8752. 1. 70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 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. 70.0576. 1. 63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -70.0576. 1. -63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 36.1134. 1. 33.4296. 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. -36.1134. 1. -33.4296. 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. 33.4296. 1. 31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -33.4296. 1. -31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 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. 30.5664. 1. 29.1348. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.5664. 1. -29.1348. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 29.1348. 1. 27.7032. 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. -29.1348. 1. -27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.7032. 1. 26.2716. 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. -27.7032. 1. -26.2716. 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. 26.2716. 1. 23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 96.3024. 1. 89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -96.3024. 1. -89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 89.1456. 1. 85.328. 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. -89.1456. 1. -85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 85.328. 1. 81.5104. 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. -85.328. 1. -81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 77.6928. 1. 73.8752. 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. -77.6928. 1. -73.8752. 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. 73.8752. 1. 70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 70.0576. 1. 63.2416. 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. -70.0576. 1. -63.2416. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
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    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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 36.1134. 1. 33.4296. 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. -36.1134. 1. -33.4296. 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. 33.4296. 1. 31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -33.4296. 1. -31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 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. 29.1348. 1. 27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.1348. 1. -27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.7032. 1. 26.2716. 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. -27.7032. 1. -26.2716. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.2716. 1. 23.7156. 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. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 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. 24.8128. 1. 20.9952. 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
    15. 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. 20.9952. 1. 17.1776. 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. 17.1776. 1. 13.36. 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. 9.5424. 1. 2.7264. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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
    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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 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. 24.8128. 1. 20.9952. 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
    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. 20.9952. 1. 17.1776. 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. 17.1776. 1. 13.36. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. 9.3048. 1. 7.8732. 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
    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. 7.8732. 1. 6.4416. 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. 3.5784. 1. 1.0224. 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
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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(
    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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. 60.189. 1. 55.716. 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. -60.189. 1. -55.716. 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. 55.716. 1. 53.33. 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. -55.716. 1. -53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.33. 1. 50.944. 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. -53.33. 1. -50.944. 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. 50.944. 1. 48.558. 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. -50.944. 1. -48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.558. 1. 46.172. 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. -48.558. 1. -46.172. 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. 46.172. 1. 43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -46.172. 1. -43.786. 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. 43.786. 1. 39.526. 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
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -43.786. 1. -39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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 [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. 30.0945. 1. 27.858. 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. -30.0945. 1. -27.858. 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. 27.858. 1. 26.665. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.858. 1. -26.665. 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. 26.665. 1. 25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.665. 1. -25.472. 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. 25.472. 1. 24.279. 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. -25.472. 1. -24.279. 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. 24.279. 1. 23.086. 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. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 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. 21.893. 1. 19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -21.893. 1. -19.763. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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 [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. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 60.189. 1. 55.716. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -60.189. 1. -55.716. 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. 55.716. 1. 53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.716. 1. -53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.33. 1. 50.944. 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. -53.33. 1. -50.944. 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. 50.944. 1. 48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -50.944. 1. -48.558. 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. 48.558. 1. 46.172. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.558. 1. -46.172. 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. 46.172. 1. 43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -46.172. 1. -43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.786. 1. 39.526. 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. -43.786. 1. -39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
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    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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 30.0945. 1. 27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.0945. 1. -27.858. 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. 27.858. 1. 26.665. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.858. 1. -26.665. 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. 26.665. 1. 25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.665. 1. -25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 25.472. 1. 24.279. 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. -25.472. 1. -24.279. 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. 24.279. 1. 23.086. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 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. 21.893. 1. 19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -21.893. 1. -19.763. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 60.189. 1. 55.716. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -60.189. 1. -55.716. 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. 55.716. 1. 53.33. 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. -55.716. 1. -53.33. 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. 53.33. 1. 50.944. 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. -53.33. 1. -50.944. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 50.944. 1. 48.558. 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. -50.944. 1. -48.558. 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 8.408 1 8.408 0 0 0 0  NO 0 0 NO
    17 BEAM    UNILOAD GX NO NO aDir[1]    0 48.558 1 46.172 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 -48.558 1 -46.172 0 0 0 0  NO 0 0 NO
    19 BEAM    UNILOAD GX NO NO aDir[1]    0 46.172 1 43.786 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 -46.172 1 -43.786 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 43.786 1 39.526 0 0 0 0  NO 0 0 NO
    22 BEAM    UNILOAD GX NO NO aDir[1]    0 -43.786 1 -39.526 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 -88.785 1 -88.785 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 -88.785 1 -88.785 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 -88.785 1 -88.785 0 0 0 0  NO 0 0 NO
    26 BEAM    UNILOAD GZ NO NO aDir[1]    0 -88.785 1 -88.785 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 -88.785 1 -88.785 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 -88.785 1 -88.785 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 -88.785 1 -88.785 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 -88.785 1 -88.785 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 30.0945 1 27.858 0 0 0 0  NO 0 0 NO
    10 BEAM    UNILOAD GX NO NO aDir[1]    0 -30.0945 1 -27.858 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 27.858 1 26.665 0 0 0 0  NO 0 0 NO
    12 BEAM    UNILOAD GX NO NO aDir[1]    0 -27.858 1 -26.665 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 26.665 1 25.472 0 0 0 0  NO 0 0 NO
    14 BEAM    UNILOAD GX NO NO aDir[1]    0 -26.665 1 -25.472 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 25.472 1 24.279 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 -25.472 1 -24.279 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
    17 BEAM    UNILOAD GX NO NO aDir[1]    0 24.279 1 23.086 0 0 0 0  NO 0 0 NO
    18 BEAM    UNILOAD GX NO NO aDir[1]    0 -24.279 1 -23.086 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 23.086 1 21.893 0 0 0 0  NO 0 0 NO
    20 BEAM    UNILOAD GX NO NO aDir[1]    0 -23.086 1 -21.893 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 21.893 1 19.763 0 0 0 0  NO 0 0 NO
    22 BEAM    UNILOAD GX NO NO aDir[1]    0 -21.893 1 -19.763 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 -88.785 1 -88.785 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 -88.785 1 -88.785 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 -88.785 1 -88.785 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 -88.785 1 -88.785 0 0 0 0  NO 0 0 NO
    27 BEAM    UNILOAD GZ NO NO aDir[1]    0 -88.785 1 -88.785 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 -88.785 1 -88.785 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 -88.785 1 -88.785 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
    30 BEAM    UNILOAD GZ NO NO aDir[1]    0 -88.785 1 -88.785 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, 60.189, 1, 55.716, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -60.189, 1, -55.716, 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, 55.716, 1, 53.33, 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, -55.716, 1, -53.33, 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, 53.33, 1, 50.944, 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, -53.33, 1, -50.944, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 50.944, 1, 48.558, 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, -50.944, 1, -48.558, 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
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 48.558, 1, 46.172, 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, -48.558, 1, -46.172, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 46.172, 1, 43.786, 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, -46.172, 1, -43.786, 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, 43.786, 1, 39.526, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -43.786, 1, -39.526, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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. 30.0945. 1. 27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.0945. 1. -27.858. 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. 27.858. 1. 26.665. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.858. 1. -26.665. 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. 26.665. 1. 25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.665. 1. -25.472. 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. 25.472. 1. 24.279. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -25.472. 1. -24.279. 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. 24.279. 1. 23.086. 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. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 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. 21.893. 1. 19.763. 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. -21.893. 1. -19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. 60.189. 1. 55.716. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -60.189. 1. -55.716. 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. 55.716. 1. 53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.716. 1. -53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.33. 1. 50.944. 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. -53.33. 1. -50.944. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 50.944. 1. 48.558. 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. -50.944. 1. -48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.558. 1. 46.172. 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. -48.558. 1. -46.172. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 46.172. 1. 43.786. 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. -46.172. 1. -43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.786. 1. 39.526. 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. -43.786. 1. -39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 30.0945. 1. 27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.0945. 1. -27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.858. 1. 26.665. 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. -27.858. 1. -26.665. 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. 26.665. 1. 25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.665. 1. -25.472. 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. 25.472. 1. 24.279. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -25.472. 1. -24.279. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.279. 1. 23.086. 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. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 0. 0. 0. 0. . NO. 0. 0. NO
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    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. 21.893. 1. 19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -21.893. 1. -19.763. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 60.189. 1. 55.716. 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. -60.189. 1. -55.716. 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. 55.716. 1. 53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.716. 1. -53.33. 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. 53.33. 1. 50.944. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.33. 1. -50.944. 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. 50.944. 1. 48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -50.944. 1. -48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.558. 1. 46.172. 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. -48.558. 1. -46.172. 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. 46.172. 1. 43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -46.172. 1. -43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.786. 1. 39.526. 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. -43.786. 1. -39.526. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 30.0945. 1. 27.858. 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. -30.0945. 1. -27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.858. 1. 26.665. 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. -27.858. 1. -26.665. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.665. 1. 25.472. 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. -26.665. 1. -25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 25.472. 1. 24.279. 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. -25.472. 1. -24.279. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.279. 1. 23.086. 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. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 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. 21.893. 1. 19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -21.893. 1. -19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 60.189. 1. 55.716. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -60.189. 1. -55.716. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.716. 1. 53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.716. 1. -53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.33. 1. 50.944. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.33. 1. -50.944. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 50.944. 1. 48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -50.944. 1. -48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.558. 1. 46.172. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.558. 1. -46.172. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 46.172. 1. 43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -46.172. 1. -43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.786. 1. 39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -43.786. 1. -39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 15.508. 1. 13.122. 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
    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
    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. 5.964. 1. 1.704. 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
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 11.1835. 1. 8.947. 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. 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. 7.754. 1. 6.561. 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
    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. 8.408. 1. 8.408. 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
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 4.175. 1. 2.982. 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. 2.982. 1. 0.852. 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
    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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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, 160, 255, 255, 255, 87, 87, 192, 192, 0
 CB, COMB2, 192, 192, 0, 0, 128, 128, 0, 192, 192
 CB, COMB3, 192, 72, 0, 85, 0, 192, 160, 192, 255
 CB, COMB4, 192, 128, 0, 212, 160, 255, 93, 255, 87
 CB, COMB5, 255, 192, 87, 85, 192, 0, 192, 192, 192
 CB, COMB6, 192, 192, 192, 192, 0, 192, 160, 255, 255
 CB, COMB7, 255, 87, 128, 93, 255, 87, 0, 192, 128
 CB, COMB8, 210, 210, 210, 0, 128, 255, 85, 0, 192
 CB, COMB9, 163, 255, 160, 192, 128, 0, 148, 87, 255
 CB, COMB10, 0, 128, 255, 0, 128, 255, 85, 192, 0
 CB, COMB11, 93, 255, 87, 192, 0, 192, 192, 128, 0
 CB, COMB12, 85, 192, 0, 255, 87, 128, 192, 72, 0
 CB, COMB13, 0, 157, 192, 0, 128, 57, 0, 192, 128
 CB, COMB14, 0, 192, 128, 255, 0, 192, 0, 192, 128
 CB, COMB15, 0, 128, 255, 163, 160, 255, 192, 192, 0
 CB, COMB16, 0, 128, 255, 85, 0, 192, 148, 87, 255
 CB, COMB17, 163, 255, 160, 160, 255, 255, 128, 192, 0
 CB, COMB18, 0, 128, 192, 192, 0, 192, 163, 160, 255
 CB, COMB19, 0, 128, 192, 255, 160, 255, 255, 160, 255
 CB, COMB20, 0, 128, 128, 0, 128, 57, 255, 87, 128
 CB, COMB21, 255, 255, 87, 192, 192, 192, 212, 160, 255
 CB, COMB22, 0, 192, 192, 163, 160, 255, 163, 255, 160
 CB, COMB23, 255, 87, 128, 192, 72, 0, 192, 128, 0
 CB, COMB24, 0, 192, 192, 192, 128, 0, 0, 128, 57
 CB, COMB25, 148, 87, 255, 212, 160, 255, 128, 192, 0
 CB, COMB26, 0, 192, 128, 210, 210, 210, 0, 128, 255
 CB, COMB27, 255, 0, 192, 192, 0, 192, 0, 192, 192
 CB, COMB28, 160, 192, 255, 192, 72, 0, 85, 0, 192
 CB, COMB29, 78, 0, 255, 210, 210, 210, 255, 87, 128
 CB, COMB30, 0, 128, 57, 255, 160, 255, 148, 87, 255
 CB, COMB31, 0, 192, 128, 85, 192, 0, 0, 157, 192
 CB, COMB32, 160, 255, 255, 146, 0, 255, 255, 87, 87
 CB, COMB33, 160, 192, 255, 0, 128, 192, 212, 160, 255
 CB, COMB34, 148, 87, 255, 0, 157, 192, 163, 160, 255
 CB, COMB35, 163, 160, 255, 255, 192, 160, 146, 0, 255
 CB, USD, 255, 192, 160, 255, 255, 87, 255, 160, 255
 CB, WSD, 128, 192, 0, 163, 255, 160, 160, 255, 255
 ST, LC1, 146, 0, 255, 255, 128, 0, 255, 192, 160
 ST, LC2, 85, 0, 192, 192, 72, 0, 148, 87, 255
 ST, LC3, 192, 128, 0, 85, 192, 0, 255, 255, 255
 ST, LC4, 0, 192, 192, 163, 255, 160, 255, 255, 87
 ST, LC5, 85, 192, 0, 255, 255, 87, 192, 128, 0
 ST, LC6, 255, 255, 255, 0, 128, 255, 163, 160, 255
 ST, LC7, 0, 128, 255, 192, 128, 0, 255, 0, 128
 ST, LC8, 255, 192, 160, 85, 192, 0, 255, 0, 192
 ST, LC9, 255, 160, 255, 93, 255, 87, 0, 192, 192
 ST, LC10, 148, 87, 255, 78, 0, 255, 255, 160, 255
 ST, LC11, 78, 0, 255, 163, 255, 160, 255, 192, 87
 CBC, NCOMB1, 163, 255, 160, 146, 0, 255, 85, 192, 0
 CBC, NCOMB2, 255, 255, 255, 163, 255, 160, 255, 128, 0
 CBC, NCOMB3, 163, 255, 160, 85, 0, 192, 192, 72, 0
 CBC, NCOMB4, 148, 87, 255, 255, 128, 0, 0, 157, 192
 CBC, NCOMB5, 0, 128, 128, 148, 87, 255, 210, 210, 210
 CBC, NCOMB6, 255, 128, 0, 255, 255, 255, 128, 192, 0
 CBC, NCOMB7, 255, 255, 87, 192, 192, 192, 0, 128, 255
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CBC. NCOMB8. 255. 0. 192. 0. 192. 192. 192. 128. 0
CBC. NCOMB9. 148. 87. 255. 0. 128. 255. 0. 128. 128
CBC. NCOMB10. 192. 72. 0. 160. 192. 255. 0. 128. 128
CBC. NCOMB11. 255. 192. 87. 0. 128. 255. 148. 87. 255
CBC. NCOMB12. 192. 0. 128. 163. 160. 255. 192. 0. 128
CBC. NCOMB13. 0. 128. 255. 255. 0. 192. 160. 255. 255
CBC. NCOMB14. 192. 128. 0. 0. 128. 128. 192. 72. 0
CBC. NCOMB15. 212. 160. 255. 0. 128. 57. 0. 192. 192
CBC. NCOMB16. 255. 87. 87. 212. 160. 255. 0. 128. 57
CBC. NCOMB17. 255. 160. 255. 0. 128. 128. 163. 255. 160
CBC. NCOMB18. 192. 192. 192. 255. 160. 255. 192. 0. 128
CBC. NCOMB19. 78. 0. 255. 192. 0. 192. 192. 0. 128
CBC. NCOMB20. 0. 192. 192. 255. 87. 128. 255. 255. 255
CBC. NCOMB21. 0. 128. 57. 163. 255. 160. 160. 255. 255
CBC. NCOMB22. 255. 255. 255. 192. 128. 0. 0. 192. 192
CBC. NCOMB23. 85. 192. 0. 255. 0. 128. 255. 0. 192
CBC. NCOMB24. 160. 192. 255. 78. 0. 255. 192. 72. 0
CBC. NCOMB25. 212. 160. 255. 192. 128. 0. 93. 255. 87
CBC. NCOMB26. 255. 0. 192. 212. 160. 255. 128. 192. 0
CBC. NCOMB27. 255. 160. 255. 146. 0. 255. 160. 192. 255
CBC. NCOMB28. 148. 87. 255. 255. 255. 255. 146. 0. 255
CBC. NCOMB29. 192. 128. 0. 255. 128. 0. 192. 128. 0
CBC. NCOMB30. 255. 87. 87. 255. 128. 0. 255. 255. 87
CBC. NCOMB31. 255. 0. 128. 160. 255. 255. 255. 192. 160
CBC. NCOMB32. 146. 0. 255. 0. 192. 192. 255. 160. 255
CBC. NCOMB33. 255. 160. 255. 255. 192. 160. 0. 192. 192
CBC. NCOMB34. 255. 255. 87. 210. 210. 210. 78. 0. 255
CBC. NCOMB35. 0. 192. 192. 212. 160. 255. 192. 192. 0
ST. NCOMB1. 93. 255. 87. 210. 210. 210. 163. 255. 160
```

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]	24.870	0.000	-172.490	0.00E+00	-14.660	0.000
1	USD(max)	1/4	24.870	0.000	-173.510	0.00E+00	-0.690	0.000
1	USD(max)	2/4	24.870	0.000	-174.530	0.00E+00	13.810	0.000
1	USD(max)	3/4	24.870	0.000	-175.560	0.00E+00	28.390	0.000
1	USD(max)	J[2]	24.870	0.000	-176.580	0.00E+00	43.050	0.000
1	USD(min)	I[1]	-124.620	0.000	-210.330	0.00E+00	-45.890	0.000
1	USD(min)	1/4	-124.620	0.000	-211.540	0.00E+00	-33.490	0.000
1	USD(min)	2/4	-124.620	0.000	-212.750	0.00E+00	-21.010	0.000
1	USD(min)	3/4	-124.620	0.000	-213.960	0.00E+00	-8.470	0.000
1	USD(min)	J[2]	-124.620	0.000	-215.180	0.00E+00	4.150	0.000
1	WSD(max)	I[1]	15.440	0.000	-112.060	0.00E+00	-11.830	0.000
1	WSD(max)	1/4	15.440	0.000	-112.820	0.00E+00	-2.820	0.000
1	WSD(max)	2/4	15.440	0.000	-113.580	0.00E+00	6.240	0.000
1	WSD(max)	3/4	15.440	0.000	-114.330	0.00E+00	15.360	0.000
1	WSD(max)	J[2]	15.440	0.000	-115.090	0.00E+00	24.530	0.000
1	WSD(min)	I[1]	-75.710	0.000	-131.450	0.00E+00	-27.330	0.000
1	WSD(min)	1/4	-75.710	0.000	-132.210	0.00E+00	-18.540	0.000
1	WSD(min)	2/4	-75.710	0.000	-132.970	0.00E+00	-9.700	0.000
1	WSD(min)	3/4	-75.710	0.000	-133.730	0.00E+00	-0.810	0.000
1	WSD(min)	J[2]	-75.710	0.000	-134.490	0.00E+00	8.140	0.000
2	USD(max)	I[2]	24.870	0.000	-106.430	0.00E+00	43.050	0.000
2	USD(max)	1/4	24.870	0.000	-107.390	0.00E+00	51.150	0.000
2	USD(max)	2/4	24.870	0.000	-108.350	0.00E+00	59.310	0.000
2	USD(max)	3/4	24.870	0.000	-109.300	0.00E+00	67.550	0.000
2	USD(max)	J[3]	24.870	0.000	-110.260	0.00E+00	75.860	0.000
2	USD(min)	I[2]	-124.620	0.000	-139.320	0.00E+00	4.150	0.000
2	USD(min)	1/4	-124.620	0.000	-140.450	0.00E+00	11.500	0.000
2	USD(min)	2/4	-124.620	0.000	-141.580	0.00E+00	18.920	0.000
2	USD(min)	3/4	-124.620	0.000	-142.720	0.00E+00	26.390	0.000
2	USD(min)	J[3]	-124.620	0.000	-143.850	0.00E+00	33.930	0.000
2	WSD(max)	I[2]	15.440	0.000	-67.100	0.00E+00	24.530	0.000
2	WSD(max)	1/4	15.440	0.000	-67.810	0.00E+00	29.590	0.000
2	WSD(max)	2/4	15.440	0.000	-68.520	0.00E+00	34.700	0.000
2	WSD(max)	3/4	15.440	0.000	-69.220	0.00E+00	39.850	0.000
2	WSD(max)	J[3]	15.440	0.000	-69.930	0.00E+00	45.050	0.000
2	WSD(min)	I[2]	-75.710	0.000	-87.070	0.00E+00	8.140	0.000
2	WSD(min)	1/4	-75.710	0.000	-87.780	0.00E+00	13.280	0.000
2	WSD(min)	2/4	-75.710	0.000	-88.490	0.00E+00	18.470	0.000
2	WSD(min)	3/4	-75.710	0.000	-89.200	0.00E+00	23.700	0.000
2	WSD(min)	J[3]	-75.710	0.000	-89.910	0.00E+00	28.980	0.000
3	USD(max)	I[3]	24.870	0.000	-62.920	0.00E+00	75.860	0.000
3	USD(max)	1/4	24.870	0.000	-63.870	0.00E+00	80.640	0.000
3	USD(max)	2/4	24.870	0.000	-64.830	0.00E+00	85.500	0.000
3	USD(max)	3/4	24.870	0.000	-65.780	0.00E+00	90.420	0.000
3	USD(max)	J[4]	24.870	0.000	-66.730	0.00E+00	95.420	0.000
3	USD(min)	I[3]	-124.620	0.000	-94.630	0.00E+00	33.930	0.000
3	USD(min)	1/4	-124.620	0.000	-95.760	0.00E+00	38.640	0.000
3	USD(min)	2/4	-124.620	0.000	-96.890	0.00E+00	43.230	0.000
3	USD(min)	3/4	-124.620	0.000	-98.020	0.00E+00	47.750	0.000
3	USD(min)	J[4]	-124.620	0.000	-99.150	0.00E+00	52.340	0.000
3	WSD(max)	I[3]	15.440	0.000	-39.600	0.00E+00	45.050	0.000
3	WSD(max)	1/4	15.440	0.000	-40.310	0.00E+00	48.040	0.000
3	WSD(max)	2/4	15.440	0.000	-41.010	0.00E+00	51.350	0.000
3	WSD(max)	3/4	15.440	0.000	-41.720	0.00E+00	54.960	0.000
3	WSD(max)	J[4]	15.440	0.000	-42.430	0.00E+00	58.600	0.000
3	WSD(min)	I[3]	-75.710	0.000	-59.140	0.00E+00	28.980	0.000
3	WSD(min)	1/4	-75.710	0.000	-59.850	0.00E+00	32.220	0.000
3	WSD(min)	2/4	-75.710	0.000	-60.560	0.00E+00	35.070	0.000
3	WSD(min)	3/4	-75.710	0.000	-61.260	0.00E+00	37.720	0.000
3	WSD(min)	J[4]	-75.710	0.000	-61.970	0.00E+00	40.410	0.000
4	USD(max)	I[4]	24.870	0.000	-19.660	0.00E+00	95.420	0.000
4	USD(max)	1/4	24.870	0.000	-20.620	0.00E+00	97.270	0.000
4	USD(max)	2/4	24.870	0.000	-21.570	0.00E+00	99.880	0.000
4	USD(max)	3/4	24.870	0.000	-22.530	0.00E+00	102.560	0.000
4	USD(max)	J[5]	24.870	0.000	-23.490	0.00E+00	105.310	0.000
4	USD(min)	I[4]	-124.620	0.000	-48.840	0.00E+00	52.340	0.000
4	USD(min)	1/4	-124.620	0.000	-49.970	0.00E+00	54.200	0.000
4	USD(min)	2/4	-124.620	0.000	-51.100	0.00E+00	56.120	0.000
4	USD(min)	3/4	-124.620	0.000	-52.240	0.00E+00	58.090	0.000
4	USD(min)	J[5]	-124.620	0.000	-53.370	0.00E+00	60.130	0.000
4	WSD(max)	I[4]	15.440	0.000	-12.240	0.00E+00	58.600	0.000
4	WSD(max)	1/4	15.440	0.000	-12.940	0.00E+00	60.270	0.000
4	WSD(max)	2/4	15.440	0.000	-13.650	0.00E+00	61.980	0.000
4	WSD(max)	3/4	15.440	0.000	-14.360	0.00E+00	63.730	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]	15.440	0.000	-15.070	0.00E+00	65.540	0.000
4	WSD(min)	I[4]	-75.710	0.000	-30.520	0.00E+00	40.410	0.000
4	WSD(min)	1/4	-75.710	0.000	-31.230	0.00E+00	41.220	0.000
4	WSD(min)	2/4	-75.710	0.000	-31.940	0.00E+00	42.080	0.000
4	WSD(min)	3/4	-75.710	0.000	-32.650	0.00E+00	42.980	0.000
4	WSD(min)	J[5]	-75.710	0.000	-33.360	0.00E+00	43.920	0.000
5	USD(max)	I[5]	24.870	0.000	27.800	0.00E+00	105.310	0.000
5	USD(max)	1/4	24.870	0.000	26.660	0.00E+00	104.830	0.000
5	USD(max)	2/4	24.870	0.000	25.530	0.00E+00	104.410	0.000
5	USD(max)	3/4	24.870	0.000	24.400	0.00E+00	104.070	0.000
5	USD(max)	J[6]	24.870	0.000	23.260	0.00E+00	104.060	0.000
5	USD(min)	I[5]	-124.620	0.000	-7.050	0.00E+00	60.130	0.000
5	USD(min)	1/4	-124.620	0.000	-8.000	0.00E+00	59.410	0.000
5	USD(min)	2/4	-124.620	0.000	-8.960	0.00E+00	58.750	0.000
5	USD(min)	3/4	-124.620	0.000	-9.920	0.00E+00	58.150	0.000
5	USD(min)	J[6]	-124.620	0.000	-10.870	0.00E+00	57.610	0.000
5	WSD(max)	I[5]	15.440	0.000	17.370	0.00E+00	65.540	0.000
5	WSD(max)	1/4	15.440	0.000	16.660	0.00E+00	65.310	0.000
5	WSD(max)	2/4	15.440	0.000	15.960	0.00E+00	65.130	0.000
5	WSD(max)	3/4	15.440	0.000	15.250	0.00E+00	65.000	0.000
5	WSD(max)	J[6]	15.440	0.000	14.540	0.00E+00	65.040	0.000
5	WSD(min)	I[5]	-75.710	0.000	-1.100	0.00E+00	43.920	0.000
5	WSD(min)	1/4	-75.710	0.000	-1.810	0.00E+00	42.980	0.000
5	WSD(min)	2/4	-75.710	0.000	-2.520	0.00E+00	42.080	0.000
5	WSD(min)	3/4	-75.710	0.000	-3.230	0.00E+00	41.220	0.000
5	WSD(min)	J[6]	-75.710	0.000	-3.940	0.00E+00	40.410	0.000
6	USD(max)	I[6]	24.870	0.000	78.950	0.00E+00	104.060	0.000
6	USD(max)	1/4	24.870	0.000	77.820	0.00E+00	101.100	0.000
6	USD(max)	2/4	24.870	0.000	76.690	0.00E+00	98.210	0.000
6	USD(max)	3/4	24.870	0.000	75.560	0.00E+00	95.400	0.000
6	USD(max)	J[7]	24.870	0.000	74.430	0.00E+00	92.650	0.000
6	USD(min)	I[6]	-124.620	0.000	35.380	0.00E+00	57.610	0.000
6	USD(min)	1/4	-124.620	0.000	34.420	0.00E+00	54.300	0.000
6	USD(min)	2/4	-124.620	0.000	33.470	0.00E+00	51.050	0.000
6	USD(min)	3/4	-124.620	0.000	32.520	0.00E+00	47.690	0.000
6	USD(min)	J[7]	-124.620	0.000	31.570	0.00E+00	43.610	0.000
6	WSD(max)	I[6]	15.440	0.000	49.340	0.00E+00	65.040	0.000
6	WSD(max)	1/4	15.440	0.000	48.640	0.00E+00	63.190	0.000
6	WSD(max)	2/4	15.440	0.000	47.930	0.00E+00	61.380	0.000
6	WSD(max)	3/4	15.440	0.000	47.230	0.00E+00	59.620	0.000
6	WSD(max)	J[7]	15.440	0.000	46.520	0.00E+00	57.910	0.000
6	WSD(min)	I[6]	-75.710	0.000	29.270	0.00E+00	40.410	0.000
6	WSD(min)	1/4	-75.710	0.000	28.560	0.00E+00	37.720	0.000
6	WSD(min)	2/4	-75.710	0.000	27.860	0.00E+00	35.070	0.000
6	WSD(min)	3/4	-75.710	0.000	27.150	0.00E+00	32.470	0.000
6	WSD(min)	J[7]	-75.710	0.000	26.440	0.00E+00	29.910	0.000
7	USD(max)	I[7]	24.870	0.000	130.390	0.00E+00	92.650	0.000
7	USD(max)	1/4	24.870	0.000	129.250	0.00E+00	86.450	0.000
7	USD(max)	2/4	24.870	0.000	128.120	0.00E+00	80.310	0.000
7	USD(max)	3/4	24.870	0.000	126.990	0.00E+00	74.250	0.000
7	USD(max)	J[8]	24.870	0.000	125.850	0.00E+00	68.260	0.000
7	USD(min)	I[7]	-124.620	0.000	79.550	0.00E+00	43.610	0.000
7	USD(min)	1/4	-124.620	0.000	78.600	0.00E+00	36.530	0.000
7	USD(min)	2/4	-124.620	0.000	77.640	0.00E+00	29.510	0.000
7	USD(min)	3/4	-124.620	0.000	76.690	0.00E+00	22.550	0.000
7	USD(min)	J[8]	-124.620	0.000	75.730	0.00E+00	15.660	0.000
7	WSD(max)	I[7]	15.440	0.000	81.490	0.00E+00	57.910	0.000
7	WSD(max)	1/4	15.440	0.000	80.780	0.00E+00	54.030	0.000
7	WSD(max)	2/4	15.440	0.000	80.080	0.00E+00	50.190	0.000
7	WSD(max)	3/4	15.440	0.000	79.370	0.00E+00	46.410	0.000
7	WSD(max)	J[8]	15.440	0.000	78.660	0.00E+00	42.660	0.000
7	WSD(min)	I[7]	-75.710	0.000	60.740	0.00E+00	29.910	0.000
7	WSD(min)	1/4	-75.710	0.000	60.030	0.00E+00	25.440	0.000
7	WSD(min)	2/4	-75.710	0.000	59.320	0.00E+00	21.020	0.000
7	WSD(min)	3/4	-75.710	0.000	58.610	0.00E+00	16.640	0.000
7	WSD(min)	J[8]	-75.710	0.000	57.900	0.00E+00	12.300	0.000
8	USD(max)	I[8]	24.870	0.000	214.410	0.00E+00	68.260	0.000
8	USD(max)	1/4	24.870	0.000	213.200	0.00E+00	55.790	0.000
8	USD(max)	2/4	24.870	0.000	211.980	0.00E+00	43.410	0.000
8	USD(max)	3/4	24.870	0.000	210.770	0.00E+00	31.110	0.000
8	USD(max)	J[9]	24.870	0.000	209.560	0.00E+00	20.280	0.000
8	USD(min)	I[8]	-124.620	0.000	154.170	0.00E+00	15.660	0.000
8	USD(min)	1/4	-124.620	0.000	153.150	0.00E+00	3.180	0.000
8	USD(min)	2/4	-124.620	0.000	152.130	0.00E+00	-9.230	0.000
8	USD(min)	3/4	-124.620	0.000	151.100	0.00E+00	-22.100	0.000
8	USD(min)	J[9]	-124.620	0.000	150.080	0.00E+00	-34.950	0.000
8	WSD(max)	I[8]	15.440	0.000	134.010	0.00E+00	42.660	0.000
8	WSD(max)	1/4	15.440	0.000	133.250	0.00E+00	34.870	0.000
8	WSD(max)	2/4	15.440	0.000	132.490	0.00E+00	27.130	0.000
8	WSD(max)	3/4	15.440	0.000	131.730	0.00E+00	19.440	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]	15.440	0.000	130.970	0.00E+00	11.810	0.000
8	WSD(min)	I[8]	-75.710	0.000	113.720	0.00E+00	12.300	0.000
8	WSD(min)	1/4	-75.710	0.000	112.960	0.00E+00	4.420	0.000
8	WSD(min)	2/4	-75.710	0.000	112.200	0.00E+00	-3.420	0.000
8	WSD(min)	3/4	-75.710	0.000	111.440	0.00E+00	-12.390	0.000
8	WSD(min)	J[9]	-75.710	0.000	110.680	0.00E+00	-21.420	0.000
9	USD(max)	I[1]	-249.970	0.000	-21.790	0.00E+00	-48.970	0.000
9	USD(max)	1/4	-248.230	0.000	-20.540	0.00E+00	-44.900	0.000
9	USD(max)	2/4	-246.490	0.000	-19.300	0.00E+00	-41.110	0.000
9	USD(max)	3/4	-244.760	0.000	-18.070	0.00E+00	-37.580	0.000
9	USD(max)	J[10]	-243.020	0.000	-16.850	0.00E+00	-34.330	0.000
9	USD(min)	I[1]	-310.680	0.000	-97.540	0.00E+00	-71.750	0.000
9	USD(min)	1/4	-308.620	0.000	-91.860	0.00E+00	-69.840	0.000
9	USD(min)	2/4	-306.570	0.000	-86.220	0.00E+00	-68.040	0.000
9	USD(min)	3/4	-304.510	0.000	-80.610	0.00E+00	-66.340	0.000
9	USD(min)	J[10]	-302.450	0.000	-75.030	0.00E+00	-64.760	0.000
9	WSD(max)	I[1]	-166.430	0.000	-15.810	0.00E+00	-30.980	0.000
9	WSD(max)	1/4	-165.140	0.000	-14.910	0.00E+00	-28.740	0.000
9	WSD(max)	2/4	-163.860	0.000	-14.010	0.00E+00	-26.660	0.000
9	WSD(max)	3/4	-162.570	0.000	-13.130	0.00E+00	-24.720	0.000
9	WSD(max)	J[10]	-161.290	0.000	-12.260	0.00E+00	-22.940	0.000
9	WSD(min)	I[1]	-194.180	0.000	-58.310	0.00E+00	-44.840	0.000
9	WSD(min)	1/4	-192.890	0.000	-54.830	0.00E+00	-43.650	0.000
9	WSD(min)	2/4	-191.600	0.000	-51.370	0.00E+00	-42.520	0.000
9	WSD(min)	3/4	-190.320	0.000	-47.930	0.00E+00	-41.460	0.000
9	WSD(min)	J[10]	-189.030	0.000	-44.510	0.00E+00	-40.470	0.000
10	USD(max)	I[9]	-238.240	0.000	24.870	0.00E+00	-28.510	0.000
10	USD(max)	1/4	-236.500	0.000	24.870	0.00E+00	-29.760	0.000
10	USD(max)	2/4	-234.770	0.000	24.870	0.00E+00	-30.140	0.000
10	USD(max)	3/4	-233.030	0.000	24.870	0.00E+00	-27.510	0.000
10	USD(max)	J[11]	-231.290	0.000	24.870	0.00E+00	-25.120	0.000
10	USD(min)	I[9]	-310.680	0.000	-86.880	0.00E+00	-58.570	0.000
10	USD(min)	1/4	-308.620	0.000	-81.210	0.00E+00	-57.000	0.000
10	USD(min)	2/4	-306.570	0.000	-75.560	0.00E+00	-55.540	0.000
10	USD(min)	3/4	-304.510	0.000	-69.950	0.00E+00	-54.220	0.000
10	USD(min)	J[11]	-302.450	0.000	-64.380	0.00E+00	-53.010	0.000
10	WSD(max)	I[9]	-166.430	0.000	15.440	0.00E+00	-23.230	0.000
10	WSD(max)	1/4	-165.140	0.000	15.440	0.00E+00	-24.000	0.000
10	WSD(max)	2/4	-163.860	0.000	15.440	0.00E+00	-24.240	0.000
10	WSD(max)	3/4	-162.570	0.000	15.440	0.00E+00	-22.590	0.000
10	WSD(max)	J[11]	-161.290	0.000	15.440	0.00E+00	-21.090	0.000
10	WSD(min)	I[9]	-194.180	0.000	-52.550	0.00E+00	-36.530	0.000
10	WSD(min)	1/4	-192.890	0.000	-49.070	0.00E+00	-35.230	0.000
10	WSD(min)	2/4	-191.600	0.000	-45.610	0.00E+00	-34.030	0.000
10	WSD(min)	3/4	-190.320	0.000	-42.170	0.00E+00	-32.930	0.000
10	WSD(min)	J[11]	-189.030	0.000	-38.750	0.00E+00	-31.920	0.000
11	USD(max)	I[10]	-243.020	0.000	-16.850	0.00E+00	-34.330	0.000
11	USD(max)	1/4	-242.100	0.000	-15.170	0.00E+00	-30.230	0.000
11	USD(max)	2/4	-241.170	0.000	-13.510	0.00E+00	-26.650	0.000
11	USD(max)	3/4	-240.240	0.000	-11.880	0.00E+00	-23.590	0.000
11	USD(max)	J[12]	-239.320	0.000	-9.240	0.00E+00	-21.040	0.000
11	USD(min)	I[10]	-302.450	0.000	-75.030	0.00E+00	-64.760	0.000
11	USD(min)	1/4	-301.350	0.000	-67.280	0.00E+00	-62.710	0.000
11	USD(min)	2/4	-300.250	0.000	-59.600	0.00E+00	-60.870	0.000
11	USD(min)	3/4	-299.160	0.000	-51.990	0.00E+00	-59.970	0.000
11	USD(min)	J[12]	-298.060	0.000	-44.440	0.00E+00	-59.200	0.000
11	WSD(max)	I[10]	-161.290	0.000	-12.260	0.00E+00	-22.940	0.000
11	WSD(max)	1/4	-160.600	0.000	-11.050	0.00E+00	-20.690	0.000
11	WSD(max)	2/4	-159.910	0.000	-9.870	0.00E+00	-18.730	0.000
11	WSD(max)	3/4	-159.230	0.000	-8.710	0.00E+00	-17.060	0.000
11	WSD(max)	J[12]	-158.540	0.000	-7.560	0.00E+00	-15.680	0.000
11	WSD(min)	I[10]	-189.030	0.000	-44.510	0.00E+00	-40.470	0.000
11	WSD(min)	1/4	-188.340	0.000	-39.760	0.00E+00	-39.200	0.000
11	WSD(min)	2/4	-187.660	0.000	-35.050	0.00E+00	-38.050	0.000
11	WSD(min)	3/4	-186.970	0.000	-30.380	0.00E+00	-37.390	0.000
11	WSD(min)	J[12]	-186.290	0.000	-25.750	0.00E+00	-36.820	0.000
12	USD(max)	I[11]	-231.290	0.000	24.870	0.00E+00	-25.120	0.000
12	USD(max)	1/4	-230.370	0.000	24.870	0.00E+00	-22.170	0.000
12	USD(max)	2/4	-229.440	0.000	24.870	0.00E+00	-19.680	0.000
12	USD(max)	3/4	-228.510	0.000	24.870	0.00E+00	-17.650	0.000
12	USD(max)	J[13]	-227.590	0.000	24.870	0.00E+00	-16.080	0.000
12	USD(min)	I[11]	-302.450	0.000	-64.380	0.00E+00	-53.010	0.000
12	USD(min)	1/4	-301.350	0.000	-56.630	0.00E+00	-51.530	0.000
12	USD(min)	2/4	-300.250	0.000	-48.950	0.00E+00	-50.290	0.000
12	USD(min)	3/4	-299.160	0.000	-41.330	0.00E+00	-50.740	0.000
12	USD(min)	J[13]	-298.060	0.000	-33.780	0.00E+00	-52.140	0.000
12	WSD(max)	I[11]	-161.290	0.000	15.440	0.00E+00	-21.090	0.000
12	WSD(max)	1/4	-160.600	0.000	15.440	0.00E+00	-19.230	0.000
12	WSD(max)	2/4	-159.910	0.000	15.440	0.00E+00	-17.670	0.000
12	WSD(max)	3/4	-159.230	0.000	15.440	0.00E+00	-16.400	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]	-158.540	0.000	15.440	0.00E+00	-15.410	0.000
12	WSD(min)	I[11]	-189.030	0.000	-38.750	0.00E+00	-31.920	0.000
12	WSD(min)	1/4	-188.340	0.000	-34.000	0.00E+00	-30.670	0.000
12	WSD(min)	2/4	-187.660	0.000	-29.290	0.00E+00	-30.370	0.000
12	WSD(min)	3/4	-186.970	0.000	-24.620	0.00E+00	-31.280	0.000
12	WSD(min)	J[13]	-186.290	0.000	-19.990	0.00E+00	-32.200	0.000
13	USD(max)	I[12]	-239.320	0.000	-9.240	0.00E+00	-21.040	0.000
13	USD(max)	1/4	-238.390	0.000	-5.900	0.00E+00	-18.890	0.000
13	USD(max)	2/4	-237.460	0.000	-2.590	0.00E+00	-16.780	0.000
13	USD(max)	3/4	-236.540	0.000	0.700	0.00E+00	-15.180	0.000
13	USD(max)	J[14]	-235.610	0.000	3.970	0.00E+00	-14.060	0.000
13	USD(min)	I[12]	-298.060	0.000	-44.440	0.00E+00	-59.200	0.000
13	USD(min)	1/4	-296.960	0.000	-36.960	0.00E+00	-58.530	0.000
13	USD(min)	2/4	-295.860	0.000	-29.540	0.00E+00	-57.980	0.000
13	USD(min)	3/4	-294.770	0.000	-22.190	0.00E+00	-57.530	0.000
13	USD(min)	J[14]	-293.670	0.000	-14.910	0.00E+00	-57.190	0.000
13	WSD(max)	I[12]	-158.540	0.000	-7.560	0.00E+00	-15.680	0.000
13	WSD(max)	1/4	-157.860	0.000	-6.030	0.00E+00	-14.570	0.000
13	WSD(max)	2/4	-157.170	0.000	-3.470	0.00E+00	-13.740	0.000
13	WSD(max)	3/4	-156.480	0.000	-0.920	0.00E+00	-13.190	0.000
13	WSD(max)	J[14]	-155.800	0.000	1.600	0.00E+00	-12.910	0.000
13	WSD(min)	I[12]	-186.290	0.000	-25.750	0.00E+00	-36.820	0.000
13	WSD(min)	1/4	-185.600	0.000	-21.170	0.00E+00	-36.330	0.000
13	WSD(min)	2/4	-184.910	0.000	-16.630	0.00E+00	-35.920	0.000
13	WSD(min)	3/4	-184.230	0.000	-12.130	0.00E+00	-35.580	0.000
13	WSD(min)	J[14]	-183.540	0.000	-7.670	0.00E+00	-35.320	0.000
14	USD(max)	I[13]	-227.590	0.000	24.870	0.00E+00	-16.080	0.000
14	USD(max)	1/4	-226.660	0.000	24.870	0.00E+00	-14.900	0.000
14	USD(max)	2/4	-225.740	0.000	24.870	0.00E+00	-14.040	0.000
14	USD(max)	3/4	-224.810	0.000	24.870	0.00E+00	-13.630	0.000
14	USD(max)	J[15]	-223.880	0.000	24.870	0.00E+00	-13.650	0.000
14	USD(min)	I[13]	-298.060	0.000	-33.780	0.00E+00	-52.140	0.000
14	USD(min)	1/4	-296.960	0.000	-26.300	0.00E+00	-53.530	0.000
14	USD(min)	2/4	-295.860	0.000	-18.890	0.00E+00	-54.920	0.000
14	USD(min)	3/4	-294.770	0.000	-11.540	0.00E+00	-56.310	0.000
14	USD(min)	J[15]	-293.670	0.000	-4.330	0.00E+00	-57.700	0.000
14	WSD(max)	I[13]	-158.540	0.000	15.440	0.00E+00	-15.410	0.000
14	WSD(max)	1/4	-157.860	0.000	15.440	0.00E+00	-14.570	0.000
14	WSD(max)	2/4	-157.170	0.000	15.440	0.00E+00	-13.740	0.000
14	WSD(max)	3/4	-156.480	0.000	15.440	0.00E+00	-13.190	0.000
14	WSD(max)	J[15]	-155.800	0.000	15.440	0.00E+00	-12.910	0.000
14	WSD(min)	I[13]	-186.290	0.000	-19.990	0.00E+00	-32.200	0.000
14	WSD(min)	1/4	-185.600	0.000	-15.410	0.00E+00	-33.110	0.000
14	WSD(min)	2/4	-184.910	0.000	-10.870	0.00E+00	-34.020	0.000
14	WSD(min)	3/4	-184.230	0.000	-6.370	0.00E+00	-34.930	0.000
14	WSD(min)	J[15]	-183.540	0.000	-2.060	0.00E+00	-35.840	0.000
15	USD(max)	I[14]	-235.610	0.000	3.970	0.00E+00	-14.060	0.000
15	USD(max)	1/4	-234.690	0.000	7.200	0.00E+00	-13.440	0.000
15	USD(max)	2/4	-233.760	0.000	11.010	0.00E+00	-13.300	0.000
15	USD(max)	3/4	-232.830	0.000	17.950	0.00E+00	-13.640	0.000
15	USD(max)	J[16]	-231.910	0.000	24.810	0.00E+00	-14.450	0.000
15	USD(min)	I[14]	-293.670	0.000	-14.910	0.00E+00	-57.190	0.000
15	USD(min)	1/4	-292.570	0.000	-9.340	0.00E+00	-56.960	0.000
15	USD(min)	2/4	-291.470	0.000	-6.880	0.00E+00	-56.820	0.000
15	USD(min)	3/4	-290.380	0.000	-4.490	0.00E+00	-56.790	0.000
15	USD(min)	J[16]	-289.280	0.000	-2.160	0.00E+00	-56.860	0.000
15	WSD(max)	I[14]	-155.800	0.000	1.600	0.00E+00	-12.910	0.000
15	WSD(max)	1/4	-155.110	0.000	4.100	0.00E+00	-12.900	0.000
15	WSD(max)	2/4	-154.430	0.000	6.880	0.00E+00	-13.160	0.000
15	WSD(max)	3/4	-153.740	0.000	11.220	0.00E+00	-13.680	0.000
15	WSD(max)	J[16]	-153.050	0.000	15.510	0.00E+00	-14.460	0.000
15	WSD(min)	I[14]	-183.540	0.000	-7.670	0.00E+00	-35.320	0.000
15	WSD(min)	1/4	-182.860	0.000	-4.280	0.00E+00	-35.130	0.000
15	WSD(min)	2/4	-182.170	0.000	-2.830	0.00E+00	-35.020	0.000
15	WSD(min)	3/4	-181.480	0.000	-1.430	0.00E+00	-34.970	0.000
15	WSD(min)	J[16]	-180.800	0.000	-0.070	0.00E+00	-34.990	0.000
16	USD(max)	I[15]	-223.880	0.000	24.870	0.00E+00	-13.650	0.000
16	USD(max)	1/4	-222.960	0.000	24.870	0.00E+00	-14.100	0.000
16	USD(max)	2/4	-222.030	0.000	24.870	0.00E+00	-14.980	0.000
16	USD(max)	3/4	-221.110	0.000	24.870	0.00E+00	-16.280	0.000
16	USD(max)	J[17]	-220.180	0.000	30.030	0.00E+00	-18.000	0.000
16	USD(min)	I[15]	-293.670	0.000	-4.330	0.00E+00	-57.700	0.000
16	USD(min)	1/4	-292.570	0.000	2.620	0.00E+00	-59.090	0.000
16	USD(min)	2/4	-291.470	0.000	8.910	0.00E+00	-60.480	0.000
16	USD(min)	3/4	-290.380	0.000	11.980	0.00E+00	-61.880	0.000
16	USD(min)	J[17]	-289.280	0.000	15.030	0.00E+00	-63.270	0.000
16	WSD(max)	I[15]	-155.800	0.000	15.440	0.00E+00	-12.910	0.000
16	WSD(max)	1/4	-155.110	0.000	15.440	0.00E+00	-12.900	0.000
16	WSD(max)	2/4	-154.430	0.000	15.440	0.00E+00	-13.160	0.000
16	WSD(max)	3/4	-153.740	0.000	15.440	0.00E+00	-13.680	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]	-153.050	0.000	18.660	0.00E+00	-14.460	0.000
16	WSD(min)	I[15]	-183.540	0.000	-2.060	0.00E+00	-35.840	0.000
16	WSD(min)	1/4	-182.860	0.000	1.770	0.00E+00	-36.760	0.000
16	WSD(min)	2/4	-182.170	0.000	5.560	0.00E+00	-37.670	0.000
16	WSD(min)	3/4	-181.480	0.000	9.050	0.00E+00	-38.580	0.000
16	WSD(min)	J[17]	-180.800	0.000	11.490	0.00E+00	-39.490	0.000
17	USD(max)	I[16]	-231.910	0.000	24.810	0.00E+00	-14.450	0.000
17	USD(max)	1/4	-230.980	0.000	31.610	0.00E+00	-15.740	0.000
17	USD(max)	2/4	-230.060	0.000	38.350	0.00E+00	-17.490	0.000
17	USD(max)	3/4	-229.130	0.000	45.010	0.00E+00	-19.640	0.000
17	USD(max)	J[18]	-228.200	0.000	51.610	0.00E+00	-22.270	0.000
17	USD(min)	I[16]	-289.280	0.000	-2.160	0.00E+00	-56.860	0.000
17	USD(min)	1/4	-288.180	0.000	0.090	0.00E+00	-57.020	0.000
17	USD(min)	2/4	-287.080	0.000	2.280	0.00E+00	-57.280	0.000
17	USD(min)	3/4	-285.990	0.000	4.120	0.00E+00	-57.640	0.000
17	USD(min)	J[18]	-284.890	0.000	5.570	0.00E+00	-58.090	0.000
17	WSD(max)	I[16]	-153.050	0.000	15.510	0.00E+00	-14.460	0.000
17	WSD(max)	1/4	-152.370	0.000	19.760	0.00E+00	-15.500	0.000
17	WSD(max)	2/4	-151.680	0.000	23.970	0.00E+00	-16.790	0.000
17	WSD(max)	3/4	-151.000	0.000	28.130	0.00E+00	-18.210	0.000
17	WSD(max)	J[18]	-150.310	0.000	32.260	0.00E+00	-19.920	0.000
17	WSD(min)	I[16]	-180.800	0.000	-0.070	0.00E+00	-34.990	0.000
17	WSD(min)	1/4	-180.110	0.000	1.250	0.00E+00	-35.080	0.000
17	WSD(min)	2/4	-179.430	0.000	2.530	0.00E+00	-35.240	0.000
17	WSD(min)	3/4	-178.740	0.000	3.620	0.00E+00	-35.460	0.000
17	WSD(min)	J[18]	-178.050	0.000	4.510	0.00E+00	-35.750	0.000
18	USD(max)	I[17]	-220.180	0.000	30.030	0.00E+00	-18.000	0.000
18	USD(max)	1/4	-219.250	0.000	35.890	0.00E+00	-20.130	0.000
18	USD(max)	2/4	-218.330	0.000	41.680	0.00E+00	-22.660	0.000
18	USD(max)	3/4	-217.400	0.000	47.400	0.00E+00	-25.460	0.000
18	USD(max)	J[19]	-216.480	0.000	53.060	0.00E+00	-28.690	0.000
18	USD(min)	I[17]	-289.280	0.000	15.030	0.00E+00	-63.270	0.000
18	USD(min)	1/4	-288.180	0.000	18.050	0.00E+00	-64.660	0.000
18	USD(min)	2/4	-287.080	0.000	19.880	0.00E+00	-66.310	0.000
18	USD(min)	3/4	-285.990	0.000	19.880	0.00E+00	-68.040	0.000
18	USD(min)	J[19]	-284.890	0.000	19.880	0.00E+00	-69.770	0.000
18	WSD(max)	I[17]	-153.050	0.000	18.660	0.00E+00	-14.460	0.000
18	WSD(max)	1/4	-152.370	0.000	22.320	0.00E+00	-15.500	0.000
18	WSD(max)	2/4	-151.680	0.000	25.940	0.00E+00	-16.790	0.000
18	WSD(max)	3/4	-151.000	0.000	29.520	0.00E+00	-18.340	0.000
18	WSD(max)	J[19]	-150.310	0.000	33.050	0.00E+00	-20.130	0.000
18	WSD(min)	I[17]	-180.800	0.000	11.490	0.00E+00	-39.490	0.000
18	WSD(min)	1/4	-180.110	0.000	13.030	0.00E+00	-40.400	0.000
18	WSD(min)	2/4	-179.430	0.000	13.030	0.00E+00	-41.450	0.000
18	WSD(min)	3/4	-178.740	0.000	13.030	0.00E+00	-42.530	0.000
18	WSD(min)	J[19]	-178.050	0.000	13.030	0.00E+00	-43.610	0.000
19	USD(max)	I[18]	-228.200	0.000	51.610	0.00E+00	-22.270	0.000
19	USD(max)	1/4	-227.280	0.000	58.260	0.00E+00	-25.370	0.000
19	USD(max)	2/4	-226.350	0.000	64.880	0.00E+00	-28.940	0.000
19	USD(max)	3/4	-225.430	0.000	71.420	0.00E+00	-32.960	0.000
19	USD(max)	J[20]	-224.500	0.000	77.900	0.00E+00	-37.440	0.000
19	USD(min)	I[18]	-284.890	0.000	5.570	0.00E+00	-58.090	0.000
19	USD(min)	1/4	-283.790	0.000	7.000	0.00E+00	-59.300	0.000
19	USD(min)	2/4	-282.690	0.000	8.400	0.00E+00	-61.660	0.000
19	USD(min)	3/4	-281.590	0.000	9.770	0.00E+00	-64.230	0.000
19	USD(min)	J[20]	-280.500	0.000	11.130	0.00E+00	-67.010	0.000
19	WSD(max)	I[18]	-150.310	0.000	32.260	0.00E+00	-19.920	0.000
19	WSD(max)	1/4	-149.620	0.000	36.340	0.00E+00	-21.920	0.000
19	WSD(max)	2/4	-148.940	0.000	40.380	0.00E+00	-24.200	0.000
19	WSD(max)	3/4	-148.250	0.000	44.380	0.00E+00	-26.760	0.000
19	WSD(max)	J[20]	-147.570	0.000	48.340	0.00E+00	-29.610	0.000
19	WSD(min)	I[18]	-178.050	0.000	4.510	0.00E+00	-35.750	0.000
19	WSD(min)	1/4	-177.370	0.000	5.380	0.00E+00	-36.090	0.000
19	WSD(min)	2/4	-176.680	0.000	6.230	0.00E+00	-36.740	0.000
19	WSD(min)	3/4	-176.000	0.000	7.060	0.00E+00	-38.620	0.000
19	WSD(min)	J[20]	-175.310	0.000	7.860	0.00E+00	-40.650	0.000
20	USD(max)	I[19]	-216.480	0.000	53.060	0.00E+00	-28.690	0.000
20	USD(max)	1/4	-215.550	0.000	58.650	0.00E+00	-32.370	0.000
20	USD(max)	2/4	-214.620	0.000	64.880	0.00E+00	-36.500	0.000
20	USD(max)	3/4	-213.700	0.000	71.420	0.00E+00	-41.080	0.000
20	USD(max)	J[21]	-212.770	0.000	77.900	0.00E+00	-46.080	0.000
20	USD(min)	I[19]	-284.890	0.000	19.880	0.00E+00	-69.770	0.000
20	USD(min)	1/4	-283.790	0.000	19.880	0.00E+00	-71.500	0.000
20	USD(min)	2/4	-282.690	0.000	19.880	0.00E+00	-73.230	0.000
20	USD(min)	3/4	-281.590	0.000	19.880	0.00E+00	-74.960	0.000
20	USD(min)	J[21]	-280.500	0.000	19.880	0.00E+00	-76.690	0.000
20	WSD(max)	I[19]	-150.310	0.000	33.050	0.00E+00	-20.130	0.000
20	WSD(max)	1/4	-149.620	0.000	36.550	0.00E+00	-22.170	0.000
20	WSD(max)	2/4	-148.940	0.000	40.380	0.00E+00	-24.460	0.000
20	WSD(max)	3/4	-148.250	0.000	44.380	0.00E+00	-26.980	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]	-147.570	0.000	48.340	0.00E+00	-29.740	0.000
20	WSD(min)	I[19]	-178.050	0.000	13.030	0.00E+00	-43.610	0.000
20	WSD(min)	1/4	-177.370	0.000	13.030	0.00E+00	-44.690	0.000
20	WSD(min)	2/4	-176.680	0.000	13.030	0.00E+00	-45.770	0.000
20	WSD(min)	3/4	-176.000	0.000	13.030	0.00E+00	-46.850	0.000
20	WSD(min)	J[21]	-175.310	0.000	13.030	0.00E+00	-47.930	0.000
21	USD(max)	I[20]	-224.500	0.000	77.900	0.00E+00	-37.440	0.000
21	USD(max)	1/4	-222.850	0.000	82.490	0.00E+00	-40.920	0.000
21	USD(max)	2/4	-221.190	0.000	87.040	0.00E+00	-44.600	0.000
21	USD(max)	3/4	-219.540	0.000	91.560	0.00E+00	-48.480	0.000
21	USD(max)	J[22]	-217.880	0.000	96.050	0.00E+00	-50.210	0.000
21	USD(min)	I[20]	-280.500	0.000	11.130	0.00E+00	-67.010	0.000
21	USD(min)	1/4	-278.540	0.000	12.080	0.00E+00	-69.120	0.000
21	USD(min)	2/4	-276.580	0.000	13.010	0.00E+00	-71.340	0.000
21	USD(min)	3/4	-274.620	0.000	13.940	0.00E+00	-73.660	0.000
21	USD(min)	J[22]	-272.660	0.000	14.850	0.00E+00	-76.080	0.000
21	WSD(max)	I[20]	-147.570	0.000	48.340	0.00E+00	-29.610	0.000
21	WSD(max)	1/4	-146.340	0.000	51.140	0.00E+00	-31.800	0.000
21	WSD(max)	2/4	-145.120	0.000	53.920	0.00E+00	-34.090	0.000
21	WSD(max)	3/4	-143.890	0.000	56.680	0.00E+00	-36.440	0.000
21	WSD(max)	J[22]	-142.670	0.000	59.420	0.00E+00	-37.670	0.000
21	WSD(min)	I[20]	-175.310	0.000	7.860	0.00E+00	-40.650	0.000
21	WSD(min)	1/4	-174.090	0.000	8.430	0.00E+00	-42.210	0.000
21	WSD(min)	2/4	-172.860	0.000	8.980	0.00E+00	-43.840	0.000
21	WSD(min)	3/4	-171.640	0.000	9.530	0.00E+00	-45.550	0.000
21	WSD(min)	J[22]	-170.410	0.000	10.060	0.00E+00	-47.350	0.000
22	USD(max)	I[21]	-212.770	0.000	77.900	0.00E+00	-46.080	0.000
22	USD(max)	1/4	-211.120	0.000	82.490	0.00E+00	-49.910	0.000
22	USD(max)	2/4	-209.460	0.000	87.040	0.00E+00	-53.810	0.000
22	USD(max)	3/4	-207.810	0.000	91.560	0.00E+00	-57.910	0.000
22	USD(max)	J[30]	-206.160	0.000	96.050	0.00E+00	-62.190	0.000
22	USD(min)	I[21]	-280.500	0.000	19.880	0.00E+00	-76.690	0.000
22	USD(min)	1/4	-278.540	0.000	19.880	0.00E+00	-77.920	0.000
22	USD(min)	2/4	-276.580	0.000	19.880	0.00E+00	-79.160	0.000
22	USD(min)	3/4	-274.620	0.000	19.880	0.00E+00	-80.390	0.000
22	USD(min)	J[30]	-272.660	0.000	19.880	0.00E+00	-81.620	0.000
22	WSD(max)	I[21]	-147.570	0.000	48.340	0.00E+00	-29.740	0.000
22	WSD(max)	1/4	-146.340	0.000	51.140	0.00E+00	-31.860	0.000
22	WSD(max)	2/4	-145.120	0.000	53.920	0.00E+00	-34.090	0.000
22	WSD(max)	3/4	-143.890	0.000	56.680	0.00E+00	-36.440	0.000
22	WSD(max)	J[30]	-142.670	0.000	59.420	0.00E+00	-38.910	0.000
22	WSD(min)	I[21]	-175.310	0.000	13.030	0.00E+00	-47.930	0.000
22	WSD(min)	1/4	-174.090	0.000	13.030	0.00E+00	-48.700	0.000
22	WSD(min)	2/4	-172.860	0.000	13.030	0.00E+00	-49.470	0.000
22	WSD(min)	3/4	-171.640	0.000	13.030	0.00E+00	-50.240	0.000
22	WSD(min)	J[30]	-170.410	0.000	13.030	0.00E+00	-51.020	0.000
23	USD(max)	I[22]	-19.880	0.000	-165.280	0.00E+00	1.500	0.000
23	USD(max)	1/4	-19.880	0.000	-156.520	0.00E+00	9.600	0.000
23	USD(max)	2/4	-19.880	0.000	-147.750	0.00E+00	17.850	0.000
23	USD(max)	3/4	-19.880	0.000	-138.870	0.00E+00	26.120	0.000
23	USD(max)	J[23]	-19.880	0.000	-129.630	0.00E+00	33.870	0.000
23	USD(min)	I[22]	-122.240	0.000	-210.690	0.00E+00	-34.310	0.000
23	USD(min)	1/4	-122.240	0.000	-200.360	0.00E+00	-24.900	0.000
23	USD(min)	2/4	-122.240	0.000	-190.030	0.00E+00	-16.170	0.000
23	USD(min)	3/4	-122.240	0.000	-179.710	0.00E+00	-7.900	0.000
23	USD(min)	J[23]	-122.240	0.000	-169.380	0.00E+00	-0.360	0.000
23	WSD(max)	I[22]	-13.030	0.000	-110.240	0.00E+00	-0.150	0.000
23	WSD(max)	1/4	-13.030	0.000	-104.840	0.00E+00	5.660	0.000
23	WSD(max)	2/4	-13.030	0.000	-99.430	0.00E+00	11.160	0.000
23	WSD(max)	3/4	-13.030	0.000	-94.030	0.00E+00	16.320	0.000
23	WSD(max)	J[23]	-13.030	0.000	-88.630	0.00E+00	21.170	0.000
23	WSD(min)	I[22]	-75.390	0.000	-131.680	0.00E+00	-21.440	0.000
23	WSD(min)	1/4	-75.390	0.000	-125.230	0.00E+00	-15.020	0.000
23	WSD(min)	2/4	-75.390	0.000	-118.770	0.00E+00	-8.920	0.000
23	WSD(min)	3/4	-75.390	0.000	-112.320	0.00E+00	-3.140	0.000
23	WSD(min)	J[23]	-75.390	0.000	-105.860	0.00E+00	1.720	0.000
24	USD(max)	I[23]	-19.880	0.000	-129.630	0.00E+00	33.870	0.000
24	USD(max)	1/4	-19.880	0.000	-117.010	0.00E+00	43.620	0.000
24	USD(max)	2/4	-19.880	0.000	-104.400	0.00E+00	52.410	0.000
24	USD(max)	3/4	-19.880	0.000	-91.790	0.00E+00	60.230	0.000
24	USD(max)	J[24]	-19.880	0.000	-79.180	0.00E+00	67.130	0.000
24	USD(min)	I[23]	-122.240	0.000	-169.380	0.00E+00	-0.360	0.000
24	USD(min)	1/4	-122.240	0.000	-155.280	0.00E+00	9.040	0.000
24	USD(min)	2/4	-122.240	0.000	-141.180	0.00E+00	17.630	0.000
24	USD(min)	3/4	-122.240	0.000	-127.090	0.00E+00	25.400	0.000
24	USD(min)	J[24]	-122.240	0.000	-112.990	0.00E+00	32.350	0.000
24	WSD(max)	I[23]	-13.030	0.000	-88.630	0.00E+00	21.170	0.000
24	WSD(max)	1/4	-13.030	0.000	-81.250	0.00E+00	27.260	0.000
24	WSD(max)	2/4	-13.030	0.000	-73.870	0.00E+00	32.750	0.000
24	WSD(max)	3/4	-13.030	0.000	-66.500	0.00E+00	37.650	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]	-13.030	0.000	-58.440	0.00E+00	41.950	0.000
24	WSD(min)	I[23]	-75.390	0.000	-105.860	0.00E+00	1.720	0.000
24	WSD(min)	1/4	-75.390	0.000	-97.050	0.00E+00	7.520	0.000
24	WSD(min)	2/4	-75.390	0.000	-88.240	0.00E+00	12.810	0.000
24	WSD(min)	3/4	-75.390	0.000	-79.430	0.00E+00	17.600	0.000
24	WSD(min)	J[24]	-75.390	0.000	-70.620	0.00E+00	21.890	0.000
25	USD(max)	I[24]	-19.880	0.000	-79.180	0.00E+00	67.130	0.000
25	USD(max)	1/4	-19.880	0.000	-66.520	0.00E+00	73.220	0.000
25	USD(max)	2/4	-19.880	0.000	-53.860	0.00E+00	78.350	0.000
25	USD(max)	3/4	-19.880	0.000	-41.200	0.00E+00	82.500	0.000
25	USD(max)	J[25]	-19.880	0.000	-28.540	0.00E+00	85.680	0.000
25	USD(min)	I[24]	-122.240	0.000	-112.990	0.00E+00	32.350	0.000
25	USD(min)	1/4	-122.240	0.000	-98.840	0.00E+00	38.510	0.000
25	USD(min)	2/4	-122.240	0.000	-84.690	0.00E+00	43.850	0.000
25	USD(min)	3/4	-122.240	0.000	-70.540	0.00E+00	47.710	0.000
25	USD(min)	J[25]	-122.240	0.000	-56.390	0.00E+00	50.470	0.000
25	WSD(max)	I[24]	-13.030	0.000	-58.440	0.00E+00	41.950	0.000
25	WSD(max)	1/4	-13.030	0.000	-49.600	0.00E+00	45.740	0.000
25	WSD(max)	2/4	-13.030	0.000	-40.750	0.00E+00	48.920	0.000
25	WSD(max)	3/4	-13.030	0.000	-31.910	0.00E+00	51.490	0.000
25	WSD(max)	J[25]	-13.030	0.000	-23.070	0.00E+00	53.460	0.000
25	WSD(min)	I[24]	-75.390	0.000	-70.620	0.00E+00	21.890	0.000
25	WSD(min)	1/4	-75.390	0.000	-61.770	0.00E+00	25.680	0.000
25	WSD(min)	2/4	-75.390	0.000	-52.930	0.00E+00	28.970	0.000
25	WSD(min)	3/4	-75.390	0.000	-44.090	0.00E+00	31.750	0.000
25	WSD(min)	J[25]	-75.390	0.000	-35.240	0.00E+00	34.030	0.000
26	USD(max)	I[25]	-19.880	0.000	-28.540	0.00E+00	85.680	0.000
26	USD(max)	1/4	-19.880	0.000	-15.930	0.00E+00	87.890	0.000
26	USD(max)	2/4	-19.880	0.000	-3.320	0.00E+00	89.140	0.000
26	USD(max)	3/4	-19.880	0.000	9.290	0.00E+00	89.420	0.000
26	USD(max)	J[26]	-19.880	0.000	21.900	0.00E+00	88.740	0.000
26	USD(min)	I[25]	-122.240	0.000	-56.390	0.00E+00	50.470	0.000
26	USD(min)	1/4	-122.240	0.000	-42.290	0.00E+00	52.400	0.000
26	USD(min)	2/4	-122.240	0.000	-28.200	0.00E+00	53.520	0.000
26	USD(min)	3/4	-122.240	0.000	-14.100	0.00E+00	53.820	0.000
26	USD(min)	J[26]	-122.240	0.000	0.000	0.00E+00	53.300	0.000
26	WSD(max)	I[25]	-13.030	0.000	-23.070	0.00E+00	53.460	0.000
26	WSD(max)	1/4	-13.030	0.000	-14.260	0.00E+00	54.820	0.000
26	WSD(max)	2/4	-13.030	0.000	-5.440	0.00E+00	55.580	0.000
26	WSD(max)	3/4	-13.030	0.000	3.370	0.00E+00	55.730	0.000
26	WSD(max)	J[26]	-13.030	0.000	12.180	0.00E+00	55.290	0.000
26	WSD(min)	I[25]	-75.390	0.000	-35.240	0.00E+00	34.030	0.000
26	WSD(min)	1/4	-75.390	0.000	-26.430	0.00E+00	35.790	0.000
26	WSD(min)	2/4	-75.390	0.000	-17.620	0.00E+00	37.050	0.000
26	WSD(min)	3/4	-75.390	0.000	-8.810	0.00E+00	37.800	0.000
26	WSD(min)	J[26]	-75.390	0.000	0.000	0.00E+00	38.060	0.000
27	USD(max)	I[26]	-19.880	0.000	21.900	0.00E+00	88.740	0.000
27	USD(max)	1/4	-19.880	0.000	31.860	0.00E+00	87.180	0.000
27	USD(max)	2/4	-19.880	0.000	43.090	0.00E+00	85.270	0.000
27	USD(max)	3/4	-19.880	0.000	54.890	0.00E+00	82.860	0.000
27	USD(max)	J[27]	-19.880	0.000	66.690	0.00E+00	79.490	0.000
27	USD(min)	I[26]	-122.240	0.000	0.000	0.00E+00	53.300	0.000
27	USD(min)	1/4	-122.240	0.000	11.970	0.00E+00	52.040	0.000
27	USD(min)	2/4	-122.240	0.000	23.930	0.00E+00	50.090	0.000
27	USD(min)	3/4	-122.240	0.000	35.900	0.00E+00	47.470	0.000
27	USD(min)	J[27]	-122.240	0.000	47.870	0.00E+00	44.170	0.000
27	WSD(max)	I[26]	-13.030	0.000	12.180	0.00E+00	55.290	0.000
27	WSD(max)	1/4	-13.030	0.000	19.550	0.00E+00	54.290	0.000
27	WSD(max)	2/4	-13.030	0.000	26.930	0.00E+00	52.790	0.000
27	WSD(max)	3/4	-13.030	0.000	34.310	0.00E+00	50.780	0.000
27	WSD(max)	J[27]	-13.030	0.000	41.680	0.00E+00	48.280	0.000
27	WSD(min)	I[26]	-75.390	0.000	0.000	0.00E+00	38.060	0.000
27	WSD(min)	1/4	-75.390	0.000	7.380	0.00E+00	37.800	0.000
27	WSD(min)	2/4	-75.390	0.000	14.750	0.00E+00	37.050	0.000
27	WSD(min)	3/4	-75.390	0.000	22.130	0.00E+00	35.790	0.000
27	WSD(min)	J[27]	-75.390	0.000	29.510	0.00E+00	34.030	0.000
28	USD(max)	I[27]	-19.880	0.000	66.690	0.00E+00	79.490	0.000
28	USD(max)	1/4	-19.880	0.000	78.540	0.00E+00	75.140	0.000
28	USD(max)	2/4	-19.880	0.000	90.380	0.00E+00	69.830	0.000
28	USD(max)	3/4	-19.880	0.000	102.230	0.00E+00	63.540	0.000
28	USD(max)	J[28]	-19.880	0.000	114.080	0.00E+00	56.290	0.000
28	USD(min)	I[27]	-122.240	0.000	47.870	0.00E+00	44.170	0.000
28	USD(min)	1/4	-122.240	0.000	59.880	0.00E+00	40.170	0.000
28	USD(min)	2/4	-122.240	0.000	71.890	0.00E+00	35.440	0.000
28	USD(min)	3/4	-122.240	0.000	83.370	0.00E+00	29.780	0.000
28	USD(min)	J[28]	-122.240	0.000	93.370	0.00E+00	23.420	0.000
28	WSD(max)	I[27]	-13.030	0.000	41.680	0.00E+00	48.280	0.000
28	WSD(max)	1/4	-13.030	0.000	49.090	0.00E+00	45.250	0.000
28	WSD(max)	2/4	-13.030	0.000	56.490	0.00E+00	41.890	0.000
28	WSD(max)	3/4	-13.030	0.000	63.890	0.00E+00	37.960	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]	-13.030	0.000	71.300	0.00E+00	33.420	0.000
28	WSD(min)	I[27]	-75.390	0.000	29.510	0.00E+00	34.030	0.000
28	WSD(min)	1/4	-75.390	0.000	36.910	0.00E+00	31.750	0.000
28	WSD(min)	2/4	-75.390	0.000	44.310	0.00E+00	28.890	0.000
28	WSD(min)	3/4	-75.390	0.000	51.720	0.00E+00	24.930	0.000
28	WSD(min)	J[28]	-75.390	0.000	59.120	0.00E+00	20.480	0.000
29	USD(max)	I[28]	-19.880	0.000	114.080	0.00E+00	56.290	0.000
29	USD(max)	1/4	-19.880	0.000	127.090	0.00E+00	48.100	0.000
29	USD(max)	2/4	-19.880	0.000	141.180	0.00E+00	38.940	0.000
29	USD(max)	3/4	-19.880	0.000	155.280	0.00E+00	28.820	0.000
29	USD(max)	J[29]	-19.880	0.000	169.380	0.00E+00	17.740	0.000
29	USD(min)	I[28]	-122.240	0.000	93.370	0.00E+00	23.420	0.000
29	USD(min)	1/4	-122.240	0.000	103.330	0.00E+00	16.410	0.000
29	USD(min)	2/4	-122.240	0.000	113.290	0.00E+00	8.720	0.000
29	USD(min)	3/4	-122.240	0.000	123.240	0.00E+00	0.360	0.000
29	USD(min)	J[29]	-122.240	0.000	133.200	0.00E+00	-8.690	0.000
29	WSD(max)	I[28]	-13.030	0.000	71.300	0.00E+00	33.420	0.000
29	WSD(max)	1/4	-13.030	0.000	79.430	0.00E+00	28.300	0.000
29	WSD(max)	2/4	-13.030	0.000	88.240	0.00E+00	22.580	0.000
29	WSD(max)	3/4	-13.030	0.000	97.050	0.00E+00	16.530	0.000
29	WSD(max)	J[29]	-13.030	0.000	105.860	0.00E+00	9.990	0.000
29	WSD(min)	I[28]	-75.390	0.000	59.120	0.00E+00	20.480	0.000
29	WSD(min)	1/4	-75.390	0.000	66.500	0.00E+00	15.530	0.000
29	WSD(min)	2/4	-75.390	0.000	73.870	0.00E+00	10.080	0.000
29	WSD(min)	3/4	-75.390	0.000	81.250	0.00E+00	4.120	0.000
29	WSD(min)	J[29]	-75.390	0.000	88.630	0.00E+00	-2.340	0.000
30	USD(max)	I[29]	-19.880	0.000	169.380	0.00E+00	17.740	0.000
30	USD(max)	1/4	-19.880	0.000	179.710	0.00E+00	9.020	0.000
30	USD(max)	2/4	-19.880	0.000	190.030	0.00E+00	-0.070	0.000
30	USD(max)	3/4	-19.880	0.000	200.360	0.00E+00	-9.090	0.000
30	USD(max)	J[30]	-19.880	0.000	210.690	0.00E+00	-18.550	0.000
30	USD(min)	I[29]	-122.240	0.000	133.200	0.00E+00	-8.690	0.000
30	USD(min)	1/4	-122.240	0.000	140.500	0.00E+00	-15.750	0.000
30	USD(min)	2/4	-122.240	0.000	147.790	0.00E+00	-23.180	0.000
30	USD(min)	3/4	-122.240	0.000	155.090	0.00E+00	-30.970	0.000
30	USD(min)	J[30]	-122.240	0.000	162.380	0.00E+00	-39.120	0.000
30	WSD(max)	I[29]	-13.030	0.000	105.860	0.00E+00	9.990	0.000
30	WSD(max)	1/4	-13.030	0.000	112.320	0.00E+00	4.880	0.000
30	WSD(max)	2/4	-13.030	0.000	118.770	0.00E+00	-0.510	0.000
30	WSD(max)	3/4	-13.030	0.000	125.230	0.00E+00	-6.160	0.000
30	WSD(max)	J[30]	-13.030	0.000	131.680	0.00E+00	-12.080	0.000
30	WSD(min)	I[29]	-75.390	0.000	88.630	0.00E+00	-2.340	0.000
30	WSD(min)	1/4	-75.390	0.000	94.030	0.00E+00	-7.390	0.000
30	WSD(min)	2/4	-75.390	0.000	99.430	0.00E+00	-12.710	0.000
30	WSD(min)	3/4	-75.390	0.000	104.840	0.00E+00	-18.300	0.000
30	WSD(min)	J[30]	-75.390	0.000	110.240	0.00E+00	-24.160	0.000

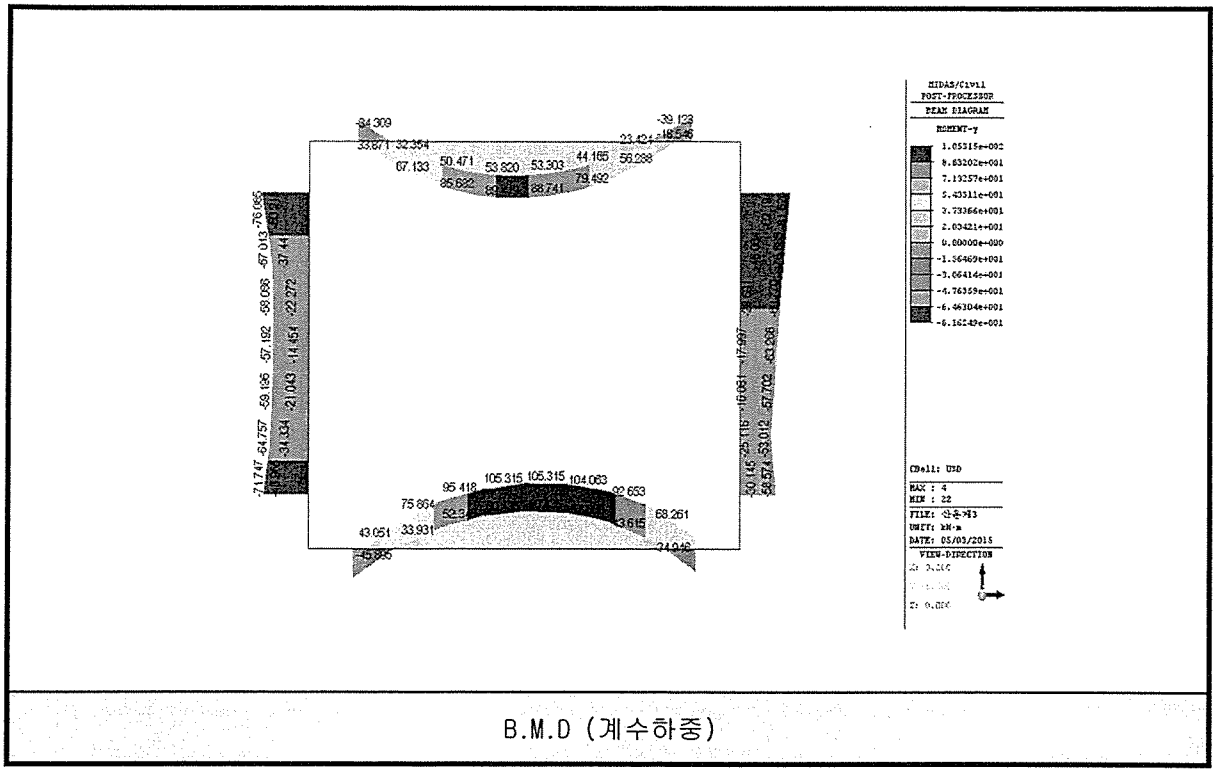
9. 단면력 요약

구분	위치	부재	극한하중			사용하중	비고
			Mu(kN · m)	Su(kN)	Pu(kN)	M(kN · m)	
상부슬래브	단부	23,30	-39.12	210.69	-	-24.16	
	중앙부	26,27	89.42	66.69	-	55.73	
벽체	상단부 (축력최대)	21.22	-57.18	96.05	-280.50	-29.61	
	상단부 (모멘트최대)	21,22	-81.62	96.05	-247.75	-51.02	
	중앙부 (축력최대)	15,16	-25.30	30.03	-293.67	-12.90	
	중앙부 (모멘트최대)	15,16	-63.27	-14.91	-261.88	-39.49	
	하단부 (축력최대)	9,10	-57.92	-97.54	-310.68	-21.09	
	하단부 (모멘트최대)	9,10	-71.75	-97.54	-291.20	-44.84	
하부슬래브	단부	1,8	-45.89	215.18	-	-27.33	
	중앙부	4,5	105.31	53.37	-	65.54	

-'전단력과 사용하중 상태에서의 모멘트는 선택 부재에서의 최대값 적용

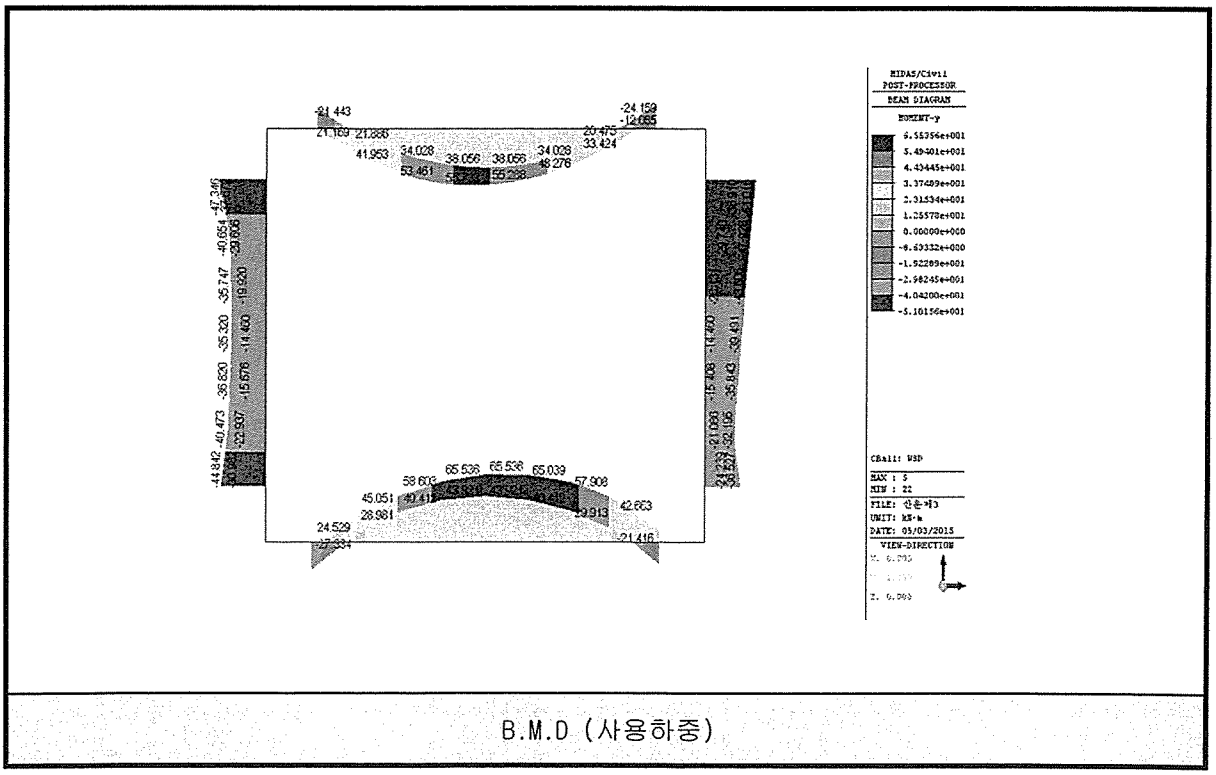
10. 단면력도

(1) 극한하중 모멘트도



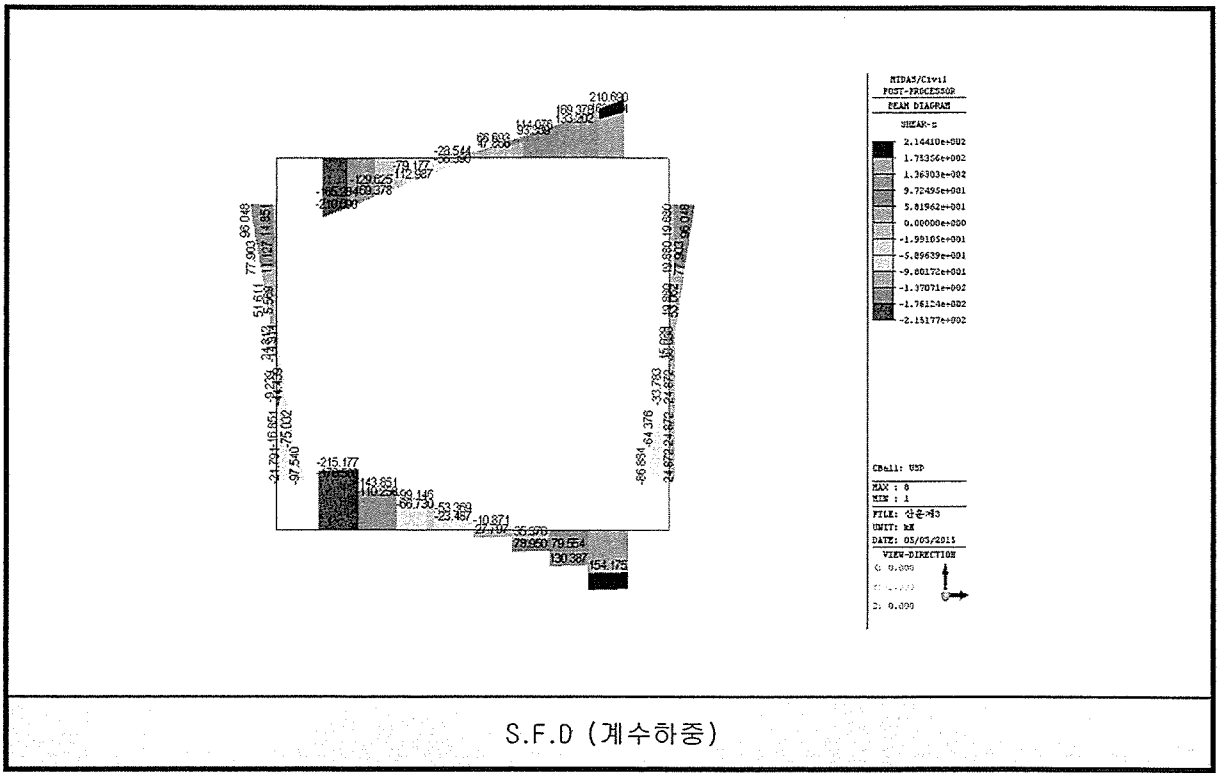
B.M.D (계수하중)

(2) 사용하중 모멘트도



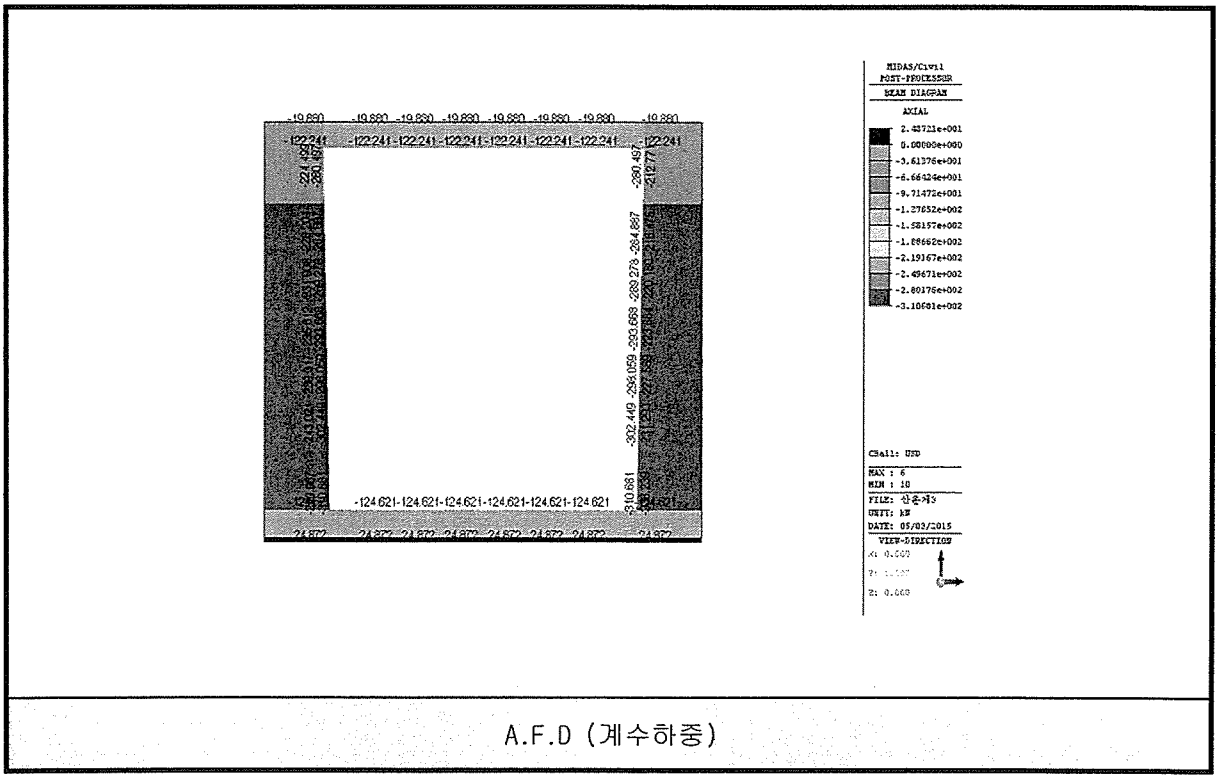
B.M.D (사용하중)

(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	24.160
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Su (kN)
1000.0	500.0	400.0	100.0	39.120	210.690

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 = 273.129 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) = 273.129 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 364.173 mm^2 ※ As = 364.173 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 > 39.120 kN · m ----- ∴ O.K. [사용률 = 5.666]

* 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 ∴ 최소전단 철근을 배근하는것이 좋다.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 24.16 × 1000000 / [1588.8×(400 - 83.857/3)]

= 40.872 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 / 40.872) - 2.5 × 92 = 1696.732 mm

300 x (210 / fs) = 300 × (210 / 40.872) = 1541.386 mm

Sa는 작은 값인 1541.386 mm 를 적용

S = 125.00 ≤ Sa (= 1541.386 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	55.730
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	89.420	66.690

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 = 846.706 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) = 846.706 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1128.941 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 > 89.420 kN · m ----- ∴ O.K. [사용률 = 1.839]

* 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)]

= 55.73 × 1000000 / [1588.8×(300 - 71.32/3)]

= 126.986 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 / 126.986) - 2.5 × 92 = 390.149 mm

300 x (210 / fs) = 300 × (210 / 126.986) = 496.119 mm

Sa는 작은 값인 390.149 mm 를 적용

S = 125.00 ≤ Sa (= 390.149 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	27.330
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	550.0	450.0	100.0	45.890	215.180

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 = 284.684 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) = 284.684 mm^2 As(min) = 1575.000 mm^2

4/3×As(req) = 379.579 mm^2 ※ As = 379.579 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 > 45.890 kN · m ----- ∴ O.K [사용률 = 5.453]

* 전단력 검토

$\varnothing v \cdot Vc = \varnothing v \cdot 1/6 \cdot \sqrt{fck} \cdot B \cdot d / 1000 =$ 271.579 kN

1/2 x Φv x Vc = 135.790 kN ≤ Vu ≤Φv x Vc ∴ 최소전단 철근을 배근하는것이 좋다.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

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

$= 27.33 \times 1000000 / [1588.8 \times (450 - 89.542/3)]$

= 40.941 Mpa

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

$= -7 \times 1588.8/1000 + 7 \times 1588.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 450/(7 \times 1588.8)]}$

= 89.542 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 / 40.941) - 2.5 × 92 = 1693.479 mm

300 x (210 / fs) = 300 × (210 / 40.941) = 1538.783 mm

Sa는 작은 값인 1538.783 mm 를 적용

S = 125.00 ≤ Sa (= 1538.783 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	65.540
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	450.0	350.0	100.0	105.310	53.370

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 = 852.063 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) = 852.063 mm^2 As(min) = 1225.000 mm^2

4/3×As(req) = 1136.084 mm^2 ※ As = 1136.084 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 > 105.310 kN · m ----- ∴ O.K [사용률 = 1.833]

* 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)]

= 65.54 × 1000000 / [1588.8×(350 - 77.81/3)]

= 127.294 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 / 127.294) - 2.5 × 92 = 388.648 mm

300 x (210 / fs) = 300 × (210 / 127.294) = 494.918 mm

Sa는 작은 값인 388.648 mm 를 적용

S = 125.00 ≤ Sa (= 388.648 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	51.020
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	81.620	96.050

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 = 573.249 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) = 573.249 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 764.332 mm^2 ※ As = 764.332 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 > 81.620 kN · m ----- ∴ O.K [사용률 = 2.716]

* 전단력 검토

$\phi v \cdot Vc = \phi v \cdot 1/6 \cdot \sqrt{fck} \cdot B \cdot d / 1000 =$ 232.782 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

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

$= 51.02 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 86.312 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 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 / 86.312) - 2.5 × 92 = 682.384 mm

300 x (210 / fs) = 300 × (210 / 86.312) = 729.908 mm

Sa는 작은 값인 682.384 mm 를 적용

S = 125.00 ≤ Sa (= 682.384 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	39.490
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	63.270	14.910

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 = 595.092 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) = 595.092 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 793.456 mm^2 ※ As = 793.456 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 > 63.270 kN · m ----- ∴ O.K [사용률 = 2.599]

* 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)]

= 39.49 × 1000000 / [1588.8×(300 - 71.32/3)]

= 89.981 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 / 89.981) - 2.5 × 92 = 645.182 mm

300 x (210 / fs) = 300 × (210 / 89.981) = 700.145 mm

Sa는 작은 값인 645.182 mm 를 적용

S = 125.00 ≤ Sa (= 645.182 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	44.840
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	71.750	97.540

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 = 503.229 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) = 503.229 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 670.973 mm^2 ※ As = 670.973 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 > 71.750 kN · m ----- ∴ O.K [사용률 = 3.089]

* 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)]

= 44.84 × 1000000 / [1588.8×(400 - 83.857/3)]

= 75.857 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 / 75.857) - 2.5 × 92 = 808.132 ㎜

300 x (210 / fs) = 300 × (210 / 75.857) = 830.506 ㎜

Sa는 작은 값인 808.132 ㎜ 를 적용

S = 125.00 ≤ Sa (= 808.132 ㎜) ----- ∴ O.K.

⑤ 벽체 상단부 - Pmax 일 경우

설계축력	:	Pu	=	280.50	(kN) ,	설계모멘트	:	Mu	=	57.18	(kN · m)	
설계전단력	:	Vu	=	96.05	(kN) ,	사용 모멘트	:	M	=	29.61	(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	=	203.85 (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 = 225.339 mm , a = k1 x c = 188.383 mm 사용

fs = 600 x (400.000 - 225.339) / 225.339 = 400 Mpa (fs ≤ fy)

fs' = 600 x (225.339 - 100.000) / 225.339 = 333.7344 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 188.383 x 1000 = 4724653.676 N

Cs = 794.400 x (333.734 - 0.836 x 30) = 245195.046 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 4724653.676 + 245195.046 - 635520.000 = 4334328.722 N

Mn' = 4724653.676 x (400.0 - 188.383 / 2) + 245195.046 x (400.0 - 100.0)

= 1518397010.546 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 350.317842 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4334328.722

ΦPn = 3034030.105 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4334328.722 = 3034.030 kN ≥ Pu = 280.500 kN ------ O.K!!!

ΦMn = ΦPn x 203.850 = 618.488 kN.m ≥ Mu = 57.180 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 242109.998 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 29.61 × 1000000 / [1588.8×(400 - 83.857/3)]

= 50.092 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 / 50.092) - 2.5 × 92 = ######## mm

300 x (210 / fs) = 300 × (210 / 50.092) = ######## mm

Sa는 작은 값인 ######## mm 를 적용

S = 125.00 ≤ Sa (= 1257.679 mm) ----- ∴ O.K.

⑥ 벽체 상단부 - Mmax 일 경우

설계축력	:	Pu	=	247.75	(kN) ,	설계모멘트	:	Mu	=	81.62	(kN · m)	
설계전단력	:	Vu	=	96.05	(kN) ,	사용 모멘트	:	M	=	51.02	(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	=	329.45 (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 = 114.074 mm , a = k1 x c = 95.365 mm 사용

fs = 600 x (400.000 - 114.074) / 114.074 = 400 Mpa (fs ≤ fy)

fs' = 600 x (114.074 - 100.000) / 114.074 = 74.02333 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 95.365 x 1000 = 2391765.386 N

Cs = 794.400 x (74.023 - 0.836 x 30) = 38880.579 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2391765.386 + 38880.579 - 635520.000 = 1795125.965 N

Mn' = 2391765.386 x (400.0 - 95.365 / 2) + 38880.579 x (400.0 - 100.0)

= 854324441.612 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 475.912580 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 1795125.965

ΦPn = 1256588.175 < ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.730

ΦPn = 0.73 x 1795125.965 = 1310.442 kN ≥ Pu = 247.750 kN ------- O.K!!!

ΦMn = ΦPn x 329.445 = 431.719 kN.m ≥ Mu = 81.620 kN.m ------- O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 241020.910 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

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

$= 51.02 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 86.312 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 / 86.312) - 2.5 × 92 = 682.384 mm

300 x (210 / fs) = 300 × (210 / 86.312) = 729.908 mm

Sa는 작은 값인 682.384 mm 를 적용

S = 125.00 ≤ Sa (= 682.384 mm) ----- ∴ O.K.

⑦ 벽체 중앙부 - Pmax 일 경우

설계축력	:	Pu	=	293.67	(kN) ,	설계모멘트	:	Mu	=	25.30	(kN·m)	
설계전단력	:	Vu	=	30.03	(kN) ,	사용 모멘트	:	M	=	12.90	(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	=	86.15 (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 = 284.925 mm , a = k1 x c = 238.197 mm 사용

fs = 600 x (300.000 - 284.925) / 284.925 = 31.74475 Mpa (fs ≤ fy)

fs' = 600 x (284.925 - 100.000) / 284.925 = 389.4184 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 238.197 x 1000 = 5973992.477 N

Cs = 794.400 x (389.418 - 0.836 x 30) = 289430.437 N

Ts = 1588.800 x 31.745 = 50436.063 N

Pn = 5973992.477 + 289430.437 - 50436.063 = 6212986.852 N

Mn' = 5973992.477 x (300.0 - 238.197 / 2) + 289430.437 x (300.0 - 100.0)

= 1138588892.121 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 183.258524 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 6212986.852

ΦPn = 4349090.796 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 6212986.852 = 4349.091 kN ≥ Pu = 293.670 kN ------- O.K!!!

ΦMn = ΦPn x 86.151 = 374.679 kN.m ≥ Mu = 25.300 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 244989.429 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

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

$= 12.9 \times 1000000 / [1588.8 \times (300 - 71.32/3)]$

= 29.394 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 / 29.394) - 2.5 × 92 = 2449.14 mm

300 x (210 / fs) = 300 × (210 / 29.394) = 2143.31 mm

Sa는 작은 값인 2143.31 mm 를 적용

S = 125.00 ≤ Sa (= 2143.313 mm) ----- ∴ O.K.

⑧ 벽체 중앙부 - Mmax 일 경우

설계축력	:	Pu	=	261.88	(kN) ,	설계모멘트	:	Mu	=	63.27	(kN · m)
설계전단력	:	Vu	=	14.91	(kN) ,	사용 모멘트	:	M	=	39.49	(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 =	241.60 (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 (0.0060) < 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 = 115.048 mm , a = k1 x c = 96.180 mm 사용

fs = 600 x (300.000 - 115.048) / 115.048 = 400 Mpa (fs ≤ fy)

fs' = 600 x (115.048 - 100.000) / 115.048 = 78.47673 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 96.180 x 1000 = 2412189.223 N

Cs = 794.400 x (78.477 - 0.836 x 30) = 42418.366 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2412189.223 + 42418.366 - 635520.000 = 1819087.590 N

Mn' = 2412189.223 x (300.0 - 96.180 / 2) + 42418.366 x (300.0 - 100.0)

= 616138509.459 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 338.706608 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 1819087.590

ΦPn = 1273361.313 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 1819087.590 = 1273.361 kN ≥ Pu = 261.880 kN ------ O.K!!!

ΦMn = ΦPn x 241.599 = 307.643 kN.m ≥ Mu = 63.270 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 243667.975 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

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

$= 39.49 \times 1000000 / [1588.8 \times (300 - 71.32/3)]$

= 89.981 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 / 89.981) - 2.5 × 92 = 645.18 mm

300 x (210 / fs) = 300 × (210 / 89.981) = 700.15 mm

Sa는 작은 값인 645.18 mm 를 적용

S = 125.00 ≤ Sa (= 645.182 mm) ----- ∴ O.K.

⑨ 벽체 하단부 - Pmax 일 경우

설계축력	:	Pu	=	310.68	(kN) ,	설계모멘트	:	Mu	=	57.92	(kN·m)	
설계전단력	:	Vu	=	97.54	(kN) ,	사용 모멘트	:	M	=	21.09	(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	=	186.43 (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 = 247.142 mm , a = k1 x c = 206.610 mm 사용

fs = 600 x (400.000 - 247.142) / 247.142 = 371.1028 Mpa (fs ≤ fy)

fs' = 600 x (247.142 - 100.000) / 247.142 = 357.2243 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 206.610 x 1000 = 5181790.367 N

Cs = 794.400 x (357.224 - 0.836 x 30) = 263855.429 N

Ts = 1588.800 x 371.103 = 589608.149 N

Pn = 5181790.367 + 263855.429 - 589608.149 = 4856037.648 N

Mn' = 5181790.367 x (400.0 - 206.610 / 2) + 263855.429 x (400.0 - 100.0)

= 1616566726.806 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 332.897342 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4856037.648

ΦPn = 3399226.353 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4856037.648 = 3399.226 kN ≥ Pu = 310.680 kN ——— O.K!!!

ΦMn = ΦPn x 186.430 = 633.717 kN.m ≥ Mu = 57.920 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 243113.621 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

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

$= 21.09 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 35.679 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 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 / 35.679) - 2.5 × 92 = 1977.20 mm

300 x (210 / fs) = 300 × (210 / 35.679) = 1765.76 mm

Sa는 작은 값인 1765.76 mm 를 적용

S = 125.00 ≤ Sa (= 1765.76 mm) ------ ∴ O.K.

⑩ 벽체 하단부 - Mmax 일 경우

설계축력	:	Pu	=	291.20	(kN) ,	설계모멘트	:	Mu	=	71.75	(kN · m)
설계전단력	:	Vu	=	97.54	(kN) ,	사용 모멘트	:	M	=	44.84	(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 =	246.39	(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 = 171.819 mm , a = k1 x c = 143.641 mm 사용

fs = 600 x (400.000 - 171.819) / 171.819 = 400 Mpa (fs ≤ fy)

fs' = 600 x (171.819 - 100.000) / 171.819 = 250.795 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 143.641 x 1000 = 3602505.210 N

Cs = 794.400 x (250.795 - 0.836 x 30) = 179308.003 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 3602505.210 + 179308.003 - 635520.000 = 3146293.213 N

Mn' = 3602505.210 x (400.0 - 143.641 / 2) + 179308.003 x (400.0 - 100.0)

= 1236061554.436 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 392.861806 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 3146293.213

ΦPn = 2202405.249 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 3146293.213 = 2202.405 kN ≥ Pu = 291.200 kN ------- O.K!!!

ΦMn = ΦPn x 246.394 = 542.660 kN.m ≥ Mu = 71.750 kN.m ------- O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 242465.822 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

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

$= 44.84 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 75.857 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 / 75.857) - 2.5 × 92 = 808.132 mm

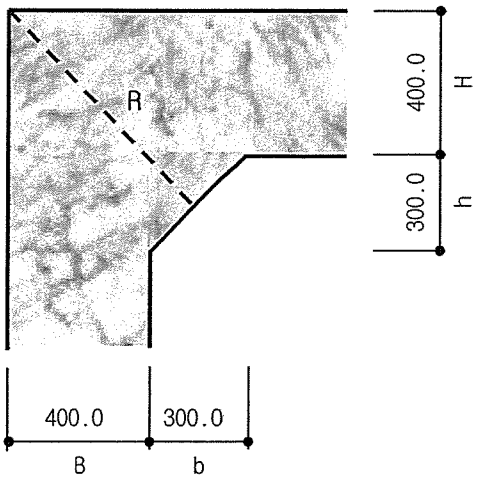
300 x (210 / fs) = 300 × (210 / 75.857) = 830.506 mm

Sa는 작은 값인 808.132 mm 를 적용

S = 125.00 ≤ Sa (= 808.132 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	:	51.02	kN·m

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

$= 777.82$ mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 51020000}{777.82^2 \times 1000.0} = 0.422 \text{ MPa}$$

f_{tmax} = 0.422 MPa < f_{ta} = 0.712 MPa 이므로 보강철근 필요없음.

② 소요 철근량

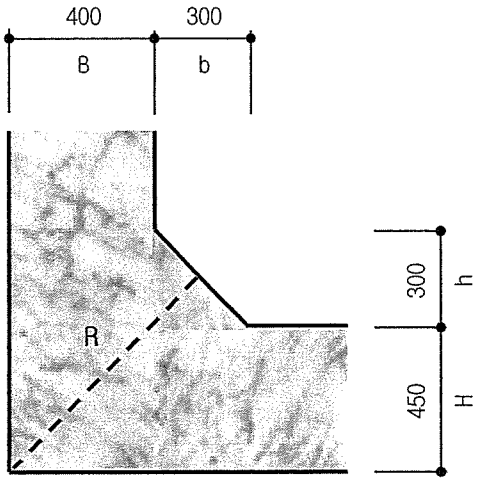
외측인장에 대한 보강 필요철근량(Asf)

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

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

----- 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	:	44.84	kN · m

R = √ (B2 + H2) = 602.08 mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 44840000}{602.08^2 \times 1000.0} = 0.618 \text{ MPa}$$

f_{tmax} = 0.618 MPa < f_{ta} = 0.712 MPa 이므로 보강철근 필요없음.

② 소요 철근량

외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 0}{602.08 \times 180.0} = 0.00 \text{ ㎟}$$

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

----- 우각부 보강철근 필요없음

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 × (2.640 + 3) / 30 = 225.6 mm

상부슬래브 두께 = 400.0 mm

Tuse = 400.0 mm > Tmin = 225.6 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

2.64 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

2.64 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

= 98.24 kN/m²

3) 활하중

= 21.019 kN/m²

4) 최대 지반 반력

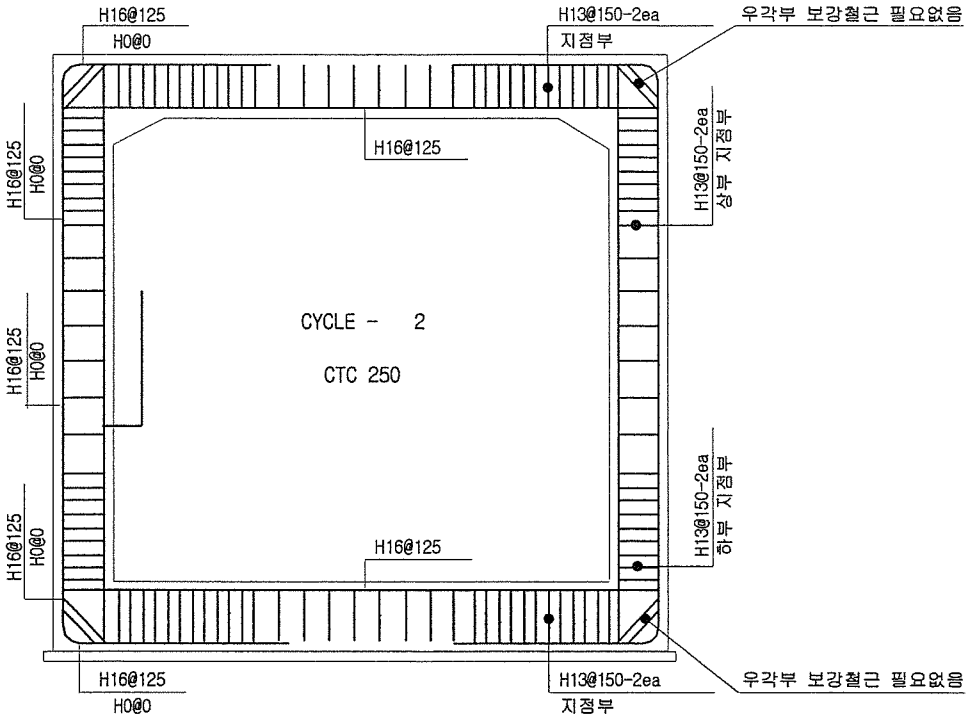
Qmax = 36.400 + 98.240 + 21.019

= 155.659 kN/m²

5) 지지력 검토

Qmax = 155.659 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

C(함) 산운제4

- 4.0 x 5.00 x 1
- 토피 = 2.8m 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) : 56.00 ° 연 장 (L) : 22.00 m

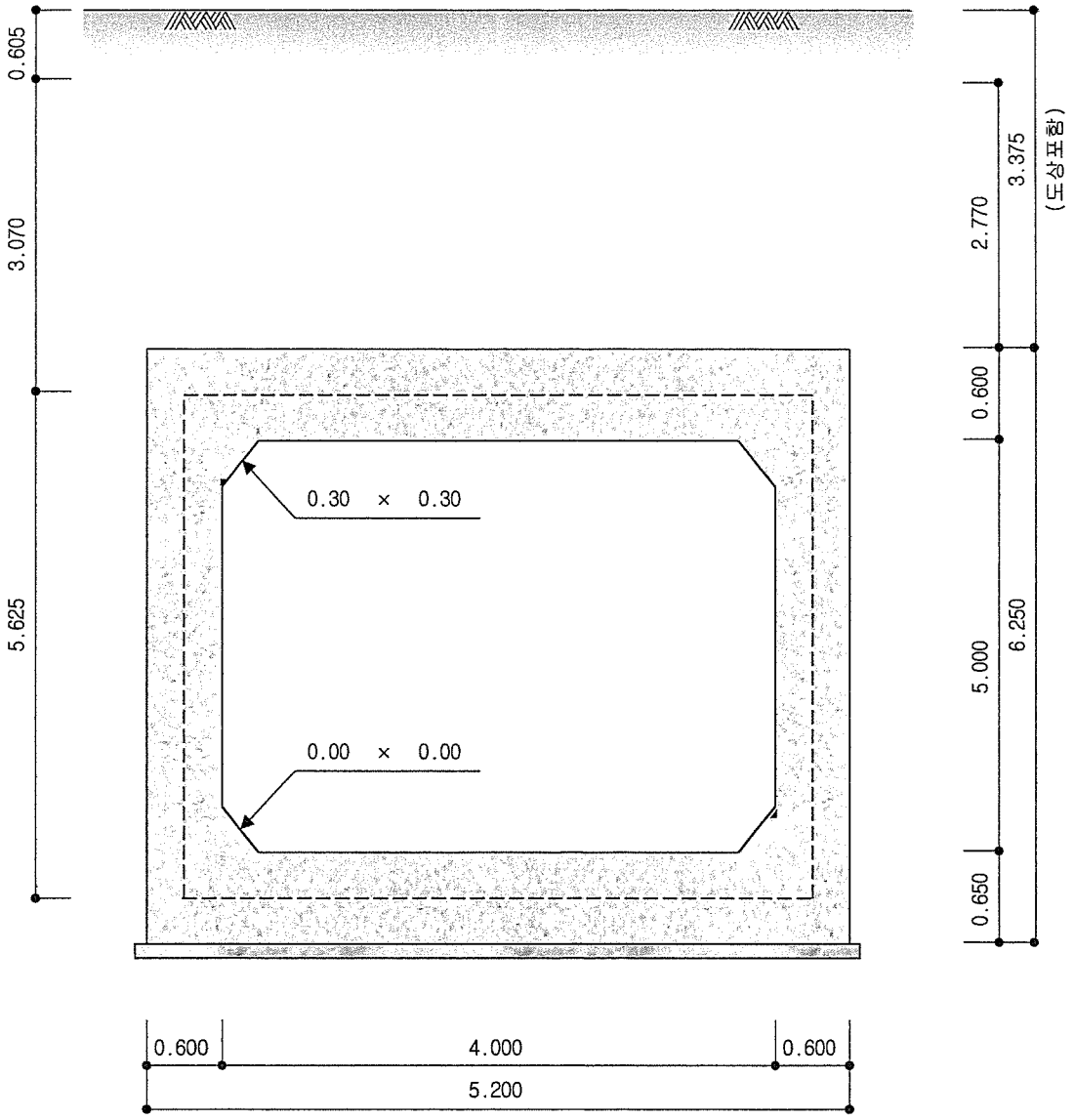
9) 설계방법

- 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

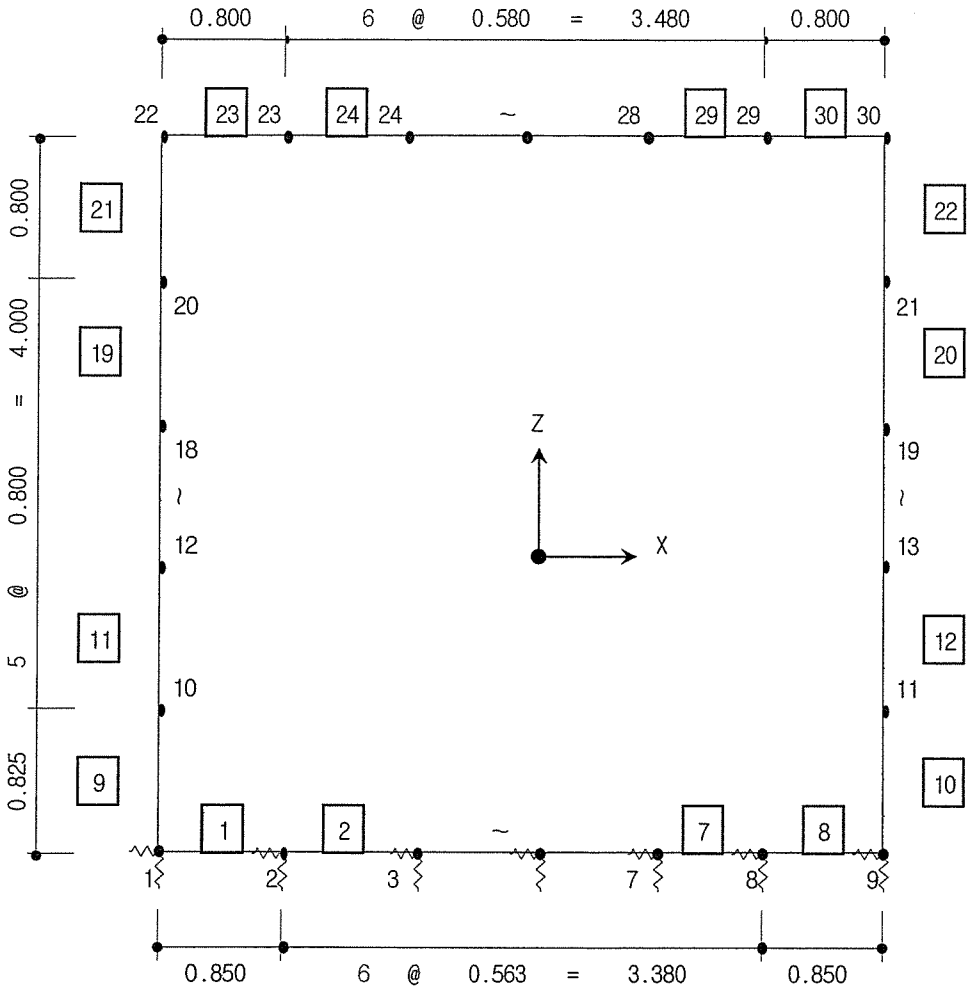
2. 단면 가정



※ 유효경간

Skew =	56.0	°				
Ln =	4.600	m				
Ls =	5.549	m				
Ls/B =	5.549	/	22.000	=	0.252	< 1.500
L =	5.080	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	5.080	0.000	1.625
2	0.850	0.000	0.000	14	0.000	0.000	2.425
3	1.413	0.000	0.000	15	5.080	0.000	2.425
4	1.977	0.000	0.000	16	0.000	0.000	3.225
5	2.540	0.000	0.000	17	5.080	0.000	3.225
6	3.103	0.000	0.000	18	0.000	0.000	4.025
7	3.667	0.000	0.000	19	5.080	0.000	4.025
8	4.230	0.000	0.000	20	0.000	0.000	4.825
9	5.080	0.000	0.000	21	5.080	0.000	4.825
10	0.000	0.000	0.825	22	0.000	0.000	5.625
11	5.080	0.000	0.825	23	0.800	0.000	5.625
12	0.000	0.000	1.625	24	1.380	0.000	5.625

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
25	1.960	0.000	5.625	28	3.700	0.000	5.625
26	2.540	0.000	5.625	29	4.280	0.000	5.625
27	3.120	0.000	5.625	30	5.080	0.000	5.625

2) 경계 조건

joint	spring계수 (kN/m²)		joint	spring계수 (kN/m²)	
	z방향(수직)	x방향(수평)		z방향(수직)	x방향(수평)
1 . 9	12159		3 ~ 7	9448	
2 . 8	11852				

3) 단면제원

Element	두께	폭	비 고
23 ~ 30	0.600	1.000	상부슬래브
1 ~ 8	0.650	1.000	하부슬래브
9 ~ 22	0.600	1.000	벽 체

4) 강역설정

(1) 강역설정기준(콘크리트구조설계기준 2012)

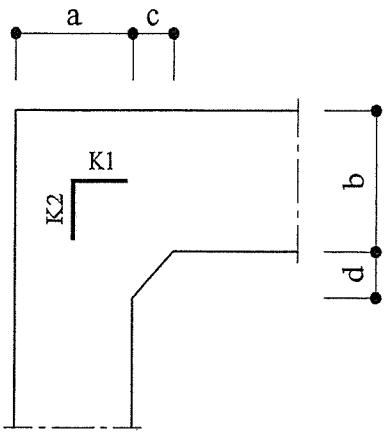
CASE 1 : 부재단부가 다른 부재와 접합할 때는 부재단에서 부재두께의 1/4 안쪽점에서 절점까지

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

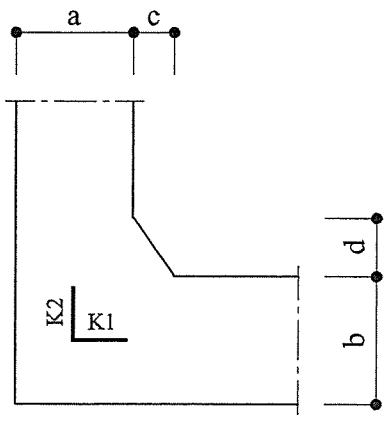
(2) 강역설정

- 절점 22 , 30



a =	600	mm	c =	300	mm
b =	600	mm	d =	300	mm
K1 =	300	mm	K2 =	300	mm

- 절점 1 , 9

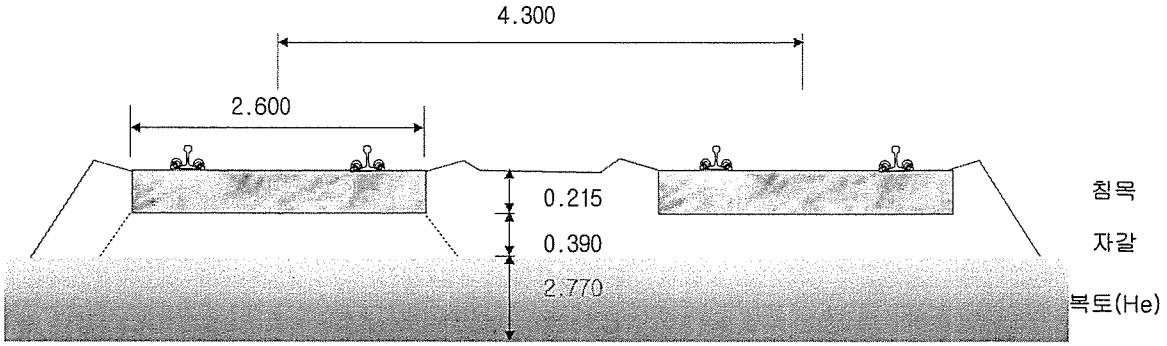


a =	600	mm	c =	0	mm
b =	650	mm	d =	0	mm
K1 =	138	mm	K2 =	175	mm

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 + 2.770) = 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 × 2.770 = 55.400 kN/㎡

∴ $q_1 + q_2 + q_3$ = 1.096 + 14.944 + 55.400 = 71.440 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) = 5.080 m

따라서 i_0 = 0.479 (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 = 3.375 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 × 3.070) = 32.989 kN/㎡

q_2 = 32.989 + 0.426 ×(20.000 × 0.800) = 39.805 kN/㎡

q_3 = 39.805 + 0.426 ×(20.000 × 0.800) = 46.621 kN/㎡

q_4 = 46.621 + 0.426 ×(20.000 × 0.800) = 53.437 kN/㎡

q_5 = 53.437 + 0.426 ×(20.000 × 0.800) = 60.253 kN/㎡

q_6 = 60.253 + 0.426 ×(20.000 × 0.800) = 67.069 kN/㎡

q_7 = 67.069 + 0.426 ×(20.000 × 0.800) = 73.885 kN/㎡

q_8 = 73.885 + 0.426 ×(20.000 × 0.825) = 80.914 kN/㎡

- 시공중 편토압 산정 (지하수가 없는 경우 작용 토압)

q_1 = 0.426 × (0.000 + 20.000 × 0.300) = 2.556 kN/㎡

q_2 = 2.556 + 0.426 × (20.000 × 0.800) = 9.372 kN/㎡

q_3 = 9.372 + 0.426 × (20.000 × 0.800) = 16.188 kN/㎡

q_4 = 16.188 + 0.426 × (20.000 × 0.800) = 23.004 kN/㎡

q_5 = 23.004 + 0.426 × (20.000 × 0.800) = 29.820 kN/㎡

q_6 = 29.820 + 0.426 × (20.000 × 0.800) = 36.636 kN/㎡

q_7 = 36.636 + 0.426 × (20.000 × 0.800) = 43.452 kN/㎡

q_8 = 43.452 + 0.426 × (20.000 × 0.825) = 50.481 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 3.375 m 이므로 장대레일 하중을 무시한다.

H_r = 0.000 × 4 / 14.590 = 0.000 kN/㎡

7) 상시 지반반력 계수

지지 지반 N치 = 15

Eo = 2800 × N = 2800 × 15 = 42000

Kvo = 1 / 0.3 x α x Eo = 1 / 0.3 × 1 x 42000 = 140000

Bv = √ Av = √ (5.080 × 5.080) = 5.080

Kv = Kvo (Bv/0.3)^-3/4 = 16771 kN/㎡

16771 × (0.600 / 2 + 0.850 / 2) = 12159 kN/㎡ - 저판 단부 스프링

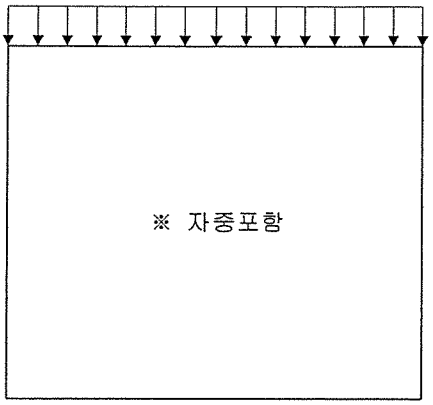
16771 × (0.850 / 2 + 0.563 / 2) = 11852 kN/㎡ - 저판 전단검토위치

16771 × (0.563 / 2 + 0.563 / 2) = 9448 kN/㎡ - 저판 중앙부 스프링

5. 하중재하도

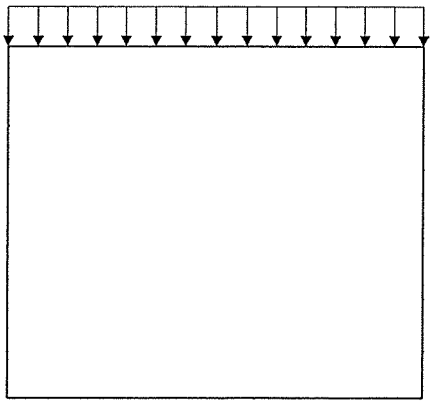
① 고정하중

W_D = 71.440 kN/㎡



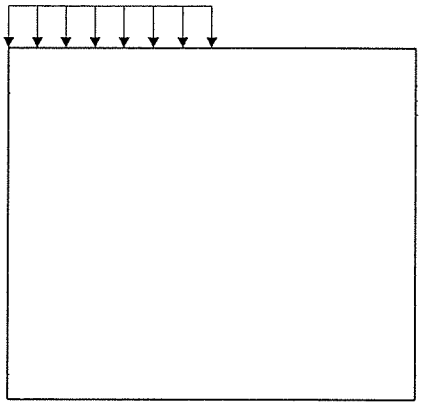
② 활하중(만재하)

W_L = 21.019 kN/㎡

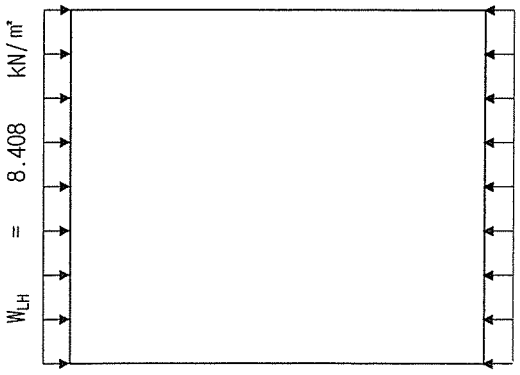


③ 활하중(편재하)

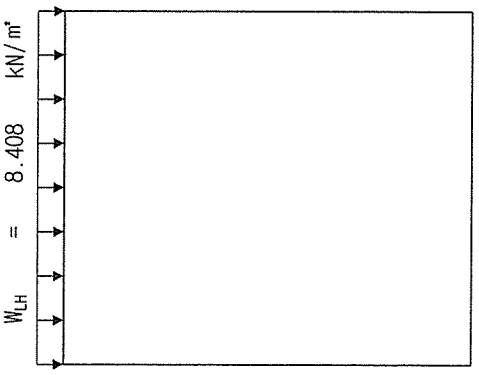
W_L = 21.019 kN/㎡



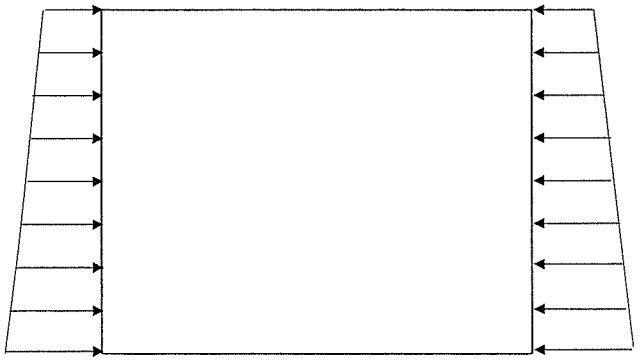
④ 활하중에 의한 측압(만재하)



⑤ 활하중에 의한 측압(편재하)



⑥ 수평토압(지하수 없는 경우)

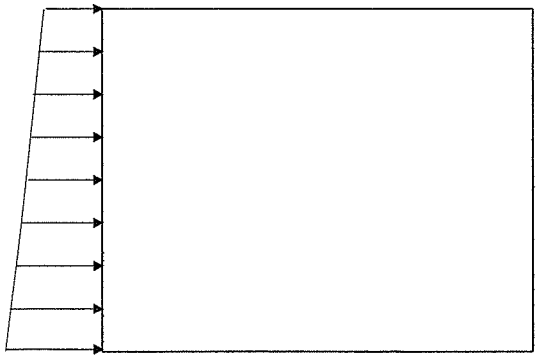


q_1 = 32.989 kN/㎡

q_7 = 80.914 kN/㎡

⑦ 편측토압(지하수 없는 경우)

q_1 = 2.556 kN/㎡



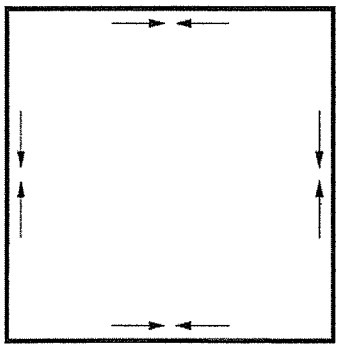
q_7 = 50.481 kN/㎡

⑧ 온도하중

△T = 0 °

⑨ 건조수축

△T = -15 °



⑩ 장대레일 종하중

Hr = 0.000 kN/㎡

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, 0.975, 0, 0
     3, 1.683, 0, 0
     4, 2.392, 0, 0
     5, 3.1, 0, 0
     6, 3.808, 0, 0
     7, 4.517, 0, 0
     8, 5.225, 0, 0
     9, 6.2, 0, 0
    10, 0, 0, 0.925
    11, 6.2, 0, 0.925
    12, 0, 0, 1.705
    13, 6.2, 0, 1.705
    14, 0, 0, 2.485
    15, 6.2, 0, 2.485
    16, 0, 0, 3.265
    17, 6.2, 0, 3.265
    18, 0, 0, 4.045
    19, 6.2, 0, 4.045
    20, 0, 0, 4.825
    21, 6.2, 0, 4.825
    22, 0, 0, 5.7
    23, 0.875, 0, 5.7
    24, 1.617, 0, 5.7
    25, 2.358, 0, 5.7
    26, 3.1, 0, 5.7
    27, 3.842, 0, 5.7
    28, 4.583, 0, 5.7
    29, 5.325, 0, 5.7
    30, 6.2, 0, 5.7

*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
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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, 0.65, 1, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.75, 1, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL             , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.65, 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, 0.65, 1, 0, 0, 0, 0, 0, 0, 0, 0
   2, DBUSER    , BOTSLAB          , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.75, 1, 0, 0, 0, 0, 0, 0, 0, 0
   3, DBUSER    , WALL             , CC, 0, 0, 0, 0, 0, 0, YES, SB , 2, 0.65, 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
   3to7, COMP  ,  5, 0, 0, 0, 10231, , 0, 0, 0, 0, 0
   1 9, COMP  ,  5, 0, 0, 0, 11735, , 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
   2 8, COMP  ,  5, 0, 0, 0, 12157, , 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, 0.1375, 0,
     8, ELEMENT, 0, 0.1375,
     9, ELEMENT, 0.2125, 0,
    10, ELEMENT, 0.2125, 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, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 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, 79.962, 1, 72.081, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -79.962, 1, -72.081, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 72.081, 1, 65.435, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -72.081, 1, -65.435, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 65.435, 1, 58.789, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -65.435, 1, -58.789, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 58.789, 1, 52.143, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -58.789, 1, -52.143, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 52.143, 1, 45.497, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -52.143, 1, -45.497, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 45.497, 1, 38.851, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -45.497, 1, -38.851, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 38.851, 1, 31.396, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -38.851, 1, -31.396, 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, 51.335, 1, 43.454, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 43.454, 1, 36.808, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 36.808, 1, 30.162, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 30.162, 1, 23.516, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 23.516, 1, 16.87, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 16.87, 1, 10.224, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 10.224, 1, 2.769, 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. 127.939. 1. 115.33. 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. -127.939. 1. -115.33. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 115.33. 1. 104.696. 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. -115.33. 1. -104.696. 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. 104.696. 1. 94.0624. 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. -104.696. 1. -94.0624. 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. 94.0624. 1. 83.4288. 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. -94.0624. 1. -83.4288. 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. 83.4288. 1. 72.7952. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -83.4288. 1. -72.7952. 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. 72.7952. 1. 62.1616. 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. -72.7952. 1. -62.1616. 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. 62.1616. 1. 50.2336. 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. -62.1616. 1. -50.2336. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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, 0, , NO, 0, 0, NO
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 47.9772, 1, 43.2486, 0, 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, 0, , NO, 0, 0, NO
    10, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -47.9772, 1, -43.2486, 0, 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, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 43.2486, 1, 39.261, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -43.2486, 1, -39.261, 0, 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, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 15.5548, 1, 15.5548, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 39.261, 1, 35.2734, 0, 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, 0, , NO, 0, 0, NO
    14, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -39.261, 1, -35.2734, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 35.2734, 1, 31.2858, 0, 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, 0, , NO, 0, 0, NO
    16, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -35.2734, 1, -31.2858, 0, 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, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 15.5548, 1, 15.5548, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 31.2858, 1, 27.2982, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -31.2858, 1, -27.2982, 0, 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, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 15.5548, 1, 15.5548, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 27.2982, 1, 23.3106, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -27.2982, 1, -23.3106, 0, 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, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 15.5548, 1, 15.5548, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 23.3106, 1, 18.8376, 0, 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, 0, , NO, 0, 0, NO
    22, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -23.3106, 1, -18.8376, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    23, BEAM    , UNILOAD, GZ, NO , NO, aDir[1],    ,    ,    , 0, -90.72, 1, -90.72, 0, 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, 0, , NO, 0, 0, NO
    24, BEAM    , UNILOAD, GZ, NO , NO, aDir[1],    ,    ,    , 0, -38.8851, 1, -38.8851, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM    , UNILOAD, GZ, NO , NO, aDir[1],    ,    ,    , 0, -90.72, 1, -90.72, 0, 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, 0, , NO, 0, 0, NO
    25, BEAM    , UNILOAD, GZ, NO , NO, aDir[1],    ,    ,    , 0, -90.72, 1, -90.72, 0, 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, 0, , NO, 0, 0, NO
    26, BEAM    , UNILOAD, GZ, NO , NO, aDir[1],    ,    ,    , 0, -90.72, 1, -90.72, 0, 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, 0, , NO, 0, 0, NO
    27, BEAM    , UNILOAD, GZ, NO , NO, aDir[1],    ,    ,    , 0, -90.72, 1, -90.72, 0, 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, 0, , NO, 0, 0, NO
    28, BEAM    , UNILOAD, GZ, NO , NO, aDir[1],    ,    ,    , 0, -90.72, 1, -90.72, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM    , UNILOAD, GZ, NO , NO, aDir[1],    ,    ,    , 0, -90.72, 1, -90.72, 0, 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, 0, , NO, 0, 0, NO
    30, BEAM    , UNILOAD, GZ, NO , NO, aDir[1],    ,    ,    , 0, -90.72, 1, -90.72, 0, 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, 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, 0, , NO, 0, 0, NO
     9, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 127.939, 1, 115.33, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -127.939, 1, -115.33, 0, 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, 0, , NO, 0, 0, NO
    11, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 115.33, 1, 104.696, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -115.33, 1, -104.696, 0, 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, 0, , NO, 0, 0, NO
    13, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 104.696, 1, 94.0624, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -104.696, 1, -94.0624, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 94.0624, 1, 83.4288, 0, 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, 0, , NO, 0, 0, NO
    16, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -94.0624, 1, -83.4288, 0, 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, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 83.4288, 1, 72.7952, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -83.4288, 1, -72.7952, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 72.7952, 1, 62.1616, 0, 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, 0, , NO, 0, 0, NO
    20, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -72.7952, 1, -62.1616, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, 62.1616, 1, 50.2336, 0, 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, 0, , NO, 0, 0, NO
    22, BEAM    , UNILOAD, GX, NO , NO, aDir[1],    ,    ,    , 0, -62.1616, 1, -50.2336, 0, 0, 0, 0, 0, , NO, 0, 0, NO
    23, BEAM    , UNILOAD, GZ, NO , NO, aDir[1],    ,    ,    , 0, -90.72, 1, -90.72, 0, 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, 0, , NO, 0, 0, NO
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. 47.9772. 1. 43.2486. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.9772. 1. -43.2486. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.2486. 1. 39.261. 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. -43.2486. 1. -39.261. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 39.261. 1. 35.2734. 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. -39.261. 1. -35.2734. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.2734. 1. 31.2858. 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. -35.2734. 1. -31.2858. 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. 31.2858. 1. 27.2982. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -31.2858. 1. -27.2982. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.2982. 1. 23.3106. 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. -27.2982. 1. -23.3106. 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. 23.3106. 1. 18.8376. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.3106. 1. -18.8376. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. 127.939. 1. 115.33. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -127.939. 1. -115.33. 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. 115.33. 1. 104.696. 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. -115.33. 1. -104.696. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.696. 1. 94.0624. 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. -104.696. 1. -94.0624. 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. 94.0624. 1. 83.4288. 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. -94.0624. 1. -83.4288. 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. 83.4288. 1. 72.7952. 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. -83.4288. 1. -72.7952. 0. 0. 0. 0. . NO. 0. 0. N(
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 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. 72.7952. 1. 62.1616. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -72.7952. 1. -62.1616. 0. 0. 0. 0. . NO. 0. 0. N(
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 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. 62.1616. 1. 50.2336. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.1616. 1. -50.2336. 0. 0. 0. 0. . NO. 0. 0. N(
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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(
    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. -107.52. 1. -107.52. 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. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. N(

; 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. 47.9772. 1. 43.2486. 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. -47.9772. 1. -43.2486. 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. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.2486. 1. 39.261. 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. -43.2486. 1. -39.261. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 39.261. 1. 35.2734. 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. -39.261. 1. -35.2734. 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. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.2734. 1. 31.2858. 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. N(
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -35.2734. 1. -31.2858. 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. 31.2858. 1. 27.2982. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -31.2858. 1. -27.2982. 0. 0. 0. 0. . NO. 0. 0. N(
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.2982. 1. 23.3106. 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. N(
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.2982. 1. -23.3106. 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. 23.3106. 1. 18.8376. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.3106. 1. -18.8376. 0. 0. 0. 0. . NO. 0. 0. N(
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 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. -107.52. 1. -107.52. 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. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. N(
    27. 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. -107.52. 1. -107.52. 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. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. 127.939. 1. 115.33. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -127.939. 1. -115.33. 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. 115.33. 1. 104.696. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -115.33. 1. -104.696. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.696. 1. 94.0624. 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. -104.696. 1. -94.0624. 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. 94.0624. 1. 83.4288. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -94.0624. 1. -83.4288. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 83.4288. 1. 72.7952. 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. -83.4288. 1. -72.7952. 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. 72.7952. 1. 62.1616. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -72.7952. 1. -62.1616. 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. 62.1616. 1. 50.2336. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.1616. 1. -50.2336. 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. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. 47.9772. 1. 43.2486. 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. -47.9772. 1. -43.2486. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.2486. 1. 39.261. 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. -43.2486. 1. -39.261. 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. 39.261. 1. 35.2734. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -39.261. 1. -35.2734. 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. 35.2734. 1. 31.2858. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -35.2734. 1. -31.2858. 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. 31.2858. 1. 27.2982. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -31.2858. 1. -27.2982. 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. 27.2982. 1. 23.3106. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.2982. 1. -23.3106. 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. 23.3106. 1. 18.8376. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.3106. 1. -18.8376. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. 127.939. 1. 115.33. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -127.939. 1. -115.33. 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. 115.33. 1. 104.696. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -115.33. 1. -104.696. 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. 104.696. 1. 94.0624. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.696. 1. -94.0624. 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. 94.0624. 1. 83.4288. 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. -94.0624. 1. -83.4288. 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. 83.4288. 1. 72.7952. 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. -83.4288. 1. -72.7952. 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. 72.7952. 1. 62.1616. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -72.7952. 1. -62.1616. 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. 62.1616. 1. 50.2336. 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. -62.1616. 1. -50.2336. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. 47.9772. 1. 43.2486. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.9772. 1. -43.2486. 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. 43.2486. 1. 39.261. 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. -43.2486. 1. -39.261. 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. 39.261. 1. 35.2734. 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. -39.261. 1. -35.2734. 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. 35.2734. 1. 31.2858. 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. -35.2734. 1. -31.2858. 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. 31.2858. 1. 27.2982. 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. -31.2858. 1. -27.2982. 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. 27.2982. 1. 23.3106. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.2982. 1. -23.3106. 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. 23.3106. 1. 18.8376. 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. -23.3106. 1. -18.8376. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. 127.939. 1. 115.33. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -127.939. 1. -115.33. 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. 115.33. 1. 104.696. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -115.33. 1. -104.696. 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. 104.696. 1. 94.0624. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.696. 1. -94.0624. 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. 94.0624. 1. 83.4288. 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. -94.0624. 1. -83.4288. 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. 83.4288. 1. 72.7952. 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. -83.4288. 1. -72.7952. 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. 72.7952. 1. 62.1616. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -72.7952. 1. -62.1616. 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. 62.1616. 1. 50.2336. 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. -62.1616. 1. -50.2336. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. 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 [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. 47.9772. 1. 43.2486. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.9772. 1. -43.2486. 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. 43.2486. 1. 39.261. 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. -43.2486. 1. -39.261. 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. 39.261. 1. 35.2734. 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. -39.261. 1. -35.2734. 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. 35.2734. 1. 31.2858. 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. -35.2734. 1. -31.2858. 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. 31.2858. 1. 27.2982. 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. -31.2858. 1. -27.2982. 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. 27.2982. 1. 23.3106. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.2982. 1. -23.3106. 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. 23.3106. 1. 18.8376. 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. -23.3106. 1. -18.8376. 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. -90.72. 1. -90.72. 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. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. N(
