

