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    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. 127.939. 1. 115.33. 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. -127.939. 1. -115.33. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 115.33. 1. 104.696. 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. -115.33. 1. -104.696. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 104.696. 1. 94.0624. 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. -104.696. 1. -94.0624. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 94.0624. 1. 83.4288. 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. -94.0624. 1. -83.4288. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 83.4288. 1. 72.7952. 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. -83.4288. 1. -72.7952. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 72.7952. 1. 62.1616. 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. -72.7952. 1. -62.1616. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 62.1616. 1. 50.2336. 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. -62.1616. 1. -50.2336. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. 47.9772. 1. 43.2486. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.9772. 1. -43.2486. 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. 43.2486. 1. 39.261. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -43.2486. 1. -39.261. 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. 39.261. 1. 35.2734. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -39.261. 1. -35.2734. 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. 35.2734. 1. 31.2858. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -35.2734. 1. -31.2858. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.2858. 1. 27.2982. 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. -31.2858. 1. -27.2982. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.2982. 1. 23.3106. 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. -27.2982. 1. -23.3106. 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. 23.3106. 1. 18.8376. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.3106. 1. -18.8376. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. 127.939. 1. 115.33. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -127.939. 1. -115.33. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 115.33. 1. 104.696. 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. -115.33. 1. -104.696. 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. 104.696. 1. 94.0624. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -104.696. 1. -94.0624. 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. 94.0624. 1. 83.4288. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -94.0624. 1. -83.4288. 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. 83.4288. 1. 72.7952. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -83.4288. 1. -72.7952. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 72.7952. 1. 62.1616. 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. -72.7952. 1. -62.1616. 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. 62.1616. 1. 50.2336. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -62.1616. 1. -50.2336. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
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    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. 47.9772. 1. 43.2486. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -47.9772. 1. -43.2486. 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. 43.2486. 1. 39.261. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -43.2486. 1. -39.261. 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. 39.261. 1. 35.2734. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -39.261. 1. -35.2734. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.2734. 1. 31.2858. 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. -35.2734. 1. -31.2858. 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. 31.2858. 1. 27.2982. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -31.2858. 1. -27.2982. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.2982. 1. 23.3106. 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. -27.2982. 1. -23.3106. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 23.3106. 1. 18.8376. 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. -23.3106. 1. -18.8376. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. 82.136. 1. 69.5264. 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. 69.5264. 1. 58.8928. 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. 58.8928. 1. 48.2592. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.2592. 1. 37.6256. 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. 37.6256. 1. 26.992. 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. 26.992. 1. 16.3584. 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. 16.3584. 1. 4.4304. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. 30.801. 1. 26.0724. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.0724. 1. 22.0848. 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. 22.0848. 1. 18.0972. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 18.0972. 1. 14.1096. 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. 14.1096. 1. 10.122. 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. 10.122. 1. 6.1344. 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. 6.1344. 1. 1.6614. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -90.72. 1. -90.72. 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. 82.136. 1. 69.5264. 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. 69.5264. 1. 58.8928. 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. 58.8928. 1. 48.2592. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.2592. 1. 37.6256. 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. 37.6256. 1. 26.992. 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. 26.992. 1. 16.3584. 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. 16.3584. 1. 4.4304. 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. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. 30.801. 1. 26.0724. 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. 26.0724. 1. 22.0848. 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. 22.0848. 1. 18.0972. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 18.0972. 1. 14.1096. 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. 14.1096. 1. 10.122. 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. 10.122. 1. 6.1344. 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. 6.1344. 1. 1.6614. 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. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 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. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -107.52. 1. -107.52. 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. 79.962. 1. 72.081. 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. -79.962. 1. -72.081. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 72.081. 1. 65.435. 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. -72.081. 1. -65.435. 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. 65.435. 1. 58.789. 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. -65.435. 1. -58.789. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.789. 1. 52.143. 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. -58.789. 1. -52.143. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.143. 1. 45.497. 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. -52.143. 1. -45.497. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 45.497. 1. 38.851. 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. -45.497. 1. -38.851. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 38.851. 1. 31.396. 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. -38.851. 1. -31.396. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. 39.981. 1. 36.0405. 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. -39.981. 1. -36.0405. 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. 36.0405. 1. 32.7175. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -36.0405. 1. -32.7175. 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. 32.7175. 1. 29.3945. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -32.7175. 1. -29.3945. 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. 29.3945. 1. 26.0715. 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. -29.3945. 1. -26.0715. 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. 26.0715. 1. 22.7485. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.0715. 1. -22.7485. 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. 22.7485. 1. 19.4255. 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. -22.7485. 1. -19.4255. 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. 19.4255. 1. 15.698. 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. -19.4255. 1. -15.698. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. 79.962. 1. 72.081. 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. -79.962. 1. -72.081. 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. 72.081. 1. 65.435. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -72.081. 1. -65.435. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 65.435. 1. 58.789. 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. -65.435. 1. -58.789. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.789. 1. 52.143. 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. -58.789. 1. -52.143. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.143. 1. 45.497. 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. -52.143. 1. -45.497. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 45.497. 1. 38.851. 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. -45.497. 1. -38.851. 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. 38.851. 1. 31.396. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -38.851. 1. -31.396. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. 39.981. 1. 36.0405. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -39.981. 1. -36.0405. 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. 36.0405. 1. 32.7175. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -36.0405. 1. -32.7175. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 32.7175. 1. 29.3945. 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. -32.7175. 1. -29.3945. 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. 29.3945. 1. 26.0715. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.3945. 1. -26.0715. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.0715. 1. 22.7485. 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. -26.0715. 1. -22.7485. 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. 22.7485. 1. 19.4255. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -22.7485. 1. -19.4255. 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. 19.4255. 1. 15.698. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -19.4255. 1. -15.698. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. 79.962. 1. 72.081. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -79.962. 1. -72.081. 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. 72.081. 1. 65.435. 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. -72.081. 1. -65.435. 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. 65.435. 1. 58.789. 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. -65.435. 1. -58.789. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.789. 1. 52.143. 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. -58.789. 1. -52.143. 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. 52.143. 1. 45.497. 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. -52.143. 1. -45.497. 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. 45.497. 1. 38.851. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -45.497. 1. -38.851. 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. 38.851. 1. 31.396. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -38.851. 1. -31.396. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. 39.981. 1. 36.0405. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -39.981. 1. -36.0405. 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. 36.0405. 1. 32.7175. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -36.0405. 1. -32.7175. 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. 32.7175. 1. 29.3945. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -32.7175. 1. -29.3945. 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. 29.3945. 1. 26.0715. 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. -29.3945. 1. -26.0715. 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. 26.0715. 1. 22.7485. 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. -26.0715. 1. -22.7485. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 22.7485. 1. 19.4255. 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. -22.7485. 1. -19.4255. 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. 19.4255. 1. 15.698. 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. -19.4255. 1. -15.698. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. 79.962. 1. 72.081. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -79.962. 1. -72.081. 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. 72.081. 1. 65.435. 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. -72.081. 1. -65.435. 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. 65.435. 1. 58.789. 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. -65.435. 1. -58.789. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.789. 1. 52.143. 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. -58.789. 1. -52.143. 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. 52.143. 1. 45.497. 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. -52.143. 1. -45.497. 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. 45.497. 1. 38.851. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -45.497. 1. -38.851. 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. 38.851. 1. 31.396. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -38.851. 1. -31.396. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. 39.981. 1. 36.0405. 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. -39.981. 1. -36.0405. 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. 36.0405. 1. 32.7175. 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. -36.0405. 1. -32.7175. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 32.7175. 1. 29.3945. 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. -32.7175. 1. -29.3945. 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. 29.3945. 1. 26.0715. 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. -29.3945. 1. -26.0715. 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. 26.0715. 1. 22.7485. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.0715. 1. -22.7485. 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. 22.7485. 1. 19.4255. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -22.7485. 1. -19.4255. 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. 19.4255. 1. 15.698. 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. -19.4255. 1. -15.698. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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.
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    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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    26. -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. 79.962. 1. 72.081. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -79.962. 1. -72.081. 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. 72.081. 1. 65.435. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -72.081. 1. -65.435. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 65.435. 1. 58.789. 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. -65.435. 1. -58.789. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.789. 1. 52.143. 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. -58.789. 1. -52.143. 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. 52.143. 1. 45.497. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.143. 1. -45.497. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 45.497. 1. 38.851. 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. -45.497. 1. -38.851. 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. 38.851. 1. 31.396. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -38.851. 1. -31.396. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. 39.981. 1. 36.0405. 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. -39.981. 1. -36.0405. 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. 36.0405. 1. 32.7175. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -36.0405. 1. -32.7175. 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. 32.7175. 1. 29.3945. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -32.7175. 1. -29.3945. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 29.3945. 1. 26.0715. 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. -29.3945. 1. -26.0715. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.0715. 1. 22.7485. 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. -26.0715. 1. -22.7485. 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. 22.7485. 1. 19.4255. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -22.7485. 1. -19.4255. 0. 0. 0. 0. . NO. 0. 0. NO
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    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 19.4255. 1. 15.698. 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. -19.4255. 1. -15.698. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. 79.962. 1. 72.081. 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. -79.962. 1. -72.081. 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. 72.081. 1. 65.435. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -72.081. 1. -65.435. 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. 65.435. 1. 58.789. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -65.435. 1. -58.789. 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. 58.789. 1. 52.143. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.789. 1. -52.143. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.143. 1. 45.497. 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. -52.143. 1. -45.497. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 45.497. 1. 38.851. 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. -45.497. 1. -38.851. 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. 38.851. 1. 31.396. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -38.851. 1. -31.396. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. 39.981. 1. 36.0405. 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. -39.981. 1. -36.0405. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 36.0405. 1. 32.7175. 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. -36.0405. 1. -32.7175. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 32.7175. 1. 29.3945. 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. -32.7175. 1. -29.3945. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 29.3945. 1. 26.0715. 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. -29.3945. 1. -26.0715. 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. 26.0715. 1. 22.7485. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.0715. 1. -22.7485. 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. 22.7485. 1. 19.4255. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -22.7485. 1. -19.4255. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 19.4255. 1. 15.698. 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. -19.4255. 1. -15.698. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. 79.962. 1. 72.081. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -79.962. 1. -72.081. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 72.081. 1. 65.435. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -72.081. 1. -65.435. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 65.435. 1. 58.789. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -65.435. 1. -58.789. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 58.789. 1. 52.143. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -58.789. 1. -52.143. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 52.143. 1. 45.497. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -52.143. 1. -45.497. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 45.497. 1. 38.851. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -45.497. 1. -38.851. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 38.851. 1. 31.396. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -38.851. 1. -31.396. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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. 51.335. 1. 43.454. 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. 43.454. 1. 36.808. 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. 36.808. 1. 30.162. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 30.162. 1. 23.516. 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. 23.516. 1. 16.87. 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. 16.87. 1. 10.224. 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. 10.224. 1. 2.769. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 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. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -67.2. 1. -67.2. 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
```

```
; 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, 25.6675, 1, 21.727, 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, 21.727, 1, 18.404, 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, 18.404, 1, 15.081, 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, 15.081, 1, 11.758, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 11.758, 1, 8.435, 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, 8.435, 1, 5.112, 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, 5.112, 1, 1.3845, 0, 0, 0, 0, , NO, 0, 0, NO
    23, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 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, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 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, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -67.2, 1, -67.2, 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
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    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, 0, 192, 0, 128, 57
 CB, COMB4, 128, 192, 0, 192, 0, 128, 0, 128, 57
 CB, COMB5, 0, 157, 192, 255, 160, 255, 192, 0, 192
 CB, COMB6, 192, 72, 0, 163, 255, 160, 255, 255, 87
 CB, COMB7, 78, 0, 255, 85, 0, 192, 0, 128, 192
 CB, COMB8, 0, 128, 57, 192, 72, 0, 0, 128, 192
 CB, COMB9, 0, 128, 128, 160, 192, 255, 255, 0, 128
 CB, COMB10, 163, 255, 160, 255, 87, 128, 192, 192, 192
 CB, COMB11, 192, 0, 128, 0, 192, 128, 85, 0, 192
 CB, COMB12, 255, 0, 128, 78, 0, 255, 0, 128, 192
 CB, COMB13, 192, 192, 0, 192, 192, 0, 163, 255, 160
 CB, COMB14, 128, 192, 0, 78, 0, 255, 192, 72, 0
 CB, COMB15, 163, 160, 255, 160, 255, 255, 255, 192, 160
 CB, COMB16, 0, 128, 57, 255, 255, 87, 192, 0, 192
 CB, COMB17, 210, 210, 210, 128, 192, 0, 146, 0, 255
 CB, COMB18, 128, 192, 0, 192, 192, 0, 0, 128, 57
 CB, COMB19, 85, 192, 0, 85, 0, 192, 255, 128, 0
 CB, COMB20, 210, 210, 210, 0, 192, 192, 0, 192, 128
 CB, COMB21, 212, 160, 255, 163, 160, 255, 255, 0, 128
 CB, COMB22, 192, 0, 128, 0, 192, 128, 192, 192, 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]	64.350	0.000	-330.160	0.00E+00	-179.040	0.000
1	USD(max)	1/4	64.350	0.000	-333.990	0.00E+00	-118.090	0.000
1	USD(max)	2/4	64.350	0.000	-337.820	0.00E+00	-55.310	0.000
1	USD(max)	3/4	64.350	0.000	-341.650	0.00E+00	18.070	0.000
1	USD(max)	J[2]	64.350	0.000	-345.480	0.00E+00	92.250	0.000
1	USD(min)	I[1]	-337.060	0.000	-417.710	0.00E+00	-384.530	0.000
1	USD(min)	1/4	-337.060	0.000	-422.250	0.00E+00	-315.140	0.000
1	USD(min)	2/4	-337.060	0.000	-426.790	0.00E+00	-247.650	0.000
1	USD(min)	3/4	-337.060	0.000	-431.330	0.00E+00	-179.480	0.000
1	USD(min)	J[2]	-337.060	0.000	-435.870	0.00E+00	-110.620	0.000
1	WSD(max)	I[1]	38.400	0.000	-213.500	0.00E+00	-137.340	0.000
1	WSD(max)	1/4	38.400	0.000	-216.340	0.00E+00	-92.410	0.000
1	WSD(max)	2/4	38.400	0.000	-219.180	0.00E+00	-46.980	0.000
1	WSD(max)	3/4	38.400	0.000	-222.010	0.00E+00	-1.040	0.000
1	WSD(max)	J[2]	38.400	0.000	-224.850	0.00E+00	45.400	0.000
1	WSD(min)	I[1]	-207.070	0.000	-261.070	0.00E+00	-240.330	0.000
1	WSD(min)	1/4	-207.070	0.000	-263.910	0.00E+00	-193.570	0.000
1	WSD(min)	2/4	-207.070	0.000	-266.750	0.00E+00	-146.310	0.000
1	WSD(min)	3/4	-207.070	0.000	-269.580	0.00E+00	-98.550	0.000
1	WSD(min)	J[2]	-207.070	0.000	-272.420	0.00E+00	-50.270	0.000
2	USD(max)	I[2]	64.350	0.000	-220.960	0.00E+00	92.250	0.000
2	USD(max)	1/4	64.350	0.000	-223.990	0.00E+00	129.090	0.000
2	USD(max)	2/4	64.350	0.000	-227.010	0.00E+00	166.440	0.000
2	USD(max)	3/4	64.350	0.000	-230.040	0.00E+00	204.290	0.000
2	USD(max)	J[3]	64.350	0.000	-233.070	0.00E+00	242.650	0.000
2	USD(min)	I[2]	-337.060	0.000	-331.710	0.00E+00	-110.620	0.000
2	USD(min)	1/4	-337.060	0.000	-335.290	0.00E+00	-67.430	0.000
2	USD(min)	2/4	-337.060	0.000	-338.880	0.00E+00	-23.810	0.000
2	USD(min)	3/4	-337.060	0.000	-342.470	0.00E+00	13.230	0.000
2	USD(min)	J[3]	-337.060	0.000	-346.050	0.00E+00	49.100	0.000
2	WSD(max)	I[2]	38.400	0.000	-139.120	0.00E+00	45.400	0.000
2	WSD(max)	1/4	38.400	0.000	-141.360	0.00E+00	68.490	0.000
2	WSD(max)	2/4	38.400	0.000	-143.600	0.00E+00	91.890	0.000
2	WSD(max)	3/4	38.400	0.000	-145.840	0.00E+00	115.610	0.000
2	WSD(max)	J[3]	38.400	0.000	-148.090	0.00E+00	139.650	0.000
2	WSD(min)	I[2]	-207.070	0.000	-207.320	0.00E+00	-50.270	0.000
2	WSD(min)	1/4	-207.070	0.000	-209.560	0.00E+00	-20.940	0.000
2	WSD(min)	2/4	-207.070	0.000	-211.800	0.00E+00	8.720	0.000
2	WSD(min)	3/4	-207.070	0.000	-214.040	0.00E+00	34.310	0.000
2	WSD(min)	J[3]	-207.070	0.000	-216.280	0.00E+00	59.220	0.000
3	USD(max)	I[3]	64.350	0.000	-128.770	0.00E+00	242.650	0.000
3	USD(max)	1/4	64.350	0.000	-131.800	0.00E+00	264.250	0.000
3	USD(max)	2/4	64.350	0.000	-134.830	0.00E+00	286.360	0.000
3	USD(max)	3/4	64.350	0.000	-137.860	0.00E+00	308.980	0.000
3	USD(max)	J[4]	64.350	0.000	-140.890	0.00E+00	332.100	0.000
3	USD(min)	I[3]	-337.060	0.000	-254.480	0.00E+00	49.100	0.000
3	USD(min)	1/4	-337.060	0.000	-258.070	0.00E+00	71.970	0.000
3	USD(min)	2/4	-337.060	0.000	-261.660	0.00E+00	95.270	0.000
3	USD(min)	3/4	-337.060	0.000	-265.250	0.00E+00	119.000	0.000
3	USD(min)	J[4]	-337.060	0.000	-268.850	0.00E+00	142.360	0.000
3	WSD(max)	I[3]	38.400	0.000	-81.040	0.00E+00	139.650	0.000
3	WSD(max)	1/4	38.400	0.000	-83.290	0.00E+00	153.200	0.000
3	WSD(max)	2/4	38.400	0.000	-85.540	0.00E+00	167.060	0.000
3	WSD(max)	3/4	38.400	0.000	-87.780	0.00E+00	181.250	0.000
3	WSD(max)	J[4]	38.400	0.000	-90.030	0.00E+00	195.740	0.000
3	WSD(min)	I[3]	-207.070	0.000	-159.050	0.00E+00	59.220	0.000
3	WSD(min)	1/4	-207.070	0.000	-161.290	0.00E+00	74.670	0.000
3	WSD(min)	2/4	-207.070	0.000	-163.540	0.00E+00	90.430	0.000
3	WSD(min)	3/4	-207.070	0.000	-165.780	0.00E+00	106.500	0.000
3	WSD(min)	J[4]	-207.070	0.000	-168.030	0.00E+00	121.150	0.000
4	USD(max)	I[4]	64.350	0.000	-38.650	0.00E+00	332.100	0.000
4	USD(max)	1/4	64.350	0.000	-41.680	0.00E+00	338.740	0.000
4	USD(max)	2/4	64.350	0.000	-44.710	0.00E+00	346.010	0.000
4	USD(max)	3/4	64.350	0.000	-47.730	0.00E+00	362.690	0.000
4	USD(max)	J[5]	64.350	0.000	-50.760	0.00E+00	379.870	0.000
4	USD(min)	I[4]	-337.060	0.000	-168.300	0.00E+00	142.360	0.000
4	USD(min)	1/4	-337.060	0.000	-171.750	0.00E+00	151.780	0.000
4	USD(min)	2/4	-337.060	0.000	-175.340	0.00E+00	161.630	0.000
4	USD(min)	3/4	-337.060	0.000	-178.920	0.00E+00	171.910	0.000
4	USD(min)	J[5]	-337.060	0.000	-182.510	0.00E+00	182.610	0.000
4	WSD(max)	I[4]	38.400	0.000	-23.920	0.00E+00	195.740	0.000
4	WSD(max)	1/4	38.400	0.000	-26.160	0.00E+00	200.150	0.000
4	WSD(max)	2/4	38.400	0.000	-28.400	0.00E+00	211.290	0.000
4	WSD(max)	3/4	38.400	0.000	-30.640	0.00E+00	222.740	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]	38.400	0.000	-32.890	0.00E+00	234.520	0.000
4	WSD(min)	I[4]	-207.070	0.000	-105.100	0.00E+00	121.150	0.000
4	WSD(min)	1/4	-207.070	0.000	-107.340	0.00E+00	124.670	0.000
4	WSD(min)	2/4	-207.070	0.000	-109.590	0.00E+00	128.510	0.000
4	WSD(min)	3/4	-207.070	0.000	-111.830	0.00E+00	132.670	0.000
4	WSD(min)	J[5]	-207.070	0.000	-114.070	0.00E+00	137.140	0.000
5	USD(max)	I[5]	64.350	0.000	60.700	0.00E+00	379.870	0.000
5	USD(max)	1/4	64.350	0.000	57.120	0.00E+00	382.000	0.000
5	USD(max)	2/4	64.350	0.000	53.530	0.00E+00	384.630	0.000
5	USD(max)	3/4	64.350	0.000	49.940	0.00E+00	389.090	0.000
5	USD(max)	J[6]	64.350	0.000	46.360	0.00E+00	400.920	0.000
5	USD(min)	I[5]	-337.060	0.000	-84.070	0.00E+00	182.610	0.000
5	USD(min)	1/4	-337.060	0.000	-87.100	0.00E+00	180.170	0.000
5	USD(min)	2/4	-337.060	0.000	-90.120	0.00E+00	178.170	0.000
5	USD(min)	3/4	-337.060	0.000	-93.150	0.00E+00	176.580	0.000
5	USD(min)	J[6]	-337.060	0.000	-96.180	0.00E+00	175.430	0.000
5	WSD(max)	I[5]	38.400	0.000	37.940	0.00E+00	234.520	0.000
5	WSD(max)	1/4	38.400	0.000	35.700	0.00E+00	236.870	0.000
5	WSD(max)	2/4	38.400	0.000	33.460	0.00E+00	239.540	0.000
5	WSD(max)	3/4	38.400	0.000	31.210	0.00E+00	243.180	0.000
5	WSD(max)	J[6]	38.400	0.000	28.970	0.00E+00	250.580	0.000
5	WSD(min)	I[5]	-207.070	0.000	-44.670	0.00E+00	137.140	0.000
5	WSD(min)	1/4	-207.070	0.000	-46.910	0.00E+00	132.670	0.000
5	WSD(min)	2/4	-207.070	0.000	-49.160	0.00E+00	128.510	0.000
5	WSD(min)	3/4	-207.070	0.000	-51.400	0.00E+00	124.670	0.000
5	WSD(min)	J[6]	-207.070	0.000	-53.640	0.00E+00	121.150	0.000
6	USD(max)	I[6]	64.350	0.000	168.420	0.00E+00	400.920	0.000
6	USD(max)	1/4	64.350	0.000	164.830	0.00E+00	395.920	0.000
6	USD(max)	2/4	64.350	0.000	161.230	0.00E+00	391.420	0.000
6	USD(max)	3/4	64.350	0.000	157.640	0.00E+00	387.430	0.000
6	USD(max)	J[7]	64.350	0.000	154.050	0.00E+00	383.940	0.000
6	USD(min)	I[6]	-337.060	0.000	12.410	0.00E+00	175.430	0.000
6	USD(min)	1/4	-337.060	0.000	9.380	0.00E+00	158.140	0.000
6	USD(min)	2/4	-337.060	0.000	6.350	0.00E+00	138.550	0.000
6	USD(min)	3/4	-337.060	0.000	3.320	0.00E+00	119.380	0.000
6	USD(min)	J[7]	-337.060	0.000	0.290	0.00E+00	100.640	0.000
6	WSD(max)	I[6]	38.400	0.000	105.260	0.00E+00	250.580	0.000
6	WSD(max)	1/4	38.400	0.000	103.020	0.00E+00	247.450	0.000
6	WSD(max)	2/4	38.400	0.000	100.770	0.00E+00	244.640	0.000
6	WSD(max)	3/4	38.400	0.000	98.520	0.00E+00	242.140	0.000
6	WSD(max)	J[7]	38.400	0.000	96.280	0.00E+00	239.960	0.000
6	WSD(min)	I[6]	-207.070	0.000	23.310	0.00E+00	121.150	0.000
6	WSD(min)	1/4	-207.070	0.000	21.060	0.00E+00	108.610	0.000
6	WSD(min)	2/4	-207.070	0.000	18.820	0.00E+00	96.390	0.000
6	WSD(min)	3/4	-207.070	0.000	16.570	0.00E+00	84.490	0.000
6	WSD(min)	J[7]	-207.070	0.000	14.330	0.00E+00	72.900	0.000
7	USD(max)	I[7]	64.350	0.000	277.940	0.00E+00	383.940	0.000
7	USD(max)	1/4	64.350	0.000	274.350	0.00E+00	361.660	0.000
7	USD(max)	2/4	64.350	0.000	270.760	0.00E+00	339.890	0.000
7	USD(max)	3/4	64.350	0.000	267.180	0.00E+00	318.620	0.000
7	USD(max)	J[8]	64.350	0.000	263.590	0.00E+00	297.850	0.000
7	USD(min)	I[7]	-337.060	0.000	122.870	0.00E+00	100.640	0.000
7	USD(min)	1/4	-337.060	0.000	119.850	0.00E+00	67.540	0.000
7	USD(min)	2/4	-337.060	0.000	116.820	0.00E+00	34.860	0.000
7	USD(min)	3/4	-337.060	0.000	113.790	0.00E+00	2.610	0.000
7	USD(min)	J[8]	-337.060	0.000	110.770	0.00E+00	-29.210	0.000
7	WSD(max)	I[7]	38.400	0.000	173.710	0.00E+00	239.960	0.000
7	WSD(max)	1/4	38.400	0.000	171.470	0.00E+00	226.040	0.000
7	WSD(max)	2/4	38.400	0.000	169.230	0.00E+00	212.430	0.000
7	WSD(max)	3/4	38.400	0.000	166.990	0.00E+00	199.140	0.000
7	WSD(max)	J[8]	38.400	0.000	164.740	0.00E+00	186.160	0.000
7	WSD(min)	I[7]	-207.070	0.000	100.050	0.00E+00	72.900	0.000
7	WSD(min)	1/4	-207.070	0.000	97.810	0.00E+00	52.220	0.000
7	WSD(min)	2/4	-207.070	0.000	95.570	0.00E+00	31.850	0.000
7	WSD(min)	3/4	-207.070	0.000	93.330	0.00E+00	11.800	0.000
7	WSD(min)	J[8]	-207.070	0.000	91.090	0.00E+00	-7.940	0.000
8	USD(max)	I[8]	64.350	0.000	422.220	0.00E+00	297.850	0.000
8	USD(max)	1/4	64.350	0.000	417.680	0.00E+00	238.090	0.000
8	USD(max)	2/4	64.350	0.000	413.140	0.00E+00	184.100	0.000
8	USD(max)	3/4	64.350	0.000	408.600	0.00E+00	135.180	0.000
8	USD(max)	J[9]	64.350	0.000	404.060	0.00E+00	86.950	0.000
8	USD(min)	I[8]	-337.060	0.000	284.210	0.00E+00	-29.210	0.000
8	USD(min)	1/4	-337.060	0.000	280.380	0.00E+00	-94.020	0.000
8	USD(min)	2/4	-337.060	0.000	276.550	0.00E+00	-160.090	0.000
8	USD(min)	3/4	-337.060	0.000	272.720	0.00E+00	-227.800	0.000
8	USD(min)	J[9]	-337.060	0.000	268.890	0.00E+00	-300.180	0.000
8	WSD(max)	I[8]	38.400	0.000	263.890	0.00E+00	186.160	0.000
8	WSD(max)	1/4	38.400	0.000	261.050	0.00E+00	148.810	0.000
8	WSD(max)	2/4	38.400	0.000	258.210	0.00E+00	111.970	0.000
8	WSD(max)	3/4	38.400	0.000	255.380	0.00E+00	75.630	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]	38.400	0.000	252.540	0.00E+00	39.800	0.000
8	WSD(min)	I[8]	-207.070	0.000	211.090	0.00E+00	-7.940	0.000
8	WSD(min)	1/4	-207.070	0.000	208.260	0.00E+00	-50.390	0.000
8	WSD(min)	2/4	-207.070	0.000	205.420	0.00E+00	-96.640	0.000
8	WSD(min)	3/4	-207.070	0.000	202.580	0.00E+00	-142.380	0.000
8	WSD(min)	J[9]	-207.070	0.000	199.750	0.00E+00	-187.610	0.000
9	USD(max)	I[1]	-435.430	0.000	-120.910	0.00E+00	-201.860	0.000
9	USD(max)	1/4	-431.330	0.000	-114.020	0.00E+00	-181.420	0.000
9	USD(max)	2/4	-427.240	0.000	-107.250	0.00E+00	-162.530	0.000
9	USD(max)	3/4	-423.150	0.000	-100.630	0.00E+00	-140.230	0.000
9	USD(max)	J[10]	-419.050	0.000	-93.030	0.00E+00	-103.520	0.000
9	USD(min)	I[1]	-567.790	0.000	-335.400	0.00E+00	-398.900	0.000
9	USD(min)	1/4	-562.940	0.000	-312.400	0.00E+00	-361.650	0.000
9	USD(min)	2/4	-558.090	0.000	-289.760	0.00E+00	-326.770	0.000
9	USD(min)	3/4	-553.240	0.000	-267.480	0.00E+00	-294.200	0.000
9	USD(min)	J[10]	-548.390	0.000	-245.570	0.00E+00	-263.870	0.000
9	WSD(max)	I[1]	-301.480	0.000	-90.030	0.00E+00	-152.470	0.000
9	WSD(max)	1/4	-298.450	0.000	-84.740	0.00E+00	-135.390	0.000
9	WSD(max)	2/4	-295.420	0.000	-79.560	0.00E+00	-110.690	0.000
9	WSD(max)	3/4	-292.390	0.000	-74.500	0.00E+00	-88.020	0.000
9	WSD(max)	J[10]	-289.360	0.000	-69.550	0.00E+00	-67.330	0.000
9	WSD(min)	I[1]	-354.870	0.000	-204.280	0.00E+00	-249.310	0.000
9	WSD(min)	1/4	-351.840	0.000	-190.120	0.00E+00	-226.030	0.000
9	WSD(min)	2/4	-348.810	0.000	-176.180	0.00E+00	-204.230	0.000
9	WSD(min)	3/4	-345.780	0.000	-162.470	0.00E+00	-183.870	0.000
9	WSD(min)	J[10]	-342.740	0.000	-148.990	0.00E+00	-164.920	0.000
10	USD(max)	I[9]	-438.600	0.000	64.350	0.00E+00	38.920	0.000
10	USD(max)	1/4	-434.510	0.000	64.350	0.00E+00	28.460	0.000
10	USD(max)	2/4	-430.410	0.000	64.350	0.00E+00	18.000	0.000
10	USD(max)	3/4	-426.320	0.000	64.350	0.00E+00	7.550	0.000
10	USD(max)	J[11]	-422.230	0.000	64.350	0.00E+00	-2.910	0.000
10	USD(min)	I[9]	-567.790	0.000	-311.890	0.00E+00	-299.690	0.000
10	USD(min)	1/4	-562.940	0.000	-288.900	0.00E+00	-251.730	0.000
10	USD(min)	2/4	-558.090	0.000	-266.260	0.00E+00	-207.420	0.000
10	USD(min)	3/4	-553.240	0.000	-243.980	0.00E+00	-171.640	0.000
10	USD(min)	J[11]	-548.390	0.000	-222.060	0.00E+00	-155.310	0.000
10	WSD(max)	I[9]	-301.480	0.000	38.400	0.00E+00	5.760	0.000
10	WSD(max)	1/4	-298.450	0.000	38.400	0.00E+00	-0.480	0.000
10	WSD(max)	2/4	-295.420	0.000	38.400	0.00E+00	-6.720	0.000
10	WSD(max)	3/4	-292.390	0.000	38.400	0.00E+00	-12.960	0.000
10	WSD(max)	J[11]	-289.360	0.000	38.400	0.00E+00	-19.200	0.000
10	WSD(min)	I[9]	-354.870	0.000	-191.570	0.00E+00	-187.310	0.000
10	WSD(min)	1/4	-351.840	0.000	-177.410	0.00E+00	-157.330	0.000
10	WSD(min)	2/4	-348.810	0.000	-163.480	0.00E+00	-129.640	0.000
10	WSD(min)	3/4	-345.780	0.000	-149.770	0.00E+00	-106.660	0.000
10	WSD(min)	J[11]	-342.740	0.000	-136.280	0.00E+00	-93.850	0.000
11	USD(max)	I[10]	-419.050	0.000	-93.030	0.00E+00	-103.520	0.000
11	USD(max)	1/4	-415.090	0.000	-81.910	0.00E+00	-63.040	0.000
11	USD(max)	2/4	-411.120	0.000	-71.000	0.00E+00	-27.650	0.000
11	USD(max)	3/4	-407.150	0.000	-60.290	0.00E+00	2.760	0.000
11	USD(max)	J[12]	-403.180	0.000	-49.780	0.00E+00	28.290	0.000
11	USD(min)	I[10]	-548.390	0.000	-245.570	0.00E+00	-263.870	0.000
11	USD(min)	1/4	-543.690	0.000	-219.080	0.00E+00	-229.550	0.000
11	USD(min)	2/4	-538.980	0.000	-193.150	0.00E+00	-198.450	0.000
11	USD(min)	3/4	-534.280	0.000	-167.760	0.00E+00	-174.410	0.000
11	USD(min)	J[12]	-529.570	0.000	-142.910	0.00E+00	-160.870	0.000
11	WSD(max)	I[10]	-289.360	0.000	-69.550	0.00E+00	-67.330	0.000
11	WSD(max)	1/4	-286.420	0.000	-63.600	0.00E+00	-44.550	0.000
11	WSD(max)	2/4	-283.480	0.000	-57.350	0.00E+00	-24.650	0.000
11	WSD(max)	3/4	-280.540	0.000	-48.700	0.00E+00	-7.570	0.000
11	WSD(max)	J[12]	-277.600	0.000	-40.230	0.00E+00	6.760	0.000
11	WSD(min)	I[10]	-342.740	0.000	-148.990	0.00E+00	-164.920	0.000
11	WSD(min)	1/4	-339.800	0.000	-132.700	0.00E+00	-143.470	0.000
11	WSD(min)	2/4	-336.860	0.000	-116.750	0.00E+00	-124.030	0.000
11	WSD(min)	3/4	-333.920	0.000	-101.150	0.00E+00	-108.510	0.000
11	WSD(min)	J[12]	-330.980	0.000	-85.880	0.00E+00	-98.610	0.000
12	USD(max)	I[11]	-422.230	0.000	64.350	0.00E+00	-2.910	0.000
12	USD(max)	1/4	-418.260	0.000	64.350	0.00E+00	-15.780	0.000
12	USD(max)	2/4	-414.290	0.000	64.350	0.00E+00	8.110	0.000
12	USD(max)	3/4	-410.320	0.000	64.350	0.00E+00	30.810	0.000
12	USD(max)	J[13]	-406.350	0.000	64.350	0.00E+00	49.120	0.000
12	USD(min)	I[11]	-548.390	0.000	-222.060	0.00E+00	-155.310	0.000
12	USD(min)	1/4	-543.690	0.000	-195.580	0.00E+00	-137.300	0.000
12	USD(min)	2/4	-538.980	0.000	-169.650	0.00E+00	-121.570	0.000
12	USD(min)	3/4	-534.280	0.000	-144.250	0.00E+00	-108.540	0.000
12	USD(min)	J[13]	-529.570	0.000	-119.410	0.00E+00	-115.880	0.000
12	WSD(max)	I[11]	-289.360	0.000	38.400	0.00E+00	-19.200	0.000
12	WSD(max)	1/4	-286.420	0.000	38.400	0.00E+00	-26.880	0.000
12	WSD(max)	2/4	-283.480	0.000	38.400	0.00E+00	-11.590	0.000
12	WSD(max)	3/4	-280.540	0.000	38.400	0.00E+00	2.970	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]	-277.600	0.000	38.400	0.00E+00	14.770	0.000
12	WSD(min)	I[11]	-342.740	0.000	-136.280	0.00E+00	-93.850	0.000
12	WSD(min)	1/4	-339.800	0.000	-119.990	0.00E+00	-79.720	0.000
12	WSD(min)	2/4	-336.860	0.000	-104.050	0.00E+00	-67.370	0.000
12	WSD(min)	3/4	-333.920	0.000	-88.440	0.00E+00	-62.720	0.000
12	WSD(min)	J[13]	-330.980	0.000	-73.170	0.00E+00	-67.920	0.000
13	USD(max)	I[12]	-403.180	0.000	-49.780	0.00E+00	28.290	0.000
13	USD(max)	1/4	-399.210	0.000	-39.480	0.00E+00	49.060	0.000
13	USD(max)	2/4	-395.240	0.000	-29.390	0.00E+00	65.180	0.000
13	USD(max)	3/4	-391.270	0.000	-19.490	0.00E+00	76.750	0.000
13	USD(max)	J[14]	-387.300	0.000	-9.810	0.00E+00	87.530	0.000
13	USD(min)	I[12]	-529.570	0.000	-142.910	0.00E+00	-160.870	0.000
13	USD(min)	1/4	-524.870	0.000	-118.610	0.00E+00	-148.740	0.000
13	USD(min)	2/4	-520.170	0.000	-94.860	0.00E+00	-137.990	0.000
13	USD(min)	3/4	-515.460	0.000	-81.240	0.00E+00	-128.570	0.000
13	USD(min)	J[14]	-510.760	0.000	-68.310	0.00E+00	-120.450	0.000
13	WSD(max)	I[12]	-277.600	0.000	-40.230	0.00E+00	6.760	0.000
13	WSD(max)	1/4	-274.660	0.000	-31.930	0.00E+00	18.400	0.000
13	WSD(max)	2/4	-271.720	0.000	-23.790	0.00E+00	27.430	0.000
13	WSD(max)	3/4	-268.780	0.000	-15.830	0.00E+00	33.920	0.000
13	WSD(max)	J[14]	-265.840	0.000	-8.040	0.00E+00	39.640	0.000
13	WSD(min)	I[12]	-330.980	0.000	-85.880	0.00E+00	-98.610	0.000
13	WSD(min)	1/4	-328.040	0.000	-70.950	0.00E+00	-89.780	0.000
13	WSD(min)	2/4	-325.100	0.000	-56.370	0.00E+00	-81.980	0.000
13	WSD(min)	3/4	-322.160	0.000	-48.120	0.00E+00	-75.190	0.000
13	WSD(min)	J[14]	-319.220	0.000	-40.310	0.00E+00	-69.360	0.000
14	USD(max)	I[13]	-406.350	0.000	64.350	0.00E+00	49.120	0.000
14	USD(max)	1/4	-402.380	0.000	64.350	0.00E+00	63.130	0.000
14	USD(max)	2/4	-398.410	0.000	64.350	0.00E+00	72.960	0.000
14	USD(max)	3/4	-394.450	0.000	64.350	0.00E+00	78.710	0.000
14	USD(max)	J[15]	-390.480	0.000	64.350	0.00E+00	83.890	0.000
14	USD(min)	I[13]	-529.570	0.000	-119.410	0.00E+00	-115.880	0.000
14	USD(min)	1/4	-524.870	0.000	-95.110	0.00E+00	-123.210	0.000
14	USD(min)	2/4	-520.170	0.000	-71.350	0.00E+00	-130.550	0.000
14	USD(min)	3/4	-515.460	0.000	-48.140	0.00E+00	-137.890	0.000
14	USD(min)	J[15]	-510.760	0.000	-25.480	0.00E+00	-145.220	0.000
14	WSD(max)	I[13]	-277.600	0.000	38.400	0.00E+00	14.770	0.000
14	WSD(max)	1/4	-274.660	0.000	38.400	0.00E+00	23.890	0.000
14	WSD(max)	2/4	-271.720	0.000	38.400	0.00E+00	30.390	0.000
14	WSD(max)	3/4	-268.780	0.000	38.400	0.00E+00	34.350	0.000
14	WSD(max)	J[15]	-265.840	0.000	38.400	0.00E+00	37.920	0.000
14	WSD(min)	I[13]	-330.980	0.000	-73.170	0.00E+00	-67.920	0.000
14	WSD(min)	1/4	-328.040	0.000	-58.250	0.00E+00	-73.130	0.000
14	WSD(min)	2/4	-325.100	0.000	-43.670	0.00E+00	-78.330	0.000
14	WSD(min)	3/4	-322.160	0.000	-29.420	0.00E+00	-83.540	0.000
14	WSD(min)	J[15]	-319.220	0.000	-15.520	0.00E+00	-88.740	0.000
15	USD(max)	I[14]	-387.300	0.000	-9.810	0.00E+00	87.530	0.000
15	USD(max)	1/4	-383.330	0.000	-0.050	0.00E+00	95.110	0.000
15	USD(max)	2/4	-379.360	0.000	18.210	0.00E+00	98.320	0.000
15	USD(max)	3/4	-375.400	0.000	39.240	0.00E+00	97.260	0.000
15	USD(max)	J[16]	-371.430	0.000	59.730	0.00E+00	92.060	0.000
15	USD(min)	I[14]	-510.760	0.000	-68.310	0.00E+00	-120.450	0.000
15	USD(min)	1/4	-506.050	0.000	-55.930	0.00E+00	-113.580	0.000
15	USD(min)	2/4	-501.350	0.000	-44.100	0.00E+00	-107.920	0.000
15	USD(min)	3/4	-496.650	0.000	-32.810	0.00E+00	-103.440	0.000
15	USD(min)	J[16]	-491.940	0.000	-22.060	0.00E+00	-100.080	0.000
15	WSD(max)	I[14]	-265.840	0.000	-8.040	0.00E+00	39.640	0.000
15	WSD(max)	1/4	-262.900	0.000	-0.420	0.00E+00	43.920	0.000
15	WSD(max)	2/4	-259.960	0.000	11.260	0.00E+00	45.520	0.000
15	WSD(max)	3/4	-257.020	0.000	24.140	0.00E+00	44.520	0.000
15	WSD(max)	J[16]	-254.080	0.000	36.680	0.00E+00	40.970	0.000
15	WSD(min)	I[14]	-319.220	0.000	-40.310	0.00E+00	-69.360	0.000
15	WSD(min)	1/4	-316.280	0.000	-32.830	0.00E+00	-64.460	0.000
15	WSD(min)	2/4	-313.340	0.000	-25.700	0.00E+00	-60.470	0.000
15	WSD(min)	3/4	-310.400	0.000	-18.900	0.00E+00	-57.330	0.000
15	WSD(min)	J[16]	-307.460	0.000	-12.450	0.00E+00	-55.030	0.000
16	USD(max)	I[15]	-390.480	0.000	64.350	0.00E+00	83.890	0.000
16	USD(max)	1/4	-386.510	0.000	64.350	0.00E+00	86.700	0.000
16	USD(max)	2/4	-382.540	0.000	64.350	0.00E+00	85.290	0.000
16	USD(max)	3/4	-378.570	0.000	64.350	0.00E+00	79.770	0.000
16	USD(max)	J[17]	-374.600	0.000	73.550	0.00E+00	70.250	0.000
16	USD(min)	I[15]	-510.760	0.000	-25.480	0.00E+00	-145.220	0.000
16	USD(min)	1/4	-506.050	0.000	-3.410	0.00E+00	-152.560	0.000
16	USD(min)	2/4	-501.350	0.000	8.950	0.00E+00	-159.900	0.000
16	USD(min)	3/4	-496.650	0.000	18.030	0.00E+00	-167.240	0.000
16	USD(min)	J[17]	-491.940	0.000	26.890	0.00E+00	-178.180	0.000
16	WSD(max)	I[15]	-265.840	0.000	38.400	0.00E+00	37.920	0.000
16	WSD(max)	1/4	-262.900	0.000	38.400	0.00E+00	39.520	0.000
16	WSD(max)	2/4	-259.960	0.000	38.400	0.00E+00	38.770	0.000
16	WSD(max)	3/4	-257.020	0.000	38.400	0.00E+00	35.750	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]	-254.080	0.000	44.160	0.00E+00	30.530	0.000
16	WSD(min)	I[15]	-319.220	0.000	-15.520	0.00E+00	-88.740	0.000
16	WSD(min)	1/4	-316.280	0.000	-2.070	0.00E+00	-93.950	0.000
16	WSD(min)	2/4	-313.340	0.000	7.030	0.00E+00	-99.150	0.000
16	WSD(min)	3/4	-310.400	0.000	14.320	0.00E+00	-104.350	0.000
16	WSD(min)	J[17]	-307.460	0.000	21.430	0.00E+00	-111.360	0.000
17	USD(max)	I[16]	-371.430	0.000	59.730	0.00E+00	92.060	0.000
17	USD(max)	1/4	-367.460	0.000	79.670	0.00E+00	82.810	0.000
17	USD(max)	2/4	-363.490	0.000	99.060	0.00E+00	69.630	0.000
17	USD(max)	3/4	-359.520	0.000	117.910	0.00E+00	52.620	0.000
17	USD(max)	J[18]	-355.550	0.000	136.210	0.00E+00	31.900	0.000
17	USD(min)	I[16]	-491.940	0.000	-22.060	0.00E+00	-100.080	0.000
17	USD(min)	1/4	-487.240	0.000	-11.860	0.00E+00	-97.820	0.000
17	USD(min)	2/4	-482.530	0.000	-4.810	0.00E+00	-96.610	0.000
17	USD(min)	3/4	-477.830	0.000	0.550	0.00E+00	-105.000	0.000
17	USD(min)	J[18]	-473.130	0.000	5.700	0.00E+00	-116.750	0.000
17	WSD(max)	I[16]	-254.080	0.000	36.680	0.00E+00	40.970	0.000
17	WSD(max)	1/4	-251.140	0.000	48.880	0.00E+00	34.950	0.000
17	WSD(max)	2/4	-248.200	0.000	60.740	0.00E+00	26.520	0.000
17	WSD(max)	3/4	-245.260	0.000	72.260	0.00E+00	15.760	0.000
17	WSD(max)	J[18]	-242.320	0.000	83.430	0.00E+00	2.730	0.000
17	WSD(min)	I[16]	-307.460	0.000	-12.450	0.00E+00	-55.030	0.000
17	WSD(min)	1/4	-304.520	0.000	-6.340	0.00E+00	-53.530	0.000
17	WSD(min)	2/4	-301.580	0.000	-1.870	0.00E+00	-52.780	0.000
17	WSD(min)	3/4	-298.640	0.000	1.690	0.00E+00	-53.310	0.000
17	WSD(min)	J[18]	-295.700	0.000	5.070	0.00E+00	-62.310	0.000
18	USD(max)	I[17]	-374.600	0.000	73.550	0.00E+00	70.250	0.000
18	USD(max)	1/4	-370.630	0.000	90.380	0.00E+00	56.840	0.000
18	USD(max)	2/4	-366.660	0.000	106.660	0.00E+00	39.650	0.000
18	USD(max)	3/4	-362.690	0.000	122.400	0.00E+00	18.790	0.000
18	USD(max)	J[19]	-358.720	0.000	137.590	0.00E+00	-5.640	0.000
18	USD(min)	I[17]	-491.940	0.000	26.890	0.00E+00	-178.180	0.000
18	USD(min)	1/4	-487.240	0.000	35.560	0.00E+00	-190.470	0.000
18	USD(min)	2/4	-482.530	0.000	36.690	0.00E+00	-202.760	0.000
18	USD(min)	3/4	-477.830	0.000	36.690	0.00E+00	-215.050	0.000
18	USD(min)	J[19]	-473.130	0.000	36.690	0.00E+00	-227.340	0.000
18	WSD(max)	I[17]	-254.080	0.000	44.160	0.00E+00	30.530	0.000
18	WSD(max)	1/4	-251.140	0.000	54.670	0.00E+00	23.160	0.000
18	WSD(max)	2/4	-248.200	0.000	64.850	0.00E+00	13.730	0.000
18	WSD(max)	3/4	-245.260	0.000	74.690	0.00E+00	2.300	0.000
18	WSD(max)	J[19]	-242.320	0.000	84.180	0.00E+00	-11.070	0.000
18	WSD(min)	I[17]	-307.460	0.000	21.430	0.00E+00	-111.360	0.000
18	WSD(min)	1/4	-304.520	0.000	26.020	0.00E+00	-119.040	0.000
18	WSD(min)	2/4	-301.580	0.000	26.020	0.00E+00	-126.720	0.000
18	WSD(min)	3/4	-298.640	0.000	26.020	0.00E+00	-134.400	0.000
18	WSD(min)	J[19]	-295.700	0.000	26.020	0.00E+00	-142.080	0.000
19	USD(max)	I[18]	-355.550	0.000	136.210	0.00E+00	31.900	0.000
19	USD(max)	1/4	-351.580	0.000	153.960	0.00E+00	7.580	0.000
19	USD(max)	2/4	-347.610	0.000	171.180	0.00E+00	-20.240	0.000
19	USD(max)	3/4	-343.640	0.000	187.840	0.00E+00	-27.600	0.000
19	USD(max)	J[20]	-339.670	0.000	203.960	0.00E+00	-35.830	0.000
19	USD(min)	I[18]	-473.130	0.000	5.700	0.00E+00	-116.750	0.000
19	USD(min)	1/4	-468.420	0.000	10.660	0.00E+00	-130.170	0.000
19	USD(min)	2/4	-463.720	0.000	15.020	0.00E+00	-145.190	0.000
19	USD(min)	3/4	-459.010	0.000	19.140	0.00E+00	-161.800	0.000
19	USD(min)	J[20]	-454.310	0.000	23.060	0.00E+00	-179.940	0.000
19	WSD(max)	I[18]	-242.320	0.000	83.430	0.00E+00	2.730	0.000
19	WSD(max)	1/4	-239.380	0.000	94.270	0.00E+00	-12.510	0.000
19	WSD(max)	2/4	-236.440	0.000	104.760	0.00E+00	-29.880	0.000
19	WSD(max)	3/4	-233.500	0.000	114.920	0.00E+00	-34.400	0.000
19	WSD(max)	J[20]	-230.560	0.000	124.730	0.00E+00	-39.420	0.000
19	WSD(min)	I[18]	-295.700	0.000	5.070	0.00E+00	-62.310	0.000
19	WSD(min)	1/4	-292.760	0.000	8.290	0.00E+00	-72.570	0.000
19	WSD(min)	2/4	-289.820	0.000	11.330	0.00E+00	-84.070	0.000
19	WSD(min)	3/4	-286.880	0.000	14.210	0.00E+00	-96.760	0.000
19	WSD(min)	J[20]	-283.940	0.000	16.910	0.00E+00	-110.630	0.000
20	USD(max)	I[19]	-358.720	0.000	137.590	0.00E+00	-5.640	0.000
20	USD(max)	1/4	-354.760	0.000	153.960	0.00E+00	-33.520	0.000
20	USD(max)	2/4	-350.790	0.000	171.180	0.00E+00	-64.750	0.000
20	USD(max)	3/4	-346.820	0.000	187.840	0.00E+00	-99.210	0.000
20	USD(max)	J[21]	-342.850	0.000	203.960	0.00E+00	-136.800	0.000
20	USD(min)	I[19]	-473.130	0.000	36.690	0.00E+00	-227.340	0.000
20	USD(min)	1/4	-468.420	0.000	36.690	0.00E+00	-239.620	0.000
20	USD(min)	2/4	-463.720	0.000	36.690	0.00E+00	-251.910	0.000
20	USD(min)	3/4	-459.010	0.000	36.690	0.00E+00	-264.200	0.000
20	USD(min)	J[21]	-454.310	0.000	36.690	0.00E+00	-276.490	0.000
20	WSD(max)	I[19]	-242.320	0.000	84.180	0.00E+00	-11.070	0.000
20	WSD(max)	1/4	-239.380	0.000	94.270	0.00E+00	-26.300	0.000
20	WSD(max)	2/4	-236.440	0.000	104.760	0.00E+00	-43.330	0.000
20	WSD(max)	3/4	-233.500	0.000	114.920	0.00E+00	-62.090	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]	-230.560	0.000	124.730	0.00E+00	-82.500	0.000
20	WSD(min)	I[19]	-295.700	0.000	26.020	0.00E+00	-142.080	0.000
20	WSD(min)	1/4	-292.760	0.000	26.020	0.00E+00	-149.760	0.000
20	WSD(min)	2/4	-289.820	0.000	26.020	0.00E+00	-157.450	0.000
20	WSD(min)	3/4	-286.880	0.000	26.020	0.00E+00	-165.130	0.000
20	WSD(min)	J[21]	-283.940	0.000	26.020	0.00E+00	-172.810	0.000
21	USD(max)	I[20]	-339.670	0.000	203.960	0.00E+00	-35.830	0.000
21	USD(max)	1/4	-335.710	0.000	213.760	0.00E+00	-41.600	0.000
21	USD(max)	2/4	-331.740	0.000	223.350	0.00E+00	-47.820	0.000
21	USD(max)	3/4	-327.770	0.000	232.720	0.00E+00	-54.460	0.000
21	USD(max)	J[22]	-323.800	0.000	241.880	0.00E+00	-61.500	0.000
21	USD(min)	I[20]	-454.310	0.000	23.060	0.00E+00	-179.940	0.000
21	USD(min)	1/4	-449.610	0.000	25.400	0.00E+00	-192.040	0.000
21	USD(min)	2/4	-444.900	0.000	27.670	0.00E+00	-217.520	0.000
21	USD(min)	3/4	-440.200	0.000	29.850	0.00E+00	-245.390	0.000
21	USD(min)	J[22]	-435.490	0.000	31.960	0.00E+00	-274.390	0.000
21	WSD(max)	I[20]	-230.560	0.000	124.730	0.00E+00	-39.420	0.000
21	WSD(max)	1/4	-227.620	0.000	130.690	0.00E+00	-42.920	0.000
21	WSD(max)	2/4	-224.680	0.000	136.520	0.00E+00	-46.680	0.000
21	WSD(max)	3/4	-221.740	0.000	142.210	0.00E+00	-50.680	0.000
21	WSD(max)	J[22]	-218.800	0.000	147.770	0.00E+00	-54.910	0.000
21	WSD(min)	I[20]	-283.940	0.000	16.910	0.00E+00	-110.630	0.000
21	WSD(min)	1/4	-281.000	0.000	18.510	0.00E+00	-119.870	0.000
21	WSD(min)	2/4	-278.060	0.000	20.050	0.00E+00	-135.950	0.000
21	WSD(min)	3/4	-275.120	0.000	21.520	0.00E+00	-153.370	0.000
21	WSD(min)	J[22]	-272.180	0.000	22.930	0.00E+00	-171.500	0.000
22	USD(max)	I[21]	-342.850	0.000	203.960	0.00E+00	-136.800	0.000
22	USD(max)	1/4	-338.880	0.000	213.760	0.00E+00	-161.830	0.000
22	USD(max)	2/4	-334.910	0.000	223.350	0.00E+00	-175.210	0.000
22	USD(max)	3/4	-330.940	0.000	232.720	0.00E+00	-187.880	0.000
22	USD(max)	J[30]	-326.970	0.000	241.880	0.00E+00	-201.080	0.000
22	USD(min)	I[21]	-454.310	0.000	36.690	0.00E+00	-276.490	0.000
22	USD(min)	1/4	-449.610	0.000	36.690	0.00E+00	-284.170	0.000
22	USD(min)	2/4	-444.900	0.000	36.690	0.00E+00	-291.850	0.000
22	USD(min)	3/4	-440.200	0.000	36.690	0.00E+00	-299.530	0.000
22	USD(min)	J[30]	-435.490	0.000	36.690	0.00E+00	-307.210	0.000
22	WSD(max)	I[21]	-230.560	0.000	124.730	0.00E+00	-82.500	0.000
22	WSD(max)	1/4	-227.620	0.000	130.690	0.00E+00	-96.080	0.000
22	WSD(max)	2/4	-224.680	0.000	136.520	0.00E+00	-110.250	0.000
22	WSD(max)	3/4	-221.740	0.000	142.210	0.00E+00	-125.020	0.000
22	WSD(max)	J[30]	-218.800	0.000	147.770	0.00E+00	-140.360	0.000
22	WSD(min)	I[21]	-283.940	0.000	26.020	0.00E+00	-172.810	0.000
22	WSD(min)	1/4	-281.000	0.000	26.020	0.00E+00	-177.610	0.000
22	WSD(min)	2/4	-278.060	0.000	26.020	0.00E+00	-182.410	0.000
22	WSD(min)	3/4	-275.120	0.000	26.020	0.00E+00	-187.210	0.000
22	WSD(min)	J[30]	-272.180	0.000	26.020	0.00E+00	-192.010	0.000
23	USD(max)	I[22]	-36.690	0.000	-277.250	0.00E+00	10.300	0.000
23	USD(max)	1/4	-36.690	0.000	-257.850	0.00E+00	43.740	0.000
23	USD(max)	2/4	-36.690	0.000	-238.450	0.00E+00	74.760	0.000
23	USD(max)	3/4	-36.690	0.000	-219.060	0.00E+00	105.780	0.000
23	USD(max)	J[23]	-36.690	0.000	-199.660	0.00E+00	136.320	0.000
23	USD(min)	I[22]	-263.000	0.000	-384.060	0.00E+00	-225.500	0.000
23	USD(min)	1/4	-263.000	0.000	-362.630	0.00E+00	-180.020	0.000
23	USD(min)	2/4	-263.000	0.000	-341.190	0.00E+00	-140.210	0.000
23	USD(min)	3/4	-263.000	0.000	-319.760	0.00E+00	-102.820	0.000
23	USD(min)	J[23]	-263.000	0.000	-298.330	0.00E+00	-67.860	0.000
23	WSD(max)	I[22]	-26.020	0.000	-192.950	0.00E+00	-1.200	0.000
23	WSD(max)	1/4	-26.020	0.000	-182.190	0.00E+00	22.910	0.000
23	WSD(max)	2/4	-26.020	0.000	-171.420	0.00E+00	45.350	0.000
23	WSD(max)	3/4	-26.020	0.000	-159.410	0.00E+00	66.110	0.000
23	WSD(max)	J[23]	-26.020	0.000	-146.020	0.00E+00	85.200	0.000
23	WSD(min)	I[22]	-160.570	0.000	-240.040	0.00E+00	-140.930	0.000
23	WSD(min)	1/4	-160.570	0.000	-226.640	0.00E+00	-111.770	0.000
23	WSD(min)	2/4	-160.570	0.000	-213.250	0.00E+00	-84.270	0.000
23	WSD(min)	3/4	-160.570	0.000	-199.850	0.00E+00	-58.460	0.000
23	WSD(min)	J[23]	-160.570	0.000	-186.460	0.00E+00	-34.310	0.000
24	USD(max)	I[23]	-36.690	0.000	-199.660	0.00E+00	136.320	0.000
24	USD(max)	1/4	-36.690	0.000	-177.160	0.00E+00	168.400	0.000
24	USD(max)	2/4	-36.690	0.000	-154.660	0.00E+00	196.870	0.000
24	USD(max)	3/4	-36.690	0.000	-132.160	0.00E+00	221.730	0.000
24	USD(max)	J[24]	-36.690	0.000	-109.660	0.00E+00	242.990	0.000
24	USD(min)	I[23]	-263.000	0.000	-298.330	0.00E+00	-67.860	0.000
24	USD(min)	1/4	-263.000	0.000	-273.470	0.00E+00	-31.560	0.000
24	USD(min)	2/4	-263.000	0.000	-248.610	0.00E+00	0.610	0.000
24	USD(min)	3/4	-263.000	0.000	-223.750	0.00E+00	29.710	0.000
24	USD(min)	J[24]	-263.000	0.000	-198.890	0.00E+00	55.760	0.000
24	WSD(max)	I[23]	-26.020	0.000	-146.020	0.00E+00	85.200	0.000
24	WSD(max)	1/4	-26.020	0.000	-130.480	0.00E+00	105.250	0.000
24	WSD(max)	2/4	-26.020	0.000	-114.940	0.00E+00	123.040	0.000
24	WSD(max)	3/4	-26.020	0.000	-99.400	0.00E+00	138.580	0.000

Elem	Load	Part	Axial (kN)	Shear-y (kN)	Shear-z (kN)	Torsion (kN · m)	Moment-y (kN · m)	Moment-z (kN · m)
24	WSD(max)	J[24]	-26.020	0.000	-83.870	0.00E+00	151.870	0.000
24	WSD(min)	I[23]	-160.570	0.000	-186.460	0.00E+00	-34.310	0.000
24	WSD(min)	1/4	-160.570	0.000	-170.920	0.00E+00	-11.110	0.000
24	WSD(min)	2/4	-160.570	0.000	-155.380	0.00E+00	7.910	0.000
24	WSD(min)	3/4	-160.570	0.000	-139.840	0.00E+00	25.110	0.000
24	WSD(min)	J[24]	-160.570	0.000	-124.300	0.00E+00	40.500	0.000
25	USD(max)	I[24]	-36.690	0.000	-109.660	0.00E+00	242.990	0.000
25	USD(max)	1/4	-36.690	0.000	-87.160	0.00E+00	260.650	0.000
25	USD(max)	2/4	-36.690	0.000	-64.660	0.00E+00	276.790	0.000
25	USD(max)	3/4	-36.690	0.000	-42.160	0.00E+00	289.820	0.000
25	USD(max)	J[25]	-36.690	0.000	-19.660	0.00E+00	299.260	0.000
25	USD(min)	I[24]	-263.000	0.000	-198.890	0.00E+00	55.760	0.000
25	USD(min)	1/4	-263.000	0.000	-174.030	0.00E+00	78.730	0.000
25	USD(min)	2/4	-263.000	0.000	-149.170	0.00E+00	98.650	0.000
25	USD(min)	3/4	-263.000	0.000	-124.300	0.00E+00	115.500	0.000
25	USD(min)	J[25]	-263.000	0.000	-99.440	0.00E+00	127.140	0.000
25	WSD(max)	I[24]	-26.020	0.000	-83.870	0.00E+00	151.870	0.000
25	WSD(max)	1/4	-26.020	0.000	-68.330	0.00E+00	162.900	0.000
25	WSD(max)	2/4	-26.020	0.000	-52.790	0.00E+00	172.730	0.000
25	WSD(max)	3/4	-26.020	0.000	-37.250	0.00E+00	180.550	0.000
25	WSD(max)	J[25]	-26.020	0.000	-21.710	0.00E+00	186.130	0.000
25	WSD(min)	I[24]	-160.570	0.000	-124.300	0.00E+00	40.500	0.000
25	WSD(min)	1/4	-160.570	0.000	-108.770	0.00E+00	54.090	0.000
25	WSD(min)	2/4	-160.570	0.000	-93.230	0.00E+00	65.860	0.000
25	WSD(min)	3/4	-160.570	0.000	-77.690	0.00E+00	75.820	0.000
25	WSD(min)	J[25]	-160.570	0.000	-62.150	0.00E+00	83.970	0.000
26	USD(max)	I[25]	-36.690	0.000	-19.660	0.00E+00	299.260	0.000
26	USD(max)	1/4	-36.690	0.000	2.840	0.00E+00	305.080	0.000
26	USD(max)	2/4	-36.690	0.000	25.340	0.00E+00	307.300	0.000
26	USD(max)	3/4	-36.690	0.000	47.840	0.00E+00	305.920	0.000
26	USD(max)	J[26]	-36.690	0.000	70.340	0.00E+00	300.930	0.000
26	USD(min)	I[25]	-263.000	0.000	-99.440	0.00E+00	127.140	0.000
26	USD(min)	1/4	-263.000	0.000	-74.580	0.00E+00	133.280	0.000
26	USD(min)	2/4	-263.000	0.000	-49.720	0.00E+00	136.360	0.000
26	USD(min)	3/4	-263.000	0.000	-24.860	0.00E+00	136.370	0.000
26	USD(min)	J[26]	-263.000	0.000	0.000	0.00E+00	133.320	0.000
26	WSD(max)	I[25]	-26.020	0.000	-21.710	0.00E+00	186.130	0.000
26	WSD(max)	1/4	-26.020	0.000	-6.180	0.00E+00	189.440	0.000
26	WSD(max)	2/4	-26.020	0.000	9.360	0.00E+00	190.510	0.000
26	WSD(max)	3/4	-26.020	0.000	24.900	0.00E+00	189.320	0.000
26	WSD(max)	J[26]	-26.020	0.000	40.440	0.00E+00	185.880	0.000
26	WSD(min)	I[25]	-160.570	0.000	-62.150	0.00E+00	83.970	0.000
26	WSD(min)	1/4	-160.570	0.000	-46.610	0.00E+00	90.310	0.000
26	WSD(min)	2/4	-160.570	0.000	-31.080	0.00E+00	94.840	0.000
26	WSD(min)	3/4	-160.570	0.000	-15.540	0.00E+00	97.550	0.000
26	WSD(min)	J[26]	-160.570	0.000	0.000	0.00E+00	98.460	0.000
27	USD(max)	I[26]	-36.690	0.000	70.340	0.00E+00	300.930	0.000
27	USD(max)	1/4	-36.690	0.000	87.210	0.00E+00	292.690	0.000
27	USD(max)	2/4	-36.690	0.000	104.670	0.00E+00	281.550	0.000
27	USD(max)	3/4	-36.690	0.000	124.650	0.00E+00	269.840	0.000
27	USD(max)	J[27]	-36.690	0.000	144.640	0.00E+00	257.220	0.000
27	USD(min)	I[26]	-263.000	0.000	0.000	0.00E+00	133.320	0.000
27	USD(min)	1/4	-263.000	0.000	21.130	0.00E+00	127.520	0.000
27	USD(min)	2/4	-263.000	0.000	42.260	0.00E+00	119.270	0.000
27	USD(min)	3/4	-263.000	0.000	63.390	0.00E+00	108.580	0.000
27	USD(min)	J[27]	-263.000	0.000	84.520	0.00E+00	95.440	0.000
27	WSD(max)	I[26]	-26.020	0.000	40.440	0.00E+00	185.880	0.000
27	WSD(max)	1/4	-26.020	0.000	52.930	0.00E+00	180.400	0.000
27	WSD(max)	2/4	-26.020	0.000	65.420	0.00E+00	173.120	0.000
27	WSD(max)	3/4	-26.020	0.000	77.910	0.00E+00	164.020	0.000
27	WSD(max)	J[27]	-26.020	0.000	90.400	0.00E+00	153.120	0.000
27	WSD(min)	I[26]	-160.570	0.000	0.000	0.00E+00	98.460	0.000
27	WSD(min)	1/4	-160.570	0.000	12.490	0.00E+00	97.550	0.000
27	WSD(min)	2/4	-160.570	0.000	24.980	0.00E+00	94.840	0.000
27	WSD(min)	3/4	-160.570	0.000	37.470	0.00E+00	90.310	0.000
27	WSD(min)	J[27]	-160.570	0.000	49.960	0.00E+00	83.970	0.000
28	USD(max)	I[27]	-36.690	0.000	144.640	0.00E+00	257.220	0.000
28	USD(max)	1/4	-36.690	0.000	164.620	0.00E+00	241.000	0.000
28	USD(max)	2/4	-36.690	0.000	184.610	0.00E+00	221.170	0.000
28	USD(max)	3/4	-36.690	0.000	204.590	0.00E+00	197.740	0.000
28	USD(max)	J[28]	-36.690	0.000	224.580	0.00E+00	170.710	0.000
28	USD(min)	I[27]	-263.000	0.000	84.520	0.00E+00	95.440	0.000
28	USD(min)	1/4	-263.000	0.000	105.640	0.00E+00	79.160	0.000
28	USD(min)	2/4	-263.000	0.000	126.770	0.00E+00	59.660	0.000
28	USD(min)	3/4	-263.000	0.000	147.900	0.00E+00	37.710	0.000
28	USD(min)	J[28]	-263.000	0.000	166.490	0.00E+00	13.320	0.000
28	WSD(max)	I[27]	-26.020	0.000	90.400	0.00E+00	153.120	0.000
28	WSD(max)	1/4	-26.020	0.000	102.890	0.00E+00	140.450	0.000
28	WSD(max)	2/4	-26.020	0.000	115.380	0.00E+00	128.060	0.000
28	WSD(max)	3/4	-26.020	0.000	127.870	0.00E+00	113.410	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]	-26.020	0.000	140.360	0.00E+00	96.520	0.000
28	WSD(min)	I[27]	-160.570	0.000	49.960	0.00E+00	83.970	0.000
28	WSD(min)	1/4	-160.570	0.000	62.450	0.00E+00	74.280	0.000
28	WSD(min)	2/4	-160.570	0.000	74.940	0.00E+00	61.050	0.000
28	WSD(min)	3/4	-160.570	0.000	87.430	0.00E+00	46.010	0.000
28	WSD(min)	J[28]	-160.570	0.000	99.920	0.00E+00	29.150	0.000
29	USD(max)	I[28]	-36.690	0.000	224.580	0.00E+00	170.710	0.000
29	USD(max)	1/4	-36.690	0.000	244.560	0.00E+00	140.070	0.000
29	USD(max)	2/4	-36.690	0.000	264.550	0.00E+00	105.820	0.000
29	USD(max)	3/4	-36.690	0.000	284.530	0.00E+00	67.970	0.000
29	USD(max)	J[29]	-36.690	0.000	304.520	0.00E+00	26.510	0.000
29	USD(min)	I[28]	-263.000	0.000	166.490	0.00E+00	13.320	0.000
29	USD(min)	1/4	-263.000	0.000	183.360	0.00E+00	-13.520	0.000
29	USD(min)	2/4	-263.000	0.000	200.220	0.00E+00	-42.800	0.000
29	USD(min)	3/4	-263.000	0.000	217.080	0.00E+00	-74.520	0.000
29	USD(min)	J[29]	-263.000	0.000	233.940	0.00E+00	-108.700	0.000
29	WSD(max)	I[28]	-26.020	0.000	140.360	0.00E+00	96.520	0.000
29	WSD(max)	1/4	-26.020	0.000	152.850	0.00E+00	77.360	0.000
29	WSD(max)	2/4	-26.020	0.000	165.340	0.00E+00	55.960	0.000
29	WSD(max)	3/4	-26.020	0.000	177.830	0.00E+00	32.300	0.000
29	WSD(max)	J[29]	-26.020	0.000	190.320	0.00E+00	6.390	0.000
29	WSD(min)	I[28]	-160.570	0.000	99.920	0.00E+00	29.150	0.000
29	WSD(min)	1/4	-160.570	0.000	112.410	0.00E+00	10.480	0.000
29	WSD(min)	2/4	-160.570	0.000	124.900	0.00E+00	-10.000	0.000
29	WSD(min)	3/4	-160.570	0.000	137.390	0.00E+00	-32.280	0.000
29	WSD(min)	J[29]	-160.570	0.000	149.880	0.00E+00	-56.390	0.000
30	USD(max)	I[29]	-36.690	0.000	304.520	0.00E+00	26.510	0.000
30	USD(max)	1/4	-36.690	0.000	321.740	0.00E+00	-12.120	0.000
30	USD(max)	2/4	-36.690	0.000	341.190	0.00E+00	-53.320	0.000
30	USD(max)	3/4	-36.690	0.000	362.630	0.00E+00	-90.710	0.000
30	USD(max)	J[30]	-36.690	0.000	384.060	0.00E+00	-130.370	0.000
30	USD(min)	I[29]	-263.000	0.000	233.940	0.00E+00	-108.700	0.000
30	USD(min)	1/4	-263.000	0.000	248.480	0.00E+00	-140.120	0.000
30	USD(min)	2/4	-263.000	0.000	263.010	0.00E+00	-173.350	0.000
30	USD(min)	3/4	-263.000	0.000	277.550	0.00E+00	-208.410	0.000
30	USD(min)	J[30]	-263.000	0.000	292.090	0.00E+00	-245.410	0.000
30	WSD(max)	I[29]	-26.020	0.000	190.320	0.00E+00	6.390	0.000
30	WSD(max)	1/4	-26.020	0.000	201.090	0.00E+00	-17.750	0.000
30	WSD(max)	2/4	-26.020	0.000	213.250	0.00E+00	-43.570	0.000
30	WSD(max)	3/4	-26.020	0.000	226.640	0.00E+00	-71.060	0.000
30	WSD(max)	J[30]	-26.020	0.000	240.040	0.00E+00	-100.230	0.000
30	WSD(min)	I[29]	-160.570	0.000	149.880	0.00E+00	-56.390	0.000
30	WSD(min)	1/4	-160.570	0.000	160.650	0.00E+00	-78.610	0.000
30	WSD(min)	2/4	-160.570	0.000	171.420	0.00E+00	-102.190	0.000
30	WSD(min)	3/4	-160.570	0.000	182.190	0.00E+00	-127.110	0.000
30	WSD(min)	J[30]	-160.570	0.000	192.950	0.00E+00	-153.380	0.000

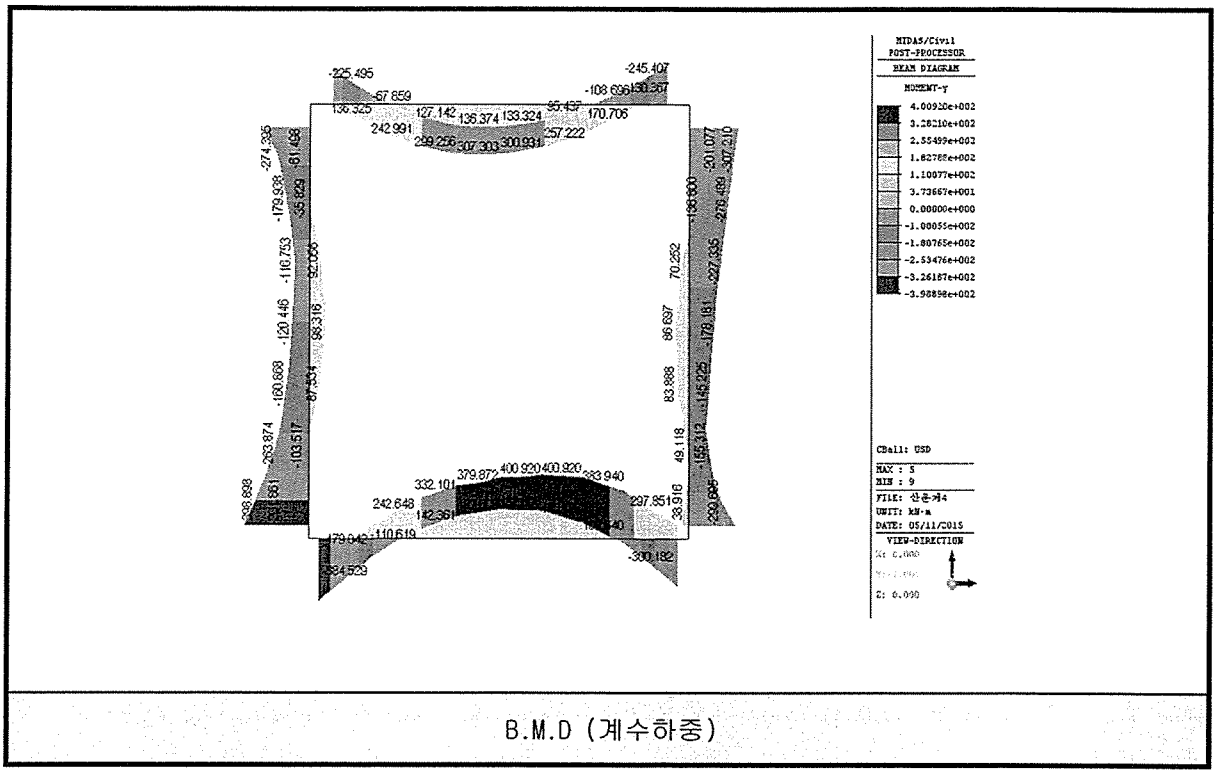
9. 단면력 요약

구분	위치	부재	극한하중			사용하중	비고
			Mu(kN · m)	Su(kN)	Pu(kN)	M(kN · m)	
상부슬래브	단부	23,30	-245.41	384.06	-	-153.38	
	중앙부	26,27	307.30	144.64	-	190.51	
벽체	상단부 (축력최대)	21.22	-165.25	241.88	-454.31	-39.42	
	상단부 (모멘트최대)	21,22	-307.21	241.88	-414.77	-192.01	
	중앙부 (축력최대)	15,16	60.13	73.55	-510.76	45.52	
	중앙부 (모멘트최대)	15,16	-178.18	-68.31	-471.22	-111.36	
	하단부 (축력최대)	9,10	-299.69	-335.40	-567.79	5.76	
	하단부 (모멘트최대)	9,10	-398.90	-335.40	-503.09	-249.31	
하부슬래브	단부	1,8	-384.53	435.87	-	-240.33	
	중앙부	4,5	400.92	182.51	-	250.58	

-'전단력과 사용하중 상태에서의 모멘트는 선택 부재에서의 최대값 적용

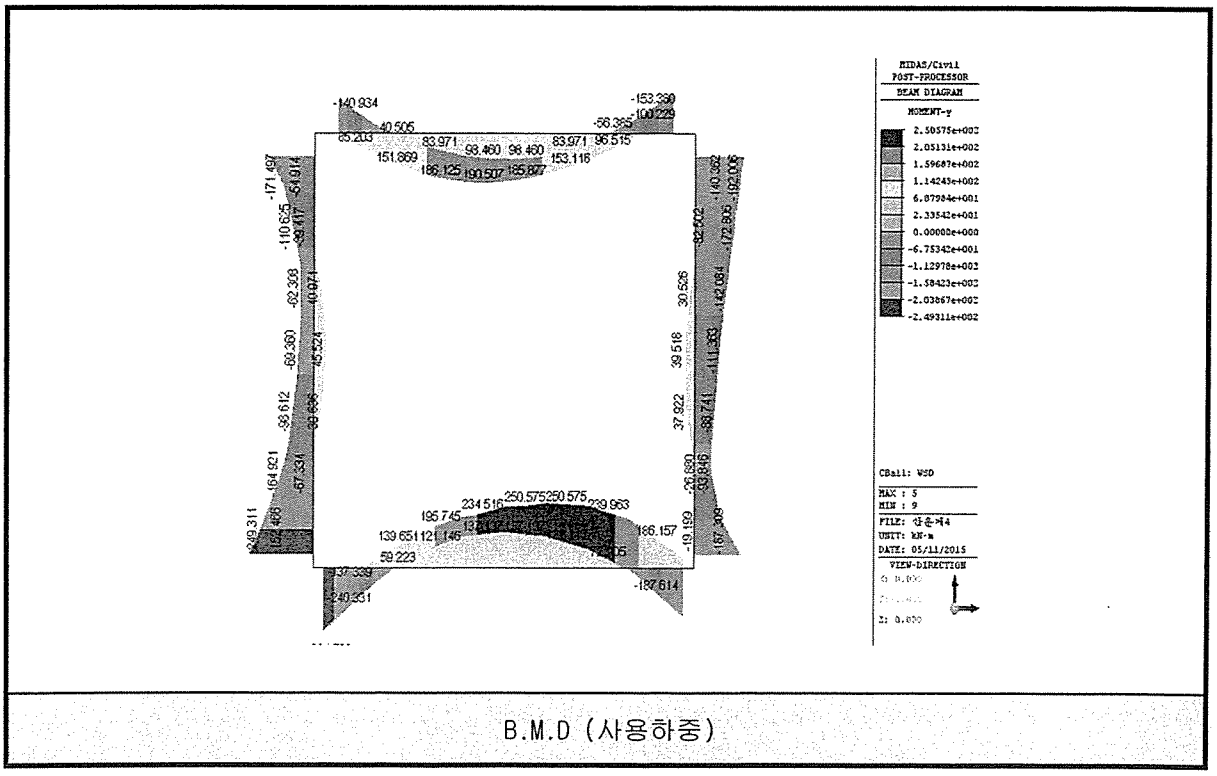
10. 단면력도

(1) 극한하중 모멘트도



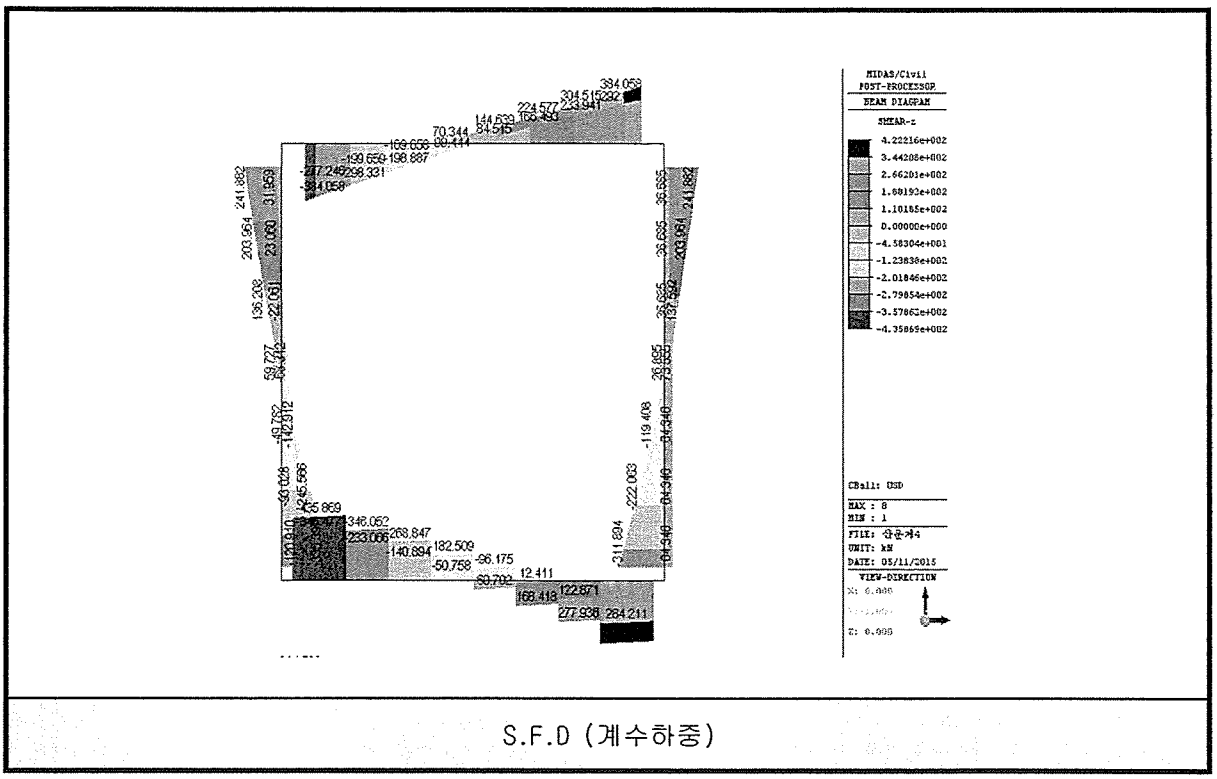
B.M.D (계수하중)

(2) 사용하중 모멘트도



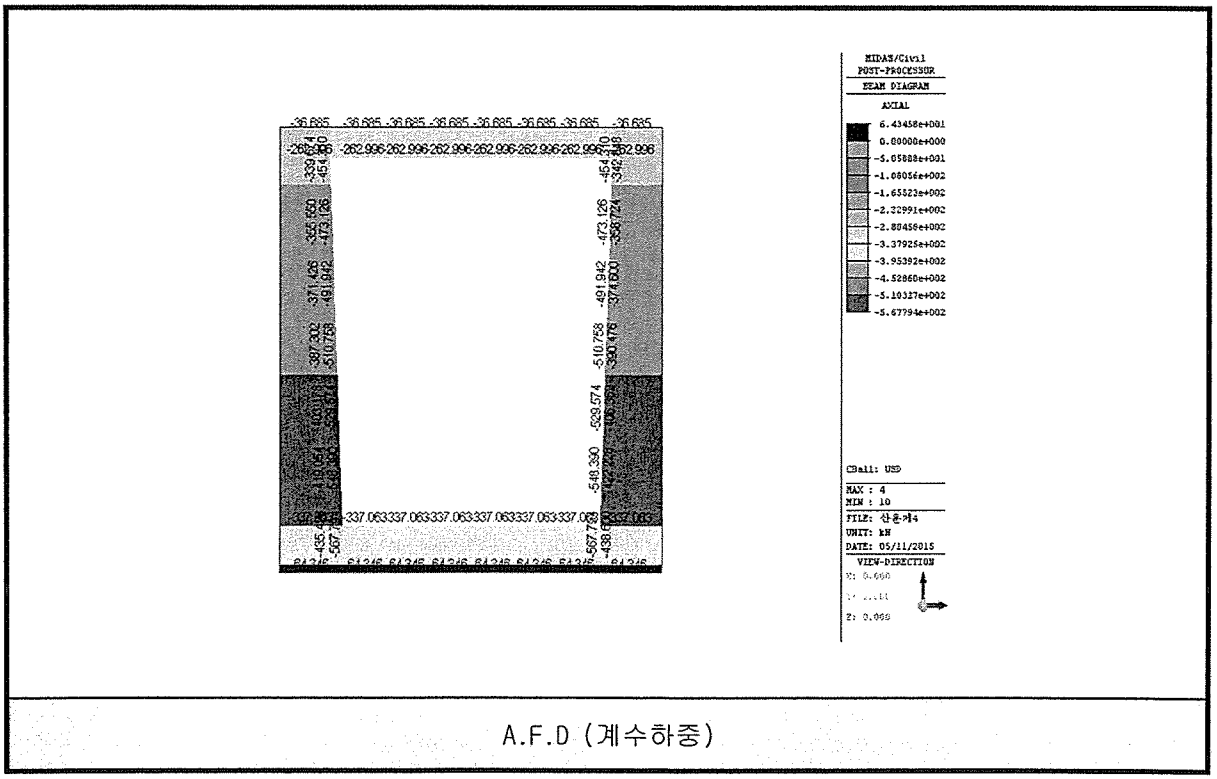
B.M.D (사용하중)

(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	153.380
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Su (kN)
1000.0	700.0	600.0	100.0	245.410	384.060

전단설계시 단면의 유효높이 ds = 500.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 35.953 mm

최외단 인장철근 변형률 εt = 0.03885 ≥ 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 = 1153.552 mm^2

사용철근비 : Puse = As / (B × D) = 0.00382

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) = 1153.552 mm^2 As(min) = 2100.000 mm^2

4/3×As(req) = 1538.069 mm^2 ※ As = 1538.069 mm^2

사용철근량 = H19 × 8ea = 2292.000 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 480239230 N · mm

= 480.239 kN · m > 245.410 kN · m ----- ∴ O.K. [사용률 = 1.957]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 387.970 kN

1/2 x Φv x Vc = 193.985 kN ≤ Vu ≤Φv x Vc ∴ 최소전단 철근을 배근하는것이 좋다.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 153.38 × 1000000 / [2292×(600 - 123.635/3)]

= 119.759 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 2292/1000 + 7 × 2292/1000 × √[(1 + 2×1000×600/(7×2292)]

= 123.635 mm

사용철근량 = 2292.000 mm^2 (철근도심 : 100 mm)

1단 H19 @ 125 (= 2292 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 19 / 2 = 90.50 mm

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 119.759) - 2.5 × 90.5 = 431.323 mm

300 x (210 / fs) = 300 × (210 / 119.759) = 526.058 mm

Sa는 작은 값인 431.323 mm 를 적용

S = 125.00 ≤ Sa (= 431.323 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	190.510
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	600.0	500.0	100.0	307.300	144.640

전단설계시 단면의 유효높이 ds = 500.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 35.953 mm

최외단 인장철근 변형률 εt = 0.03188 ≥ 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 = 1755.568 mm^2

사용철근비 : Puse = As / (B × D) = 0.00458

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) = 1755.568 mm^2 As(min) = 1750.000 mm^2

4/3×As(req) = 2340.757 mm^2 ※ As = 1755.568 mm^2

사용철근량 = H19 × 8ea = 2292.000 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 397727230 N · mm

= 397.727 kN · m > 307.300 kN · m ----- ∴ O.K. [사용률 = 1.294]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 387.970 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 190.51 × 1000000 / [2292×(500 - 111.633/3)]

= 179.606 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 2292/1000 + 7 × 2292/1000 × √[(1 + 2×1000×500/(7×2292)]

= 111.633 mm

사용철근량 = 2292.000 mm^2 (철근도심 : 100 mm)

1단 H19 @ 125 (= 2292 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 19 / 2 = 90.50 mm

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 179.606) - 2.5 × 90.5 = 212.210 mm

300 x (210 / fs) = 300 × (210 / 179.606) = 350.768 mm

Sa는 작은 값인 212.210 mm 를 적용

S = 125.00 ≤ Sa (= 212.21 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	240.330
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	650.0	550.0	100.0	384.530	435.870

전단설계시 단면의 유효높이 ds = 550.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 48.577 mm

최외단 인장철근 변형률 εt = 0.02540 ≥ 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 = 1999.058 mm^2

사용철근비 : Puse = As / (B × D) = 0.00563

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) = 1999.058 mm^2 As(min) = 1925.000 mm^2

4/3×As(req) = 2665.411 mm^2 ※ As = 1999.058 mm^2

사용철근량 = H22 × 8ea = 3096.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 586088414 N · mm

= 586.088 kN · m > 384.530 kN · m ----- ∴ O.K [사용률 = 1.524]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 426.767 kN

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (435.9 - 426.767)×10³ ×150.0 / (400.0×550.0×0.85)

= 7.302 ㎟

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

Øv · As = Øv · Av · fy · D / (s × B) = 315.905 kN

s = 150.0 mm < Min (600, 0.5D) = 275.0 mm ----- ∴ O.K

Øv · Vn = Øv · Vc + Øv · Vs = 742.672 kN > Vu ----- ∴ O.K

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 240.33 × 1000000 / [3096.8×(550 - 134.256/3)]

= 153.600 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 3096.8/1000 + 7 × 3096.8/1000 × √[(1 + 2×1000×550/(7×3096.8)]

= 134.256 mm

사용철근량 = 3096.800 mm^2 (철근도심 : 100 mm)

1단 H22 @ 125 (= 3096.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 22 / 2 = 89.00 mm

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 153.6) - 2.5 × 89 = 290.196 mm

300 x (210 / fs) = 300 × (210 / 153.6) = 410.157 mm

Sa는 작은 값인 290.196 mm 를 적용

S = 125.00 ≤ Sa (= 290.196 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	250.580
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	650.0	550.0	100.0	400.920	182.510

전단설계시 단면의 유효높이 ds = 550.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 48.577 mm

최외단 인장철근 변형률 εt = 0.02540 ≥ 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 = 2086.957 mm^2

사용철근비 : Puse = As / (B × D) = 0.00563

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) = 2086.957 mm^2 As(min) = 1925.000 mm^2

4/3×As(req) = 2782.610 mm^2 ※ As = 2086.957 mm^2

사용철근량 = H22 × 8ea = 3096.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 586088414 N · mm

= 586.088 kN · m > 400.920 kN · m ----- ∴ O.K [사용률 = 1.462]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 426.767 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 250.58 × 1000000 / [3096.8×(550 - 134.256/3)]

= 160.151 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 3096.8/1000 + 7 × 3096.8/1000 × √[(1 + 2×1000×550/(7×3096.8)]

= 134.256 mm

사용철근량 = 3096.800 mm^2 (철근도심 : 100 mm)

1단 H22 @ 125 (= 3096.8 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 22 / 2 = 89.00 mm

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 160.151) - 2.5 × 89 = 269.225 mm

300 x (210 / fs) = 300 × (210 / 160.151) = 393.380 mm

Sa는 작은 값인 269.225 mm 를 적용

S = 125.00 ≤ Sa (= 269.225 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	192.010
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	700.0	600.0	100.0	307.210	241.880

전단설계시 단면의 유효높이 ds = 500.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 35.953 mm

최외단 인장철근 변형률 εt = 0.03885 ≥ 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 = 1449.742 mm^2

사용철근비 : Puse = As / (B × D) = 0.00382

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) = 1449.742 mm^2 As(min) = 2100.000 mm^2

4/3×As(req) = 1932.990 mm^2 ※ As = 1932.990 mm^2

사용철근량 = H19 × 8ea = 2292.000 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 480239230 N · mm

= 480.239 kN · m > 307.210 kN · m ----- ∴ O.K [사용률 = 1.563]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 387.970 kN

1/2 x Φv x Vc = 193.985 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 192.01 × 1000000 / [2292×(600 - 123.635/3)]

= 149.921 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 2292/1000 + 7 × 2292/1000 × √[(1 + 2×1000×600/(7×2292)]

= 123.635 mm

사용철근량 = 2292.000 mm^2 (철근도심 : 100 mm)

1단 H19 @ 125 (= 2292 mm^2)

ⓑ 철근의 최대 중심간격

Cc = 100 - 19 / 2 = 90.50 mm

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 149.921) - 2.5 × 90.5 = 299.027 mm

300 x (210 / fs) = 300 × (210 / 149.921) = 420.222 mm

Sa는 작은 값인 299.027 mm 를 적용

S = 125.00 ≤ Sa (= 299.027 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	111.360
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	600.0	500.0	100.0	178.180	68.310

전단설계시 단면의 유효높이 ds = 500.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 35.953 mm

최외단 인장철근 변형률 εt = 0.03188 ≥ 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 = 1005.756 mm^2

사용철근비 : Puse = As / (B × D) = 0.00458

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) = 1005.756 mm^2 As(min) = 1750.000 mm^2

4/3×As(req) = 1341.008 mm^2 ※ As = 1341.008 mm^2

사용철근량 = H19 × 8ea = 2292.000 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Øf · fy · As · (D - a/2) = 397727230 N · mm

= 397.727 kN · m > 178.180 kN · m ----- ∴ O.K [사용률 = 2.232]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 387.970 kN

∴ 전단철근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 111.36 × 1000000 / [2292×(500 - 111.633/3)]

= 104.986 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 2292/1000 + 7 × 2292/1000 × √[(1 + 2×1000×500/(7×2292)]

= 111.633 ㎜

사용철근량 = 2292.000 ㎟ (철근도심 : 100 ㎜)

1단 H19 @ 125 (= 2292 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 19 / 2 = 90.50 ㎜

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 104.986) - 2.5 × 90.5 = 523.850 ㎜

300 x (210 / fs) = 300 × (210 / 104.986) = 600.080 ㎜

Sa는 작은 값인 523.850 ㎜ 를 적용

S = 125.00 ≤ Sa (= 523.85 ㎜) ----- ∴ 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	249.310
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	600.0	500.0	100.0	398.900	335.400

전단설계시 단면의 유효높이 ds = 500.0 d1' = 100 d2' = 0

* 휨모멘트 검토

공칭강도시 등가응력깊이 a = (As×fy) / (0.85×fck×B) = 48.577 mm

최외단 인장철근 변형률 εt = 0.02281 ≥ 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 = 2299.021 mm^2

사용철근비 : Puse = As / (B × D) = 0.00619

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) = 2299.021 mm^2 As(min) = 1750.000 mm^2

4/3×As(req) = 3065.361 mm^2 ※ As = 2299.021 mm^2

사용철근량 = H22 × 8ea = 3096.800 ㎟ ----- ∴ O.K.

ⓑ 휨강도 검토

ØMn = Ø f · fy · As · (D - a/2) = 530346014 N · mm

= 530.346 kN · m > 398.900 kN · m ----- ∴ O.K [사용률 = 1.330]

* 전단력 검토

Øv · Vc = Øv · 1/6 · √fck · B · d / 1000 = 387.970 kN

1/2 x Φv x Vc = 193.985 kN ≤ Vu ≤Φv x Vc ∴ 슬래브이므로 최소전단 철근 배근이 필요없음.

▣ 사용성 검토 (균열방지 인장철근 간격검토)

ⓐ 응력산정

fs = M / [As x (d - χ/3)]

= 249.31 × 1000000 / [3096.8×(500 - 127.143/3)]

= 175.923 Mpa

χ = -nAs/b + nAs/b√[1 + 2bd/(nAs)]

= -7 × 3096.8/1000 + 7 × 3096.8/1000 × √[(1 + 2×1000×500/(7×3096.8)]

= 127.143 ㎜

사용철근량 = 3096.800 $㎜^2$ (철근도심 : 100 ㎜)

1단 H22 @ 125 (= 3096.8 ㎟)

ⓑ 철근의 최대 중심간격

Cc = 100 - 22 / 2 = 89.00 ㎜

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 175.923) - 2.5 × 89 = 225.139 ㎜

300 x (210 / fs) = 300 × (210 / 175.923) = 358.111 ㎜

Sa는 작은 값인 225.139 ㎜ 를 적용

S = 125.00 ≤ Sa (= 225.139 ㎜) ------ ∴ O.K.

⑤ 벽체 상단부 - Pmax 일 경우

설계축력	:	Pu	=	454.31	(kN) ,	설계모멘트	:	Mu	=	165.25	(kN · m)	
설계전단력	:	Vu	=	241.88	(kN) ,	사용 모멘트	:	M	=	39.42	(kN.m)	
부 재 높 이	:	H	=	700.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	600.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	500.0	(mm) ,	k_1	=	0.836	,	e	=	363.74 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 19 @ 8 EA = 22.920 cm^2 , d1 = 10.0 cm

$\sum$ = 22.920 cm^2

Asf = H 19 @ 4 EA = 11.460 cm^2 , d'1 = 10.0 cm

Pmin (0.0015) < Puse (0.0049) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 700.00 x 1000.00 = 17556000.000 N

Cs = As x fy = 916800.00 N , Cs' = Asf x fy = 458400.000 N

Xp = (17556000.00 x 350.0 + 916800.0 x 100.0 + 458400.0 x 600.0) / 18931200.000

= 343.947 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 360.000 mm, ab = k1 x cb = 300.960 mm

fs' = 600 x (360.000 - 100.0) / 360.0(= 400 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 300.960 x 1000 = 7548076.800 N

Cs = As' x (fs' - 0.9 x fck) = 427458.000 N

Ts = As x fs = 916800.000 N

Pb = 7548076.800 + 427458.000 - 916800.000 = 7058734.800 N

Mb = 7548076.800x(600.0-300.960/2)+427458.000x(600.0-100.0)-7058734.800x(343.947-100.0)

= 1884786827.089 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 267.015 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 234.050 mm , a = k1 x c = 195.666 mm 사용

fs = 600 x (600.000 - 234.050) / 234.050 = 400 Mpa (fs ≤ fy)

fs' = 600 x (234.050 - 100.000) / 234.050 = 343.6447 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 195.666 x 1000 = 4907302.457 N

Cs = 1146.000 x (343.645 - 0.836 x 30) = 365075.191 N

Ts = 2292.000 x 400.000 = 916800.000 N

Pn = 4907302.457 + 365075.191 - 916800.000 = 4355577.649 N

Mn' = 4907302.457 x (600.0 - 195.666 / 2) + 365075.191 x (600.0 - 100.0)

= 2646823029.305 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 607.684918 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 15310024.800 N ≥ Pn = 4355577.649

ΦPn = 3048904.354 > ΦPb = 4941114.360 , 0.1 x fck x Ag = 2100000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4355577.649 = 3048.904 kN ≥ Pu = 454.310 kN ——— O.K!!!

ΦMn = ΦPn x 363.738 = 1109.004 kN.m ≥ Mu = 165.250 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 405955.728 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

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

$= 39.42 \times 1000000 / [2292 \times (600 - 123.635/3)]$

= 30.779 Mpa

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

$= -7 \times 2292/1000 + 7 \times 2292/1000 \times \sqrt{[(1 + 2 \times 1000 \times 600/(7 \times 2292)]}$

= 123.635 mm

사용철근량 = 2292.000 mm^2 (철근도심 : 100 mm)

1단 H19 @ 125 (= 2292 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 19 / 2 = 90.50 mm

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 30.779) - 2.5 × 90.5 = 2332.312 mm

300 x (210 / fs) = 300 × (210 / 30.779) = 2046.849 mm

Sa는 작은 값인 2046.849 mm 를 적용

S = 125.00 ≤ Sa (= 2046.849 mm) ------ ∴ O.K.

⑥ 벽체 상단부 - Mmax 일 경우

설계축력	:	Pu	=	414.77	(kN) ,	설계모멘트	:	Mu	=	307.21	(kN · m)
설계전단력	:	Vu	=	241.88	(kN) ,	사용 모멘트	:	M	=	192.01	(kN.m)
부 재 높 이	:	H	=	700.0	(mm) ,	f_y	=	400	MPa	f_{ck} =	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v =	0.85
유효높이(휨)	:	d	=	600.0	(mm) ,	d'	=	100	(mm),	ϕc =	0.70
유효높이(전단)	:	d	=	500.0	(mm) ,	k_1	=	0.836	,	e =	740.68 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 19 @ 8 EA = 22.920 cm^2 , d1 = 10.0 cm

$\sum$ = 22.920 cm^2

Asf = H 19 @ 4 EA = 11.460 cm^2 , d'1 = 10.0 cm

Pmin (0.0015) < Puse (0.0049) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 700.00 x 1000.00 = 17556000.000 N

Cs = As x fy = 916800.00 N , Cs' = Asf x fy = 458400.000 N

Xp = (17556000.00 x 350.0 + 916800.0 x 100.0 + 458400.0 x 600.0) / 18931200.000

= 343.947 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 360.000 mm, ab = k1 x cb = 300.960 mm

fs' = 600 x (360.000 - 100.0) / 360.0(= 400 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 300.960 x 1000 = 7548076.800 N

Cs = As' x (fs' - 0.9 x fck) = 427458.000 N

Ts = As x fs = 916800.000 N

Pb = 7548076.800 + 427458.000 - 916800.000 = 7058734.800 N

Mb = 7548076.800x(600.0-300.960/2)+427458.000x(600.0-100.0)-7058734.800x(343.947-100.0)

= 1884786827.089 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 267.015 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 101.721 mm , a = k1 x c = 85.039 mm 사용

fs = 600 x (600.000 - 101.721) / 101.721 = 400 Mpa (fs ≤ fy)

fs' = 600 x (101.721 - 100.000) / 101.721 = 10.14956 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 85.039 x 1000 = 2132765.710 N

Cs = 1146.000 x (10.150 - 0.836 x 30) = (17110.288) N

Ts = 2292.000 x 400.000 = 916800.000 N

Pn = 2132765.710 + -17110.288 - 916800.000 = 1198855.422 N

Mn' = 2132765.710 x (600.0 - 85.039 / 2) + -17110.288 x (600.0 - 100.0)

= 1180420678.192 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 984.622056 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 15310024.800 N ≥ Pn = 1198855.422

ΦPn = 839198.796 < ΦPb = 4941114.360 , 0.1 x fck x Ag = 2100000.000

∴ Φ = 0.790

ΦPn = 0.79 x 1198855.422 = 947.096 kN ≥ Pu = 414.770 kN ------ O.K!!!

ΦMn = ΦPn x 740.676 = 701.491 kN.m ≥ Mu = 307.210 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 404390.387 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

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

$= 192.01 \times 1000000 / [2292 \times (600 - 123.635/3)]$

= 149.921 Mpa

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

$= -7 \times 2292/1000 + 7 \times 2292/1000 \times \sqrt{[(1 + 2 \times 1000 \times 600/(7 \times 2292)]}$

= 123.635 mm

사용철근량 = 2292.000 mm^2 (철근도심 : 100 mm)

1단 H19 @ 125 (= 2292 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 19 / 2 = 90.50 mm

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 149.921) - 2.5 × 90.5 = 299.027 mm

300 x (210 / fs) = 300 × (210 / 149.921) = 420.222 mm

Sa는 작은 값인 299.027 mm 를 적용

S = 125.00 ≤ Sa (= 299.027 mm) ----- ∴ O.K.

⑦ 벽체 중앙부 - Pmax 일 경우

설계축력	:	Pu	=	510.76	(kN) ,	설계모멘트	:	Mu	=	60.13	(kN · m)	
설계전단력	:	Vu	=	73.55	(kN) ,	사용 모멘트	:	M	=	45.52	(kN.m)	
부 재 높 이	:	H	=	600.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	500.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	500.0	(mm) ,	k_1	=	0.836	,	e	=	117.73 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 19 @ 8 EA = 22.920 cm^2 , d1 = 10.0 cm

Σ = 22.920 cm^2

Asf = H 19 @ 4 EA = 11.460 cm^2 , d'1 = 10.0 cm

Pmin (0.0015) < Puse (0.0057) < Pmax (0.0800) ---------- O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 600.00 x 1000.00 = 15048000.000 N

Cs = As x fy = 916800.00 N , Cs' = Asf x fy = 458400.000 N

Xp = (15048000.00 x 300.0 + 916800.0 x 100.0 + 458400.0 x 500.0) / 16423200.000

= 294.418 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 300.000 mm, ab = k1 x cb = 250.800 mm

fs' = 600 x (300.000 - 100.0) / 300.0(= 400 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 250.800 x 1000 = 6290064.000 N

Cs = As' x (fs' - 0.9 x fck) = 427458.000 N

Ts = As x fs = 916800.000 N

Pb = 6290064.000 + 427458.000 - 916800.000 = 5800722.000 N

Mb = 6290064.000x(500.0-250.800/2)+427458.000x(500.0-100.0)-5800722.000x(294.418-100.0)

= 1399478417.013 N.mm

eb > e → 압축파괴 (eb = Mb / Pb = 241.259 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 466.254 mm , a = k1 x c = 389.788 mm 사용

fs = 600 x (500.000 - 466.254) / 466.254 = 43.42598 Mpa (fs ≤ fy)

fs' = 600 x (466.254 - 100.000) / 466.254 = 400 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 389.788 x 1000 = 9775893.764 N

Cs = 1146.000 x (400.000 - 0.836 x 30) = 429658.320 N

Ts = 2292.000 x 43.426 = 99532.340 N

Pn = 9775893.764 + 429658.320 - 99532.340 = 10106019.744 N

Mn' = 9775893.764 x (500.0 - 389.788 / 2) + 429658.320 x (500.0 - 100.0)

= 3154545080.736 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 312.144178 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 13270024.800 N ≥ Pn = 10106019.744

ΦPn = 7074213.821 > ΦPb = 4060505.400 , 0.1 x fck x Ag = 1800000.000

∴ Φ = 0.700

ΦPn = 0.70 x 10106019.744 = 7074.214 kN ≥ Pu = 510.760 kN ——— O.K!!!

ΦMn = ΦPn x 117.727 = 832.823 kN.m ≥ Mu = 60.130 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 411560.577 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 45.52 × 1000000 / [2292×(500 - 111.633/3)]

= 42.915 Mpa

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

$= -7 \times 2292/1000 + 7 \times 2292/1000 \times \sqrt{[(1 + 2\times1000\times500/(7\times2292)]}$

= 111.633 mm

사용철근량 = 2292.000 mm^2 (철근도심 : 100 mm)

1단 H19 @ 125 (= 2292 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 19 / 2 = 90.50 mm

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 42.915) - 2.5 × 90.5 = 1608.79 mm

300 x (210 / fs) = 300 × (210 / 42.915) = 1468.03 mm

Sa는 작은 값인 1468.03 mm 를 적용

S = 125.00 ≤ Sa (= 1468.033 mm) ------ ∴ O.K.

⑧ 벽체 중앙부 - Mmax 일 경우

설계축력	:	Pu	=	471.22	(kN) ,	설계모멘트	:	Mu	=	178.18	(kN · m)
설계전단력	:	Vu	=	68.31	(kN) ,	사용 모멘트	:	M	=	111.36	(kN.m)
부 재 높 이	:	H	=	600.0	(mm) ,	f_y =	400	MPa	f_{ck} =	30	MPa
폭	:	b	=	1000	(mm) ,	ϕ_f =	0.90	,	ϕ_v =	0.85	
유효높이(휨)	:	d	=	500.0	(mm) ,	d' =	100	(mm),	ϕc =	0.70	
유효높이(전단)	:	d	=	500.0	(mm) ,	k_1 =	0.836	,	e =	378.12	(mm)

○ 휨철근량 계산

- 철근비검토

As = H 19 @ 8 EA = 22.920 cm^2 , d1 = 10.0 cm

Σ = 22.920 cm^2

Asf = H 19 @ 4 EA = 11.460 cm^2 , d'1 = 10.0 cm

Pmin (0.0015) < Puse (0.0057) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 600.00 x 1000.00 = 15048000.000 N

Cs = As x fy = 916800.00 N , Cs' = Asf x fy = 458400.000 N

Xp = (15048000.00 x 300.0 + 916800.0 x 100.0 + 458400.0 x 500.0) / 16423200.000

= 294.418 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 300.000 mm, ab = k1 x cb = 250.800 mm

fs' = 600 x (300.000 - 100.0) / 300.0(= 400 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 250.800 x 1000 = 6290064.000 N

Cs = As' x (fs' - 0.9 x fck) = 427458.000 N

Ts = As x fs = 916800.000 N

Pb = 6290064.000 + 427458.000 - 916800.000 = 5800722.000 N

Mb = 6290064.000x(500.0-250.800/2)+427458.000x(500.0-100.0)-5800722.000x(294.418-100.0)

= 1399478417.013 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 241.259 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 163.669 mm , a = k1 x c = 136.828 mm 사용

fs = 600 x (500.000 - 163.669) / 163.669 = 400 Mpa (fs ≤ fy)

fs' = 600 x (163.669 - 100.000) / 163.669 = 233.4073 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 136.828 x 1000 = 3431636.669 N

Cs = 1146.000 x (233.407 - 0.836 x 30) = 238743.137 N

Ts = 2292.000 x 400.000 = 916800.000 N

Pn = 3431636.669 + 238743.137 - 916800.000 = 2753579.806 N

Mn' = 3431636.669 x (500.0 - 136.828 / 2) + 238743.137 x (500.0 - 100.0)

= 1576544253.022 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 572.542520 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 13270024.800 N ≥ Pn = 2753579.806

ΦPn = 1927505.864 > ΦPb = 4060505.400 , 0.1 x fck x Ag = 1800000.000

∴ Φ = 0.700

ΦPn = 0.70 x 2753579.806 = 1927.506 kN ≥ Pu = 471.220 kN ——— O.K!!!

ΦMn = ΦPn x 378.125 = 728.838 kN.m ≥ Mu = 178.180 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 409734.346 N

여기서 , Vu < 1/2φVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 111.36 × 1000000 / [2292×(500 - 111.633/3)]

= 104.986 Mpa

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

$= -7 \times 2292/1000 + 7 \times 2292/1000 \times \sqrt{[(1 + 2\times1000\times500/(7\times2292)]}$

= 111.633 mm

사용철근량 = 2292.000 mm^2 (철근도심 : 100 mm)

1단 H19 @ 125 (= 2292 mm^2)

- 철근의 최대 중심간격

Cc = 100 - 19 / 2 = 90.50 mm

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 104.986) - 2.5 × 90.5 = 523.85 mm

300 x (210 / fs) = 300 × (210 / 104.986) = 600.08 mm

Sa는 작은 값인 523.85 mm 를 적용

S = 125.00 ≤ Sa (= 523.85 mm) ------ ∴ O.K.

⑨ 벽체 하단부 - Pmax 일 경우

설계축력	:	Pu	=	567.79	(kN) ,	설계모멘트	:	Mu	=	299.69	(kN · m)	
설계전단력	:	Vu	=	335.40	(kN) ,	사용 모멘트	:	M	=	5.76	(kN.m)	
부 재 높 이	:	H	=	600.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	500.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	500.0	(mm) ,	k_1	=	0.836	,	e	=	527.82 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 22 @ 8 EA = 30.968 cm^2 , d1 = 10.0 cm

Σ = 30.968 cm^2

Asf = H 19 @ 4 EA = 11.460 cm^2 , d'1 = 10.0 cm

Pmin (0.0015) < Puse (0.0071) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 600.00 x 1000.00 = 15048000.000 N

Cs = As x fy = 1238720.00 N , Cs' = Asf x fy = 458400.000 N

Xp = (15048000.00 x 300.0 + 1238720.0 x 100.0 + 458400.0 x 500.0) / 16745120.000

= 290.680 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 300.000 mm, ab = k1 x cb = 250.800 mm

fs' = 600 x (300.000 - 100.0) / 300.0(= 400 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 250.800 x 1000 = 6290064.000 N

Cs = As' x (fs' - 0.9 x fck) = 427458.000 N

Ts = As x fs = 1238720.000 N

Pb = 6290064.000 + 427458.000 - 1238720.000 = 5478802.000 N

Mb = 6290064.000x(500.0-250.800/2)+427458.000x(500.0-100.0)-5478802.000x(290.680-100.0)

= 1482543039.426 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 270.596 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 142.876 mm , a = k1 x c = 119.444 mm 사용

fs = 600 x (500.000 - 142.876) / 142.876 = 400 Mpa (fs ≤ fy)

fs' = 600 x (142.876 - 100.000) / 142.876 = 180.054 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 119.444 x 1000 = 2995653.463 N

Cs = 1146.000 x (180.054 - 0.836 x 30) = 177600.162 N

Ts = 3096.800 x 400.000 = 1238720.000 N

Pn = 2995653.463 + 177600.162 - 1238720.000 = 1934533.625 N

Mn' = 2995653.463 x (500.0 - 119.444 / 2) + 177600.162 x (500.0 - 100.0)

= 1389960503.068 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 718.498415 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 13511142.880 N ≥ Pn = 1934533.625

ΦPn = 1354173.538 < ΦPb = 3835161.400 , 0.1 x fck x Ag = 1800000.000

∴ Φ = 0.740

ΦPn = 0.74 x 1934533.625 = 1431.555 kN ≥ Pu = 567.790 kN ------ O.K!!!

ΦMn = ΦPn x 527.818 = 755.601 kN.m ≥ Mu = 299.690 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 414194.617 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

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

$= 5.76 \times 1000000 / [3096.8 \times (500 - 127.143/3)]$

= 4.064 Mpa

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

$= -7 \times 3096.8/1000 + 7 \times 3096.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 500/(7 \times 3096.8)]}$

= 127.143 ㎜

사용철근량 = 3096.800 ㎟ (철근도심 : 100 ㎜)

1단 H22 @ 125 (= 3096.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 22 / 2 = 89.00 ㎜

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 4.064) - 2.5 × 89 = ######## ㎜

300 x (210 / fs) = 300 × (210 / 4.064) = ######## ㎜

Sa는 작은 값인 ######## ㎜ 를 적용

S = 125.00 ≤ Sa (= 15500.13 ㎜) ------ ∴ O.K.

⑩ 벽체 하단부 - Mmax 일 경우

설계축력	:	Pu	=	503.09	(kN) ,	설계모멘트	:	Mu	=	398.90	(kN · m)	
설계전단력	:	Vu	=	335.40	(kN) ,	사용 모멘트	:	M	=	249.31	(kN.m)	
부 재 높 이	:	H	=	600.0	(mm) ,	f_y	=	400	MPa	f_{ck}	=	30 MPa
폭	:	b	=	1000	(mm) ,	ϕ_f	=	0.90	,	ϕ_v	=	0.85
유효높이(휨)	:	d	=	500.0	(mm) ,	d'	=	100	(mm),	ϕc	=	0.70
유효높이(전단)	:	d	=	500.0	(mm) ,	k_1	=	0.836	,	e	=	792.90 (mm)

○ 휨철근량 계산

- 철근비검토

As = H 22 @ 8 EA = 30.968 cm^2 , d1 = 10.0 cm

Σ = 30.968 cm^2

Asf = H 19 @ 4 EA = 11.460 cm^2 , d'1 = 10.0 cm

Pmin (0.0015) < Puse (0.0071) < Pmax (0.0800) ———— O.K!!!

- 평형하중 산정

소성중심 계산

Cc = 0.84 x 30 x 600.00 x 1000.00 = 15048000.000 N

Cs = As x fy = 1238720.00 N , Cs' = Asf x fy = 458400.000 N

Xp = (15048000.00 x 300.0 + 1238720.0 x 100.0 + 458400.0 x 500.0) / 16745120.000

= 290.680 mm

- 평형상태 계산

Cb = 600 / (600 + fy) x d = 300.000 mm, ab = k1 x cb = 250.800 mm

fs' = 600 x (300.000 - 100.0) / 300.0(= 400 Mpa (fs' ≤ fy)

Cc = 0.836 x 30 x 250.800 x 1000 = 6290064.000 N

Cs = As' x (fs' - 0.9 x fck) = 427458.000 N

Ts = As x fs = 1238720.000 N

Pb = 6290064.000 + 427458.000 - 1238720.000 = 5478802.000 N

Mb = 6290064.000x(500.0-250.800/2)+427458.000x(500.0-100.0)-5478802.000x(290.680-100.0)

= 1482543039.426 N.mm

eb < e → 인장파괴 (eb = Mb / Pb = 270.596 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 108.529 mm , a = k1 x c = 90.730 mm 사용

fs = 600 x (500.000 - 108.529) / 108.529 = 400 Mpa (fs ≤ fy)

fs' = 600 x (108.529 - 100.000) / 108.529 = 47.15085 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 90.730 x 1000 = 2275508.229 N

Cs = 1146.000 x (47.151 - 0.836 x 30) = 25293.189 N

Ts = 3096.800 x 400.000 = 1238720.000 N

Pn = 2275508.229 + 25293.189 - 1238720.000 = 1062081.419 N

Mn' = 2275508.229 x (500.0 - 90.730 / 2) + 25293.189 x (500.0 - 100.0)

= 1044642967.356 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 983.579910 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 13511142.880 N ≥ Pn = 1062081.419

ΦPn = 743456.993 < ΦPb = 3835161.400 , 0.1 x fck x Ag = 1800000.000

∴ Φ = 0.790

ΦPn = 0.79 x 1062081.419 = 839.044 kN ≥ Pu = 503.090 kN ——— O.K!!!

ΦMn = ΦPn x 792.900 = 665.278 kN.m ≥ Mu = 398.900 kN.m ——— O.K!!!

○ 전단력 검토

ϕVc = 0.85 × 1/6 × (1 + Pu / (14 x Ag)) x √fck × bo × d = 411206.323 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

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

$= 249.31 \times 1000000 / [3096.8 \times (500 - 127.143/3)]$

$= 175.923$ Mpa

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

$= -7 \times 3096.8/1000 + 7 \times 3096.8/1000 \times \sqrt{[(1 + 2 \times 1000 \times 500/(7 \times 3096.8)]}$

$= 127.143$ mm

사용철근량 = 3096.800 mm^2 (철근도심 : 100 mm)

1단 H22 @ 125 (= 3096.8 ㎟)

- 철근의 최대 중심간격

Cc = 100 - 22 / 2 = 89.00 mm

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

Smin : 375 x (210 / fs) - 2.5 x Cc = 375 × (210 / 175.923) - 2.5 × 89 = 225.139 mm

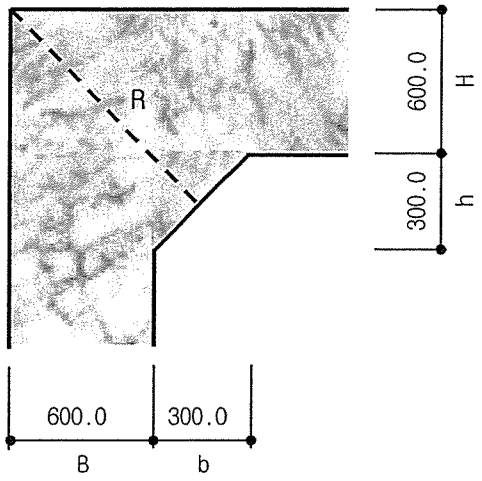
300 x (210 / fs) = 300 × (210 / 175.923) = 358.111 mm

Sa는 작은 값인 225.139 mm 를 적용

S = 125.00 ≤ Sa (= 225.139 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 : 192.01 kN·m

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

$= 1060.66$ mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 192010000}{1060.66^2 \times 1000.0} = 0.853 \text{ MPa}$$

f_{tmax} = 0.853 MPa > f_{ta} = 0.712 MPa 이므로 보강철근 필요.

② 소요 철근량

외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 192010000}{1060.66 \times 180.0} = 2011.43 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 2011.43 - 1146 = 865.43 ㎟

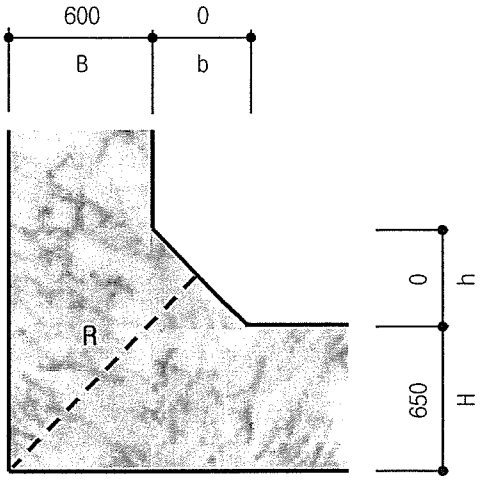
----- 우각부 보강철근 필요

외측인장에 대한 보강 사용철근량(As)

As = H19 @ 250 - 1 단 = 1146.00 ㎟

보강 As = 865.43 ㎟ < As = 1146.00 ㎟ ----- ∴ O.K.

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	:	249.31	kN · m

R = √ (B2 + H2) = 884.59 mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 249310000}{884.59^2 \times 1000.0} = 1.593 \text{ MPa}$$

f_{tmax} = 1.593 MPa > f_{ta} = 0.712 MPa 이므로 보강철근 필요.

② 소요 철근량

외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 249310000}{884.59 \times 180.0} = 3131.52 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 3131.52 - 1548.4 = 1583.12 ㎟

----- 우각부 보강철근 필요

외측인장에 대한 보강 사용철근량(As)

As = H25 @ 250 - 1 단 = 2026.80 ㎟

Asf = 1583.12 ㎟ < As = 2026.80 ㎟ ----- ∴ 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 × 600.0 × 0.25					=	1500.00	㎟
사용철근 인장측 ;	H	16	@	150	=	1324.00	㎟
압축측 ;	H	16	@	300	=	662.00	㎟
					∑ As =	1986.00	㎟

따라서, As = 1986.00 ㎟ > Asreq = 1500.00 ㎟ ------ ∴ O.K.

사용 주철근량의 1/5 = 458.400 ㎟

따라서, As = 1324.00 ㎟ > Asreq = 458.40 ㎟ ----- ∴ O.K.

② 하부슬래브

배력철근 최소 철근비 (Asreq) = 1,000.0 × 650.0 × 0.25					=	1625.00	㎟
사용철근 인장측 ;	H	16	@	150	=	1324.00	㎟
압축측 ;	H	16	@	300	=	662.00	㎟
					∑ As =	1986.00	㎟

따라서, As = 1986.00 ㎟ > Asreq = 1625.00 ㎟ ------ ∴ O.K.

사용 주철근량의 1/5 = 619.360 ㎟

따라서, As = 1324.00 ㎟ > Asreq = 619.36 ㎟ ------ ∴ O.K.

③ 벽체

배력철근 최소 철근비 (Asreq) = 1,000.0 × 600.0 × 0.30	=	1800.00	㎟
사용철근 인장측 ; H 16 @ 150	=	1324.00	㎟
압축측 ; H 16 @ 300	=	662.00	㎟
	∑ As =	1986.00	㎟

따라서, As = 1986.00 ㎟ > Asreq = 1800.00 ㎟ ----- ∴ O.K.

사용 주철근량의 1/5 = 619.360 ㎟

따라서, As = 1324.00 ㎟ > Asreq = 619.36 ㎟ ----- ∴ O.K.

14. 사용성검토

1) 상부슬래브 최소 두께

1.2(L+3)/30 = 1.2 × (5.080 + 3) / 30 = 323.2 mm

상부슬래브 두께 = 600.0 mm

Tuse = 600.0 mm > Tmin = 323.2 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

5.08 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 0.371 kN · m Mmin = -10.879 kN · m

- 사용철근량 = H19 × 8ea = 2292.000 ㎟

n = 7

p = As / bd = 2292.00 / (1000 × 600) = 0.00382

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

$= -7 \times 0.00382 + \sqrt{\{ (7 \times 0.00382)^2 + 2 \times 7 \times 0.00382 \}}$

= 0.206

J = 1 - K / 3 = 1 - 0.206 / 3 = 0.931

$$fs\ max = \frac{M}{As \times j \times d} = \frac{0.371 \times 10^6}{2292.00 \times 0.931 \times 600} = 0.290 \text{ Mpa}$$

$$fs\ min = \frac{-10.879 \times 10^6}{2292.00 \times 0.931 \times 600} = -8 \text{ Mpa}$$

Δf = fs max - fs min = 8.784 Mpa

$f_f = 165 - 0.33fmin$

= 165 - 0.33 × -8.49 = 167.803 Mpa > 8.784 Mpa O.K.

② 상부슬래브 중앙부

5.08 m 지간에서의 모멘트 변화에 의한 피로검토

Mmax = 46.512 kN · m Mmin = 41.391 kN · m

- 사용철근량 = H19 × 8ea = 2292.000 ㎟

n = 7

p = As / bd = 2292.00 / (1000 × 500) = 0.00458

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

$= -7 \times 0.00458 + \sqrt{\{ (7 \times 0.00458)^2 + 2 \times 7 \times 0.00458 \}}$

= 0.223

J = 1 - K / 3 = 1 - 0.223 / 3 = 0.926

$$fs\ max = \frac{M}{As \times j \times d} = \frac{46.512 \times 10^6}{2292.00 \times 0.926 \times 500} = 43.850\ Mpa$$

$$fs\ min = \frac{41.391 \times 10^6}{2292.00 \times 0.926 \times 500} = 39\ Mpa$$

Δf = fs max - fs min = 4.828 Mpa

f_f = 165 - 0.33fmin

= 165 - 0.33 × 39.02 = 152.123 Mpa > 4.828 Mpa O.K.

15. 기초지지력 검토

1) 구체자중

-	5.200	x	0.650	x	24.500				=	82.810	kN/m
-	5.200	x	0.600	x	24.500				=	76.440	kN/m
-	5.000	x	0.600	x	24.500				=	73.500	kN/m
-	5.000	x	0.600	x	24.500				=	73.500	kN/m
-	0.300	x	0.300	x	1/2	x	2	x 24.500	=	2.205	kN/m
							∴ Total		=	308.455	kN/m

308.455 / 5.200 = 59.318 kN/m²

2) 상부연직하중

= 71.44 kN/m²

3) 활하중

= 21.019 kN/m²

4) 최대 지반 반력

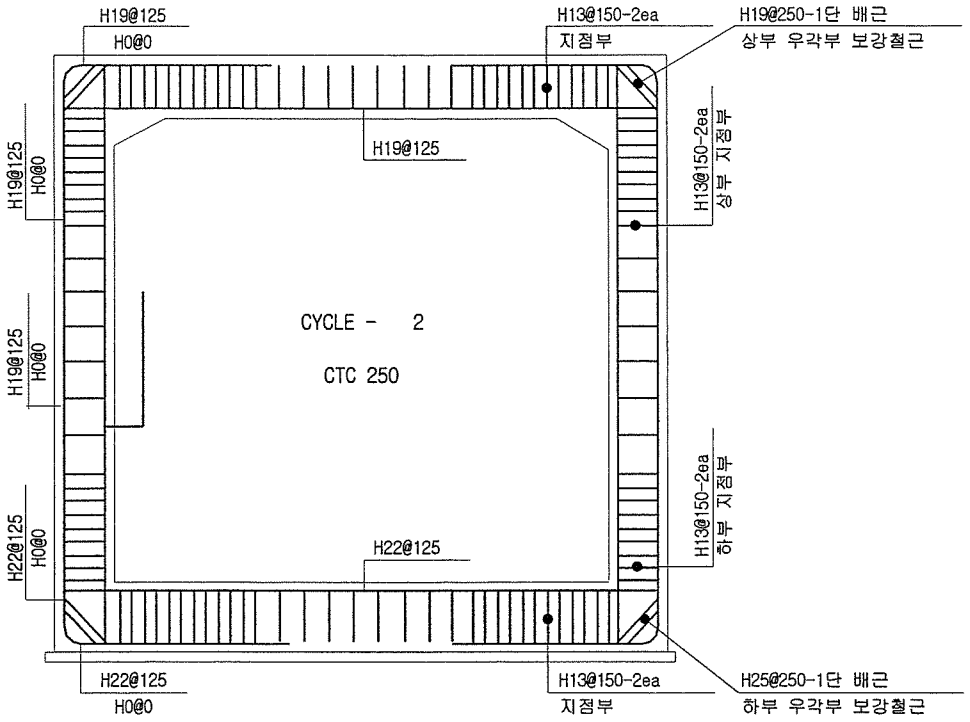
Qmax = 59.318 + 71.440 + 21.019

= 151.777 kN/m²

5) 지지력 검토

Qmax = 151.777 kN/m² < 300.00 kN/m² ---- ∴ O.K.

16. 주철근 조립도



▶ 배력철근

- 상부 지점부 : H16, 인장측:150, 압축측:300
- 하부 지점부 : H16, 인장측:150, 압축측:300
- 벽체부 : H16, 인장측:150, 압축측:300

C(함) 산윤제5

- 2.0 x 2.00 x 1
- 토피 = 7.5m 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 (항)

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) : 57.00 ° 연 장 (L) : 42.00 m

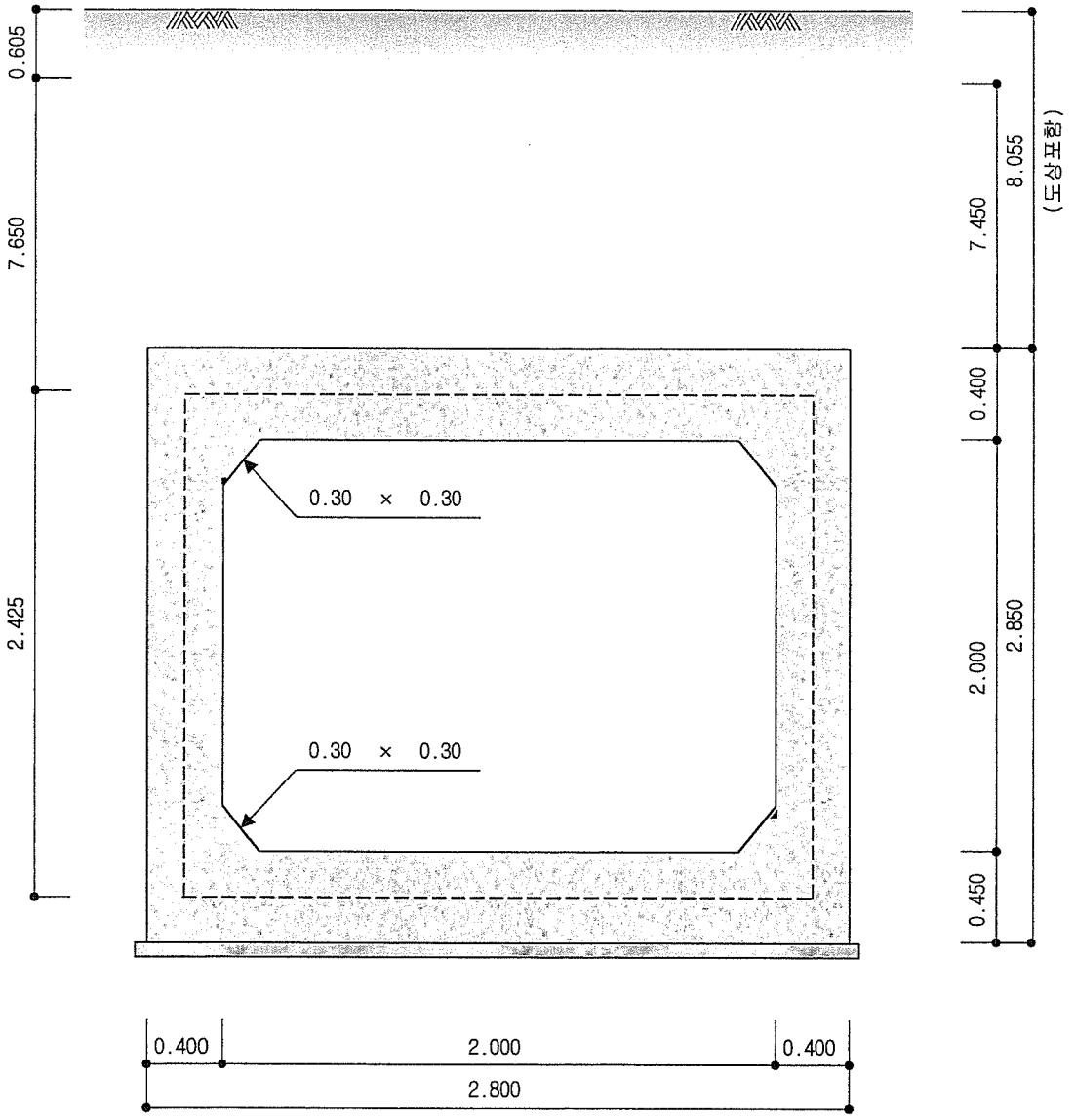
9) 설계방법

- 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

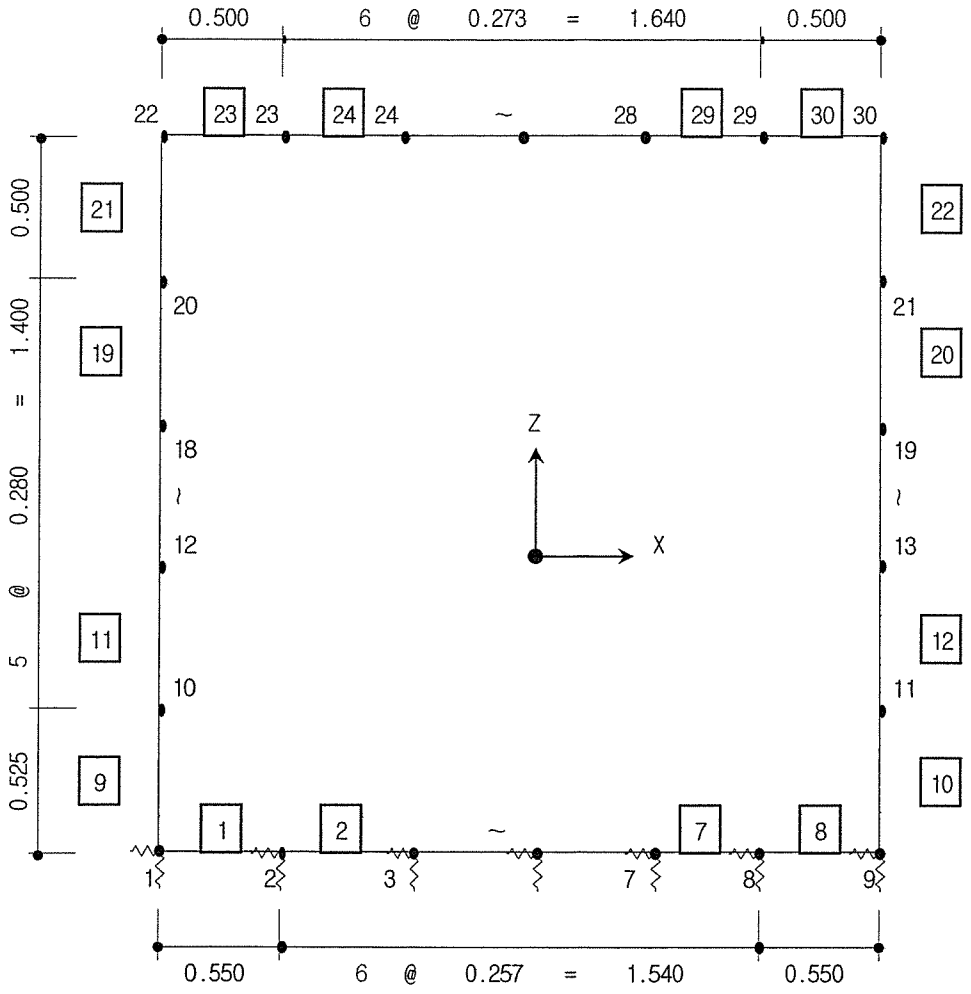
2. 단면 가정



※ 유효경간

Skew =	57.0	°					
Ln =	2.400	m					
Ls =	2.862	m					
Ls/B =	2.862	/	18.000	=	0.159	<	1.500
L =	2.640	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	2.640	0.000	0.805
2	0.550	0.000	0.000	14	0.000	0.000	1.085
3	0.807	0.000	0.000	15	2.640	0.000	1.085
4	1.063	0.000	0.000	16	0.000	0.000	1.365
5	1.320	0.000	0.000	17	2.640	0.000	1.365
6	1.577	0.000	0.000	18	0.000	0.000	1.645
7	1.833	0.000	0.000	19	2.640	0.000	1.645
8	2.090	0.000	0.000	20	0.000	0.000	1.925
9	2.640	0.000	0.000	21	2.640	0.000	1.925
10	0.000	0.000	0.525	22	0.000	0.000	2.425
11	2.640	0.000	0.525	23	0.500	0.000	2.425
12	0.000	0.000	0.805	24	0.773	0.000	2.425

Joint	좌 표			Joint	좌 표		
	X	Y	Z		X	Y	Z
25	1.047	0.000	2.425	28	1.867	0.000	2.425
26	1.320	0.000	2.425	29	2.140	0.000	2.425
27	1.593	0.000	2.425	30	2.640	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	6074		3 ~ 7	3282	
2 , 8	5157				

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)

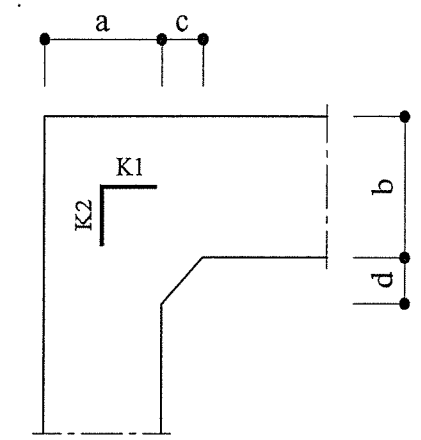
CASE 1 : 부재단부가 다른 부재와 접합할 때는 부재단에서 부재두께의 1/4 안쪽정에서 절점까지

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

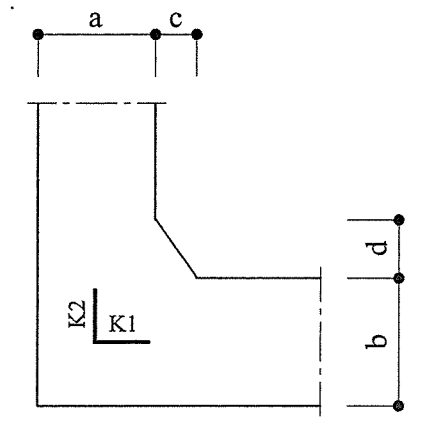
(2) 강역설정

- 절점 22 , 30



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

- 절점 1 , 9

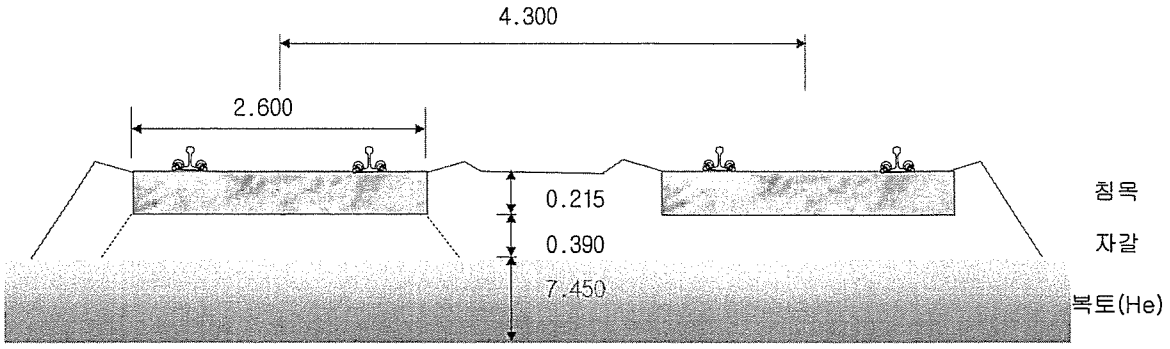


a =	400	mm	c =	300	mm
b =	450	mm	d =	300	mm
K1 =	275	mm	K2 =	325	mm

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 + 7.450) = 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 × 7.450 = 149.000 kN/㎡

∴ $q_1 + q_2 + q_3$ = 1.096 + 14.944 + 149.000 = 165.040 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) = 2.640 m

따라서 i_0 = 0.537 (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 = 8.055 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 × 7.650) = 72.011 kN/㎡

q_2 = 72.011 + 0.426 ×(20.000 × 0.500) = 76.271 kN/㎡

q_3 = 76.271 + 0.426 ×(20.000 × 0.280) = 78.657 kN/㎡

q_4 = 78.657 + 0.426 ×(20.000 × 0.280) = 81.043 kN/㎡

q_5 = 81.043 + 0.426 ×(20.000 × 0.280) = 83.429 kN/㎡

q_6 = 83.429 + 0.426 ×(20.000 × 0.280) = 85.815 kN/㎡

q_7 = 85.815 + 0.426 ×(20.000 × 0.280) = 88.201 kN/㎡

q_8 = 88.201 + 0.426 ×(20.000 × 0.525) = 92.674 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 8.055 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 = √ (2.640 × 2.640) = 2.640

Kv = Kvo (Bv/0.3)^-3/4 = 12787 kN/㎡

12787 × (0.400 / 2 + 0.550 / 2) = 6074 kN/㎡ - 저판 단부 스프링

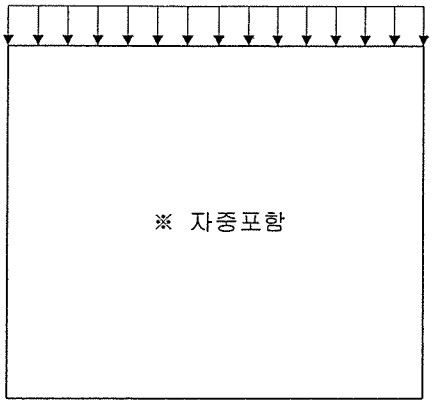
12787 × (0.550 / 2 + 0.257 / 2) = 5157 kN/㎡ - 저판 전단검토위치

12787 × (0.257 / 2 + 0.257 / 2) = 3282 kN/㎡ - 저판 중앙부 스프링

5. 하중재하도

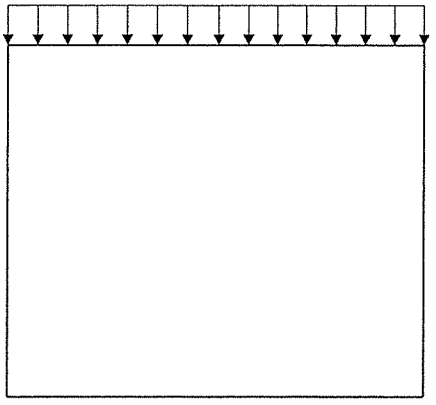
① 고정하중

W_D = 165.040 kN/㎡



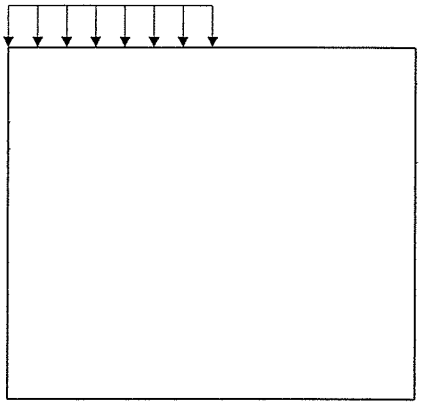
② 활하중(만재하)

W_L = 21.019 kN/㎡



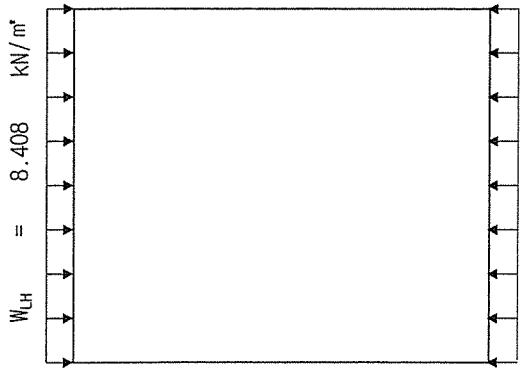
③ 활하중(편재하)

W_L = 21.019 kN/㎡



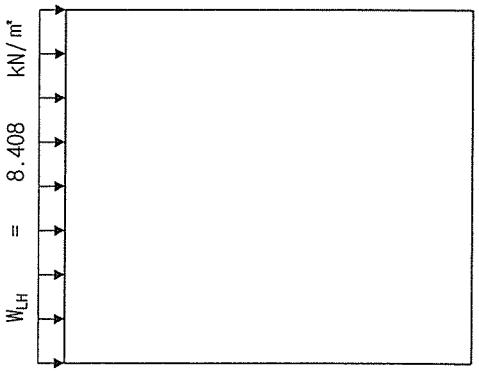
④ 활하중에 의한 측압(만재하)

W_{LH} = 8.408 kN/㎡

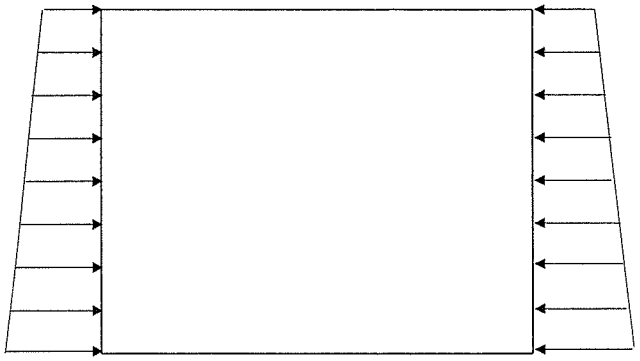


⑤ 활하중에 의한 측압(편재하)

W_{LH} = 8.408 kN/㎡



⑥ 수평토압(지하수 없는 경우)

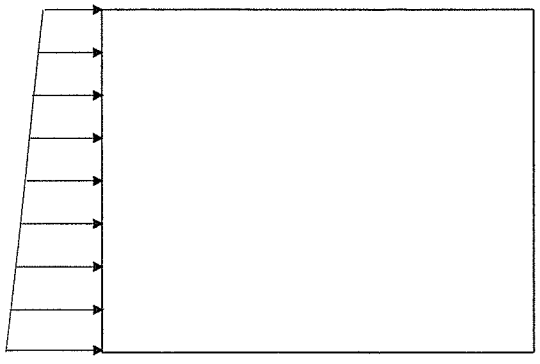


q_1 = 72.011 kN/㎡

q_7 = 92.674 kN/㎡

⑦ 편측토압(지하수 없는 경우)

q_1 = 1.704 kN/㎡



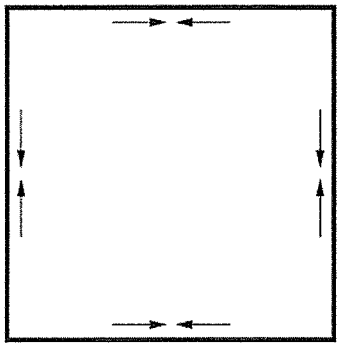
q_7 = 22.367 kN/㎡

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, 0.772, 0, 0
     4, 0.993, 0, 0
     5, 1.215, 0, 0
     6, 1.437, 0, 0
     7, 1.658, 0, 0
     8, 1.88, 0, 0
     9, 2.43, 0, 0
    10, 0, 0, 0.525
    11, 2.43, 0, 0.525
    12, 0, 0, 0.805
    13, 2.43, 0, 0.805
    14, 0, 0, 1.085
    15, 2.43, 0, 1.085
    16, 0, 0, 1.365
    17, 2.43, 0, 1.365
    18, 0, 0, 1.645
    19, 2.43, 0, 1.645
    20, 0, 0, 1.925
    21, 2.43, 0, 1.925
    22, 0, 0, 2.425
    23, 0.5, 0, 2.425
    24, 0.738, 0, 2.425
    25, 0.977, 0, 2.425
    26, 1.215, 0, 2.425
    27, 1.453, 0, 2.425
    28, 1.692, 0, 2.425
    29, 1.93, 0, 2.425
    30, 2.43, 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, 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
```

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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, 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
   1, LINEAR, 1e+010, 0, 0, 0, 0, 0, NO, 0, 0, 0, 0, 0, 0, 0, , 0, 0, 0, 0, 0
   2 8, COMP  ,  5, 0, 0, 0, 12000, , 0, 0, 0, 0, 0
   3to7, COMP  ,  5, 0, 0, 0, 6894, , 0, 0, 0, 0, 0
   9, COMP  ,  5, 0, 0, 0, 14774, , 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, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    25, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM   , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 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, 60.189, 1, 55.716, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -60.189, 1, -55.716, 0, 0, 0, 0, , NO, 0, 0, NO
    11, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 55.716, 1, 53.33, 0, 0, 0, 0, , NO, 0, 0, NO
    12, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -55.716, 1, -53.33, 0, 0, 0, 0, , NO, 0, 0, NO
    13, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 53.33, 1, 50.944, 0, 0, 0, 0, , NO, 0, 0, NO
    14, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -53.33, 1, -50.944, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 50.944, 1, 48.558, 0, 0, 0, 0, , NO, 0, 0, NO
    16, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -50.944, 1, -48.558, 0, 0, 0, 0, , NO, 0, 0, NO
    17, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 48.558, 1, 46.172, 0, 0, 0, 0, , NO, 0, 0, NO
    18, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -48.558, 1, -46.172, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 46.172, 1, 43.786, 0, 0, 0, 0, , NO, 0, 0, NO
    20, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -46.172, 1, -43.786, 0, 0, 0, 0, , NO, 0, 0, NO
    21, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 43.786, 1, 39.526, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM   , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -43.786, 1, -39.526, 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. 96.3024. 1. 89.1456. 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. -96.3024. 1. -89.1456. 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. 89.1456. 1. 85.328. 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
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -89.1456. 1. -85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 85.328. 1. 81.5104. 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. -85.328. 1. -81.5104. 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. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 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. 77.6928. 1. 73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 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. 73.8752. 1. 70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 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. 70.0576. 1. 63.2416. 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. -70.0576. 1. -63.2416. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -38.8851. 1. -38.8851. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. 36.1134. 1. 33.4296. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -36.1134. 1. -33.4296. 0. 0. 0. 0. . NO. 0. 0. N(
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. N(
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 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. N(
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. N(
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -31.998. 1. -30.5664. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 29.1348. 1. 27.7032. 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
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -15.5548. 1. -15.5548. 0. 0. 0. 0. . NO. 0. 0. N(
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.1348. 1. -27.7032. 0. 0. 0. 0. . NO. 0. 0. N(
    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. 27.7032. 1. 26.2716. 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. N(
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.7032. 1. -26.2716. 0. 0. 0. 0. . NO. 0. 0. N(
    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. 26.2716. 1. 23.7156. 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. N(
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 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. -119.86. 1. -119.86. 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. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 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. -119.86. 1. -119.86. 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. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(

; 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. 96.3024. 1. 89.1456. 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. -96.3024. 1. -89.1456. 0. 0. 0. 0. . NO. 0. 0. N(
    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. 89.1456. 1. 85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -89.1456. 1. -85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 85.328. 1. 81.5104. 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. -85.328. 1. -81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 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. 77.6928. 1. 73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 73.8752. 1. 70.0576. 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. -73.8752. 1. -70.0576. 0. 0. 0. 0. . NO. 0. 0. N(
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 70.0576. 1. 63.2416. 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. -70.0576. 1. -63.2416. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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(
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    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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 36.1134. 1. 33.4296. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -36.1134. 1. -33.4296. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 29.1348. 1. 27.7032. 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
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.1348. 1. -27.7032. 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. 27.7032. 1. 26.2716. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.7032. 1. -26.2716. 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. 26.2716. 1. 23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 96.3024. 1. 89.1456. 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. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -96.3024. 1. -89.1456. 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. 89.1456. 1. 85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -89.1456. 1. -85.328. 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
    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. 85.328. 1. 81.5104. 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
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -85.328. 1. -81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 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. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 77.6928. 1. 73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 0. 0. 0. 0. . NO. 0. 0. N(
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 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. 73.8752. 1. 70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 0. 0. 0. 0. . NO. 0. 0. N(
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 70.0576. 1. 63.2416. 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
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -70.0576. 1. -63.2416. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(

; 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. 36.1134. 1. 33.4296. 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. -36.1134. 1. -33.4296. 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. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 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. N(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 30.5664. 1. 29.1348. 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. N(
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.5664. 1. -29.1348. 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. 29.1348. 1. 27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.1348. 1. -27.7032. 0. 0. 0. 0. . NO. 0. 0. N(
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.7032. 1. 26.2716. 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. -27.7032. 1. -26.2716. 0. 0. 0. 0. . NO. 0. 0. N(
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 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. 26.2716. 1. 23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. N(
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -13.4528. 1. -13.4528. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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(
    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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -33.6304. 1. -33.6304. 0. 0. 0. 0. . NO. 0. 0. N(
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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. 96.3024. 1. 89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -96.3024. 1. -89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 89.1456. 1. 85.328. 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. -89.1456. 1. -85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 85.328. 1. 81.5104. 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. -85.328. 1. -81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 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. 77.6928. 1. 73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 73.8752. 1. 70.0576. 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. -73.8752. 1. -70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 70.0576. 1. 63.2416. 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
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -70.0576. 1. -63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 36.1134. 1. 33.4296. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -36.1134. 1. -33.4296. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 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. 30.5664. 1. 29.1348. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.5664. 1. -29.1348. 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. 29.1348. 1. 27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.1348. 1. -27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.7032. 1. 26.2716. 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. -27.7032. 1. -26.2716. 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. 26.2716. 1. 23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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
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    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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. 96.3024. 1. 89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -96.3024. 1. -89.1456. 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. 89.1456. 1. 85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -89.1456. 1. -85.328. 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(
    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. 85.328. 1. 81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -85.328. 1. -81.5104. 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(
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 0. 0. 0. 0. . NO. 0. 0. N(
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 77.6928. 1. 73.8752. 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. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 0. 0. 0. 0. . NO. 0. 0. N(
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 73.8752. 1. 70.0576. 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. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. N(
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 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. 70.0576. 1. 63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -70.0576. 1. -63.2416. 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. -119.86. 1. -119.86. 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. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 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. -119.86. 1. -119.86. 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. N(
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 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. 36.1134. 1. 33.4296. 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. -36.1134. 1. -33.4296. 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. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 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. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 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. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 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. 29.1348. 1. 27.7032. 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. -29.1348. 1. -27.7032. 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. 27.7032. 1. 26.2716. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.7032. 1. -26.2716. 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. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.2716. 1. 23.7156. 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
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. 96.3024. 1. 89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -96.3024. 1. -89.1456. 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. 89.1456. 1. 85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -89.1456. 1. -85.328. 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. 85.328. 1. 81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -85.328. 1. -81.5104. 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. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 77.6928. 1. 73.8752. 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. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -77.6928. 1. -73.8752. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 73.8752. 1. 70.0576. 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. -11.7712. 1. -11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 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. 70.0576. 1. 63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -70.0576. 1. -63.2416. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 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 [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. 36.1134. 1. 33.4296. 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. -36.1134. 1. -33.4296. 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. 33.4296. 1. 31.998. 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. -33.4296. 1. -31.998. 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. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 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. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 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. 29.1348. 1. 27.7032. 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. -29.1348. 1. -27.7032. 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. 27.7032. 1. 26.2716. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.7032. 1. -26.2716. 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. 11.7712. 1. 11.7712. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.2716. 1. 23.7156. 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. N(
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. N(
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. N(
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    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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. 96.3024. 1. 89.1456. 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. -96.3024. 1. -89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 89.1456. 1. 85.328. 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. -89.1456. 1. -85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 85.328. 1. 81.5104. 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. -85.328. 1. -81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 77.6928. 1. 73.8752. 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. -77.6928. 1. -73.8752. 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. 73.8752. 1. 70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 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. 70.0576. 1. 63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -70.0576. 1. -63.2416. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 36.1134. 1. 33.4296. 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. -36.1134. 1. -33.4296. 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. 33.4296. 1. 31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -33.4296. 1. -31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 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. 30.5664. 1. 29.1348. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.5664. 1. -29.1348. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 29.1348. 1. 27.7032. 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. -29.1348. 1. -27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.7032. 1. 26.2716. 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. -27.7032. 1. -26.2716. 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. 26.2716. 1. 23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 96.3024. 1. 89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -96.3024. 1. -89.1456. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 89.1456. 1. 85.328. 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. -89.1456. 1. -85.328. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 85.328. 1. 81.5104. 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. -85.328. 1. -81.5104. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 81.5104. 1. 77.6928. 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. -81.5104. 1. -77.6928. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 77.6928. 1. 73.8752. 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. -77.6928. 1. -73.8752. 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. 73.8752. 1. 70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -73.8752. 1. -70.0576. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 70.0576. 1. 63.2416. 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. -70.0576. 1. -63.2416. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
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    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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 36.1134. 1. 33.4296. 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. -36.1134. 1. -33.4296. 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. 33.4296. 1. 31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -33.4296. 1. -31.998. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 31.998. 1. 30.5664. 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. -31.998. 1. -30.5664. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 30.5664. 1. 29.1348. 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. -30.5664. 1. -29.1348. 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. 29.1348. 1. 27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -29.1348. 1. -27.7032. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.7032. 1. 26.2716. 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. -27.7032. 1. -26.2716. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.2716. 1. 23.7156. 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. -26.2716. 1. -23.7156. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -29.4266. 1. -29.4266. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
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    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 15.5548. 1. 15.5548. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 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. 24.8128. 1. 20.9952. 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
    15. 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. 20.9952. 1. 17.1776. 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. 17.1776. 1. 13.36. 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. 9.5424. 1. 2.7264. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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. -119.86. 1. -119.86. 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
    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. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -119.86. 1. -119.86. 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. 13.4528. 1. 13.4528. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 35.7872. 1. 28.6304. 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. 24.8128. 1. 20.9952. 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
    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. 20.9952. 1. 17.1776. 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. 17.1776. 1. 13.36. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. 9.3048. 1. 7.8732. 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
    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. 7.8732. 1. 6.4416. 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. 3.5784. 1. 1.0224. 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
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 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
    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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -142.056. 1. -142.056. 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. 60.189. 1. 55.716. 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. -60.189. 1. -55.716. 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. 55.716. 1. 53.33. 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. -55.716. 1. -53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.33. 1. 50.944. 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. -53.33. 1. -50.944. 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. 50.944. 1. 48.558. 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. -50.944. 1. -48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.558. 1. 46.172. 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. -48.558. 1. -46.172. 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. 46.172. 1. 43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -46.172. 1. -43.786. 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. 43.786. 1. 39.526. 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
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -43.786. 1. -39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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 [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. 30.0945. 1. 27.858. 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. -30.0945. 1. -27.858. 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. 27.858. 1. 26.665. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.858. 1. -26.665. 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. 26.665. 1. 25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.665. 1. -25.472. 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. 25.472. 1. 24.279. 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. -25.472. 1. -24.279. 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. 24.279. 1. 23.086. 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. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 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. 21.893. 1. 19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -21.893. 1. -19.763. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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 [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. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 60.189. 1. 55.716. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -60.189. 1. -55.716. 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. 55.716. 1. 53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.716. 1. -53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.33. 1. 50.944. 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. -53.33. 1. -50.944. 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. 50.944. 1. 48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -50.944. 1. -48.558. 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. 48.558. 1. 46.172. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.558. 1. -46.172. 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. 46.172. 1. 43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -46.172. 1. -43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.786. 1. 39.526. 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. -43.786. 1. -39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
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    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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 30.0945. 1. 27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.0945. 1. -27.858. 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. 27.858. 1. 26.665. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.858. 1. -26.665. 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. 26.665. 1. 25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.665. 1. -25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 25.472. 1. 24.279. 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. -25.472. 1. -24.279. 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. 24.279. 1. 23.086. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 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. 21.893. 1. 19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -21.893. 1. -19.763. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 60.189. 1. 55.716. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -60.189. 1. -55.716. 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. 55.716. 1. 53.33. 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. -55.716. 1. -53.33. 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. 53.33. 1. 50.944. 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. -53.33. 1. -50.944. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 50.944. 1. 48.558. 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. -50.944. 1. -48.558. 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. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.558. 1. 46.172. 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. -48.558. 1. -46.172. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 46.172. 1. 43.786. 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. -46.172. 1. -43.786. 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. 43.786. 1. 39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -43.786. 1. -39.526. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. 30.0945. 1. 27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.0945. 1. -27.858. 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. 27.858. 1. 26.665. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.858. 1. -26.665. 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. 26.665. 1. 25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.665. 1. -25.472. 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. 25.472. 1. 24.279. 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. -25.472. 1. -24.279. 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
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.279. 1. 23.086. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 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. 21.893. 1. 19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -21.893. 1. -19.763. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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, 60.189, 1, 55.716, 0, 0, 0, 0, , NO, 0, 0, NO
    10, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -60.189, 1, -55.716, 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, 55.716, 1, 53.33, 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, -55.716, 1, -53.33, 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, 53.33, 1, 50.944, 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, -53.33, 1, -50.944, 0, 0, 0, 0, , NO, 0, 0, NO
    15, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 50.944, 1, 48.558, 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, -50.944, 1, -48.558, 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
    17, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 48.558, 1, 46.172, 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, -48.558, 1, -46.172, 0, 0, 0, 0, , NO, 0, 0, NO
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 46.172, 1, 43.786, 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, -46.172, 1, -43.786, 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, 43.786, 1, 39.526, 0, 0, 0, 0, , NO, 0, 0, NO
    22, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, -43.786, 1, -39.526, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    26, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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. 30.0945. 1. 27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.0945. 1. -27.858. 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. 27.858. 1. 26.665. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -27.858. 1. -26.665. 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. 26.665. 1. 25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.665. 1. -25.472. 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. 25.472. 1. 24.279. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -25.472. 1. -24.279. 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. 24.279. 1. 23.086. 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. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 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. 21.893. 1. 19.763. 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. -21.893. 1. -19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. 60.189. 1. 55.716. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -60.189. 1. -55.716. 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. 55.716. 1. 53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.716. 1. -53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.33. 1. 50.944. 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. -53.33. 1. -50.944. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 50.944. 1. 48.558. 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. -50.944. 1. -48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.558. 1. 46.172. 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. -48.558. 1. -46.172. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 46.172. 1. 43.786. 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. -46.172. 1. -43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.786. 1. 39.526. 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. -43.786. 1. -39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 8.408. 1. 8.408. 0. 0. 0. 0. . NO. 0. 0. NO
     9. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 30.0945. 1. 27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -30.0945. 1. -27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.858. 1. 26.665. 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. -27.858. 1. -26.665. 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. 26.665. 1. 25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -26.665. 1. -25.472. 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. 25.472. 1. 24.279. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -25.472. 1. -24.279. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.279. 1. 23.086. 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. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 0. 0. 0. 0. . NO. 0. 0. NO
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    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. 21.893. 1. 19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -21.893. 1. -19.763. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 60.189. 1. 55.716. 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. -60.189. 1. -55.716. 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. 55.716. 1. 53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.716. 1. -53.33. 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. 53.33. 1. 50.944. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.33. 1. -50.944. 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. 50.944. 1. 48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -50.944. 1. -48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.558. 1. 46.172. 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. -48.558. 1. -46.172. 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. 46.172. 1. 43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -46.172. 1. -43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.786. 1. 39.526. 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. -43.786. 1. -39.526. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 30.0945. 1. 27.858. 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. -30.0945. 1. -27.858. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 27.858. 1. 26.665. 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. -27.858. 1. -26.665. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 26.665. 1. 25.472. 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. -26.665. 1. -25.472. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 25.472. 1. 24.279. 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. -25.472. 1. -24.279. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 24.279. 1. 23.086. 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. -24.279. 1. -23.086. 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. 23.086. 1. 21.893. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -23.086. 1. -21.893. 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. 21.893. 1. 19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -21.893. 1. -19.763. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 60.189. 1. 55.716. 0. 0. 0. 0. . NO. 0. 0. NO
    10. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -60.189. 1. -55.716. 0. 0. 0. 0. . NO. 0. 0. NO
    11. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 55.716. 1. 53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    12. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -55.716. 1. -53.33. 0. 0. 0. 0. . NO. 0. 0. NO
    13. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 53.33. 1. 50.944. 0. 0. 0. 0. . NO. 0. 0. NO
    14. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -53.33. 1. -50.944. 0. 0. 0. 0. . NO. 0. 0. NO
    15. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 50.944. 1. 48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    16. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -50.944. 1. -48.558. 0. 0. 0. 0. . NO. 0. 0. NO
    17. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 48.558. 1. 46.172. 0. 0. 0. 0. . NO. 0. 0. NO
    18. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -48.558. 1. -46.172. 0. 0. 0. 0. . NO. 0. 0. NO
    19. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 46.172. 1. 43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    20. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -46.172. 1. -43.786. 0. 0. 0. 0. . NO. 0. 0. NO
    21. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. 43.786. 1. 39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    22. BEAM    . UNILOAD. GX. NO . NO. aDir[1]. . . . 0. -43.786. 1. -39.526. 0. 0. 0. 0. . NO. 0. 0. NO
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    24. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    25. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    27. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. 15.508. 1. 13.122. 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
    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
    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. 5.964. 1. 1.704. 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
    23. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    26. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    28. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    29. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 0. 0. 0. 0. . NO. 0. 0. NO
    30. BEAM    . UNILOAD. GZ. NO . NO. aDir[1]. . . . 0. -88.785. 1. -88.785. 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, 11.1835, 1, 8.947, 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, 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, 7.754, 1, 6.561, 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
    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, 8.408, 1, 8.408, 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
    19, BEAM    , UNILOAD, GX, NO , NO, aDir[1], , , , 0, 4.175, 1, 2.982, 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, 2.982, 1, 0.852, 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
    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, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    24, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 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, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    27, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    28, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    29, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 0, 0, 0, 0, , NO, 0, 0, NO
    30, BEAM    , UNILOAD, GZ, NO , NO, aDir[1], , , , 0, -88.785, 1, -88.785, 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, 160, 255, 255, 255, 87, 87, 192, 192, 0
 CB, COMB2, 192, 192, 0, 0, 128, 128, 0, 192, 192
 CB, COMB3, 192, 72, 0, 85, 0, 192, 160, 192, 255
 CB, COMB4, 192, 128, 0, 212, 160, 255, 93, 255, 87
 CB, COMB5, 255, 192, 87, 85, 192, 0, 192, 192, 192
 CB, COMB6, 192, 192, 192, 192, 0, 192, 160, 255, 255
 CB, COMB7, 255, 87, 128, 93, 255, 87, 0, 192, 128
 CB, COMB8, 210, 210, 210, 0, 128, 255, 85, 0, 192
 CB, COMB9, 163, 255, 160, 192, 128, 0, 148, 87, 255
 CB, COMB10, 0, 128, 255, 0, 128, 255, 85, 192, 0
 CB, COMB11, 93, 255, 87, 192, 0, 192, 192, 128, 0
 CB, COMB12, 85, 192, 0, 255, 87, 128, 192, 72, 0
 CB, COMB13, 0, 157, 192, 0, 128, 57, 0, 192, 128
 CB, COMB14, 0, 192, 128, 255, 0, 192, 0, 192, 128
 CB, COMB15, 0, 128, 255, 163, 160, 255, 192, 192, 0
 CB, COMB16, 0, 128, 255, 85, 0, 192, 148, 87, 255
 CB, COMB17, 163, 255, 160, 160, 255, 255, 128, 192, 0
 CB, COMB18, 0, 128, 192, 192, 0, 192, 163, 160, 255
 CB, COMB19, 0, 128, 192, 255, 160, 255, 255, 160, 255
 CB, COMB20, 0, 128, 128, 0, 128, 57, 255, 87, 128
 CB, COMB21, 255, 255, 87, 192, 192, 192, 212, 160, 255
 CB, COMB22, 0, 192, 192, 163, 160, 255, 163, 255, 160
 CB, COMB23, 255, 87, 128, 192, 72, 0, 192, 128, 0
 CB, COMB24, 0, 192, 192, 192, 128, 0, 0, 128, 57
 CB, COMB25, 148, 87, 255, 212, 160, 255, 128, 192, 0
 CB, COMB26, 0, 192, 128, 210, 210, 210, 0, 128, 255
 CB, COMB27, 255, 0, 192, 192, 0, 192, 0, 192, 192
 CB, COMB28, 160, 192, 255, 192, 72, 0, 85, 0, 192
 CB, COMB29, 78, 0, 255, 210, 210, 210, 255, 87, 128
 CB, COMB30, 0, 128, 57, 255, 160, 255, 148, 87, 255
 CB, COMB31, 0, 192, 128, 85, 192, 0, 0, 157, 192
 CB, COMB32, 160, 255, 255, 146, 0, 255, 255, 87, 87
 CB, COMB33, 160, 192, 255, 0, 128, 192, 212, 160, 255
 CB, COMB34, 148, 87, 255, 0, 157, 192, 163, 160, 255
 CB, COMB35, 163, 160, 255, 255, 192, 160, 146, 0, 255
 CB, USD, 255, 192, 160, 255, 255, 87, 255, 160, 255
 CB, WSD, 128, 192, 0, 163, 255, 160, 160, 255, 255
 ST, LC1, 146, 0, 255, 255, 128, 0, 255, 192, 160
 ST, LC2, 85, 0, 192, 192, 72, 0, 148, 87, 255
 ST, LC3, 192, 128, 0, 85, 192, 0, 255, 255, 255
 ST, LC4, 0, 192, 192, 163, 255, 160, 255, 255, 87
 ST, LC5, 85, 192, 0, 255, 255, 87, 192, 128, 0
 ST, LC6, 255, 255, 255, 0, 128, 255, 163, 160, 255
 ST, LC7, 0, 128, 255, 192, 128, 0, 255, 0, 128
 ST, LC8, 255, 192, 160, 85, 192, 0, 255, 0, 192
 ST, LC9, 255, 160, 255, 93, 255, 87, 0, 192, 192
 ST, LC10, 148, 87, 255, 78, 0, 255, 255, 160, 255
 ST, LC11, 78, 0, 255, 163, 255, 160, 255, 192, 87
 CBC, NCOMB1, 163, 255, 160, 146, 0, 255, 85, 192, 0
 CBC, NCOMB2, 255, 255, 255, 163, 255, 160, 255, 128, 0
 CBC, NCOMB3, 163, 255, 160, 85, 0, 192, 192, 72, 0
 CBC, NCOMB4, 148, 87, 255, 255, 128, 0, 0, 157, 192
 CBC, NCOMB5, 0, 128, 128, 148, 87, 255, 210, 210, 210
 CBC, NCOMB6, 255, 128, 0, 255, 255, 255, 128, 192, 0
 CBC, NCOMB7, 255, 255, 87, 192, 192, 192, 0, 128, 255
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CBC. NCOMB8. 255. 0. 192. 0. 192. 192. 192. 128. 0
CBC. NCOMB9. 148. 87. 255. 0. 128. 255. 0. 128. 128
CBC. NCOMB10. 192. 72. 0. 160. 192. 255. 0. 128. 128
CBC. NCOMB11. 255. 192. 87. 0. 128. 255. 148. 87. 255
CBC. NCOMB12. 192. 0. 128. 163. 160. 255. 192. 0. 128
CBC. NCOMB13. 0. 128. 255. 255. 0. 192. 160. 255. 255
CBC. NCOMB14. 192. 128. 0. 0. 128. 128. 192. 72. 0
CBC. NCOMB15. 212. 160. 255. 0. 128. 57. 0. 192. 192
CBC. NCOMB16. 255. 87. 87. 212. 160. 255. 0. 128. 57
CBC. NCOMB17. 255. 160. 255. 0. 128. 128. 163. 255. 160
CBC. NCOMB18. 192. 192. 192. 255. 160. 255. 192. 0. 128
CBC. NCOMB19. 78. 0. 255. 192. 0. 192. 192. 0. 128
CBC. NCOMB20. 0. 192. 192. 255. 87. 128. 255. 255. 255
CBC. NCOMB21. 0. 128. 57. 163. 255. 160. 160. 255. 255
CBC. NCOMB22. 255. 255. 255. 192. 128. 0. 0. 192. 192
CBC. NCOMB23. 85. 192. 0. 255. 0. 128. 255. 0. 192
CBC. NCOMB24. 160. 192. 255. 78. 0. 255. 192. 72. 0
CBC. NCOMB25. 212. 160. 255. 192. 128. 0. 93. 255. 87
CBC. NCOMB26. 255. 0. 192. 212. 160. 255. 128. 192. 0
CBC. NCOMB27. 255. 160. 255. 146. 0. 255. 160. 192. 255
CBC. NCOMB28. 148. 87. 255. 255. 255. 255. 146. 0. 255
CBC. NCOMB29. 192. 128. 0. 255. 128. 0. 192. 128. 0
CBC. NCOMB30. 255. 87. 87. 255. 128. 0. 255. 255. 87
CBC. NCOMB31. 255. 0. 128. 160. 255. 255. 255. 192. 160
CBC. NCOMB32. 146. 0. 255. 0. 192. 192. 255. 160. 255
CBC. NCOMB33. 255. 160. 255. 255. 192. 160. 0. 192. 192
CBC. NCOMB34. 255. 255. 87. 210. 210. 210. 78. 0. 255
CBC. NCOMB35. 0. 192. 192. 212. 160. 255. 192. 192. 0
ST. NCOMB1. 93. 255. 87. 210. 210. 210. 163. 255. 160
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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]	31.650	0.000	-249.900	0.00E+00	-17.430	0.000
1	USD(max)	1/4	31.650	0.000	-250.930	0.00E+00	3.070	0.000
1	USD(max)	2/4	31.650	0.000	-251.950	0.00E+00	23.660	0.000
1	USD(max)	3/4	31.650	0.000	-252.970	0.00E+00	44.330	0.000
1	USD(max)	J[2]	31.650	0.000	-254.000	0.00E+00	65.090	0.000
1	USD(min)	I[1]	-172.190	0.000	-302.090	0.00E+00	-59.220	0.000
1	USD(min)	1/4	-172.190	0.000	-303.300	0.00E+00	-41.500	0.000
1	USD(min)	2/4	-172.190	0.000	-304.510	0.00E+00	-23.710	0.000
1	USD(min)	3/4	-172.190	0.000	-305.730	0.00E+00	-5.850	0.000
1	USD(min)	J[2]	-172.190	0.000	-306.940	0.00E+00	12.080	0.000
1	WSD(max)	I[1]	19.780	0.000	-169.310	0.00E+00	-12.200	0.000
1	WSD(max)	1/4	19.780	0.000	-170.070	0.00E+00	0.650	0.000
1	WSD(max)	2/4	19.780	0.000	-170.820	0.00E+00	13.560	0.000
1	WSD(max)	3/4	19.780	0.000	-171.580	0.00E+00	26.520	0.000
1	WSD(max)	J[2]	19.780	0.000	-172.340	0.00E+00	39.530	0.000
1	WSD(min)	I[1]	-104.760	0.000	-188.800	0.00E+00	-35.470	0.000
1	WSD(min)	1/4	-104.760	0.000	-189.560	0.00E+00	-22.750	0.000
1	WSD(min)	2/4	-104.760	0.000	-190.320	0.00E+00	-9.970	0.000
1	WSD(min)	3/4	-104.760	0.000	-191.080	0.00E+00	2.870	0.000
1	WSD(min)	J[2]	-104.760	0.000	-191.840	0.00E+00	15.750	0.000
2	USD(max)	I[2]	31.650	0.000	-154.170	0.00E+00	65.090	0.000
2	USD(max)	1/4	31.650	0.000	-155.130	0.00E+00	77.210	0.000
2	USD(max)	2/4	31.650	0.000	-156.090	0.00E+00	89.400	0.000
2	USD(max)	3/4	31.650	0.000	-157.040	0.00E+00	101.660	0.000
2	USD(max)	J[3]	31.650	0.000	-158.000	0.00E+00	114.000	0.000
2	USD(min)	I[2]	-172.190	0.000	-195.870	0.00E+00	12.080	0.000
2	USD(min)	1/4	-172.190	0.000	-197.010	0.00E+00	22.490	0.000
2	USD(min)	2/4	-172.190	0.000	-198.140	0.00E+00	32.960	0.000
2	USD(min)	3/4	-172.190	0.000	-199.270	0.00E+00	43.500	0.000
2	USD(min)	J[3]	-172.190	0.000	-200.410	0.00E+00	54.090	0.000
2	WSD(max)	I[2]	19.780	0.000	-102.320	0.00E+00	39.530	0.000
2	WSD(max)	1/4	19.780	0.000	-103.030	0.00E+00	47.160	0.000
2	WSD(max)	2/4	19.780	0.000	-103.740	0.00E+00	54.850	0.000
2	WSD(max)	3/4	19.780	0.000	-104.450	0.00E+00	62.570	0.000
2	WSD(max)	J[3]	19.780	0.000	-105.160	0.00E+00	70.350	0.000
2	WSD(min)	I[2]	-104.760	0.000	-122.420	0.00E+00	15.750	0.000
2	WSD(min)	1/4	-104.760	0.000	-123.130	0.00E+00	23.160	0.000
2	WSD(min)	2/4	-104.760	0.000	-123.840	0.00E+00	30.610	0.000
2	WSD(min)	3/4	-104.760	0.000	-124.550	0.00E+00	38.110	0.000
2	WSD(min)	J[3]	-104.760	0.000	-125.250	0.00E+00	45.650	0.000
3	USD(max)	I[3]	31.650	0.000	-91.610	0.00E+00	114.000	0.000
3	USD(max)	1/4	31.650	0.000	-92.570	0.00E+00	121.680	0.000
3	USD(max)	2/4	31.650	0.000	-93.520	0.00E+00	129.430	0.000
3	USD(max)	3/4	31.650	0.000	-94.470	0.00E+00	137.250	0.000
3	USD(max)	J[4]	31.650	0.000	-95.420	0.00E+00	145.150	0.000
3	USD(min)	I[3]	-172.190	0.000	-128.650	0.00E+00	54.090	0.000
3	USD(min)	1/4	-172.190	0.000	-129.780	0.00E+00	60.630	0.000
3	USD(min)	2/4	-172.190	0.000	-130.910	0.00E+00	67.040	0.000
3	USD(min)	3/4	-172.190	0.000	-132.040	0.00E+00	73.400	0.000
3	USD(min)	J[4]	-172.190	0.000	-133.170	0.00E+00	79.820	0.000
3	WSD(max)	I[3]	19.780	0.000	-60.760	0.00E+00	70.350	0.000
3	WSD(max)	1/4	19.780	0.000	-61.460	0.00E+00	75.220	0.000
3	WSD(max)	2/4	19.780	0.000	-62.170	0.00E+00	80.140	0.000
3	WSD(max)	3/4	19.780	0.000	-62.870	0.00E+00	85.100	0.000
3	WSD(max)	J[4]	19.780	0.000	-63.580	0.00E+00	90.110	0.000
3	WSD(min)	I[3]	-104.760	0.000	-80.410	0.00E+00	45.650	0.000
3	WSD(min)	1/4	-104.760	0.000	-81.110	0.00E+00	50.240	0.000
3	WSD(min)	2/4	-104.760	0.000	-81.820	0.00E+00	54.450	0.000
3	WSD(min)	3/4	-104.760	0.000	-82.530	0.00E+00	58.450	0.000
3	WSD(min)	J[4]	-104.760	0.000	-83.230	0.00E+00	62.490	0.000
4	USD(max)	I[4]	31.650	0.000	-29.230	0.00E+00	145.150	0.000
4	USD(max)	1/4	31.650	0.000	-30.190	0.00E+00	148.420	0.000
4	USD(max)	2/4	31.650	0.000	-31.150	0.00E+00	151.760	0.000
4	USD(max)	3/4	31.650	0.000	-32.100	0.00E+00	155.170	0.000
4	USD(max)	J[5]	31.650	0.000	-33.060	0.00E+00	158.660	0.000
4	USD(min)	I[4]	-172.190	0.000	-60.230	0.00E+00	79.820	0.000
4	USD(min)	1/4	-172.190	0.000	-61.370	0.00E+00	82.290	0.000
4	USD(min)	2/4	-172.190	0.000	-62.500	0.00E+00	84.820	0.000
4	USD(min)	3/4	-172.190	0.000	-63.640	0.00E+00	87.410	0.000
4	USD(min)	J[5]	-172.190	0.000	-64.770	0.00E+00	90.070	0.000
4	WSD(max)	I[4]	19.780	0.000	-19.290	0.00E+00	90.110	0.000
4	WSD(max)	1/4	19.780	0.000	-20.000	0.00E+00	92.230	0.000
4	WSD(max)	2/4	19.780	0.000	-20.710	0.00E+00	94.400	0.000
4	WSD(max)	3/4	19.780	0.000	-21.420	0.00E+00	96.610	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]	19.780	0.000	-22.130	0.00E+00	98.870	0.000
4	WSD(min)	I[4]	-104.760	0.000	-37.650	0.00E+00	62.490	0.000
4	WSD(min)	1/4	-104.760	0.000	-38.360	0.00E+00	63.760	0.000
4	WSD(min)	2/4	-104.760	0.000	-39.060	0.00E+00	65.060	0.000
4	WSD(min)	3/4	-104.760	0.000	-39.770	0.00E+00	66.420	0.000
4	WSD(min)	J[5]	-104.760	0.000	-40.480	0.00E+00	67.820	0.000
5	USD(max)	I[5]	31.650	0.000	39.120	0.00E+00	158.660	0.000
5	USD(max)	1/4	31.650	0.000	37.980	0.00E+00	157.450	0.000
5	USD(max)	2/4	31.650	0.000	36.850	0.00E+00	156.310	0.000
5	USD(max)	3/4	31.650	0.000	35.720	0.00E+00	155.240	0.000
5	USD(max)	J[6]	31.650	0.000	34.580	0.00E+00	154.490	0.000
5	USD(min)	I[5]	-172.190	0.000	2.460	0.00E+00	90.070	0.000
5	USD(min)	1/4	-172.190	0.000	1.500	0.00E+00	88.730	0.000
5	USD(min)	2/4	-172.190	0.000	0.540	0.00E+00	87.460	0.000
5	USD(min)	3/4	-172.190	0.000	-0.410	0.00E+00	86.250	0.000
5	USD(min)	J[6]	-172.190	0.000	-1.370	0.00E+00	85.100	0.000
5	WSD(max)	I[5]	19.780	0.000	24.450	0.00E+00	98.870	0.000
5	WSD(max)	1/4	19.780	0.000	23.740	0.00E+00	98.190	0.000
5	WSD(max)	2/4	19.780	0.000	23.030	0.00E+00	97.560	0.000
5	WSD(max)	3/4	19.780	0.000	22.320	0.00E+00	96.970	0.000
5	WSD(max)	J[6]	19.780	0.000	21.610	0.00E+00	96.560	0.000
5	WSD(min)	I[5]	-104.760	0.000	5.940	0.00E+00	67.820	0.000
5	WSD(min)	1/4	-104.760	0.000	5.240	0.00E+00	66.420	0.000
5	WSD(min)	2/4	-104.760	0.000	4.530	0.00E+00	65.060	0.000
5	WSD(min)	3/4	-104.760	0.000	3.820	0.00E+00	63.760	0.000
5	WSD(min)	J[6]	-104.760	0.000	3.110	0.00E+00	62.490	0.000
6	USD(max)	I[6]	31.650	0.000	112.890	0.00E+00	154.490	0.000
6	USD(max)	1/4	31.650	0.000	111.760	0.00E+00	149.360	0.000
6	USD(max)	2/4	31.650	0.000	110.630	0.00E+00	144.300	0.000
6	USD(max)	3/4	31.650	0.000	109.500	0.00E+00	139.310	0.000
6	USD(max)	J[7]	31.650	0.000	108.370	0.00E+00	134.390	0.000
6	USD(min)	I[6]	-172.190	0.000	64.020	0.00E+00	85.100	0.000
6	USD(min)	1/4	-172.190	0.000	63.060	0.00E+00	79.960	0.000
6	USD(min)	2/4	-172.190	0.000	62.110	0.00E+00	74.880	0.000
6	USD(min)	3/4	-172.190	0.000	61.160	0.00E+00	69.710	0.000
6	USD(min)	J[7]	-172.190	0.000	60.210	0.00E+00	63.800	0.000
6	WSD(max)	I[6]	19.780	0.000	70.550	0.00E+00	96.560	0.000
6	WSD(max)	1/4	19.780	0.000	69.850	0.00E+00	93.350	0.000
6	WSD(max)	2/4	19.780	0.000	69.140	0.00E+00	90.190	0.000
6	WSD(max)	3/4	19.780	0.000	68.440	0.00E+00	87.070	0.000
6	WSD(max)	J[7]	19.780	0.000	67.730	0.00E+00	83.990	0.000
6	WSD(min)	I[6]	-104.760	0.000	50.480	0.00E+00	62.490	0.000
6	WSD(min)	1/4	-104.760	0.000	49.780	0.00E+00	58.450	0.000
6	WSD(min)	2/4	-104.760	0.000	49.070	0.00E+00	54.450	0.000
6	WSD(min)	3/4	-104.760	0.000	48.370	0.00E+00	50.490	0.000
6	WSD(min)	J[7]	-104.760	0.000	47.660	0.00E+00	46.580	0.000
7	USD(max)	I[7]	31.650	0.000	186.870	0.00E+00	134.390	0.000
7	USD(max)	1/4	31.650	0.000	185.730	0.00E+00	124.550	0.000
7	USD(max)	2/4	31.650	0.000	184.600	0.00E+00	114.780	0.000
7	USD(max)	3/4	31.650	0.000	183.470	0.00E+00	105.090	0.000
7	USD(max)	J[8]	31.650	0.000	182.330	0.00E+00	95.470	0.000
7	USD(min)	I[7]	-172.190	0.000	127.280	0.00E+00	63.800	0.000
7	USD(min)	1/4	-172.190	0.000	126.320	0.00E+00	53.660	0.000
7	USD(min)	2/4	-172.190	0.000	125.370	0.00E+00	43.580	0.000
7	USD(min)	3/4	-172.190	0.000	124.410	0.00E+00	33.560	0.000
7	USD(min)	J[8]	-172.190	0.000	123.450	0.00E+00	23.600	0.000
7	WSD(max)	I[7]	19.780	0.000	116.790	0.00E+00	83.990	0.000
7	WSD(max)	1/4	19.780	0.000	116.080	0.00E+00	77.840	0.000
7	WSD(max)	2/4	19.780	0.000	115.370	0.00E+00	71.740	0.000
7	WSD(max)	3/4	19.780	0.000	114.670	0.00E+00	65.680	0.000
7	WSD(max)	J[8]	19.780	0.000	113.960	0.00E+00	59.670	0.000
7	WSD(min)	I[7]	-104.760	0.000	96.080	0.00E+00	46.580	0.000
7	WSD(min)	1/4	-104.760	0.000	95.370	0.00E+00	39.850	0.000
7	WSD(min)	2/4	-104.760	0.000	94.660	0.00E+00	33.160	0.000
7	WSD(min)	3/4	-104.760	0.000	93.960	0.00E+00	26.510	0.000
7	WSD(min)	J[8]	-104.760	0.000	93.250	0.00E+00	19.920	0.000
8	USD(max)	I[8]	31.650	0.000	306.130	0.00E+00	95.470	0.000
8	USD(max)	1/4	31.650	0.000	304.920	0.00E+00	76.680	0.000
8	USD(max)	2/4	31.650	0.000	303.710	0.00E+00	57.980	0.000
8	USD(max)	3/4	31.650	0.000	302.500	0.00E+00	39.370	0.000
8	USD(max)	J[9]	31.650	0.000	301.280	0.00E+00	21.920	0.000
8	USD(min)	I[8]	-172.190	0.000	231.710	0.00E+00	23.600	0.000
8	USD(min)	1/4	-172.190	0.000	230.690	0.00E+00	5.810	0.000
8	USD(min)	2/4	-172.190	0.000	229.670	0.00E+00	-11.920	0.000
8	USD(min)	3/4	-172.190	0.000	228.640	0.00E+00	-30.110	0.000
8	USD(min)	J[9]	-172.190	0.000	227.620	0.00E+00	-48.280	0.000
8	WSD(max)	I[8]	19.780	0.000	191.330	0.00E+00	59.670	0.000
8	WSD(max)	1/4	19.780	0.000	190.580	0.00E+00	47.930	0.000
8	WSD(max)	2/4	19.780	0.000	189.820	0.00E+00	36.240	0.000
8	WSD(max)	3/4	19.780	0.000	189.060	0.00E+00	24.600	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]	19.780	0.000	188.300	0.00E+00	13.020	0.000
8	WSD(min)	I[8]	-104.760	0.000	171.130	0.00E+00	19.920	0.000
8	WSD(min)	1/4	-104.760	0.000	170.380	0.00E+00	8.100	0.000
8	WSD(min)	2/4	-104.760	0.000	169.620	0.00E+00	-3.670	0.000
8	WSD(min)	3/4	-104.760	0.000	168.860	0.00E+00	-16.590	0.000
8	WSD(min)	J[9]	-104.760	0.000	168.100	0.00E+00	-29.560	0.000
9	USD(max)	I[1]	-362.020	0.000	-14.850	0.00E+00	-70.380	0.000
9	USD(max)	1/4	-360.280	0.000	-13.590	0.00E+00	-64.680	0.000
9	USD(max)	2/4	-358.550	0.000	-12.350	0.00E+00	-59.370	0.000
9	USD(max)	3/4	-356.810	0.000	-11.120	0.00E+00	-54.430	0.000
9	USD(max)	J[10]	-355.070	0.000	-9.910	0.00E+00	-49.880	0.000
9	USD(min)	I[1]	-443.480	0.000	-131.160	0.00E+00	-97.320	0.000
9	USD(min)	1/4	-441.430	0.000	-123.340	0.00E+00	-95.760	0.000
9	USD(min)	2/4	-439.370	0.000	-115.550	0.00E+00	-94.310	0.000
9	USD(min)	3/4	-437.310	0.000	-107.800	0.00E+00	-92.960	0.000
9	USD(min)	J[10]	-435.250	0.000	-100.080	0.00E+00	-91.720	0.000
9	WSD(max)	I[1]	-249.430	0.000	-11.470	0.00E+00	-46.830	0.000
9	WSD(max)	1/4	-248.150	0.000	-10.570	0.00E+00	-43.610	0.000
9	WSD(max)	2/4	-246.860	0.000	-9.670	0.00E+00	-40.610	0.000
9	WSD(max)	3/4	-245.570	0.000	-8.790	0.00E+00	-37.830	0.000
9	WSD(max)	J[10]	-244.290	0.000	-7.920	0.00E+00	-35.260	0.000
9	WSD(min)	I[1]	-277.180	0.000	-78.650	0.00E+00	-60.830	0.000
9	WSD(min)	1/4	-275.890	0.000	-73.820	0.00E+00	-59.850	0.000
9	WSD(min)	2/4	-274.600	0.000	-69.020	0.00E+00	-58.940	0.000
9	WSD(min)	3/4	-273.320	0.000	-64.240	0.00E+00	-58.100	0.000
9	WSD(min)	J[10]	-272.030	0.000	-59.480	0.00E+00	-57.330	0.000
10	USD(max)	I[9]	-350.290	0.000	31.650	0.00E+00	-50.100	0.000
10	USD(max)	1/4	-348.560	0.000	31.650	0.00E+00	-51.640	0.000
10	USD(max)	2/4	-346.820	0.000	31.650	0.00E+00	-48.390	0.000
10	USD(max)	3/4	-345.080	0.000	31.650	0.00E+00	-44.350	0.000
10	USD(max)	J[11]	-343.350	0.000	31.650	0.00E+00	-40.650	0.000
10	USD(min)	I[9]	-443.480	0.000	-120.520	0.00E+00	-84.120	0.000
10	USD(min)	1/4	-441.430	0.000	-112.700	0.00E+00	-82.170	0.000
10	USD(min)	2/4	-439.370	0.000	-104.910	0.00E+00	-80.380	0.000
10	USD(min)	3/4	-437.310	0.000	-97.160	0.00E+00	-78.760	0.000
10	USD(min)	J[11]	-435.250	0.000	-89.440	0.00E+00	-77.300	0.000
10	WSD(max)	I[9]	-249.430	0.000	19.780	0.00E+00	-39.220	0.000
10	WSD(max)	1/4	-248.150	0.000	19.780	0.00E+00	-40.210	0.000
10	WSD(max)	2/4	-246.860	0.000	19.780	0.00E+00	-38.210	0.000
10	WSD(max)	3/4	-245.570	0.000	19.780	0.00E+00	-35.710	0.000
10	WSD(max)	J[11]	-244.290	0.000	19.780	0.00E+00	-33.420	0.000
10	WSD(min)	I[9]	-277.180	0.000	-72.890	0.00E+00	-52.470	0.000
10	WSD(min)	1/4	-275.890	0.000	-68.070	0.00E+00	-50.790	0.000
10	WSD(min)	2/4	-274.600	0.000	-63.270	0.00E+00	-49.240	0.000
10	WSD(min)	3/4	-273.320	0.000	-58.490	0.00E+00	-47.830	0.000
10	WSD(min)	J[11]	-272.030	0.000	-53.730	0.00E+00	-46.540	0.000
11	USD(max)	I[10]	-355.070	0.000	-9.910	0.00E+00	-49.880	0.000
11	USD(max)	1/4	-354.150	0.000	-8.230	0.00E+00	-44.130	0.000
11	USD(max)	2/4	-353.220	0.000	-6.570	0.00E+00	-39.110	0.000
11	USD(max)	3/4	-352.290	0.000	-4.940	0.00E+00	-34.820	0.000
11	USD(max)	J[12]	-351.370	0.000	-3.330	0.00E+00	-31.250	0.000
11	USD(min)	I[10]	-435.250	0.000	-100.080	0.00E+00	-91.720	0.000
11	USD(min)	1/4	-434.150	0.000	-89.330	0.00E+00	-90.170	0.000
11	USD(min)	2/4	-433.060	0.000	-78.650	0.00E+00	-88.810	0.000
11	USD(min)	3/4	-431.960	0.000	-68.040	0.00E+00	-88.410	0.000
11	USD(min)	J[12]	-430.860	0.000	-57.490	0.00E+00	-88.120	0.000
11	WSD(max)	I[10]	-244.290	0.000	-7.920	0.00E+00	-35.260	0.000
11	WSD(max)	1/4	-243.600	0.000	-6.710	0.00E+00	-32.030	0.000
11	WSD(max)	2/4	-242.920	0.000	-5.530	0.00E+00	-29.220	0.000
11	WSD(max)	3/4	-242.230	0.000	-4.370	0.00E+00	-26.830	0.000
11	WSD(max)	J[12]	-241.540	0.000	-3.220	0.00E+00	-24.860	0.000
11	WSD(min)	I[10]	-272.030	0.000	-59.480	0.00E+00	-57.330	0.000
11	WSD(min)	1/4	-271.350	0.000	-52.860	0.00E+00	-56.350	0.000
11	WSD(min)	2/4	-270.660	0.000	-46.270	0.00E+00	-55.510	0.000
11	WSD(min)	3/4	-269.970	0.000	-39.730	0.00E+00	-55.160	0.000
11	WSD(min)	J[12]	-269.290	0.000	-33.230	0.00E+00	-54.890	0.000
12	USD(max)	I[11]	-343.350	0.000	31.650	0.00E+00	-40.650	0.000
12	USD(max)	1/4	-342.420	0.000	31.650	0.00E+00	-36.050	0.000
12	USD(max)	2/4	-341.490	0.000	31.650	0.00E+00	-32.120	0.000
12	USD(max)	3/4	-340.570	0.000	31.650	0.00E+00	-28.870	0.000
12	USD(max)	J[13]	-339.640	0.000	31.650	0.00E+00	-26.280	0.000
12	USD(min)	I[11]	-435.250	0.000	-89.440	0.00E+00	-77.300	0.000
12	USD(min)	1/4	-434.150	0.000	-78.690	0.00E+00	-75.540	0.000
12	USD(min)	2/4	-433.060	0.000	-68.010	0.00E+00	-77.310	0.000
12	USD(min)	3/4	-431.960	0.000	-57.400	0.00E+00	-79.180	0.000
12	USD(min)	J[13]	-430.860	0.000	-46.850	0.00E+00	-81.060	0.000
12	WSD(max)	I[11]	-244.290	0.000	19.780	0.00E+00	-33.420	0.000
12	WSD(max)	1/4	-243.600	0.000	19.780	0.00E+00	-30.590	0.000
12	WSD(max)	2/4	-242.920	0.000	19.780	0.00E+00	-28.180	0.000
12	WSD(max)	3/4	-242.230	0.000	19.780	0.00E+00	-26.180	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]	-241.540	0.000	19.780	0.00E+00	-24.600	0.000
12	WSD(min)	I[11]	-272.030	0.000	-53.730	0.00E+00	-46.540	0.000
12	WSD(min)	1/4	-271.350	0.000	-47.110	0.00E+00	-46.630	0.000
12	WSD(min)	2/4	-270.660	0.000	-40.520	0.00E+00	-47.840	0.000
12	WSD(min)	3/4	-269.970	0.000	-33.980	0.00E+00	-49.060	0.000
12	WSD(min)	J[13]	-269.290	0.000	-27.480	0.00E+00	-50.270	0.000
13	USD(max)	I[12]	-351.370	0.000	-3.330	0.00E+00	-31.250	0.000
13	USD(max)	1/4	-350.440	0.000	-1.750	0.00E+00	-28.270	0.000
13	USD(max)	2/4	-349.520	0.000	-0.200	0.00E+00	-25.560	0.000
13	USD(max)	3/4	-348.590	0.000	3.910	0.00E+00	-23.570	0.000
13	USD(max)	J[14]	-347.660	0.000	8.300	0.00E+00	-22.280	0.000
13	USD(min)	I[12]	-430.860	0.000	-57.490	0.00E+00	-88.120	0.000
13	USD(min)	1/4	-429.760	0.000	-47.010	0.00E+00	-87.940	0.000
13	USD(min)	2/4	-428.670	0.000	-36.590	0.00E+00	-87.870	0.000
13	USD(min)	3/4	-427.570	0.000	-26.240	0.00E+00	-87.910	0.000
13	USD(min)	J[14]	-426.470	0.000	-15.960	0.00E+00	-88.060	0.000
13	WSD(max)	I[12]	-241.540	0.000	-3.220	0.00E+00	-24.860	0.000
13	WSD(max)	1/4	-240.860	0.000	-2.100	0.00E+00	-23.300	0.000
13	WSD(max)	2/4	-240.170	0.000	-1.000	0.00E+00	-22.140	0.000
13	WSD(max)	3/4	-239.490	0.000	0.310	0.00E+00	-21.400	0.000
13	WSD(max)	J[14]	-238.800	0.000	3.770	0.00E+00	-21.050	0.000
13	WSD(min)	I[12]	-269.290	0.000	-33.230	0.00E+00	-54.890	0.000
13	WSD(min)	1/4	-268.600	0.000	-26.770	0.00E+00	-54.710	0.000
13	WSD(min)	2/4	-267.920	0.000	-20.350	0.00E+00	-54.600	0.000
13	WSD(min)	3/4	-267.230	0.000	-13.980	0.00E+00	-54.570	0.000
13	WSD(min)	J[14]	-266.540	0.000	-7.640	0.00E+00	-54.610	0.000
14	USD(max)	I[13]	-339.640	0.000	31.650	0.00E+00	-26.280	0.000
14	USD(max)	1/4	-338.720	0.000	31.650	0.00E+00	-24.280	0.000
14	USD(max)	2/4	-337.790	0.000	31.650	0.00E+00	-22.830	0.000
14	USD(max)	3/4	-336.860	0.000	31.650	0.00E+00	-22.030	0.000
14	USD(max)	J[15]	-335.940	0.000	31.650	0.00E+00	-21.870	0.000
14	USD(min)	I[13]	-430.860	0.000	-46.850	0.00E+00	-81.060	0.000
14	USD(min)	1/4	-429.760	0.000	-36.370	0.00E+00	-82.940	0.000
14	USD(min)	2/4	-428.670	0.000	-25.950	0.00E+00	-84.820	0.000
14	USD(min)	3/4	-427.570	0.000	-15.600	0.00E+00	-86.690	0.000
14	USD(min)	J[15]	-426.470	0.000	-5.380	0.00E+00	-88.570	0.000
14	WSD(max)	I[13]	-241.540	0.000	19.780	0.00E+00	-24.600	0.000
14	WSD(max)	1/4	-240.860	0.000	19.780	0.00E+00	-23.300	0.000
14	WSD(max)	2/4	-240.170	0.000	19.780	0.00E+00	-22.140	0.000
14	WSD(max)	3/4	-239.490	0.000	19.780	0.00E+00	-21.400	0.000
14	WSD(max)	J[15]	-238.800	0.000	19.780	0.00E+00	-21.050	0.000
14	WSD(min)	I[13]	-269.290	0.000	-27.480	0.00E+00	-50.270	0.000
14	WSD(min)	1/4	-268.600	0.000	-21.020	0.00E+00	-51.490	0.000
14	WSD(min)	2/4	-267.920	0.000	-14.600	0.00E+00	-52.700	0.000
14	WSD(min)	3/4	-267.230	0.000	-8.230	0.00E+00	-53.920	0.000
14	WSD(min)	J[15]	-266.540	0.000	-2.030	0.00E+00	-55.140	0.000
15	USD(max)	I[14]	-347.660	0.000	8.300	0.00E+00	-22.280	0.000
15	USD(max)	1/4	-346.740	0.000	12.670	0.00E+00	-21.690	0.000
15	USD(max)	2/4	-345.810	0.000	17.040	0.00E+00	-21.790	0.000
15	USD(max)	3/4	-344.890	0.000	26.970	0.00E+00	-22.580	0.000
15	USD(max)	J[16]	-343.960	0.000	36.840	0.00E+00	-24.060	0.000
15	USD(min)	I[14]	-426.470	0.000	-15.960	0.00E+00	-88.060	0.000
15	USD(min)	1/4	-425.370	0.000	-5.750	0.00E+00	-88.310	0.000
15	USD(min)	2/4	-424.280	0.000	-1.020	0.00E+00	-88.660	0.000
15	USD(min)	3/4	-423.180	0.000	1.370	0.00E+00	-89.120	0.000
15	USD(min)	J[16]	-422.080	0.000	3.700	0.00E+00	-89.670	0.000
15	WSD(max)	I[14]	-238.800	0.000	3.770	0.00E+00	-21.050	0.000
15	WSD(max)	1/4	-238.110	0.000	7.210	0.00E+00	-21.110	0.000
15	WSD(max)	2/4	-237.430	0.000	10.650	0.00E+00	-21.570	0.000
15	WSD(max)	3/4	-236.740	0.000	16.860	0.00E+00	-22.420	0.000
15	WSD(max)	J[16]	-236.060	0.000	23.020	0.00E+00	-23.660	0.000
15	WSD(min)	I[14]	-266.540	0.000	-7.640	0.00E+00	-54.610	0.000
15	WSD(min)	1/4	-265.860	0.000	-1.350	0.00E+00	-54.730	0.000
15	WSD(min)	2/4	-265.170	0.000	1.510	0.00E+00	-54.910	0.000
15	WSD(min)	3/4	-264.490	0.000	2.910	0.00E+00	-55.170	0.000
15	WSD(min)	J[16]	-263.800	0.000	4.280	0.00E+00	-55.500	0.000
16	USD(max)	I[15]	-335.940	0.000	31.650	0.00E+00	-21.870	0.000
16	USD(max)	1/4	-335.010	0.000	31.650	0.00E+00	-22.350	0.000
16	USD(max)	2/4	-334.090	0.000	31.650	0.00E+00	-23.470	0.000
16	USD(max)	3/4	-333.160	0.000	32.970	0.00E+00	-25.220	0.000
16	USD(max)	J[17]	-332.230	0.000	41.900	0.00E+00	-27.600	0.000
16	USD(min)	I[15]	-426.470	0.000	-5.380	0.00E+00	-88.570	0.000
16	USD(min)	1/4	-425.370	0.000	4.570	0.00E+00	-90.450	0.000
16	USD(min)	2/4	-424.280	0.000	14.420	0.00E+00	-92.330	0.000
16	USD(min)	3/4	-423.180	0.000	18.610	0.00E+00	-94.200	0.000
16	USD(min)	J[17]	-422.080	0.000	22.780	0.00E+00	-96.080	0.000
16	WSD(max)	I[15]	-238.800	0.000	19.780	0.00E+00	-21.050	0.000
16	WSD(max)	1/4	-238.110	0.000	19.780	0.00E+00	-21.110	0.000
16	WSD(max)	2/4	-237.430	0.000	19.780	0.00E+00	-21.570	0.000
16	WSD(max)	3/4	-236.740	0.000	20.610	0.00E+00	-22.420	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]	-236.060	0.000	26.190	0.00E+00	-23.660	0.000
16	WSD(min)	I[15]	-266.540	0.000	-2.030	0.00E+00	-55.140	0.000
16	WSD(min)	1/4	-265.860	0.000	3.680	0.00E+00	-56.350	0.000
16	WSD(min)	2/4	-265.170	0.000	9.340	0.00E+00	-57.570	0.000
16	WSD(min)	3/4	-264.490	0.000	14.030	0.00E+00	-58.780	0.000
16	WSD(min)	J[17]	-263.800	0.000	17.370	0.00E+00	-60.000	0.000
17	USD(max)	I[16]	-343.960	0.000	36.840	0.00E+00	-24.060	0.000
17	USD(max)	1/4	-343.030	0.000	46.640	0.00E+00	-26.220	0.000
17	USD(max)	2/4	-342.110	0.000	56.370	0.00E+00	-29.050	0.000
17	USD(max)	3/4	-341.180	0.000	66.040	0.00E+00	-32.490	0.000
17	USD(max)	J[18]	-340.250	0.000	75.640	0.00E+00	-36.620	0.000
17	USD(min)	I[16]	-422.080	0.000	3.700	0.00E+00	-89.670	0.000
17	USD(min)	1/4	-420.980	0.000	5.950	0.00E+00	-90.320	0.000
17	USD(min)	2/4	-419.890	0.000	8.150	0.00E+00	-91.070	0.000
17	USD(min)	3/4	-418.790	0.000	9.970	0.00E+00	-91.910	0.000
17	USD(min)	J[18]	-417.690	0.000	11.420	0.00E+00	-92.840	0.000
17	WSD(max)	I[16]	-236.060	0.000	23.020	0.00E+00	-23.660	0.000
17	WSD(max)	1/4	-235.370	0.000	29.150	0.00E+00	-25.290	0.000
17	WSD(max)	2/4	-234.680	0.000	35.230	0.00E+00	-27.310	0.000
17	WSD(max)	3/4	-234.000	0.000	41.270	0.00E+00	-29.590	0.000
17	WSD(max)	J[18]	-233.310	0.000	47.270	0.00E+00	-32.280	0.000
17	WSD(min)	I[16]	-263.800	0.000	4.280	0.00E+00	-55.500	0.000
17	WSD(min)	1/4	-263.110	0.000	5.590	0.00E+00	-55.890	0.000
17	WSD(min)	2/4	-262.430	0.000	6.870	0.00E+00	-56.350	0.000
17	WSD(min)	3/4	-261.740	0.000	7.960	0.00E+00	-56.880	0.000
17	WSD(min)	J[18]	-261.060	0.000	8.850	0.00E+00	-57.470	0.000
18	USD(max)	I[17]	-332.230	0.000	41.900	0.00E+00	-27.600	0.000
18	USD(max)	1/4	-331.310	0.000	50.760	0.00E+00	-30.600	0.000
18	USD(max)	2/4	-330.380	0.000	59.550	0.00E+00	-34.220	0.000
18	USD(max)	3/4	-329.450	0.000	68.270	0.00E+00	-38.320	0.000
18	USD(max)	J[19]	-328.530	0.000	76.930	0.00E+00	-43.050	0.000
18	USD(min)	I[17]	-422.080	0.000	22.780	0.00E+00	-96.080	0.000
18	USD(min)	1/4	-420.980	0.000	25.910	0.00E+00	-97.960	0.000
18	USD(min)	2/4	-419.890	0.000	25.910	0.00E+00	-100.100	0.000
18	USD(min)	3/4	-418.790	0.000	25.910	0.00E+00	-102.310	0.000
18	USD(min)	J[19]	-417.690	0.000	25.910	0.00E+00	-104.530	0.000
18	WSD(max)	I[17]	-236.060	0.000	26.190	0.00E+00	-23.660	0.000
18	WSD(max)	1/4	-235.370	0.000	31.720	0.00E+00	-25.290	0.000
18	WSD(max)	2/4	-234.680	0.000	37.220	0.00E+00	-27.310	0.000
18	WSD(max)	3/4	-234.000	0.000	42.670	0.00E+00	-29.710	0.000
18	WSD(max)	J[19]	-233.310	0.000	48.080	0.00E+00	-32.490	0.000
18	WSD(min)	I[17]	-263.800	0.000	17.370	0.00E+00	-60.000	0.000
18	WSD(min)	1/4	-263.110	0.000	17.370	0.00E+00	-61.210	0.000
18	WSD(min)	2/4	-262.430	0.000	17.370	0.00E+00	-62.560	0.000
18	WSD(min)	3/4	-261.740	0.000	17.370	0.00E+00	-63.940	0.000
18	WSD(min)	J[19]	-261.060	0.000	17.370	0.00E+00	-65.330	0.000
19	USD(max)	I[18]	-340.250	0.000	75.640	0.00E+00	-36.620	0.000
19	USD(max)	1/4	-339.330	0.000	85.170	0.00E+00	-41.440	0.000
19	USD(max)	2/4	-338.400	0.000	94.640	0.00E+00	-46.920	0.000
19	USD(max)	3/4	-337.480	0.000	104.030	0.00E+00	-53.080	0.000
19	USD(max)	J[20]	-336.550	0.000	113.370	0.00E+00	-59.900	0.000
19	USD(min)	I[18]	-417.690	0.000	11.420	0.00E+00	-92.840	0.000
19	USD(min)	1/4	-416.590	0.000	12.850	0.00E+00	-93.860	0.000
19	USD(min)	2/4	-415.490	0.000	14.250	0.00E+00	-94.980	0.000
19	USD(min)	3/4	-414.400	0.000	15.630	0.00E+00	-96.540	0.000
19	USD(min)	J[20]	-413.300	0.000	16.980	0.00E+00	-100.530	0.000
19	WSD(max)	I[18]	-233.310	0.000	47.270	0.00E+00	-32.280	0.000
19	WSD(max)	1/4	-232.630	0.000	53.230	0.00E+00	-35.400	0.000
19	WSD(max)	2/4	-231.940	0.000	59.150	0.00E+00	-38.930	0.000
19	WSD(max)	3/4	-231.250	0.000	65.020	0.00E+00	-42.870	0.000
19	WSD(max)	J[20]	-230.570	0.000	70.850	0.00E+00	-47.230	0.000
19	WSD(min)	I[18]	-261.060	0.000	8.850	0.00E+00	-57.470	0.000
19	WSD(min)	1/4	-260.370	0.000	9.720	0.00E+00	-58.120	0.000
19	WSD(min)	2/4	-259.680	0.000	10.570	0.00E+00	-58.830	0.000
19	WSD(min)	3/4	-259.000	0.000	11.400	0.00E+00	-59.600	0.000
19	WSD(min)	J[20]	-258.310	0.000	12.210	0.00E+00	-60.930	0.000
20	USD(max)	I[19]	-328.530	0.000	76.930	0.00E+00	-43.050	0.000
20	USD(max)	1/4	-327.600	0.000	85.520	0.00E+00	-48.440	0.000
20	USD(max)	2/4	-326.680	0.000	94.640	0.00E+00	-54.490	0.000
20	USD(max)	3/4	-325.750	0.000	104.030	0.00E+00	-61.200	0.000
20	USD(max)	J[21]	-324.820	0.000	113.370	0.00E+00	-68.550	0.000
20	USD(min)	I[19]	-417.690	0.000	25.910	0.00E+00	-104.530	0.000
20	USD(min)	1/4	-416.590	0.000	25.910	0.00E+00	-106.740	0.000
20	USD(min)	2/4	-415.490	0.000	25.910	0.00E+00	-108.960	0.000
20	USD(min)	3/4	-414.400	0.000	25.910	0.00E+00	-111.170	0.000
20	USD(min)	J[21]	-413.300	0.000	25.910	0.00E+00	-113.390	0.000
20	WSD(max)	I[19]	-233.310	0.000	48.080	0.00E+00	-32.490	0.000
20	WSD(max)	1/4	-232.630	0.000	53.450	0.00E+00	-35.650	0.000
20	WSD(max)	2/4	-231.940	0.000	59.150	0.00E+00	-39.180	0.000
20	WSD(max)	3/4	-231.250	0.000	65.020	0.00E+00	-43.090	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]	-230.570	0.000	70.850	0.00E+00	-47.360	0.000
20	WSD(min)	I[19]	-261.060	0.000	17.370	0.00E+00	-65.330	0.000
20	WSD(min)	1/4	-260.370	0.000	17.370	0.00E+00	-66.710	0.000
20	WSD(min)	2/4	-259.680	0.000	17.370	0.00E+00	-68.100	0.000
20	WSD(min)	3/4	-259.000	0.000	17.370	0.00E+00	-69.480	0.000
20	WSD(min)	J[21]	-258.310	0.000	17.370	0.00E+00	-70.870	0.000
21	USD(max)	I[20]	-336.550	0.000	113.370	0.00E+00	-59.900	0.000
21	USD(max)	1/4	-334.900	0.000	119.990	0.00E+00	-65.180	0.000
21	USD(max)	2/4	-333.240	0.000	126.580	0.00E+00	-70.770	0.000
21	USD(max)	3/4	-331.590	0.000	133.140	0.00E+00	-76.660	0.000
21	USD(max)	J[22]	-329.940	0.000	139.660	0.00E+00	-82.350	0.000
21	USD(min)	I[20]	-413.300	0.000	16.980	0.00E+00	-100.530	0.000
21	USD(min)	1/4	-411.340	0.000	17.930	0.00E+00	-103.550	0.000
21	USD(min)	2/4	-409.380	0.000	18.870	0.00E+00	-106.720	0.000
21	USD(min)	3/4	-407.420	0.000	19.790	0.00E+00	-110.030	0.000
21	USD(min)	J[22]	-405.460	0.000	20.710	0.00E+00	-113.490	0.000
21	WSD(max)	I[20]	-230.570	0.000	70.850	0.00E+00	-47.230	0.000
21	WSD(max)	1/4	-229.340	0.000	75.000	0.00E+00	-50.590	0.000
21	WSD(max)	2/4	-228.120	0.000	79.110	0.00E+00	-54.100	0.000
21	WSD(max)	3/4	-226.890	0.000	83.210	0.00E+00	-57.750	0.000
21	WSD(max)	J[22]	-225.670	0.000	87.290	0.00E+00	-61.480	0.000
21	WSD(min)	I[20]	-258.310	0.000	12.210	0.00E+00	-60.930	0.000
21	WSD(min)	1/4	-257.090	0.000	12.770	0.00E+00	-63.180	0.000
21	WSD(min)	2/4	-255.860	0.000	13.320	0.00E+00	-65.530	0.000
21	WSD(min)	3/4	-254.640	0.000	13.870	0.00E+00	-68.000	0.000
21	WSD(min)	J[22]	-253.410	0.000	14.400	0.00E+00	-70.580	0.000
22	USD(max)	I[21]	-324.820	0.000	113.370	0.00E+00	-68.550	0.000
22	USD(max)	1/4	-323.170	0.000	119.990	0.00E+00	-74.170	0.000
22	USD(max)	2/4	-321.520	0.000	126.580	0.00E+00	-79.990	0.000
22	USD(max)	3/4	-319.860	0.000	133.140	0.00E+00	-86.100	0.000
22	USD(max)	J[30]	-318.210	0.000	139.660	0.00E+00	-92.500	0.000
22	USD(min)	I[21]	-413.300	0.000	25.910	0.00E+00	-113.390	0.000
22	USD(min)	1/4	-411.340	0.000	25.910	0.00E+00	-114.970	0.000
22	USD(min)	2/4	-409.380	0.000	25.910	0.00E+00	-116.550	0.000
22	USD(min)	3/4	-407.420	0.000	25.910	0.00E+00	-118.140	0.000
22	USD(min)	J[30]	-405.460	0.000	25.910	0.00E+00	-119.720	0.000
22	WSD(max)	I[21]	-230.570	0.000	70.850	0.00E+00	-47.360	0.000
22	WSD(max)	1/4	-229.340	0.000	75.000	0.00E+00	-50.640	0.000
22	WSD(max)	2/4	-228.120	0.000	79.110	0.00E+00	-54.100	0.000
22	WSD(max)	3/4	-226.890	0.000	83.210	0.00E+00	-57.750	0.000
22	WSD(max)	J[30]	-225.670	0.000	87.290	0.00E+00	-61.570	0.000
22	WSD(min)	I[21]	-258.310	0.000	17.370	0.00E+00	-70.870	0.000
22	WSD(min)	1/4	-257.090	0.000	17.370	0.00E+00	-71.860	0.000
22	WSD(min)	2/4	-255.860	0.000	17.370	0.00E+00	-72.850	0.000
22	WSD(min)	3/4	-254.640	0.000	17.370	0.00E+00	-73.830	0.000
22	WSD(min)	J[30]	-253.410	0.000	17.370	0.00E+00	-74.820	0.000
23	USD(max)	I[22]	-25.910	0.000	-251.870	0.00E+00	-2.600	0.000
23	USD(max)	1/4	-25.910	0.000	-238.860	0.00E+00	9.720	0.000
23	USD(max)	2/4	-25.910	0.000	-225.850	0.00E+00	22.750	0.000
23	USD(max)	3/4	-25.910	0.000	-212.720	0.00E+00	35.520	0.000
23	USD(max)	J[23]	-25.910	0.000	-199.230	0.00E+00	47.520	0.000
23	USD(min)	I[22]	-178.610	0.000	-313.310	0.00E+00	-50.560	0.000
23	USD(min)	1/4	-178.610	0.000	-297.950	0.00E+00	-36.170	0.000
23	USD(min)	2/4	-178.610	0.000	-282.590	0.00E+00	-23.430	0.000
23	USD(min)	3/4	-178.610	0.000	-267.230	0.00E+00	-11.360	0.000
23	USD(min)	J[23]	-178.610	0.000	-251.880	0.00E+00	-0.240	0.000
23	WSD(max)	I[22]	-17.370	0.000	-174.380	0.00E+00	-3.190	0.000
23	WSD(max)	1/4	-17.370	0.000	-165.830	0.00E+00	5.760	0.000
23	WSD(max)	2/4	-17.370	0.000	-157.280	0.00E+00	14.220	0.000
23	WSD(max)	3/4	-17.370	0.000	-148.740	0.00E+00	22.200	0.000
23	WSD(max)	J[23]	-17.370	0.000	-140.190	0.00E+00	29.700	0.000
23	WSD(min)	I[22]	-111.300	0.000	-195.820	0.00E+00	-31.600	0.000
23	WSD(min)	1/4	-111.300	0.000	-186.220	0.00E+00	-22.050	0.000
23	WSD(min)	2/4	-111.300	0.000	-176.620	0.00E+00	-12.980	0.000
23	WSD(min)	3/4	-111.300	0.000	-167.020	0.00E+00	-4.390	0.000
23	WSD(min)	J[23]	-111.300	0.000	-157.420	0.00E+00	3.120	0.000
24	USD(max)	I[23]	-25.910	0.000	-199.230	0.00E+00	47.520	0.000
24	USD(max)	1/4	-25.910	0.000	-180.830	0.00E+00	62.670	0.000
24	USD(max)	2/4	-25.910	0.000	-162.420	0.00E+00	76.380	0.000
24	USD(max)	3/4	-25.910	0.000	-144.010	0.00E+00	88.670	0.000
24	USD(max)	J[24]	-25.910	0.000	-125.610	0.00E+00	99.560	0.000
24	USD(min)	I[23]	-178.610	0.000	-251.880	0.00E+00	-0.240	0.000
24	USD(min)	1/4	-178.610	0.000	-230.910	0.00E+00	13.720	0.000
24	USD(min)	2/4	-178.610	0.000	-209.950	0.00E+00	26.460	0.000
24	USD(min)	3/4	-178.610	0.000	-188.980	0.00E+00	38.000	0.000
24	USD(min)	J[24]	-178.610	0.000	-168.020	0.00E+00	48.320	0.000
24	WSD(max)	I[23]	-17.370	0.000	-140.190	0.00E+00	29.700	0.000
24	WSD(max)	1/4	-17.370	0.000	-128.520	0.00E+00	39.170	0.000
24	WSD(max)	2/4	-17.370	0.000	-116.850	0.00E+00	47.740	0.000
24	WSD(max)	3/4	-17.370	0.000	-105.180	0.00E+00	55.420	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]	-17.370	0.000	-92.830	0.00E+00	62.220	0.000
24	WSD(min)	I[23]	-111.300	0.000	-157.420	0.00E+00	3.120	0.000
24	WSD(min)	1/4	-111.300	0.000	-144.320	0.00E+00	12.290	0.000
24	WSD(min)	2/4	-111.300	0.000	-131.220	0.00E+00	20.670	0.000
24	WSD(min)	3/4	-111.300	0.000	-118.120	0.00E+00	28.240	0.000
24	WSD(min)	J[24]	-111.300	0.000	-105.010	0.00E+00	35.020	0.000
25	USD(max)	I[24]	-25.910	0.000	-125.610	0.00E+00	99.560	0.000
25	USD(max)	1/4	-25.910	0.000	-107.130	0.00E+00	109.180	0.000
25	USD(max)	2/4	-25.910	0.000	-88.660	0.00E+00	117.370	0.000
25	USD(max)	3/4	-25.910	0.000	-70.190	0.00E+00	124.110	0.000
25	USD(max)	J[25]	-25.910	0.000	-51.720	0.00E+00	129.410	0.000
25	USD(min)	I[24]	-178.610	0.000	-168.020	0.00E+00	48.320	0.000
25	USD(min)	1/4	-178.610	0.000	-146.980	0.00E+00	57.460	0.000
25	USD(min)	2/4	-178.610	0.000	-125.940	0.00E+00	65.380	0.000
25	USD(min)	3/4	-178.610	0.000	-104.900	0.00E+00	71.420	0.000
25	USD(min)	J[25]	-178.610	0.000	-83.860	0.00E+00	75.970	0.000
25	WSD(max)	I[24]	-17.370	0.000	-92.830	0.00E+00	62.220	0.000
25	WSD(max)	1/4	-17.370	0.000	-79.680	0.00E+00	68.210	0.000
25	WSD(max)	2/4	-17.370	0.000	-66.530	0.00E+00	73.310	0.000
25	WSD(max)	3/4	-17.370	0.000	-53.380	0.00E+00	77.500	0.000
25	WSD(max)	J[25]	-17.370	0.000	-40.230	0.00E+00	80.790	0.000
25	WSD(min)	I[24]	-111.300	0.000	-105.010	0.00E+00	35.020	0.000
25	WSD(min)	1/4	-111.300	0.000	-91.860	0.00E+00	41.030	0.000
25	WSD(min)	2/4	-111.300	0.000	-78.710	0.00E+00	46.230	0.000
25	WSD(min)	3/4	-111.300	0.000	-65.560	0.00E+00	50.630	0.000
25	WSD(min)	J[25]	-111.300	0.000	-52.410	0.00E+00	54.230	0.000
26	USD(max)	I[25]	-25.910	0.000	-51.720	0.00E+00	129.410	0.000
26	USD(max)	1/4	-25.910	0.000	-33.310	0.00E+00	133.260	0.000
26	USD(max)	2/4	-25.910	0.000	-14.900	0.00E+00	135.680	0.000
26	USD(max)	3/4	-25.910	0.000	3.500	0.00E+00	136.660	0.000
26	USD(max)	J[26]	-25.910	0.000	21.910	0.00E+00	136.220	0.000
26	USD(min)	I[25]	-178.610	0.000	-83.860	0.00E+00	75.970	0.000
26	USD(min)	1/4	-178.610	0.000	-62.890	0.00E+00	79.280	0.000
26	USD(min)	2/4	-178.610	0.000	-41.930	0.00E+00	81.390	0.000
26	USD(min)	3/4	-178.610	0.000	-20.960	0.00E+00	82.280	0.000
26	USD(min)	J[26]	-178.610	0.000	0.000	0.00E+00	81.960	0.000
26	WSD(max)	I[25]	-17.370	0.000	-40.230	0.00E+00	80.790	0.000
26	WSD(max)	1/4	-17.370	0.000	-27.130	0.00E+00	83.180	0.000
26	WSD(max)	2/4	-17.370	0.000	-14.030	0.00E+00	84.660	0.000
26	WSD(max)	3/4	-17.370	0.000	-0.920	0.00E+00	85.260	0.000
26	WSD(max)	J[26]	-17.370	0.000	12.180	0.00E+00	84.960	0.000
26	WSD(min)	I[25]	-111.300	0.000	-52.410	0.00E+00	54.230	0.000
26	WSD(min)	1/4	-111.300	0.000	-39.310	0.00E+00	57.020	0.000
26	WSD(min)	2/4	-111.300	0.000	-26.210	0.00E+00	59.010	0.000
26	WSD(min)	3/4	-111.300	0.000	-13.100	0.00E+00	60.200	0.000
26	WSD(min)	J[26]	-111.300	0.000	0.000	0.00E+00	60.600	0.000
27	USD(max)	I[26]	-25.910	0.000	21.910	0.00E+00	136.220	0.000
27	USD(max)	1/4	-25.910	0.000	38.160	0.00E+00	134.420	0.000
27	USD(max)	2/4	-25.910	0.000	56.820	0.00E+00	131.350	0.000
27	USD(max)	3/4	-25.910	0.000	75.490	0.00E+00	127.010	0.000
27	USD(max)	J[27]	-25.910	0.000	94.160	0.00E+00	121.390	0.000
27	USD(min)	I[26]	-178.610	0.000	0.000	0.00E+00	81.960	0.000
27	USD(min)	1/4	-178.610	0.000	17.760	0.00E+00	80.500	0.000
27	USD(min)	2/4	-178.610	0.000	35.520	0.00E+00	77.960	0.000
27	USD(min)	3/4	-178.610	0.000	53.280	0.00E+00	74.350	0.000
27	USD(min)	J[27]	-178.610	0.000	71.040	0.00E+00	69.660	0.000
27	WSD(max)	I[26]	-17.370	0.000	12.180	0.00E+00	84.960	0.000
27	WSD(max)	1/4	-17.370	0.000	23.850	0.00E+00	83.820	0.000
27	WSD(max)	2/4	-17.370	0.000	35.510	0.00E+00	81.880	0.000
27	WSD(max)	3/4	-17.370	0.000	47.180	0.00E+00	79.140	0.000
27	WSD(max)	J[27]	-17.370	0.000	58.850	0.00E+00	75.610	0.000
27	WSD(min)	I[26]	-111.300	0.000	0.000	0.00E+00	60.600	0.000
27	WSD(min)	1/4	-111.300	0.000	11.670	0.00E+00	60.200	0.000
27	WSD(min)	2/4	-111.300	0.000	23.340	0.00E+00	59.010	0.000
27	WSD(min)	3/4	-111.300	0.000	35.000	0.00E+00	57.020	0.000
27	WSD(min)	J[27]	-111.300	0.000	46.670	0.00E+00	54.230	0.000
28	USD(max)	I[27]	-25.910	0.000	94.160	0.00E+00	121.390	0.000
28	USD(max)	1/4	-25.910	0.000	112.900	0.00E+00	114.470	0.000
28	USD(max)	2/4	-25.910	0.000	131.640	0.00E+00	106.260	0.000
28	USD(max)	3/4	-25.910	0.000	150.370	0.00E+00	96.770	0.000
28	USD(max)	J[28]	-25.910	0.000	169.110	0.00E+00	86.000	0.000
28	USD(min)	I[27]	-178.610	0.000	71.040	0.00E+00	69.660	0.000
28	USD(min)	1/4	-178.610	0.000	88.870	0.00E+00	63.870	0.000
28	USD(min)	2/4	-178.610	0.000	106.690	0.00E+00	56.970	0.000
28	USD(min)	3/4	-178.610	0.000	123.990	0.00E+00	48.720	0.000
28	USD(min)	J[28]	-178.610	0.000	139.800	0.00E+00	39.380	0.000
28	WSD(max)	I[27]	-17.370	0.000	58.850	0.00E+00	75.610	0.000
28	WSD(max)	1/4	-17.370	0.000	70.560	0.00E+00	71.260	0.000
28	WSD(max)	2/4	-17.370	0.000	82.270	0.00E+00	66.110	0.000
28	WSD(max)	3/4	-17.370	0.000	93.980	0.00E+00	60.160	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]	-17.370	0.000	105.690	0.00E+00	53.400	0.000
28	WSD(min)	I[27]	-111.300	0.000	46.670	0.00E+00	54.230	0.000
28	WSD(min)	1/4	-111.300	0.000	58.380	0.00E+00	50.630	0.000
28	WSD(min)	2/4	-111.300	0.000	70.090	0.00E+00	46.150	0.000
28	WSD(min)	3/4	-111.300	0.000	81.800	0.00E+00	40.280	0.000
28	WSD(min)	J[28]	-111.300	0.000	93.520	0.00E+00	33.620	0.000
29	USD(max)	I[28]	-25.910	0.000	169.110	0.00E+00	86.000	0.000
29	USD(max)	1/4	-25.910	0.000	188.980	0.00E+00	73.990	0.000
29	USD(max)	2/4	-25.910	0.000	209.950	0.00E+00	60.710	0.000
29	USD(max)	3/4	-25.910	0.000	230.910	0.00E+00	46.150	0.000
29	USD(max)	J[29]	-25.910	0.000	251.880	0.00E+00	30.320	0.000
29	USD(min)	I[28]	-178.610	0.000	139.800	0.00E+00	39.380	0.000
29	USD(min)	1/4	-178.610	0.000	155.560	0.00E+00	29.010	0.000
29	USD(min)	2/4	-178.610	0.000	171.310	0.00E+00	17.550	0.000
29	USD(min)	3/4	-178.610	0.000	187.060	0.00E+00	5.030	0.000
29	USD(min)	J[29]	-178.610	0.000	202.810	0.00E+00	-8.570	0.000
29	WSD(max)	I[28]	-17.370	0.000	105.690	0.00E+00	53.400	0.000
29	WSD(max)	1/4	-17.370	0.000	118.120	0.00E+00	45.880	0.000
29	WSD(max)	2/4	-17.370	0.000	131.220	0.00E+00	37.560	0.000
29	WSD(max)	3/4	-17.370	0.000	144.320	0.00E+00	28.440	0.000
29	WSD(max)	J[29]	-17.370	0.000	157.420	0.00E+00	18.520	0.000
29	WSD(min)	I[28]	-111.300	0.000	93.520	0.00E+00	33.620	0.000
29	WSD(min)	1/4	-111.300	0.000	105.180	0.00E+00	26.170	0.000
29	WSD(min)	2/4	-111.300	0.000	116.850	0.00E+00	17.940	0.000
29	WSD(min)	3/4	-111.300	0.000	128.520	0.00E+00	8.900	0.000
29	WSD(min)	J[29]	-111.300	0.000	140.190	0.00E+00	-0.930	0.000
30	USD(max)	I[29]	-25.910	0.000	251.880	0.00E+00	30.320	0.000
30	USD(max)	1/4	-25.910	0.000	267.230	0.00E+00	17.920	0.000
30	USD(max)	2/4	-25.910	0.000	282.590	0.00E+00	4.830	0.000
30	USD(max)	3/4	-25.910	0.000	297.950	0.00E+00	-8.950	0.000
30	USD(max)	J[30]	-25.910	0.000	313.310	0.00E+00	-23.110	0.000
30	USD(min)	I[29]	-178.610	0.000	202.810	0.00E+00	-8.570	0.000
30	USD(min)	1/4	-178.610	0.000	214.350	0.00E+00	-19.220	0.000
30	USD(min)	2/4	-178.610	0.000	225.890	0.00E+00	-30.440	0.000
30	USD(min)	3/4	-178.610	0.000	237.430	0.00E+00	-42.250	0.000
30	USD(min)	J[30]	-178.610	0.000	248.970	0.00E+00	-54.920	0.000
30	WSD(max)	I[29]	-17.370	0.000	157.420	0.00E+00	18.520	0.000
30	WSD(max)	1/4	-17.370	0.000	167.020	0.00E+00	10.750	0.000
30	WSD(max)	2/4	-17.370	0.000	176.620	0.00E+00	2.550	0.000
30	WSD(max)	3/4	-17.370	0.000	186.220	0.00E+00	-6.070	0.000
30	WSD(max)	J[30]	-17.370	0.000	195.820	0.00E+00	-15.120	0.000
30	WSD(min)	I[29]	-111.300	0.000	140.190	0.00E+00	-0.930	0.000
30	WSD(min)	1/4	-111.300	0.000	148.740	0.00E+00	-8.640	0.000
30	WSD(min)	2/4	-111.300	0.000	157.280	0.00E+00	-16.770	0.000
30	WSD(min)	3/4	-111.300	0.000	165.830	0.00E+00	-25.330	0.000
30	WSD(min)	J[30]	-111.300	0.000	174.380	0.00E+00	-34.320	0.000

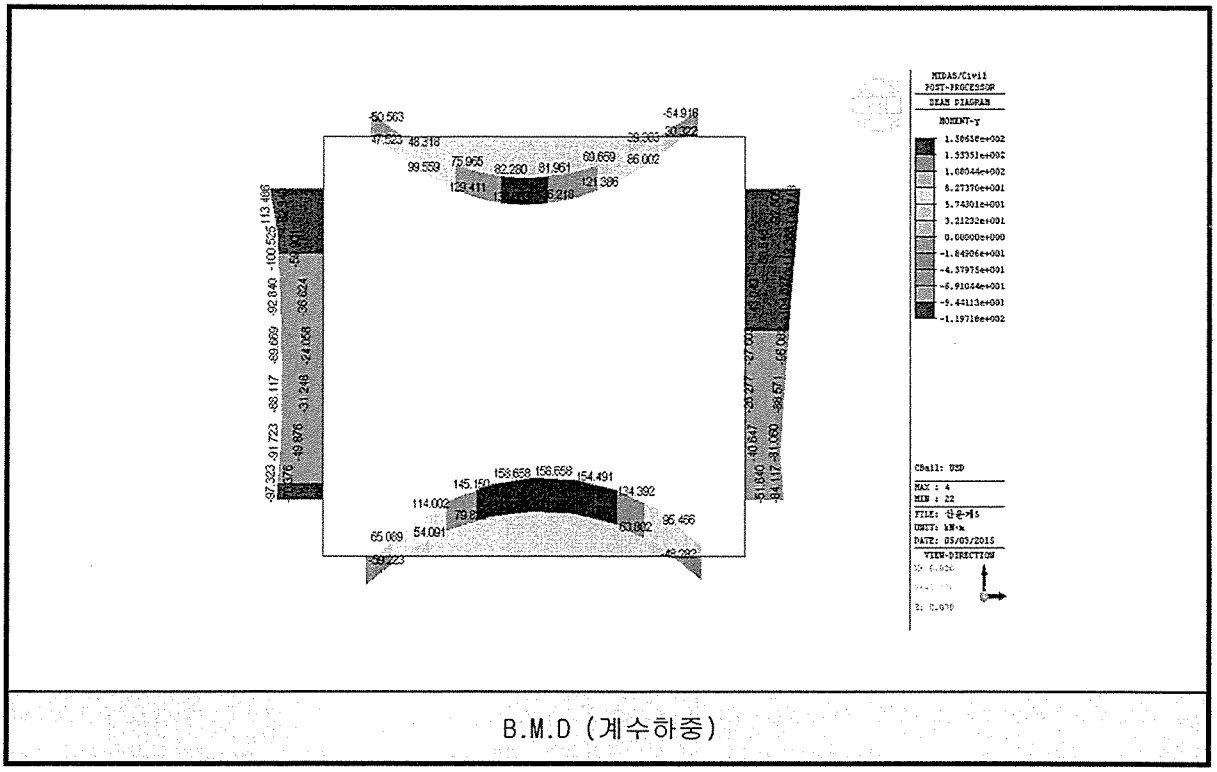
9. 단면력 요약

구분	위치	부재	극한하중			사용하중	비고
			Mu(kN · m)	Su(kN)	Pu(kN)	M(kN · m)	
상부슬래브	단부	23,30	-54.92	313.31	-	-34.32	
	중앙부	26,27	136.66	94.16	-	85.26	
벽체	상단부 (축력최대)	21.22	-100.53	139.66	-413.30	-47.23	
	상단부 (모멘트최대)	21,22	-119.72	139.66	-380.55	-74.82	
	중앙부 (축력최대)	15,16	-72.00	41.90	-426.47	-21.05	
	중앙부 (모멘트최대)	15,16	-96.08	-15.96	-394.68	-60.00	
	하단부 (축력최대)	9,10	-84.12	-131.16	-443.48	-33.42	
	하단부 (모멘트최대)	9,10	-97.32	-131.16	-424.00	-60.83	
하부슬래브	단부	1,8	-59.22	306.94	-	-35.47	
	중앙부	4,5	158.66	64.77	-	98.87	

-'전단력과 사용하중 상태에서의 모멘트는 선택 부재에서의 최대값 적용

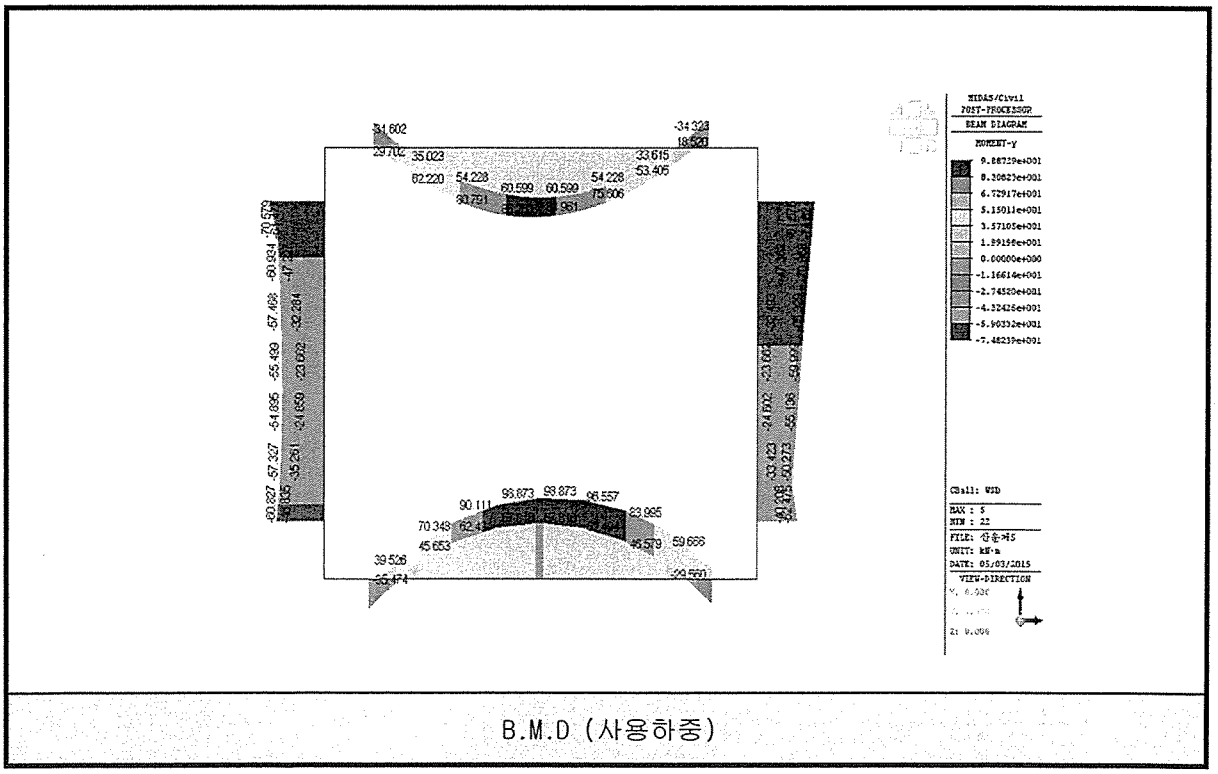
10. 단면력도

(1) 극한하중 모멘트도



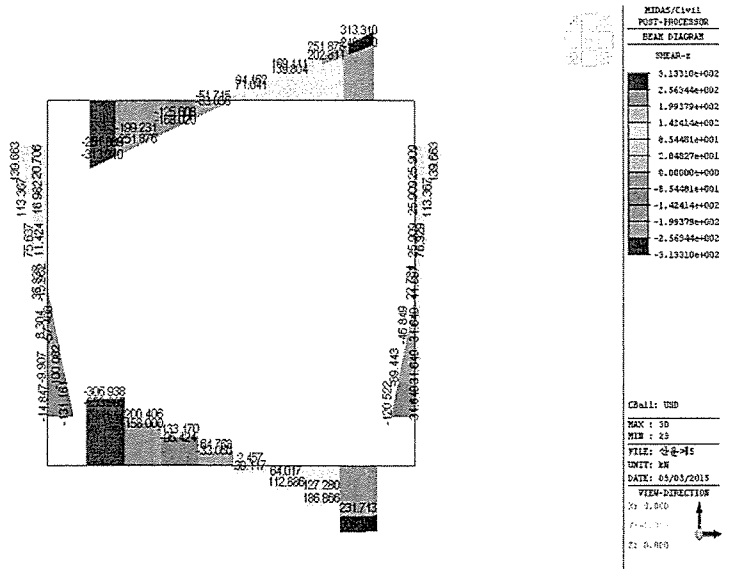
B.M.D (계수하중)

(2) 사용하중 모멘트도



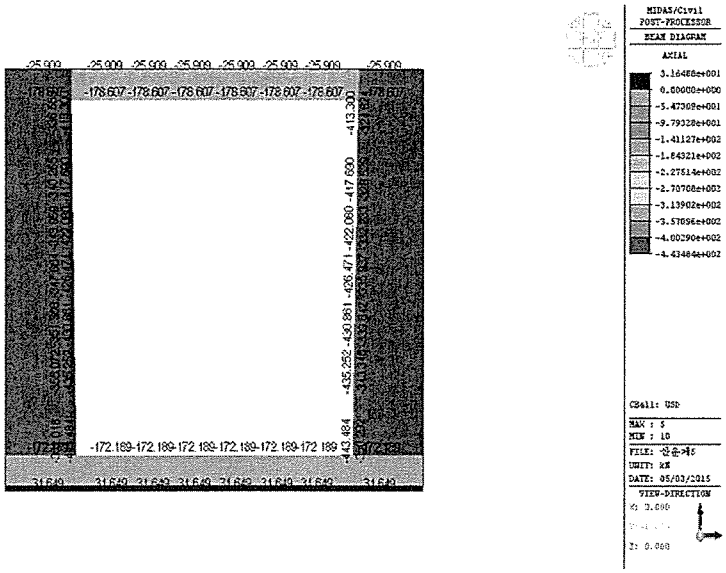
B.M.D (사용하중)

(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	34.320
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Su (kN)
1000.0	500.0	400.0	100.0	54.920	313.310

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 = 384.284 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) = 384.284 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 512.379 mm^2 ※ As = 512.379 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 > 54.920 kN · m ----- ∴ O.K. [사용률 = 4.036]

* 전단력 검토

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

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (313.3 - 232.782)×10³ ×150.0 / (400.0×300.0×0.85)

= 118.423 ㎟

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)]

= 34.32 × 1000000 / [1588.8×(400 - 83.857/3)]

= 58.060 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 / 58.06) - 2.5 × 92 = 1126.348 mm

300 x (210 / fs) = 300 × (210 / 58.06) = 1085.078 mm

Sa는 작은 값인 1085.078 mm 를 적용

S = 125.00 ≤ Sa (= 1085.078 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	85.260
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	136.660	94.160

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 = 1310.253 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) = 1310.253 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1747.004 mm^2 ※ As = 1310.253 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 > 136.660 kN · m ----- ∴ O.K. [사용률 = 1.203]

* 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)]

= 85.26 × 1000000 / [1588.8×(300 - 71.32/3)]

= 194.272 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 / 194.272) - 2.5 × 92 = 175.359 mm

300 x (210 / fs) = 300 × (210 / 194.272) = 324.287 mm

Sa는 작은 값인 175.359 mm 를 적용

S = 125.00 ≤ Sa (= 175.359 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	35.470
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	550.0	450.0	100.0	59.220	306.940

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 = 367.915 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) = 367.915 mm^2 As(min) = 1575.000 mm^2

4/3×As(req) = 490.553 mm^2 ※ As = 490.553 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 > 59.220 kN · m ----- ∴ O.K [사용률 = 4.226]

* 전단력 검토

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

Vu > Φv x Vc ∴ 전단철근보강이 필요하다.

Req Av = (306.9 - 271.579)×10³ ×150.0 / (400.0×350.0×0.85)

= 44.573 ㎟

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

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

s = 150.0 ㎜ < Min (600, 0.5D) = 175.0 ㎜ ----- ∴ 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)]

= 35.47 × 1000000 / [1588.8×(450 - 89.542/3)]

= 53.136 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 ㎜

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 / 53.136) - 2.5 × 92 = 1252.060 ㎜

300 x (210 / fs) = 300 × (210 / 53.136) = 1185.648 ㎜

Sa는 작은 값인 1185.648 ㎜ 를 적용

S = 125.00 ≤ Sa (= 1185.648 ㎜) ----- ∴ 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	98.870
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	450.0	350.0	100.0	158.660	64.770

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 = 1296.897 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) = 1296.897 mm^2 As(min) = 1225.000 mm^2

4/3×As(req) = 1729.196 mm^2 ※ As = 1296.897 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 > 158.660 kN · m ----- ∴ O.K [사용률 = 1.217]

* 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)]

= 98.87 × 1000000 / [1588.8×(350 - 77.81/3)]

= 192.028 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 / 192.028) - 2.5 × 92 = 180.096 mm

300 x (210 / fs) = 300 × (210 / 192.028) = 328.077 mm

Sa는 작은 값인 180.096 mm 를 적용

S = 125.00 ≤ Sa (= 180.096 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	74.820
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	119.720	139.660

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 = 845.403 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) = 845.403 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 1127.204 mm^2 ※ As = 1127.204 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 > 119.720 kN · m ----- ∴ O.K [사용률 = 1.851]

* 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)]

= 74.82 × 1000000 / [1588.8×(400 - 83.857/3)]

= 126.576 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 / 126.576) - 2.5 × 92 = 392.158 mm

300 x (210 / fs) = 300 × (210 / 126.576) = 497.726 mm

Sa는 작은 값인 392.158 mm 를 적용

S = 125.00 ≤ Sa (= 392.158 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	60.000
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	400.0	300.0	100.0	96.080	15.960

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 = 911.343 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) = 911.343 mm^2 As(min) = 1050.000 mm^2

4/3×As(req) = 1215.124 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 > 96.080 kN · m ----- ∴ O.K [사용률 = 1.712]

* 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)]

= 60 × 1000000 / [1588.8×(300 - 71.32/3)]

= 136.715 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 / 136.715) - 2.5 × 92 = 346.015 mm

300 x (210 / fs) = 300 × (210 / 136.715) = 460.812 mm

Sa는 작은 값인 346.015 mm 를 적용

S = 125.00 ≤ Sa (= 346.015 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	60.830
B (mm)	H (mm)	d (mm)	피복 (mm)	Mu (kN.m)	Vu (kN)
1000.0	500.0	400.0	100.0	97.320	131.160

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 = 685.035 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) = 685.035 mm^2 As(min) = 1400.000 mm^2

4/3×As(req) = 913.380 mm^2 ※ As = 913.380 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 > 97.320 kN · m ---- ∴ O.K [사용률 = 2.278]

* 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)]

= 60.83 × 1000000 / [1588.8×(400 - 83.857/3)]

= 102.908 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 / 102.908) - 2.5 × 92 = 535.245 mm

300 x (210 / fs) = 300 × (210 / 102.908) = 612.196 mm

Sa는 작은 값인 535.245 mm 를 적용

S = 125.00 ≤ Sa (= 535.245 mm) ----- ∴ O.K.

⑤ 벽체 상단부 - Pmax 일 경우

설계축력	:	Pu	=	413.30	(kN) ,	설계모멘트	:	Mu	=	100.53	(kN · m)	
설계전단력	:	Vu	=	139.66	(kN) ,	사용 모멘트	:	M	=	47.23	(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	=	243.24 (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 = 175.166 mm , a = k1 x c = 146.439 mm 사용

fs = 600 x (400.000 - 175.166) / 175.166 = 400 Mpa (fs ≤ fy)

fs' = 600 x (175.166 - 100.000) / 175.166 = 257.4682 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 146.439 x 1000 = 3672688.695 N

Cs = 794.400 x (257.468 - 0.836 x 30) = 184609.158 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 3672688.695 + 184609.158 - 635520.000 = 3221777.853 N

Mn' = 3672688.695 x (400.0 - 146.439 / 2) + 184609.158 x (400.0 - 100.0)

= 1255545899.918 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 389.704933 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 3221777.853

ΦPn = 2255244.497 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 3221777.853 = 2255.244 kN ≥ Pu = 413.300 kN ------ O.K!!!

ΦMn = ΦPn x 243.237 = 548.560 kN.m ≥ Mu = 100.530 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 246526.206 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

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

$= 47.23 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 79.901 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 / 79.901) - 2.5 × 92 = 755.599 mm

300 x (210 / fs) = 300 × (210 / 79.901) = 788.479 mm

Sa는 작은 값인 755.599 mm 를 적용

S = 125.00 ≤ Sa (= 755.599 mm) ----- ∴ O.K.

⑥ 벽체 상단부 - Mmax 일 경우

설계축력	:	Pu	=	380.55	(kN) ,	설계모멘트	:	Mu	=	119.72	(kN · m)
설계전단력	:	Vu	=	139.66	(kN) ,	사용 모멘트	:	M	=	74.82	(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 =	314.60	(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 → 인장파괴 (eb = Mb / Pb = 194.160 mm)

- 공칭강도 계산 : 반복계산을 통해 c = 120.914 mm , a = k1 x c = 101.084 mm 사용

fs = 600 x (400.000 - 120.914) / 120.914 = 400 Mpa (fs ≤ fy)

fs' = 600 x (120.914 - 100.000) / 120.914 = 103.7795 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 101.084 x 1000 = 2535189.328 N

Cs = 794.400 x (103.780 - 0.836 x 30) = 62518.919 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2535189.328 + 62518.919 - 635520.000 = 1962188.247 N

Mn' = 2535189.328 x (400.0 - 101.084 / 2) + 62518.919 x (400.0 - 100.0)

= 904697736.220 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 461.064868 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 1962188.247

ΦPn = 1373531.773 < ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.720

ΦPn = 0.72 x 1962188.247 = 1412.776 kN ≥ Pu = 380.550 kN ------ O.K!!!

ΦMn = ΦPn x 314.597 = 444.455 kN.m ≥ Mu = 119.720 kN.m ------ O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 245437.119 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

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

$= 74.82 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 126.576 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 $㎜^2$ (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 / 126.576) - 2.5 × 92 = 392.158 ㎜

300 x (210 / fs) = 300 × (210 / 126.576) = 497.726 ㎜

Sa는 작은 값인 392.158 ㎜ 를 적용

S = 125.00 ≤ Sa (= 392.158 ㎜) ------ ∴ O.K.

⑦ 벽체 중앙부 - Pmax 일 경우

설계축력	:	Pu	=	426.47	(kN) ,	설계모멘트	:	Mu	=	72.00	(kN · m)	
설계전단력	:	Vu	=	41.90	(kN) ,	사용 모멘트	:	M	=	21.05	(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	=	168.83 (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 = 180.195 mm , a = k1 x c = 150.643 mm 사용

fs = 600 x (300.000 - 180.195) / 180.195 = 398.9173 Mpa (fs ≤ fy)

fs' = 600 x (180.195 - 100.000) / 180.195 = 267.0276 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 150.643 x 1000 = 3778129.038 N

Cs = 794.400 x (267.028 - 0.836 x 30) = 192203.151 N

Ts = 1588.800 x 398.917 = 633799.782 N

Pn = 3778129.038 + 192203.151 - 633799.782 = 3336532.407 N

Mn' = 3778129.038 x (300.0 - 150.643 / 2) + 192203.151 x (300.0 - 100.0)

= 887304799.627 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 265.935221 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 3336532.407

ΦPn = 2335572.685 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 3336532.407 = 2335.573 kN ≥ Pu = 426.470 kN ——— O.K!!!

ΦMn = ΦPn x 168.828 = 394.310 kN.m ≥ Mu = 72.000 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 250509.690 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 21.05 × 1000000 / [1588.8×(300 - 71.32/3)]

= 47.964 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 ㎟)

- 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 / 47.964) - 2.5 × 92 = 1411.85 mm

300 x (210 / fs) = 300 × (210 / 47.964) = 1313.48 mm

Sa는 작은 값인 1313.48 mm 를 적용

S = 125.00 ≤ Sa (= 1313.479 mm) ----- ∴ O.K.

⑧ 벽체 중앙부 - Mmax 일 경우

설계축력	:	Pu	=	394.68	(kN) ,	설계모멘트	:	Mu	=	96.08	(kN · m)	
설계전단력	:	Vu	=	15.96	(kN) ,	사용 모멘트	:	M	=	60.00	(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	=	243.44 (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 = 114.055 mm , a = k1 x c = 95.350 mm 사용

fs = 600 x (300.000 - 114.055) / 114.055 = 400 Mpa (fs ≤ fy)

fs' = 600 x (114.055 - 100.000) / 114.055 = 73.93663 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 95.350 x 1000 = 2391371.208 N

Cs = 794.400 x (73.937 - 0.836 x 30) = 38811.706 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 2391371.208 + 38811.706 - 635520.000 = 1794662.914 N

Mn' = 2391371.208 x (300.0 - 95.350 / 2) + 38811.706 x (300.0 - 100.0)

= 611165405.095 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 340.545124 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 8874006.720 N ≥ Pn = 1794662.914

ΦPn = 1256264.040 > ΦPb = 2330236.720 , 0.1 x fck x Ag = 1200000.000

∴ Φ = 0.700

ΦPn = 0.70 x 1794662.914 = 1256.264 kN ≥ Pu = 394.680 kN ——— O.K!!!

ΦMn = ΦPn x 243.438 = 305.822 kN.m ≥ Mu = 96.080 kN.m ——— O.K!!!

○ 전단력 검토

ϕVc = 0.85 × 1/6 × (1 + Pu / (14 x Ag)) x √fck × bo × d = 249188.236 N

여기서 , Vu < 1/2ϕVc 이므로 전단철근보강 불필요

○ 사용성 검토 (균열방지 인장철근 간격검토)

- 응력산정

fs = M / [As x (d - χ/3)]

= 60 × 1000000 / [1588.8×(300 - 71.32/3)]

= 136.715 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 / 136.715) - 2.5 × 92 = 346.02 mm

300 x (210 / fs) = 300 × (210 / 136.715) = 460.81 mm

Sa는 작은 값인 346.02 mm 를 적용

S = 125.00 ≤ Sa (= 346.015 mm) ----- ∴ O.K.

⑨ 벽체 하단부 - Pmax 일 경우

설계축력	:	Pu	=	443.48	(kN) ,	설계모멘트	:	Mu	=	84.12	(kN·m)	
설계전단력	:	Vu	=	131.16	(kN) ,	사용 모멘트	:	M	=	33.42	(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	=	189.68 (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 = 244.057 mm , a = k1 x c = 204.032 mm 사용

fs = 600 x (400.000 - 244.057) / 244.057 = 383.3752 Mpa (fs ≤ fy)

fs' = 600 x (244.057 - 100.000) / 244.057 = 354.1562 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 204.032 x 1000 = 5117122.219 N

Cs = 794.400 x (354.156 - 0.836 x 30) = 261418.129 N

Ts = 1588.800 x 383.375 = 609106.553 N

Pn = 5117122.219 + 261418.129 - 609106.553 = 4769433.794 N

Mn' = 5117122.219 x (400.0 - 204.032 / 2) + 261418.129 x (400.0 - 100.0)

= 1603246020.727 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 336.149184 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 4769433.794

ΦPn = 3338603.656 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 4769433.794 = 3338.604 kN ≥ Pu = 443.480 kN ——— O.K!!!

ΦMn = ΦPn x 189.682 = 633.272 kN.m ≥ Mu = 84.120 kN.m ——— O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 247529.830 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

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

$= 33.42 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 56.538 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 $㎟^2$ (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 / 56.538) - 2.5 × 92 = 1162.87 ㎜

300 x (210 / fs) = 300 × (210 / 56.538) = 1114.30 ㎜

Sa는 작은 값인 1114.30 ㎜ 를 적용

S = 125.00 ≤ Sa (= 1114.299 ㎜) ------ ∴ O.K.

⑩ 벽체 하단부 - Mmax 일 경우

설계축력	:	Pu	=	424.00	(kN) ,	설계모멘트	:	Mu	=	97.32	(kN · m)
설계전단력	:	Vu	=	131.16	(kN) ,	사용 모멘트	:	M	=	60.83	(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 =	229.53 (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 = 190.867 mm , a = k1 x c = 159.565 mm 사용

fs = 600 x (400.000 - 190.867) / 190.867 = 400 Mpa (fs ≤ fy)

fs' = 600 x (190.867 - 100.000) / 190.867 = 285.6452 Mpa (fs ≤ fy)

Cc = 0.836 x 30 x 159.565 x 1000 = 4001888.630 N

Cs = 794.400 x (285.645 - 0.836 x 30) = 206993.015 N

Ts = 1588.800 x 400.000 = 635520.000 N

Pn = 4001888.630 + 206993.015 - 635520.000 = 3573361.645 N

Mn' = 4001888.630 x (400.0 - 159.565 / 2) + 206993.015 x (400.0 - 100.0)

= 1343572802.047 N.mm

- 편심오차 : | e' - Mn'/Pn | = 0.001 < 0.001 (e' = e + Xp - dc = 375.995877 mm)

- 축방향력 및 휨에대한 검토

(max) Pn = 0.80 x { 0.85 fck x (Ag - Ast) + fy x Ast} : 10914006.720 N ≥ Pn = 3573361.645

ΦPn = 2501353.151 > ΦPb = 3257185.680 , 0.1 x fck x Ag = 1500000.000

∴ Φ = 0.700

ΦPn = 0.70 x 3573361.645 = 2501.353 kN ≥ Pu = 424.000 kN ------- O.K!!!

ΦMn = ΦPn x 229.528 = 574.131 kN.m ≥ Mu = 97.320 kN.m ------- O.K!!!

○ 전단력 검토

$\phi Vc = 0.85 \times 1/6 \times (1 + Pu / (14 \times Ag)) \times \sqrt{fck} \times bo \times d$ = 246882.030 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

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

$= 60.83 \times 1000000 / [1588.8 \times (400 - 83.857/3)]$

= 102.908 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 / 102.908) - 2.5 × 92 = 535.245 mm

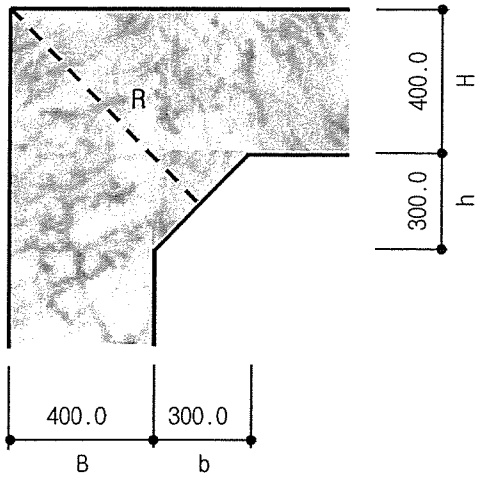
300 x (210 / fs) = 300 × (210 / 102.908) = 612.196 mm

Sa는 작은 값인 535.245 mm 를 적용

S = 125.00 ≤ Sa (= 535.245 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	:	74.82	kN · m

R = √2 × b / (b+h) × [B + h + (H × h/b)]

= 777.82 mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 74820000}{777.82^2 \times 1000.0} = 0.618 \text{ MPa}$$

f_{tmax} = 0.618 MPa < f_{ta} = 0.712 MPa 이므로 보강철근 필요없음.

② 소요 철근량

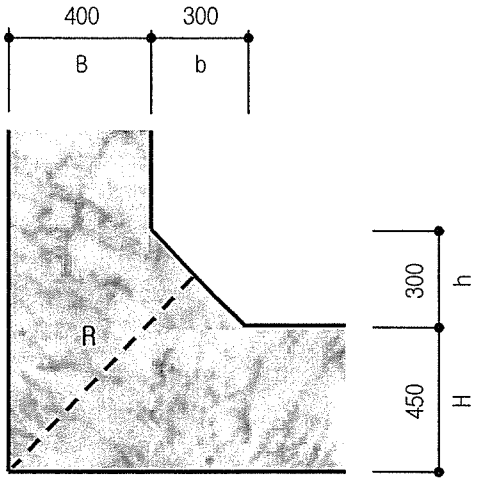
외측인장에 대한 보강 필요철근량(Asf)

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

▶ 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	:	60.83	kN · m

R = √ (B2 + H2) = 602.08 mm

① 보강철근 필요여부 판정

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 60830000}{602.08^2 \times 1000.0} = 0.839 \text{ MPa}$$

f_{tmax} = 0.839 MPa > f_{ta} = 0.712 MPa 이므로 보강철근 필요.

② 소요 철근량

외측인장에 대한 보강 필요철근량(Asf)

$$Asf = \frac{2 \times Mo}{R \times fsa} = \frac{2 \times 60830000}{602.08 \times 180.0} = 1122.59 \text{ ㎟}$$

▶ 보강 As = Asf - 주철근사용 As = 1122.59 - 794.4 = 328.19 ㎟

------ 우각부 보강철근 필요

외측인장에 대한 보강 사용철근량(As)

As = H16 @ 250 - 1 단 = 794.40 ㎟

Asf = 328.19 ㎟ < 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 × (2.640 + 3) / 30 = 225.6 mm

상부슬래브 두께 = 400.0 mm

Tuse = 400.0 mm > Tmin = 225.6 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

2.64 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

2.64 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

= 165.04 kN/m²

3) 활하중

= 21.019 kN/m²

4) 최대 지반 반력

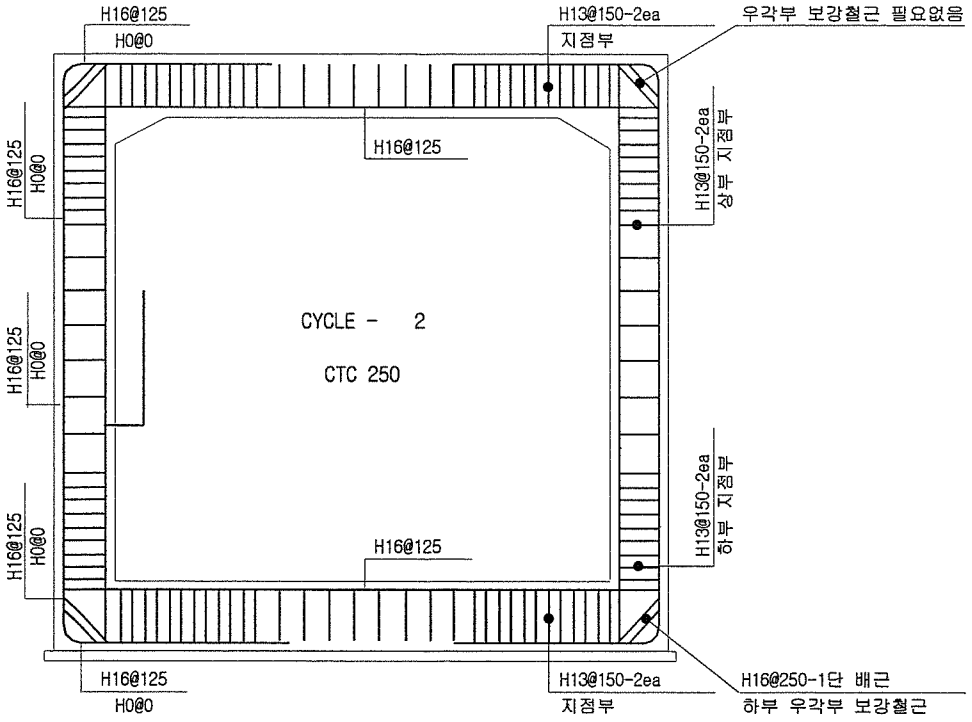
Qmax = 36.400 + 165.040 + 21.019

= 222.459 kN/m²

5) 지지력 검토

Qmax = 222.459 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

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■ 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

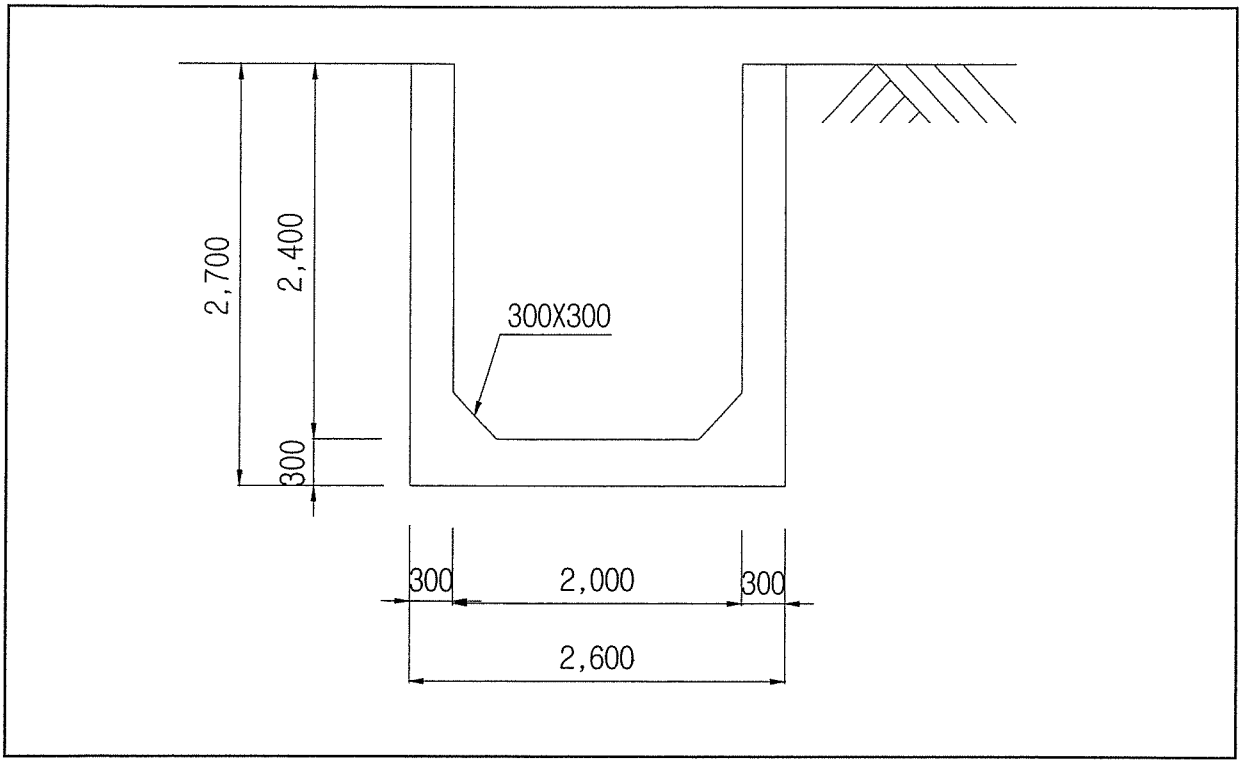
1.5 참고문헌

(1) 콘크리트 구조설계기준 (한국콘크리트 학회, 2012)

(2) 도로교 설계기준 (건설교통부, 2010)

(3) 철도설계기준 (노반편) (건설교통부 2013)

2. 단면가정

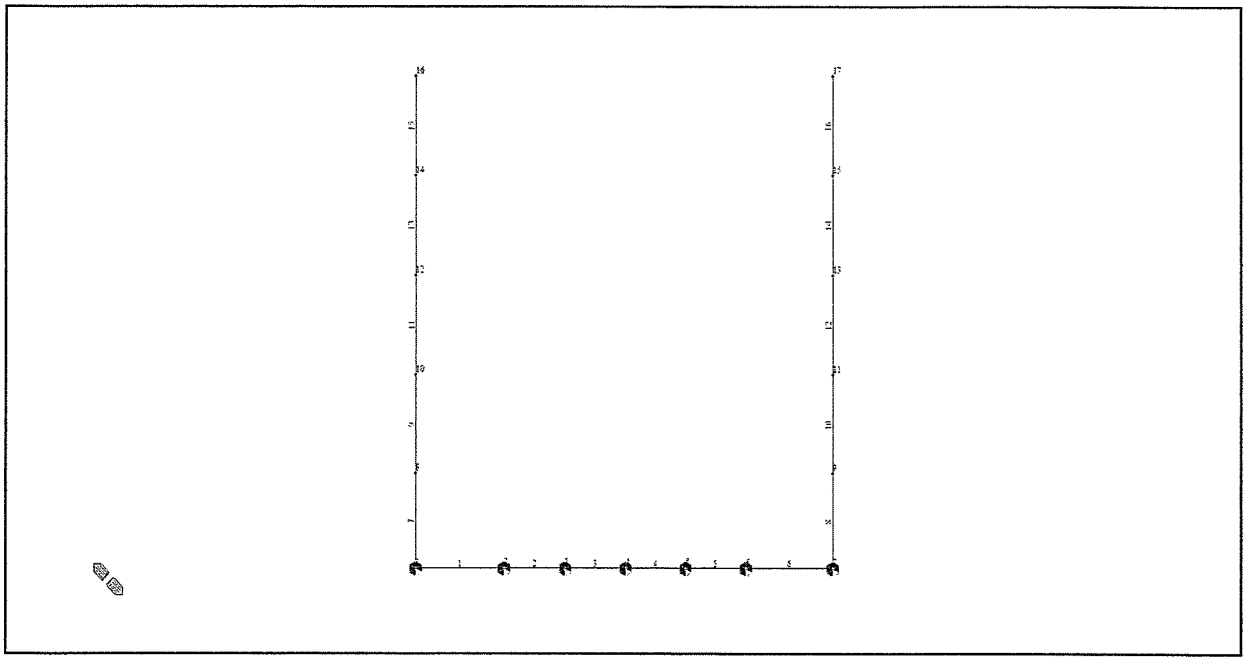


* N=15, Φ=35° 적용 함.

* 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.

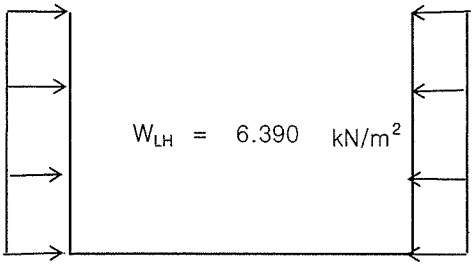
4.6 건조수축 ---------- LC 8

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

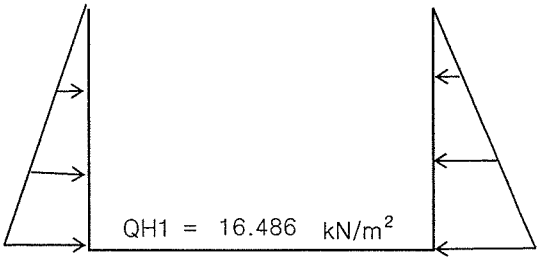
4.7 하중재하도

(1) LC 1 : 프로그램내 자동재하

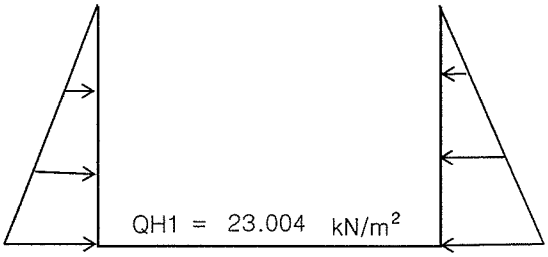
(2) LC 2



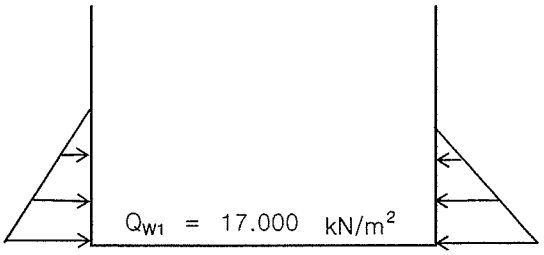
(3) LC 3



(4) LC 4



(5) LC 5



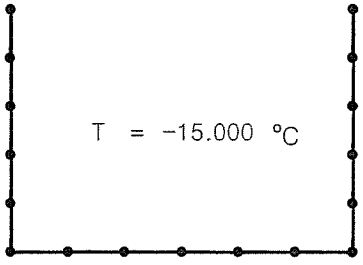
(6) LC 6

- 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	

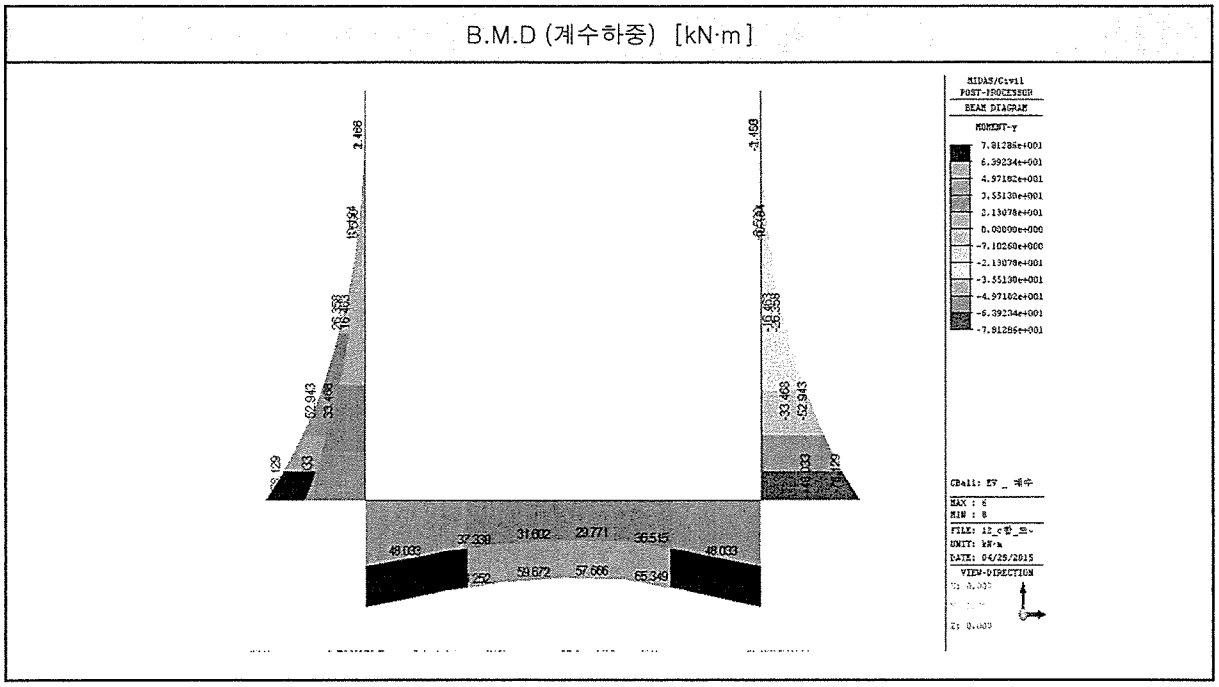
5.2 사용하중

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					

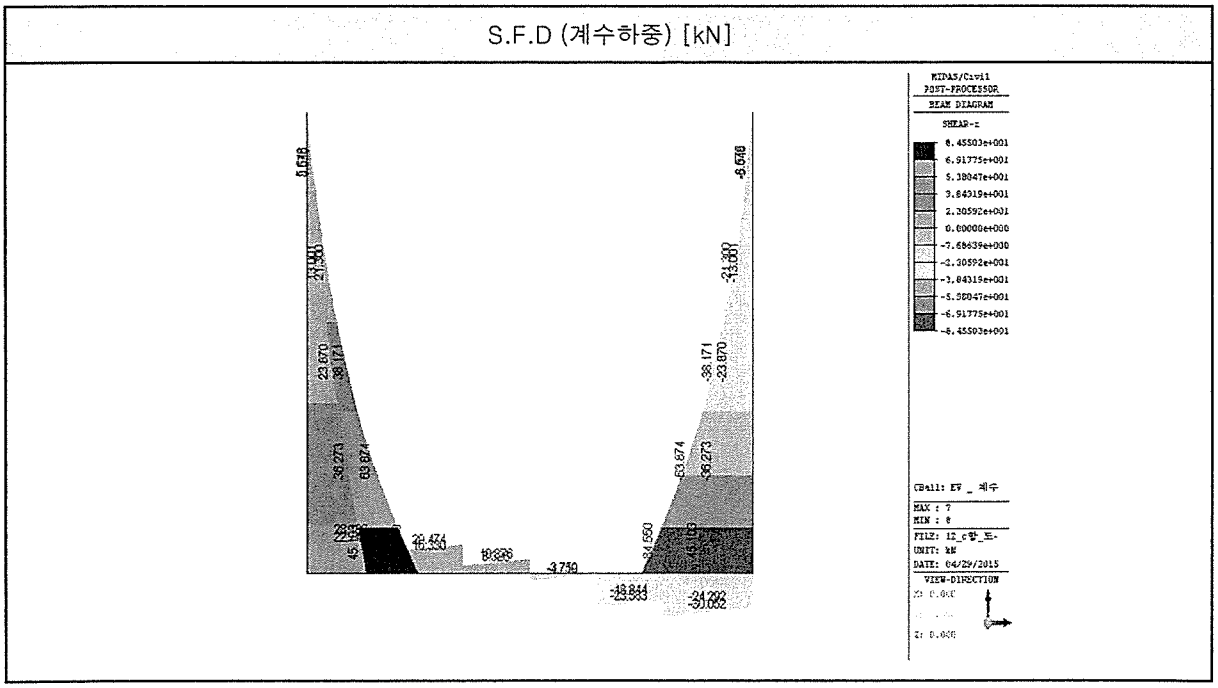
6. 구조해석 결과

6.1 부재력도 (ENVELOPE)

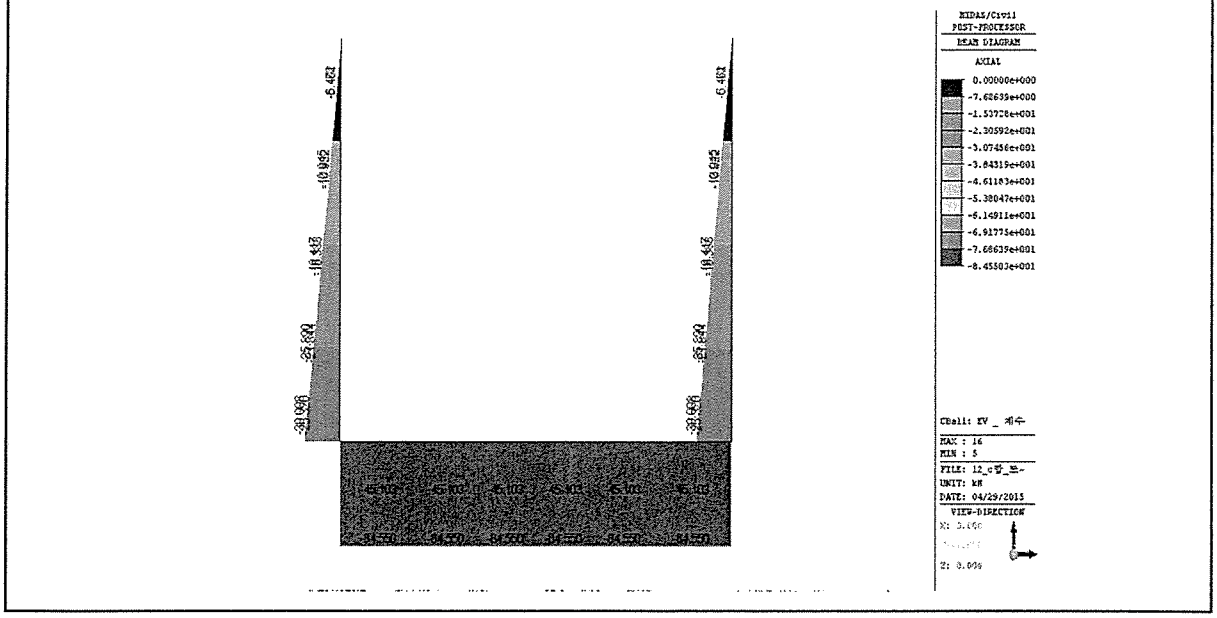
B.M.D (계수하중) [kN·m]



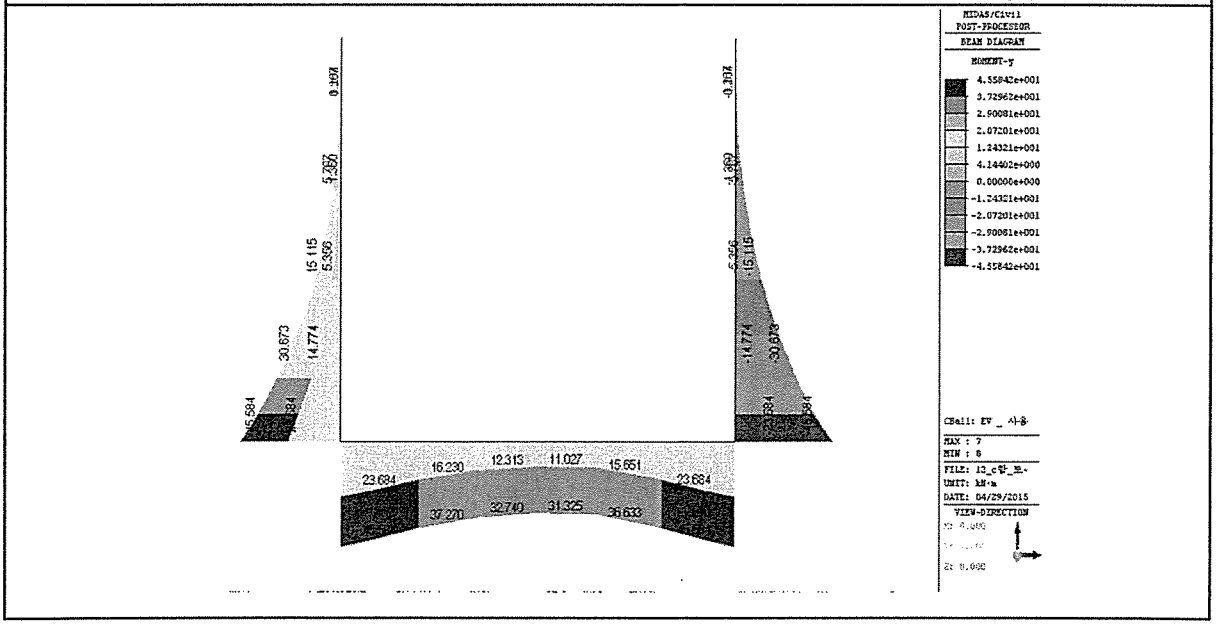
S.F.D (계수하중) [kN]



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]

$= -7 \times 0.00662 + \sqrt{[\,2 \times 0.046 + 0.046^2\,]}$ = 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 $\quad C = T$; 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

$k = - np + \sqrt{[\,2np + (np)^2\,]}$ [∵ 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

7.2.2 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 = 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	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

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

◈ $M_d = \phi_f T (d - a/2)$ = 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 × 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

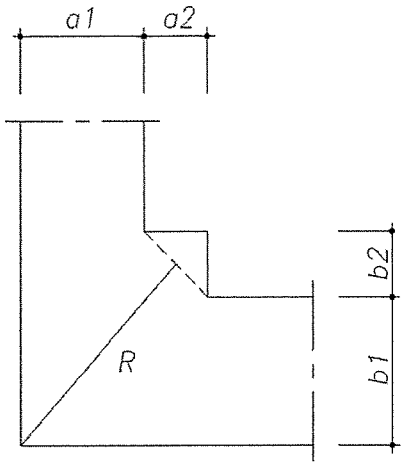
s_2 = 300 (210 / fs) = 517 mm

7.4 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

$$As = \frac{2 \times Mo}{R \times f_{sa}} - As'$$

$$= \frac{2 \times 45.584 \times 10^6}{636 \times 180} - 662$$

$$= 796 \ mm^2 - 662 \ mm^2$$

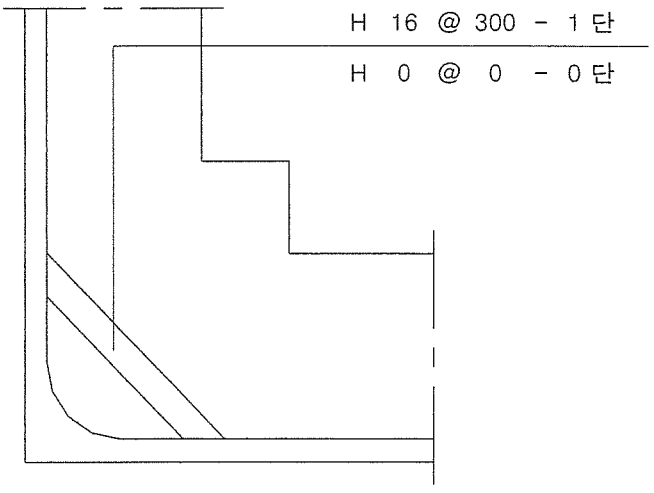
$$= 134 \ mm^2$$

- 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)

$Qu = A \cdot [\ c \cdot Nc + q \cdot Nq + 0.5 \cdot r1 \cdot B \cdot Nr\ ]$

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) 순호제1

- 2.0 x 2.00 x 1
- 토피 = 7.7m 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) : 47.00 m

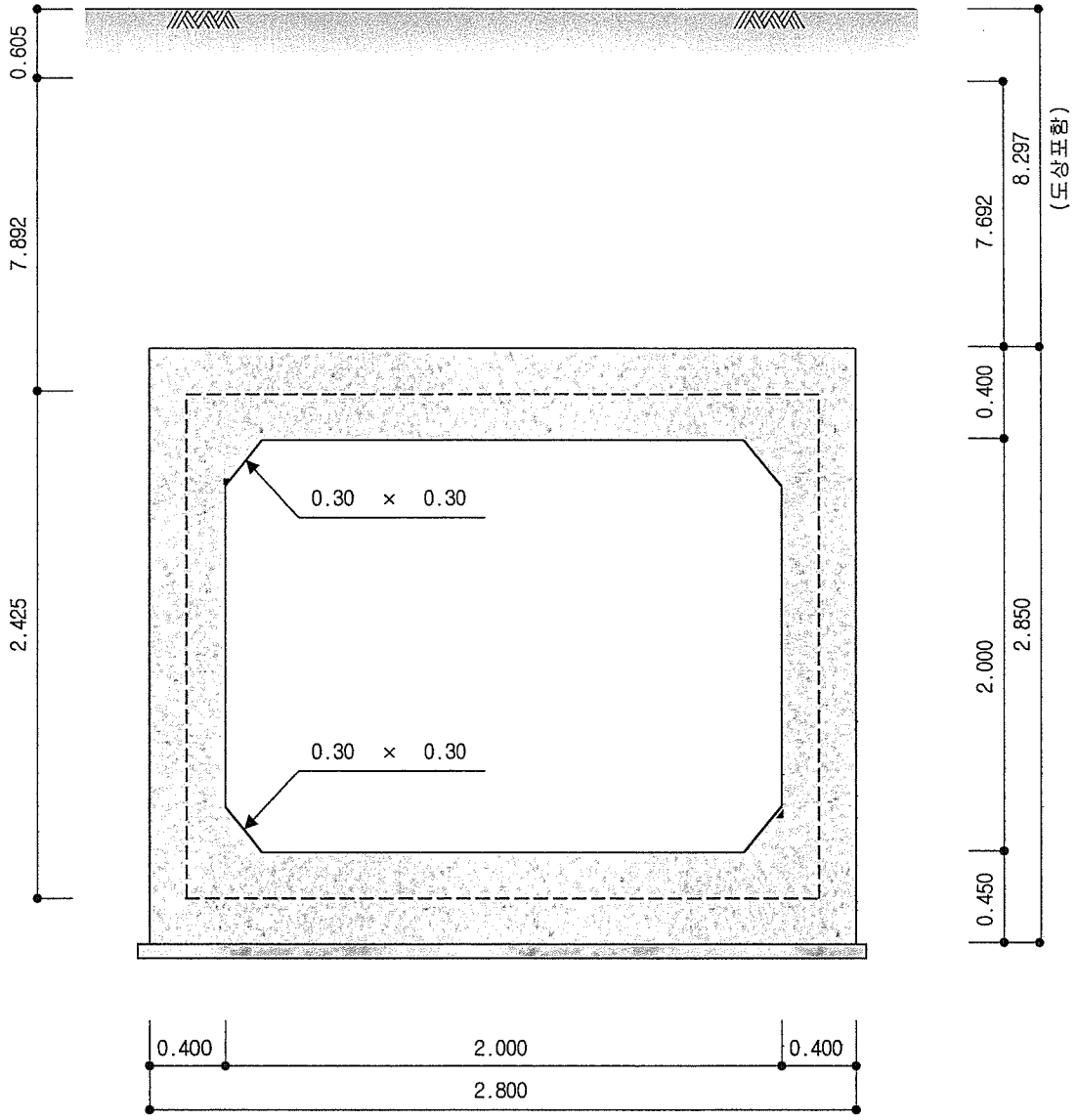
9) 설계방법

- 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

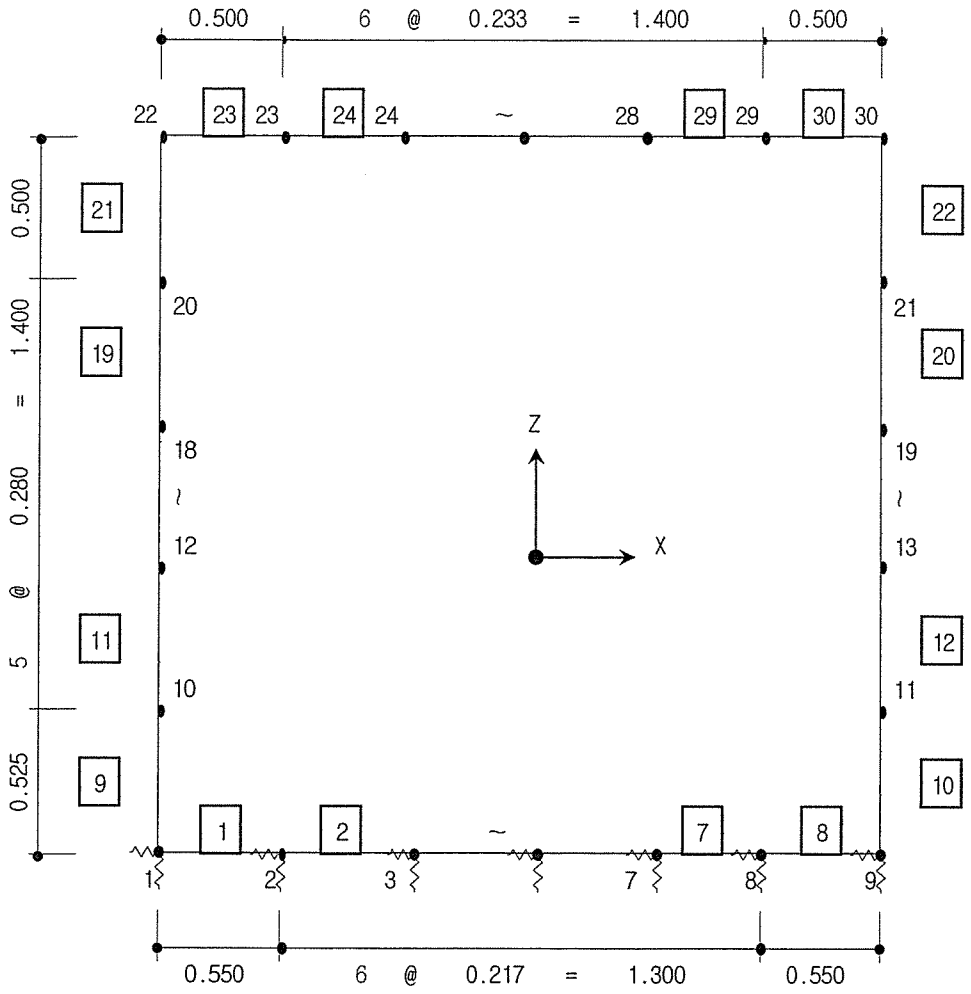
2. 단면 가정



※ 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	5592		3 ~ 7	2551	
2 . 8	4513				

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)

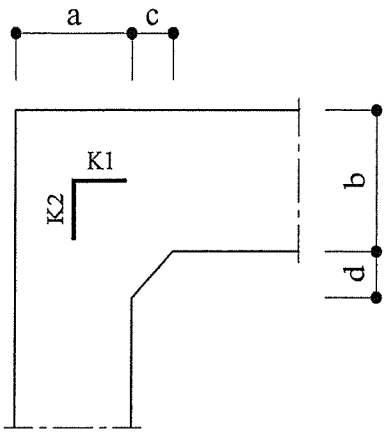
CASE 1 : 부재단부가 다른 부재와 접합할 때는 부재단에서 부재두께의 1/4 안쪽점에서 절점까지

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

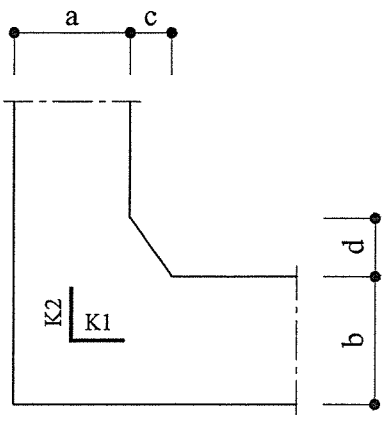
(2) 강역설정

- 절점 22 , 30



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

- 절점 1 , 9

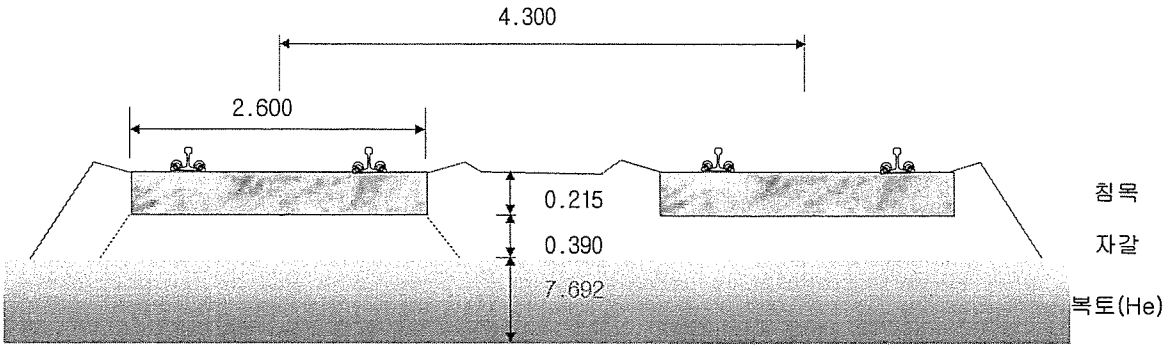


a =	400	mm	c =	300	mm
b =	450	mm	d =	300	mm
K1 =	275	mm	K2 =	325	mm

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 + 7.692) = 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 × 7.692 = 153.840 kN/㎡

∴ $q_1 + q_2 + q_3$ = 1.096 + 14.944 + 153.840 = 169.880 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 = 8.297 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 × 7.892) = 74.073 kN/㎡

q_2 = 74.073 + 0.426 ×(20.000 × 0.500) = 78.333 kN/㎡

q_3 = 78.333 + 0.426 ×(20.000 × 0.280) = 80.719 kN/㎡

q_4 = 80.719 + 0.426 ×(20.000 × 0.280) = 83.105 kN/㎡

q_5 = 83.105 + 0.426 ×(20.000 × 0.280) = 85.491 kN/㎡

q_6 = 85.491 + 0.426 ×(20.000 × 0.280) = 87.877 kN/㎡

q_7 = 87.877 + 0.426 ×(20.000 × 0.280) = 90.263 kN/㎡

q_8 = 90.263 + 0.426 ×(20.000 × 0.525) = 94.736 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 8.297 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 = √ (2.400 × 2.400) = 2.400

Kv = Kvo (Bv/0.3)^-3/4 = 11773 kN/㎡

11773 × (0.400 / 2 + 0.550 / 2) = 5592 kN/㎡ - 저판 단부 스프링

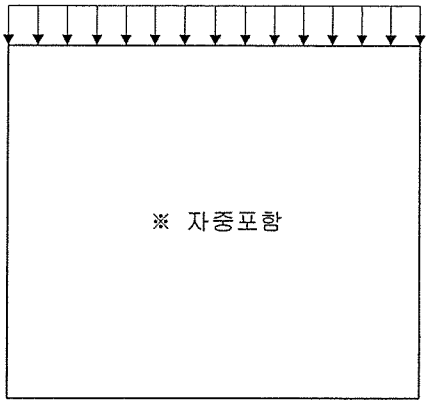
11773 × (0.550 / 2 + 0.217 / 2) = 4513 kN/㎡ - 저판 전단검토위치

11773 × (0.217 / 2 + 0.217 / 2) = 2551 kN/㎡ - 저판 중앙부 스프링

5. 하중재하도

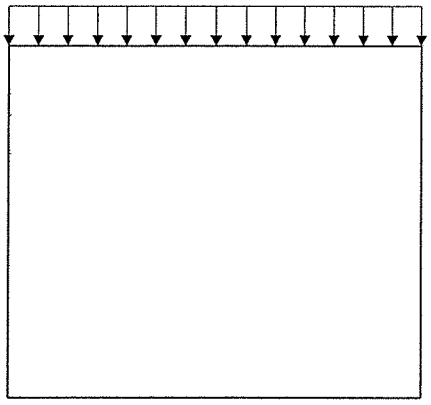
① 고정하중

W_D = 169.880 kN/㎡



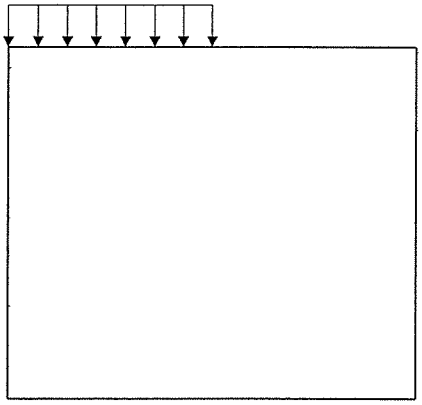
② 활하중(만재하)

W_L = 21.019 kN/㎡



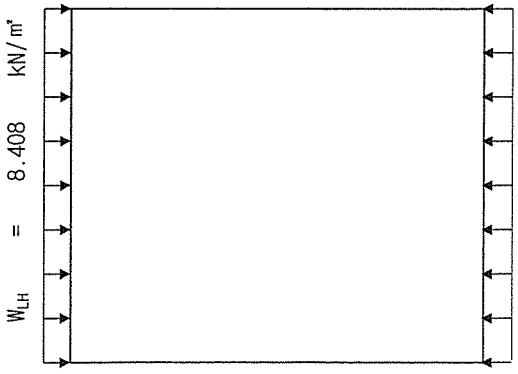
③ 활하중(편재하)

W_L = 21.019 kN/㎡



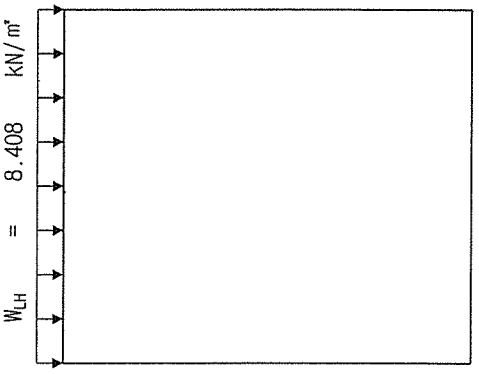
④ 활하중에 의한 측압(만재하)

W_{LH} = 8.408 kN/㎡

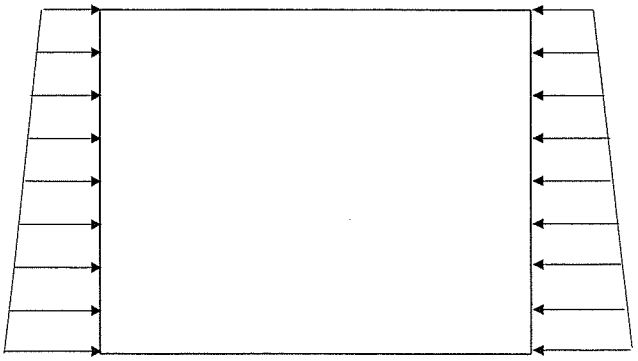


⑤ 활하중에 의한 측압(편재하)

W_{LH} = 8.408 kN/㎡



⑥ 수평토압(지하수 없는 경우)

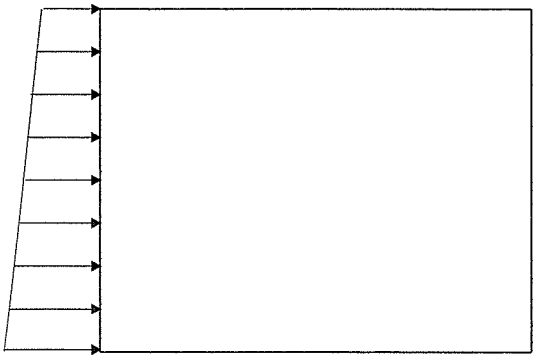


q_1 = 74.073 kN/㎡

q_7 = 94.736 kN/㎡

⑦ 편측토압(지하수 없는 경우)

q_1 = 1.704 kN/㎡



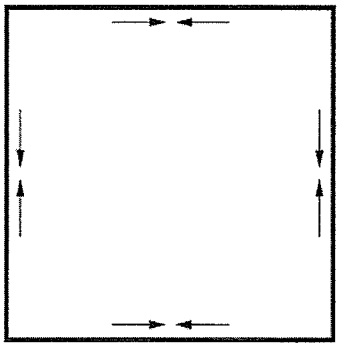
q_7 = 22.367 kN/㎡

⑧ 온도하중

△T = 0 °

⑨ 건조수축

△T = -15 °



⑩ 장대레일 종하중

Hr = 0.000 kN/㎡

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]-j                                                      ; 9th line(STYPE=PSC)
;       [SIZE-B]-j                                                      ; 10th line(STYPE=PSC)
;       [SIZE-C]-j                                                      ; 11th line(STYPE=PSC)
;       [SIZE-D]-j                                                      ; 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_j, Hw_j, tw_j, B_j, Bf1_j, tf1_j, B2_j, Bf2_j, tf2_j         ; 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_j ; 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]-j                                                      ; 8th line(STYPE=CMP-CI/CT)
;       [SIZE-B]-j                                                      ; 9th line(STYPE=CMP-CI/CT)
;       [SIZE-C]-j                                                      ; 10th line(STYPE=CMP-CI/CT)
;       [SIZE-D]-j                                                      ; 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, 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. 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. 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. 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 [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. 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. -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. -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 [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.
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    16. -15.
    17. -15.
    18. -15.
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    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
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 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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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

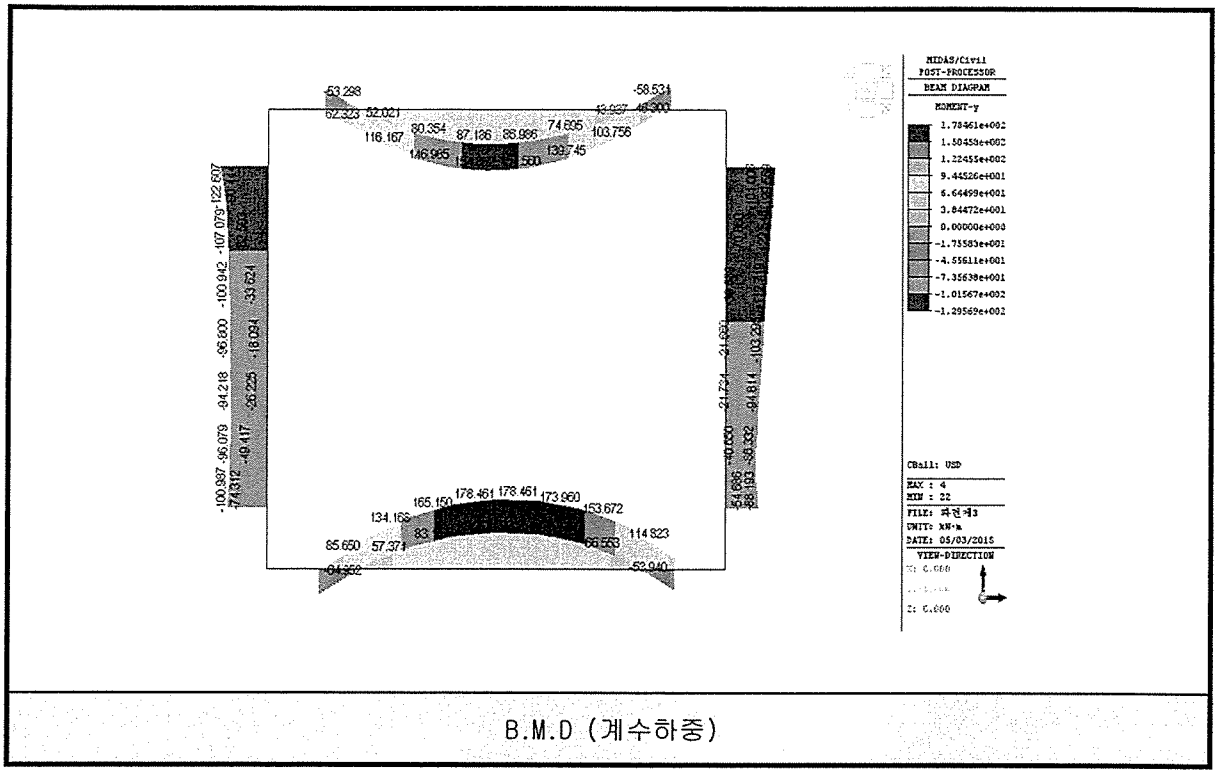
9. 단면력 요약

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

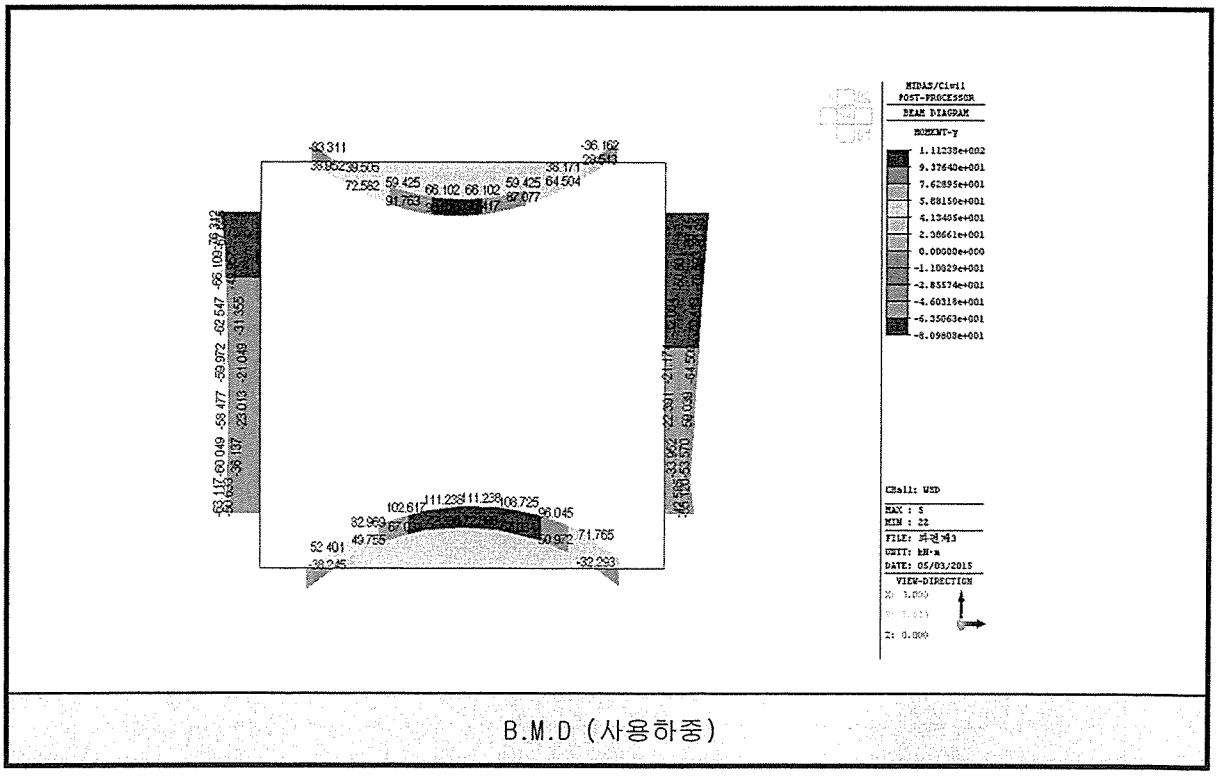
10. 단면력도

(1) 극한하중 모멘트도



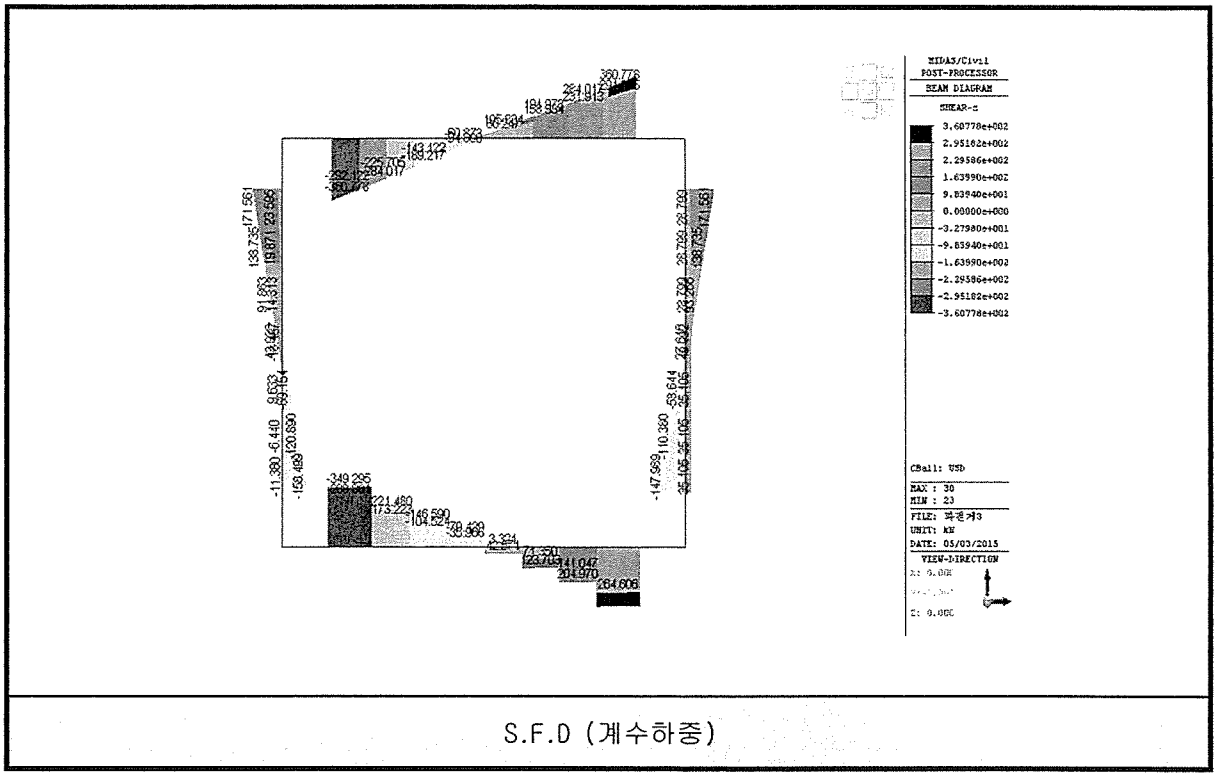
B.M.D (계수하중)

(2) 사용하중 모멘트도



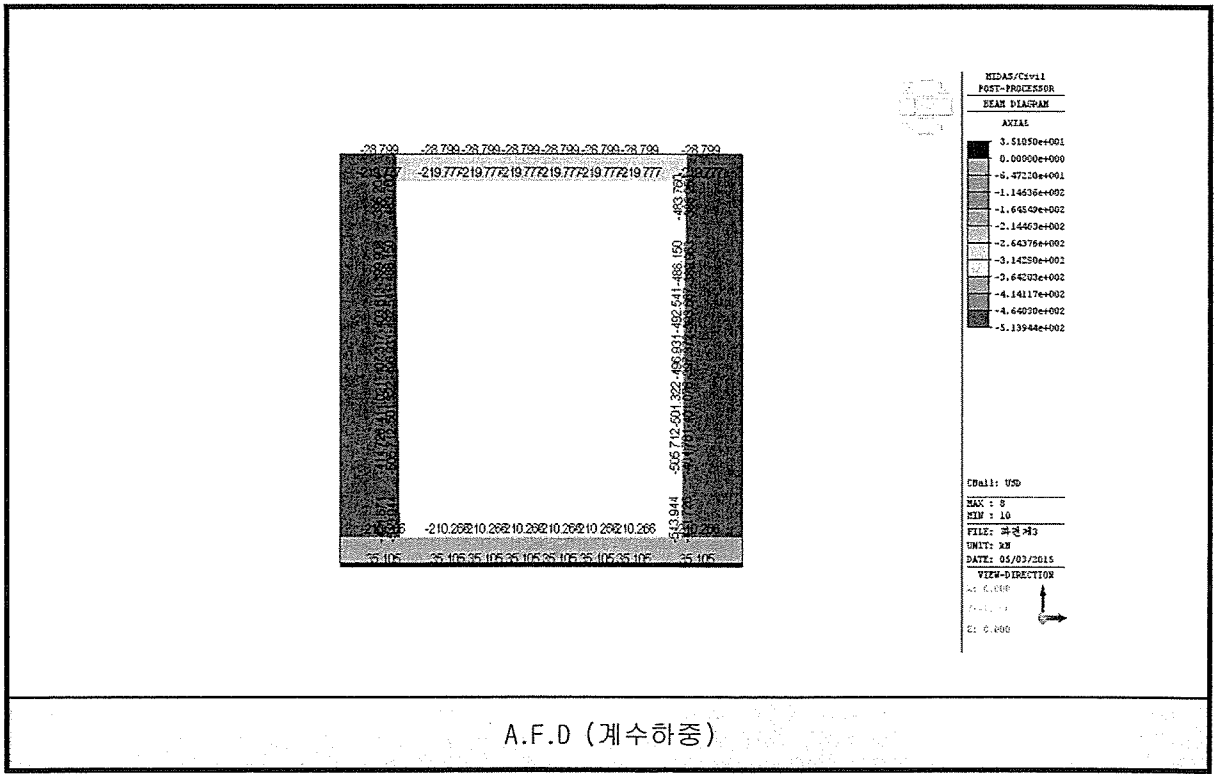
B.M.D (사용하중)

(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 / 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 = 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 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)×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 ㎜

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 / 216.054) - 2.5 × 92 = 134.493 ㎜

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

Sa는 작은 값인 134.493 ㎜ 를 적용

S = 125.00 ≤ Sa (= 134.493 ㎜) ----- ∴ 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 ㎟)

ⓑ 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 / 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 ㎟)

ⓑ 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 ㎟)

ⓑ 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 cm^2 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 ㎜

사용철근량 = 1588.800 mm^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.

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 ㎟)

- 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 ㎟)

- 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

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 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

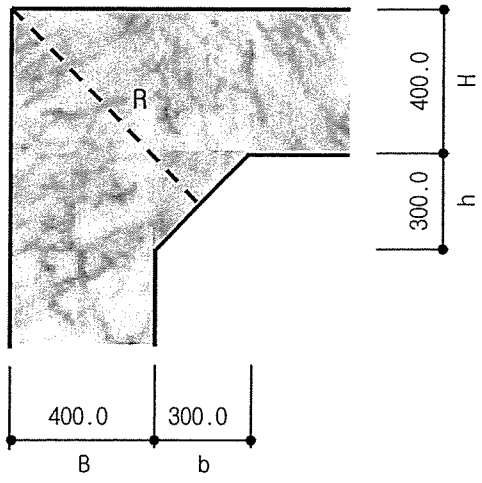
300 x (210 / fs) = 300 × (210 / 106.782) = 589.985 mm

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

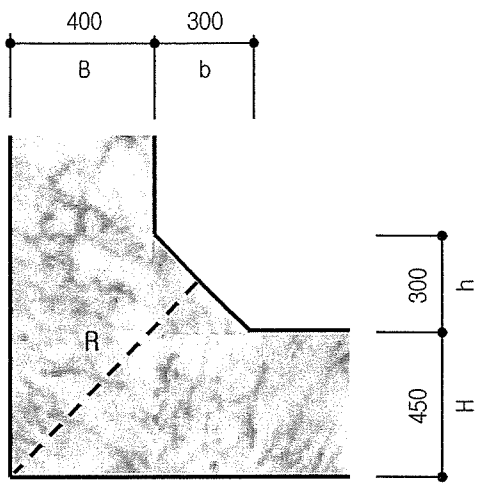
외측인장에 대한 보강 필요철근량(Asf)

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

▶ 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 × (2.400 + 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

$f_f = 165 - 0.33 fmin$

= 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

= 169.88 kN/m²

3) 활하중

= 21.019 kN/m²

4) 최대 지반 반력

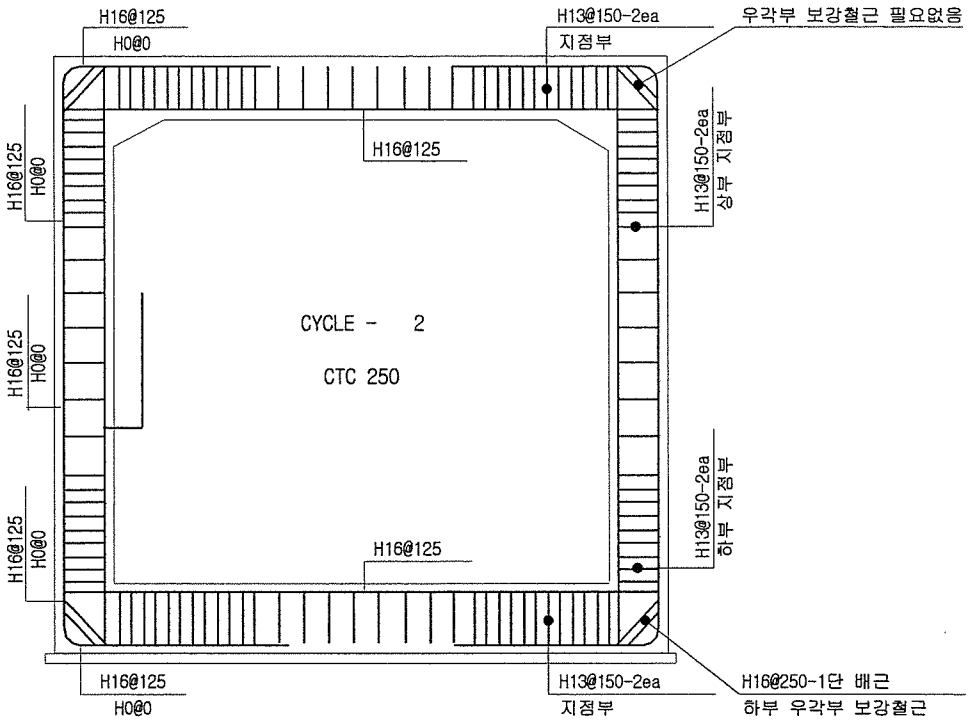
Qmax = 36.400 + 169.880 + 21.019

= 227.299 kN/m²

5) 지지력 검토

Qmax = 227.299 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

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1.2 설계방법

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■ 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

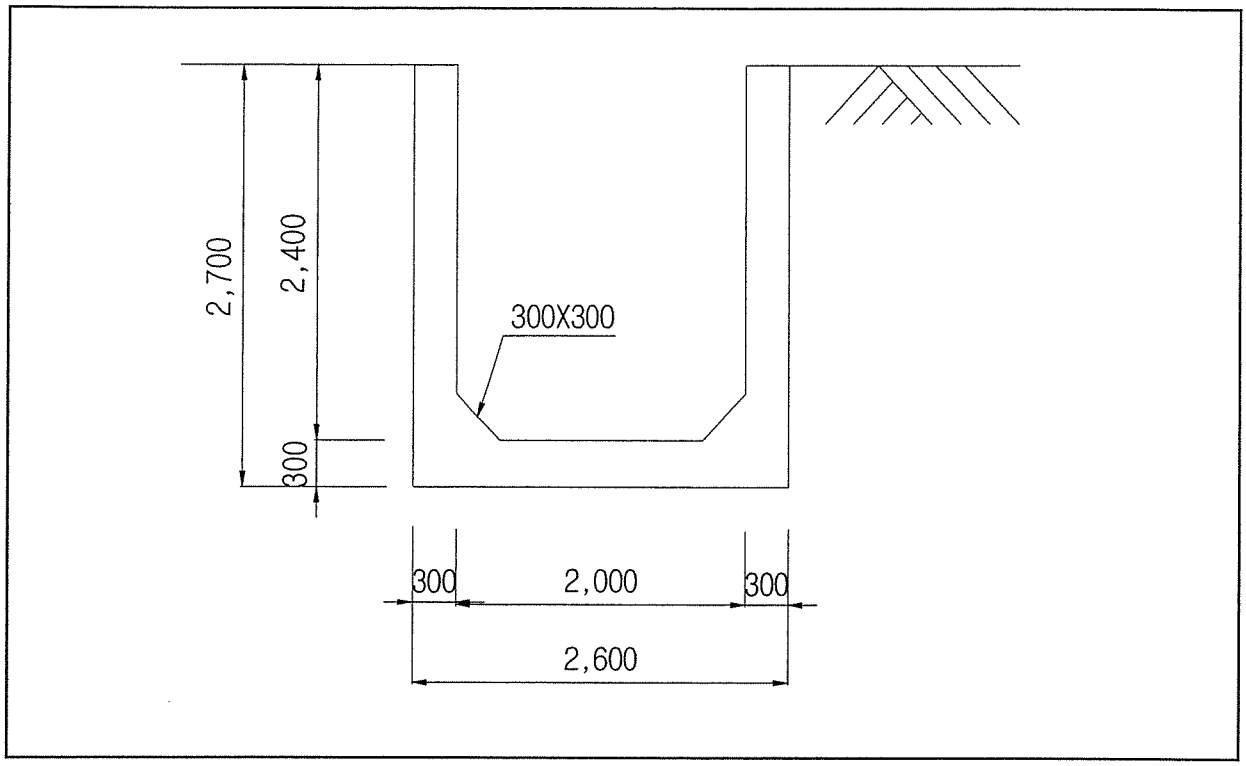
1.5 참고문헌

(1) 콘크리트 구조설계기준 (한국콘크리트 학회, 2012)

(2) 도로교 설계기준 (건설교통부, 2010)

(3) 철도설계기준 (노반편) (건설교통부 2013)

2. 단면가정

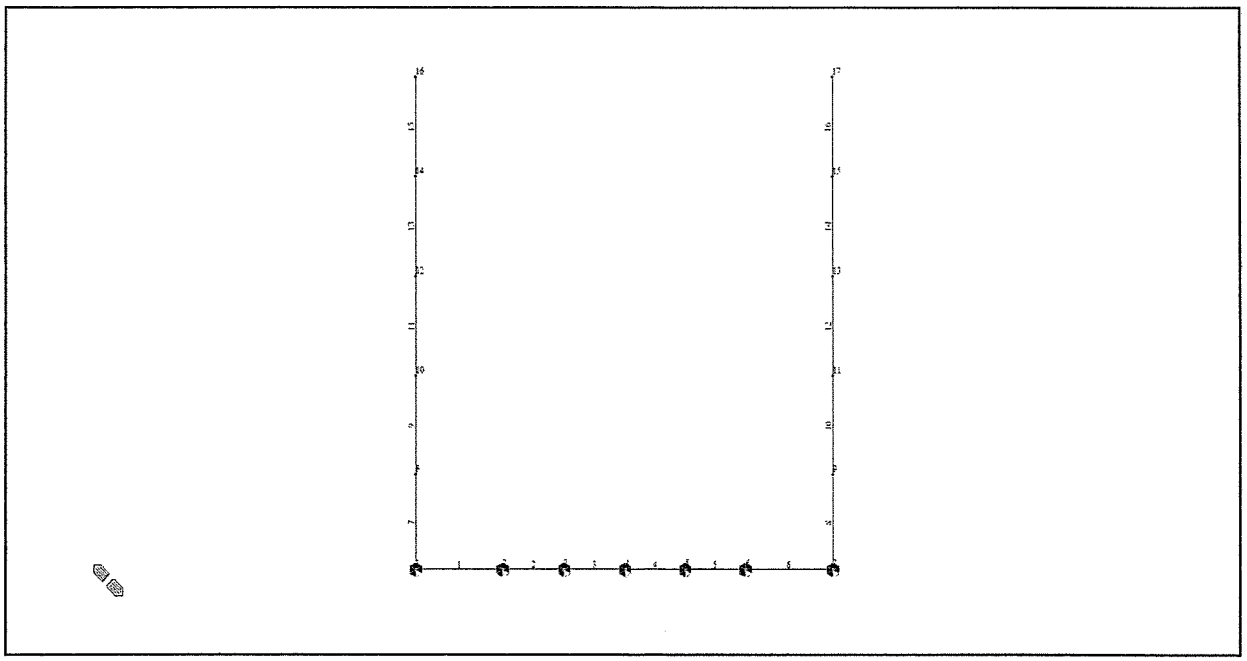


* N=15, Φ=35° 적용 함.

* 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.

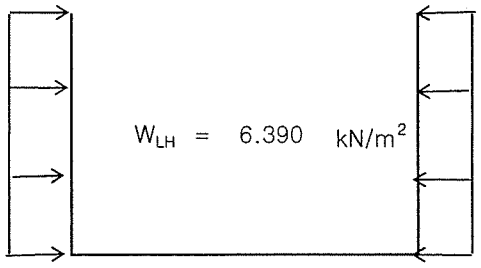
4.6 건조수축 ---------- LC 8

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

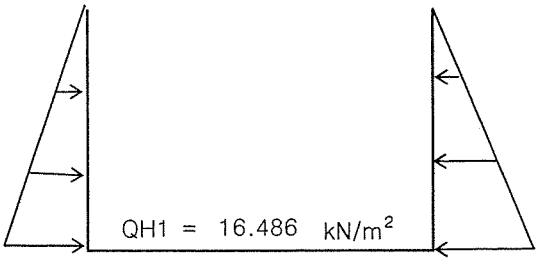
4.7 하중재하도

(1) LC 1 : 프로그램내 자동재하

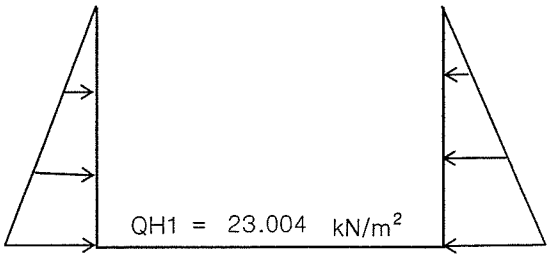
(2) LC 2



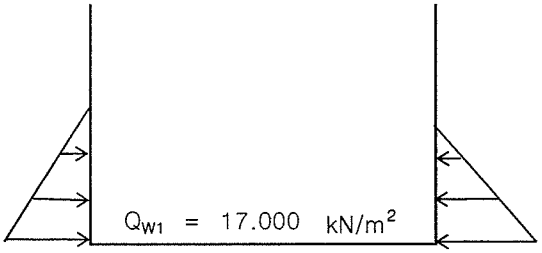
(3) LC 3



(4) LC 4



(5) LC 5



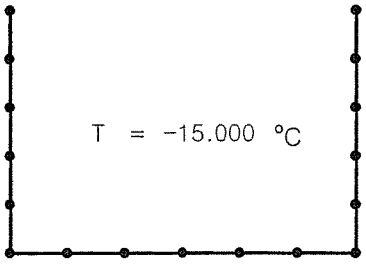
(6) LC 6

- 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	

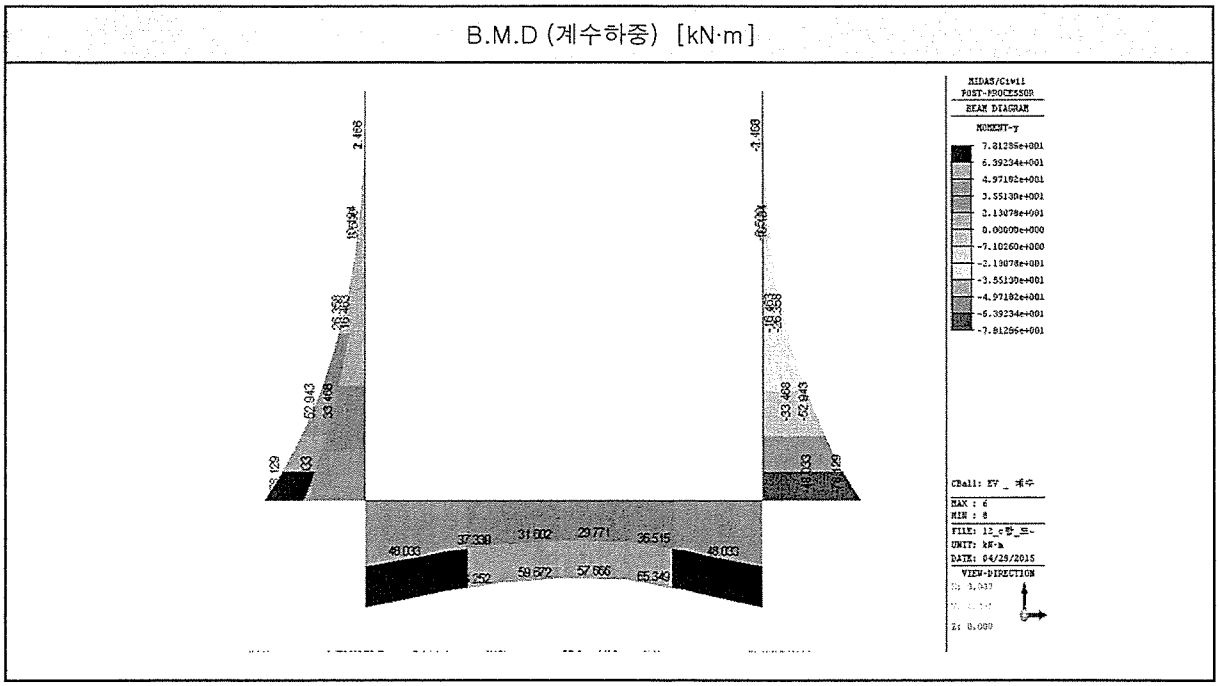
5.2 사용하중

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					

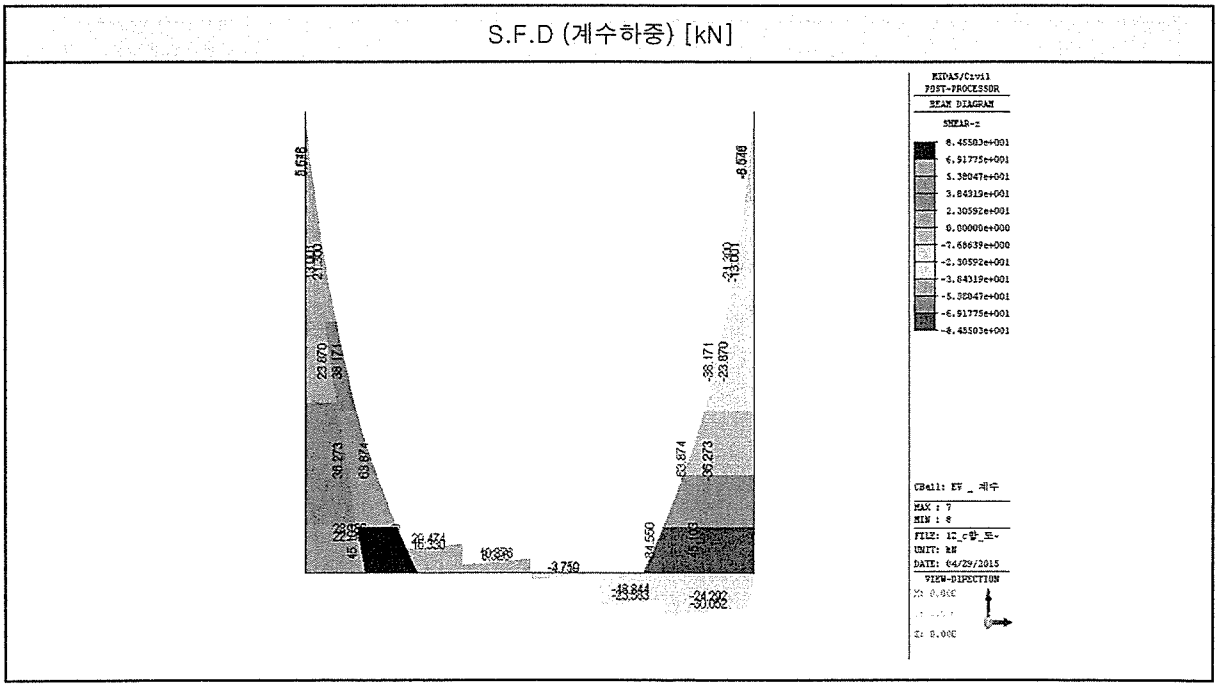
6. 구조해석 결과

6.1 부재력도 (ENVELOPE)

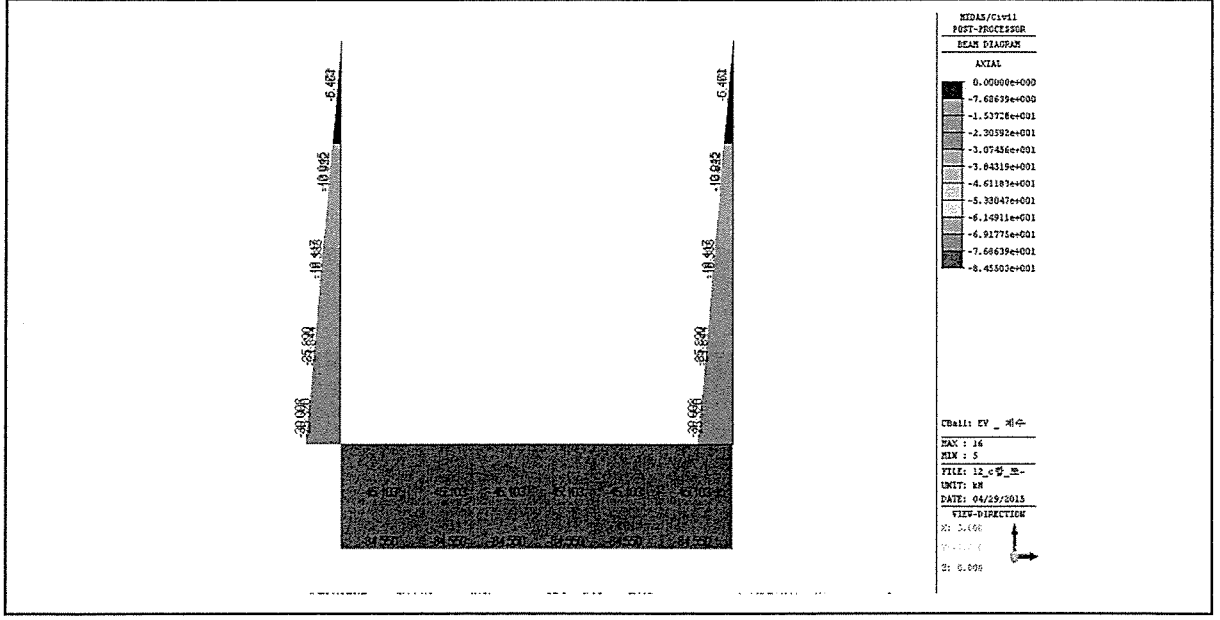
B.M.D (계수하중) [kN·m]



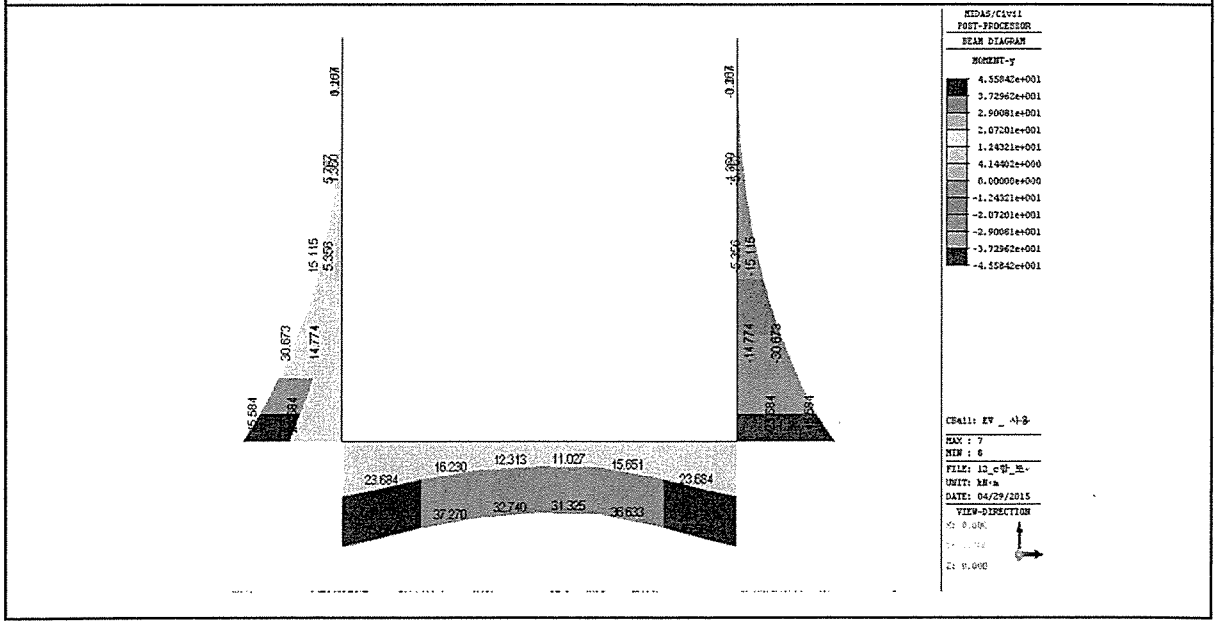
S.F.D (계수하중) [kN]



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 × 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 + 0.031 ^{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]

$= - 7 \times 0.00662 + \sqrt{[\, 2 \times 0.046 + 0.046^2 \,]}$ = 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 $\quad C = T$; 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 $C = T$; 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 = 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 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 ⇒ $A_{s2,\,min}$ = 1,027 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

7.3.2 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

$k = - np + \sqrt{[2 np + (np)^2]}$ [∵ 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

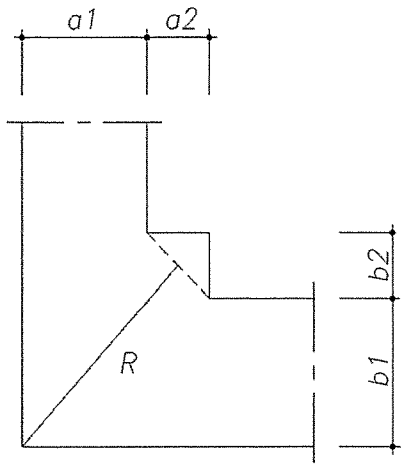
$s_2 = 300 (210 / fs)$ = 517 mm

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

$$As = \frac{2 \times Mo}{R \times f_{sa}} - As'$$

$$= \frac{2 \times 45.584 \times 10^6}{636 \times 180} - 662$$

$$= 796 \ mm^2 - 662 \ mm^2$$

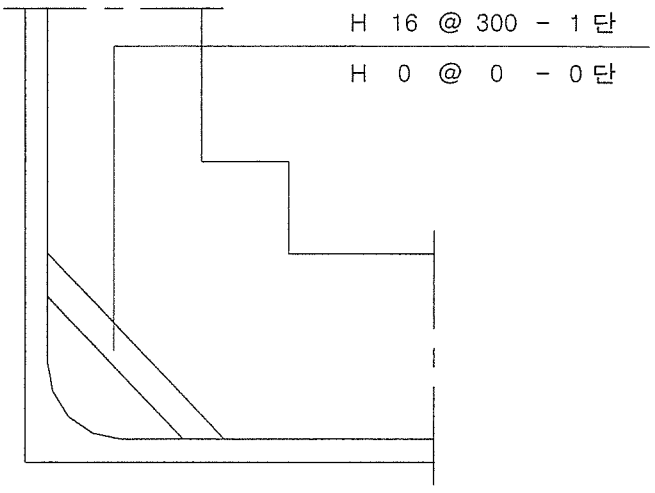
$$= 134 \ mm^2$$

- 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)

$Qu = A \cdot [\ c \cdot Nc + q \cdot Nq + 0.5 \cdot r1 \cdot B \cdot Nr\ ]$

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) 순호제2

U-Type 개거 1.0x1.8

구조계산서

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■ 해석결과 요약

* 기초 검토

구분	q_{max}(kN/m^2)	Qu(kN)	qa(kN/m^2)	비 고
직접기초	17.019	1081.440	225.300	∴ 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	0.150	37.311	74.006	H 13 @ 150	O.K	1.983	O.K	O.K
	중앙부	1.000	0.300	0.100		32.713	58.802	H 13 @ 150	O.K	1.797	O.K	O.K
좌측 벽체	단부	1.000	0.300	0.100	0.150	37.311	74.006	H 13 @ 150	O.K	1.983	O.K	O.K
	중앙부	1.000	0.300	0.100		11.646	58.802	H 13 @ 150	O.K	5.049	O.K	O.K
우측 벽체	단부	1.000	0.300	0.100	0.150	37.311	74.006	H 13 @ 150	O.K	1.983	O.K	O.K
	중앙부	1.000	0.300	0.100		11.646	58.802	H 13 @ 150	O.K	5.049	O.K	O.K

* 전단검토

구분		ΦVc	Vu	판정	전단철근			전단검토	
					사용철근	다리수	간격	판정	S.F
하부슬래브	단부	155.188	14.686	전단철근 불필요	H 0	× 0	@ 0	O.K	-
	중앙부	-	-	-	H -	× -	@ -	-	-
좌측 벽체	단부	155.188	50.383	전단철근 불필요	H 0	× 0	@ 0	O.K	-
	중앙부	-	-	-	H -	× -	@ -	-	-
우측 벽체	단부	155.188	50.383	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

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

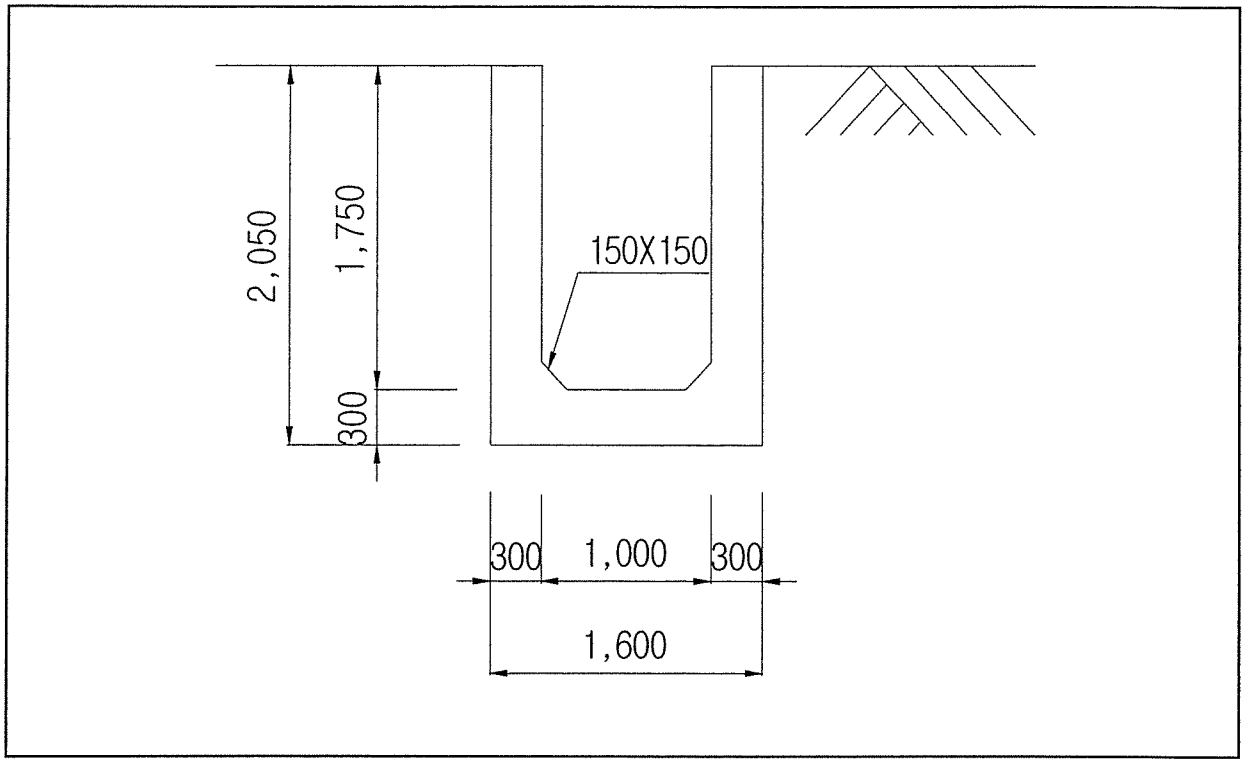
1.5 참고문헌

(1) 콘크리트 구조설계기준 (한국콘크리트 학회, 2012)

(2) 도로교 설계기준 (건설교통부, 2010)

(3) 철도설계기준 (노반편) (건설교통부 2013)

2. 단면가정

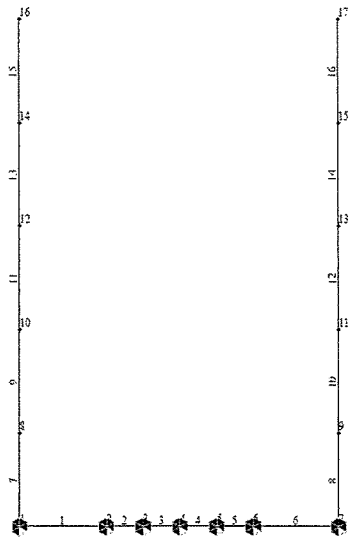


* N=15, Φ=35° 적용 함.

* 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 × 11 = 30,800.000 kN/m^2

α = 1

Kvo = 1 × 1 / 0.3 × 30800 = 102666.667 kN/m^3

Bv = √ (1.600 × 1.000) = 1.265 m

∴ Kv = 102666.667 × (1.3 / 0.3) ^ (-3/4) = 34891.963 kN/m^3

절점번호	지반반력계수					비고
1,7	34891.963	×	0.3250	=	11339.888 kN/m^2	
2,6	34891.963	×	0.2500	=	8722.991 kN/m^2	
3,4,5	34891.963	×	0.1500	=	5233.795 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

$$Q_{N1L} = 1.000 \times 20.000 \times 0.426 = 8.520 \ kN/m^2$$

$$Q_{N1R} = 8.520 + 1.050 \times 11.000 \times 0.426 = 13.440 \ kN/m^2$$

(2) 지하수위 무 ---------- LC 4

$$Q_{N1L} = 2.050 \times 20.000 \times 0.426 = 17.466 \ kN/m^2$$

4.4 수압

(1) 측벽 수압 ---------- LC 5

1) 벽체

$$Q_{W1L} = 10.000 \times 1.050 = 10.500 \ kN/m^2$$

4.5 온도하중 ---------- LC 6, LC 7

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

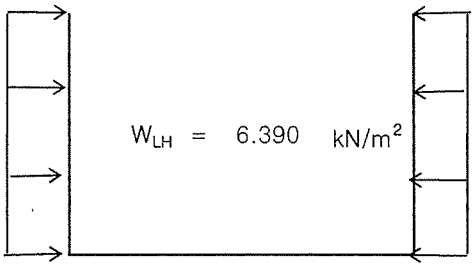
4.6 건조수축 ---------- LC 8

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

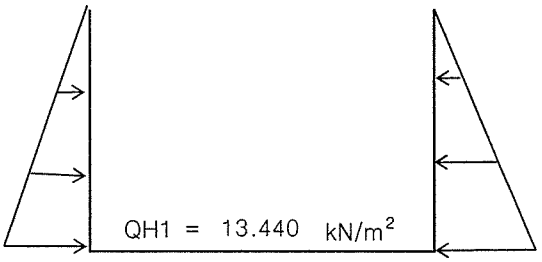
4.7 하중재하도

(1) LC 1 : 프로그램내 자동재하

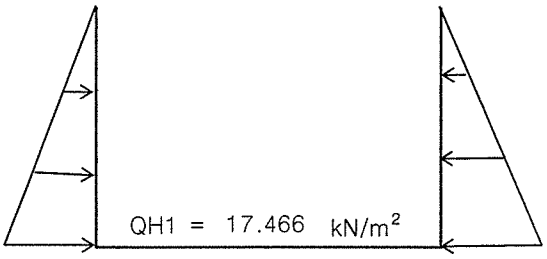
(2) LC 2



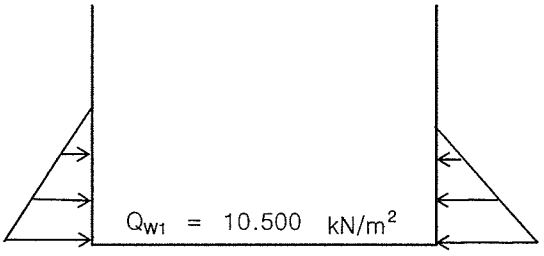
(3) LC 3



(4) LC 4



(5) LC 5



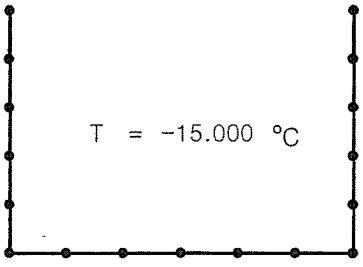
(6) LC 6

- 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	

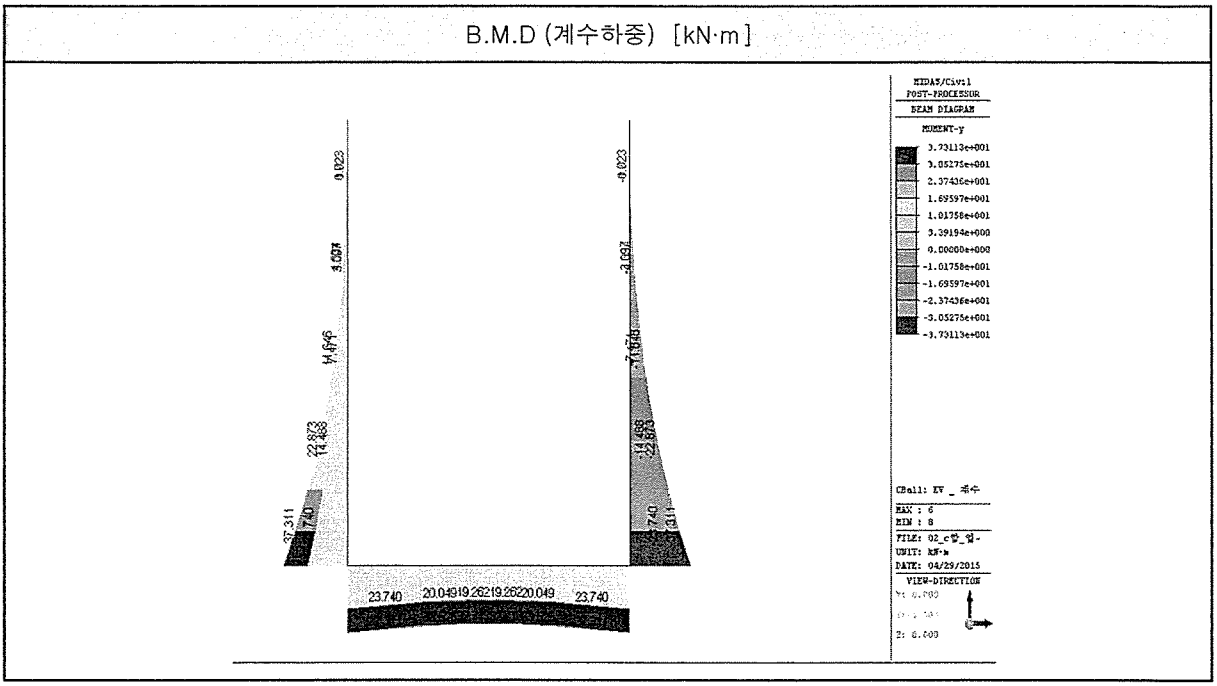
5.2 사용하중

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					

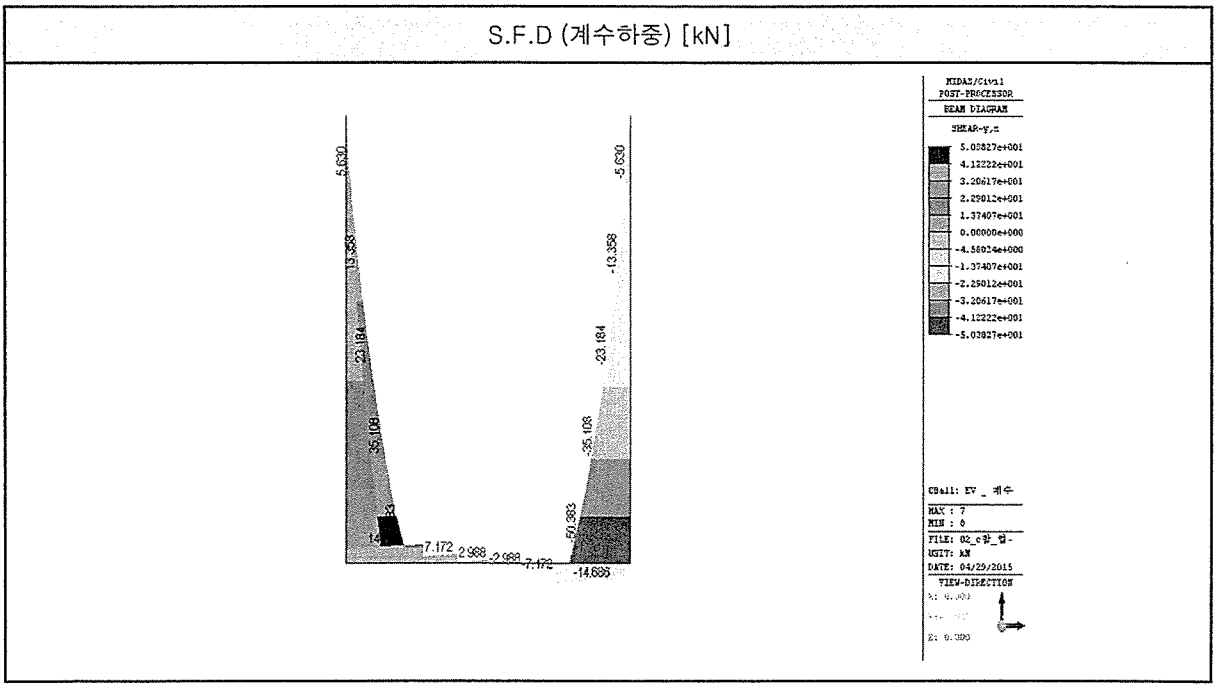
6. 구조해석 결과

6.1 부재력도 (ENVELOPE)

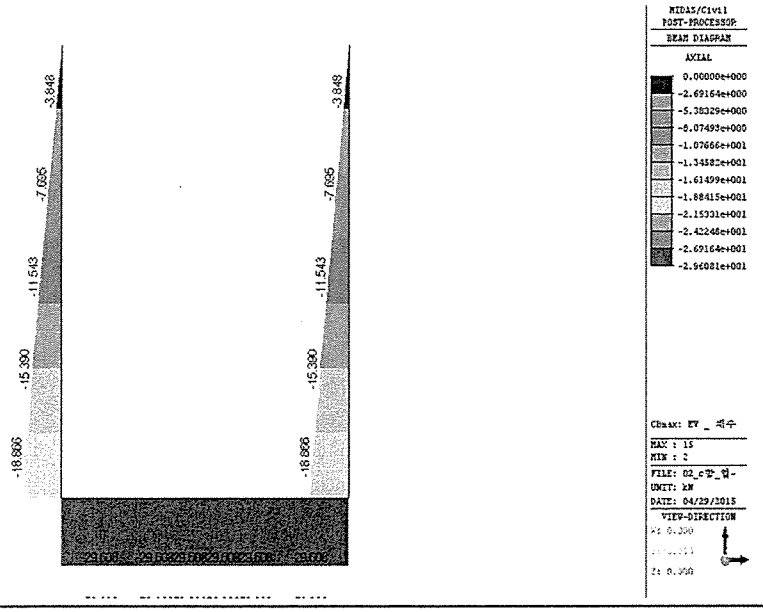
B.M.D (계수하중) [kN·m]



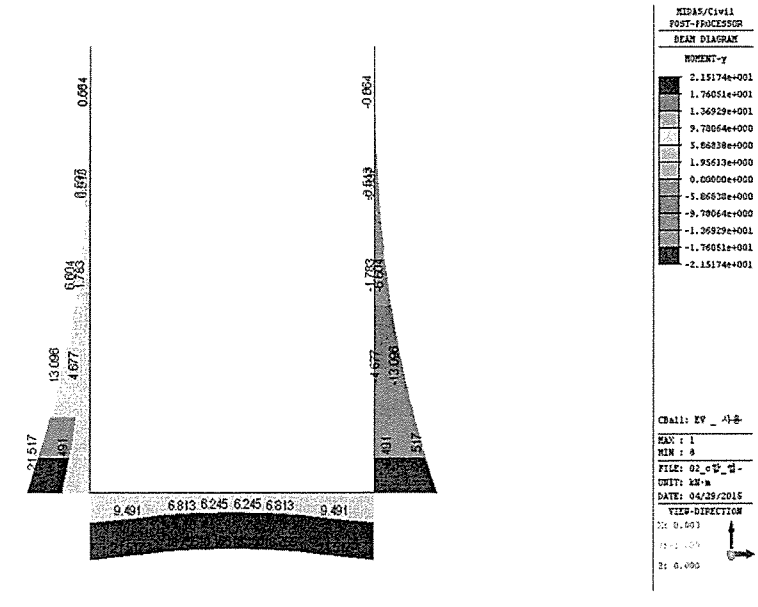
S.F.D (계수하중) [kN]



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	350	37.311	14.686	21.517	
	중앙부	1,000	300	32.713		18.166	
좌측벽체	단 부	1,000	350	37.311	50.383	21.517	
	중앙부	1,000	300	11.646		6.604	
우측벽체	단 부	1,000	350	37.311	50.383	21.517	
	중앙부	1,000	300	11.646		6.604	

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	=	37.311 kN.m	Vu	=	14.686 kN	Mo	=	21.517 kN.m	d (휨)	=	250 mm
B	=	1000 mm	H	=	350 mm	헌치	=	150 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	250 mm

Use A_s =	1단	1CYCL H	13 @	150	,	2CYCLI H	0 @	0	=	845 mm^2
	2단	1CYCL H	@		,	2CYCLI H	0 @	0	=	- mm^2
			TOTAL	=	845 mm^2	[p =	0.00338	]		

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 337,867 N

$C = 0.85 f_{ck} a b$ = 25,500 a $\quad C = T$; a = 13 mm

▶ $c = a / \beta_1$ = 13 / 0.84 = 16 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (250 - 16) / 16

= 0.04432 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.04432 - 0.002)$$

= 4.177 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,\,min}$ = 875 mm^2 $\quad A_{s,\,min}$ = 875 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,\,min}$ = 856 mm^2

$A_{s,\,Req}$ = 420 mm^2 , 4/3 $A_{s,\,Req}$ = 560 mm^2

MIN ($A_{s,min}$, 4/3 $A_{s,req}$) = 560 mm^2 < Use As = 845 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 337,867 × (250 - 13 / 2) / 10 E+6

= 74.006 kN.m > Mu = 37.311 kN.m ∴ O.K [S.F = 1.983]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 14.686 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 × 0.00338 + √ [2 × 0.024 + 0.024 ²] = 0.195

j = 1 - k / 3 = 1 - 0.195 / 3 = 0.935

fs = M / [As·d·j] = 108.979 MPa

◈ 주철근 간격

Cc = d_t' - d_b/2 = 100 - 12.7 / 2 = 94 mm (여기서, d_b = 13)

s_1 = 375 (210 / fs) - 2.5 Cc = 488 mm > s = 150 mm ∴ O.K

s_2 = 300 (210 / fs) = 578 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	=	32.713 kN.m	Vu	=	0.000 kN	Mo	=	18.166 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 13 @ 150 , 2CYCLI H 0 @ 0 = 845 mm^2

2단 1CYCL H @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 845 mm^2 [p = 0.00422]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 337,867 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 13 mm

▶ $c = a / \beta_1$ = 13 / 0.84 = 16 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 16) / 16

= 0.03486 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.03486 - 0.002)$$

= 3.388 > 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

$A_{s.\,Req}$ = 463 mm^2 , $4/3\, A_{s,\,Req}$ = 617 mm^2

MIN ($A_{s,min}$, $4/3\, A_{s,req}$) = 617 mm^2 < Use As = 845 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a/2)$ = 0.900 × 337,867 × (200 - 13 / 2) / 10 E+6

= 58.802 kN.m > Mu = 32.713 kN.m ∴ O.K [S.F = 1.797]

(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]

$= -7 \times 0.00422 + \sqrt{[\,2 \times 0.03 + 0.03^2\,]}$ = 0.216

$j = 1 - k / 3 = 1 - 0.216 / 3$ = 0.928

$fs = M / [As \cdot d \cdot j]$ = 115.877 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 12.7 / 2 = 94 mm (여기서, d_b = 13)

$s_1 = 375 (210 / fs) - 2.5\, Cc$ = 445 mm

$s_2 = 300 (210 / fs)$ = 544 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 =	37.311 kN.m	Vu =	50.383 kN	Mo =	21.517 kN.m	d (휨) =	250 mm
B =	1000 mm	H =	350 mm	헌치 =	150 mm	d (전단) =	200 mm
ϕ_f =	0.900	ϕ_v =	0.85	주철근	1 단 배치	d_t =	250 mm

Use A_s = 1단 1CYCLE H 13 @ 150 , 2CYCLE H 0 @ 0 = 845 mm^2

2단 1CYCLE H 0 @ , 2CYCLE H 0 @ 0 = - mm^2

TOTAL = 845 mm^2 [p = 0.00338]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 337,867 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 13 mm

▶ $c = a / \beta_1$ = 13 / 0.84 = 16 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (250 - 16) / 16

= 0.04432 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.04432 - 0.002)$$

= 4.177 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1.min}$ = 875 mm^2

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2.min}$ = 856 mm^2

$A_{s,min}$ = 875 mm^2

$A_{s,Req}$ = 420 mm^2 , 4/3 $A_{s,Req}$ = 560 mm^2

MIN ($A_{s.min}$, 4/3 $A_{s.req}$) = 560 mm^2 < Use As = 845 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a / 2)$ = 0.900 × 337,867 × (250 - 13 / 2) / 10 E+6

= 74.006 kN.m > Mu = 37.311 kN.m ∴ O.K [S.F = 1.983]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 50.383 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]

$= -7 \times 0.00338 + \sqrt{[2 \times 0.024 + 0.0237^2]}$ = 0.195

j = 1 - k / 3 = 1 - 0.195 / 3 = 0.935

fs = M / [As·d·j] = 108.979 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 12.7 / 2 = 94 mm (여기서, d_b = 13)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 488 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 578 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	=	11.646 kN.m	Vu	=	0.000 kN	Mo	=	6.604 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	13 @	150	,	2CYCLI H	0 @	0	=	845 mm^2
	2단	1CYCL H	@		,	2CYCLI H	0 @	0	=	- mm^2
			TOTAL =		845 mm^2		[p =	0.00422]		

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 337,867 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 13 mm

▶ $c = a / \beta_1$ = 13 / 0.84 = 16 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 16) / 16

= 0.03486 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.03486 - 0.002)$$

= 3.388 > 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

$A_{s,Req}$ = 163 mm^2 , $4/3\ A_{s,Req}$ = 217 mm^2

MIN ($A_{s,min}$, $4/3\ A_{s,req}$) = 217 mm^2 < Use As = 845 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a/2)$ = 0.900 × 337,867 × (200 - 13 / 2) / 10 E+6

= 58.802 kN.m > Mu = 11.646 kN.m ∴ O.K [S.F = 5.049]

(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]

$= -7 \times 0.00422 + \sqrt{[2 \times 0.03 + 0.0296^2]}$ = 0.216

$j = 1 - k/3 = 1 - 0.216 / 3$ = 0.928

$fs = M / [As \cdot d \cdot j]$ = 42.125 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 12.7 / 2 = 94 mm (여기서, d_b = 13)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 1635 mm

$s_2 = 300 (210 / fs)$ = 1496 mm > s = 150 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	=	37.311 kN.m	Vu	=	50.383 kN	Mo	=	21.517 kN.m	d (휨)	=	250 mm
B	=	1000 mm	H	=	350 mm	헌치	=	150 mm	d (전단)	=	200 mm
ϕ_f	=	0.900	ϕ_v	=	0.85	주철근	1	단 배치	d_t	=	250 mm

Use A_s = 1단 1CYCl H 13 @ 150 , 2CYCLI H 0 @ 0 = 845 mm^2

2단 1CYCl H @ , 2CYCLI H 0 @ 0 = - mm^2

TOTAL = 845 mm^2 [p = 0.00338]

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 337,867 N

$C = 0.85 f_{ck} a b$ = 25,500 a $C = T$; a = 13 mm

▶ $c = a / \beta_1$ = 13 / 0.84 = 16 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (250 - 16) / 16

= 0.04432 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)} (\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)} (0.04432 - 0.002)$$

= 4.177 > 0.9 ⇒ ϕ_f = 0.900

▶ 최소 철근비 검토

$P_{min1} = 1.4 / f_y$ = 0.00350 ⇒ $A_{s1,min}$ = 875 mm^2]

$P_{min2} = 0.25 \sqrt{f_{ck}} / f_y$ = 0.00342 ⇒ $A_{s2,min}$ = 856 mm^2] $A_{s,min}$ = 875 mm^2

$A_{s,Req}$ = 420 mm^2 , $4/3 A_{s,Req}$ = 560 mm^2

MIN ($A_{s,min}$, $4/3 A_{s,req}$) = 560 mm^2 < Use As = 845 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a/2)$ = 0.900 × 337,867 × (250 - 13 / 2) / 10 E+6

= 74.006 kN.m > Mu = 37.311 kN.m ∴ O.K [S.F = 1.983]

(2) 전단 검토

▶ $\phi_v Vc = \phi_v 1/6 \sqrt{f_{ck}} B d$ = 155.188 kN > Vu = 50.383 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 × 0.00338 + √ [2 × 0.024 + 0.0237^2] = 0.195

$j = 1 - k / 3 = 1 - 0.195 / 3$ = 0.935

$fs = M / [As \cdot d \cdot j]$ = 108.979 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 12.7 / 2 = 94 mm (여기서, d_b = 13)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 488 mm > s = 150 mm ∴ O.K

$s_2 = 300 (210 / fs)$ = 578 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	=	11.646 kN.m	Vu	=	0.000 kN	Mo	=	6.604 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	13 @	150	,	2CYCLE H	0 @	0	=	845 mm^2
	2단	1CYCLE H	@		,	2CYCLE H	0 @	0	=	- mm^2
			TOTAL	=	845 mm^2		[p =	0.00422	]	

▶ 주철근이 항복한다고 가정하면, $T = A_s f_y$ = 337,867 N

$C = 0.85 f_{ck} a b$ = 25,500 a, $C = T$; a = 13 mm

▶ $c = a / \beta_1$ = 13 / 0.84 = 16 mm

$\varepsilon_t = 0.003 (d_t - c) / c$ = 0.003 × (200 - 16) / 16

= 0.03486 > 0.002 ⇒ 가정만족 (주철근 항복)

> 0.005 ⇒ 인장지배 단면

$$\phi_f = \phi_c + \frac{(\phi_t - \phi_c)}{(0.005 - \varepsilon_y)}(\varepsilon_t - \varepsilon_y) = 0.65 + \frac{(0.900 - 0.65)}{(0.005 - 0.002)}(0.03486 - 0.002)$$

= 3.388 > 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

$A_{s.Req}$ = 163 mm^2, $4/3\ A_{s,Req}$ = 217 mm^2

MIN ($A_{s.min}$, $4/3\ A_{s.req}$) = 217 mm^2 < Use As = 845 mm^2 ∴ O.K

◈ $Md = \phi_f T (d - a/2)$ = 0.900 × 337,867 × (200 - 13 / 2) / 10 E+6

= 58.802 kN.m > Mu = 11.646 kN.m ∴ O.K [S.F = 5.049]

(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]

$= -7 \times 0.00422 + \sqrt{[2 \times 0.03 + 0.0296^2]}$ = 0.216

$j = 1 - k/3 = 1 - 0.216 / 3$ = 0.928

$fs = M / [As \cdot d \cdot j]$ = 42.125 MPa

◈ 주철근 간격

$Cc = d_t' - d_b/2$ = 100 - 12.7 / 2 = 94 mm (여기서, d_b = 13)

$s_1 = 375 (210 / fs) - 2.5 Cc$ = 1635 mm > s = 150 mm ∴ O.K

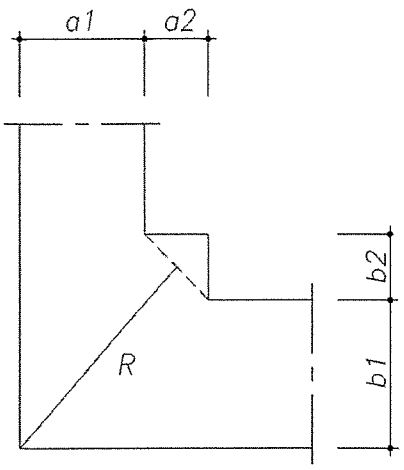
$s_2 = 300 (210 / fs)$ = 1496 mm

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	H13@150	169	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H13@150	169	600	인장	H13@200=634	950	O.K
							압축	H13@400=317		
좌측 벽체	단부	1,000	300	H13@150	169	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H13@150	169	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
우측 벽체	단부	1,000	300	H13@150	169	750	인장	H13@200=634	950	O.K
							압축	H13@400=317		
	중앙부	1,000	300	H13@150	169	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	=	21.517	kN·m
a1	=	300	mm
a2	=	150	mm
b1	=	300	mm
b2	=	150	mm

$$R = \{(a2 \times b1 + b2 \times a1 + a2 \times b2) / (a2 + b2)\} \times \sqrt{2}$$

$$= \quad 530 \quad mm$$

- 주철근 (절곡하여 보강철근으로 고려할 수 있는 주철근량)

As' = H 13 @ 300 = 422 mm^2

H 0 @ 0 = 0 mm^2

1) 최대인장응력, f_{tmax}

$$f_{tmax} = \frac{5 \times Mo}{R^2 \times W} = \frac{5 \times 21.517 \times 10^6}{(530.330)^2 \times 1{,}000}$$

$$= 0.383 \text{ Mpa} \leq 0.08 \sqrt{fck} = 0.438 \text{ Mpa}$$

보강철근 불필요 !

8. 사용성 검토

8.1 처짐 검토

1) 하부 슬래브 : 최소부재두께 적용

철근의 항복응력 fy = 400 MPa

부재의 지간길이 L = 1.300 m

슬래브 양단 연속의 경우

T = L / 28 = 0.046 m

(보정계수) FACTOR = 1.000

처짐계산을 하지않는 경우의 최소두께

T = 0.046m < H = 0.300m (처짐검토 생략)

9. 기초지반 지지력 검토

9.1 작용하중

9.1.1 구 체 자 중 (W1) :

(0.3 × 1.75 + 0.3 × 1.6 × 1 EA + 0.15 × 0.15 / 2
× 2 EA + 0.3 × 1.75) × 24.500 / 4.6 = 8.269 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)

1.000 × 1.400 × 1.000 / 1.600 / 1.000 × 10.000 = 8.750 kN/m²

9.2 지지력 검토

9.2.1 최대지반반력 (qmax) : W1 + W2 + L + W3

8.269 + 0.000 + 0.000 + 8.750 = 17.019 kN/m²

9.2.2 허용지반반력 (qa)

- 정역학 공식에 의한 지반의 허용 연직 지지력 (Terzaghi식 사용)

$Qu = A \cdot [\ c \cdot Nc + q \cdot Nq + 0.5 \cdot r1 \cdot B \cdot Nr\ ]$

Qu : 하중의 편심 및 경사가 없는 연속기초지반의 극한지지력 (kN)

· A : 재하면적 = 1.600 m²

· c : 지반의 점착력 = 0.000 kN/m²

· q : 상재하중, (q = r2 · Df) = 41.000 kN/m²

· r1 : 지지 지반의 흙의 단위중량 = 20.000 kN/m³

· r2 : 근입 지반의 흙의 단위중량 = 20.000 kN/m³

· B : 확대기초의 폭 = 1.600 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 = 1.600 × [0.000 × 25.100 + 41.000 × 12.700 +
0.500 × 20.000 × 1.600 × 9.700] = 1081.440 kN

· Qa = 1081.440 / 3 = 360.480 kN

· qa = 360.480 / 1.600 = 225.300 kN/m²

* 평상시 최대 지반반력 (도.설.해 2008) = 400.000 kN/m²

∴ q_{max} = 17.019 kN/m² < q_a = 225.300 kN/m² ∴ O.K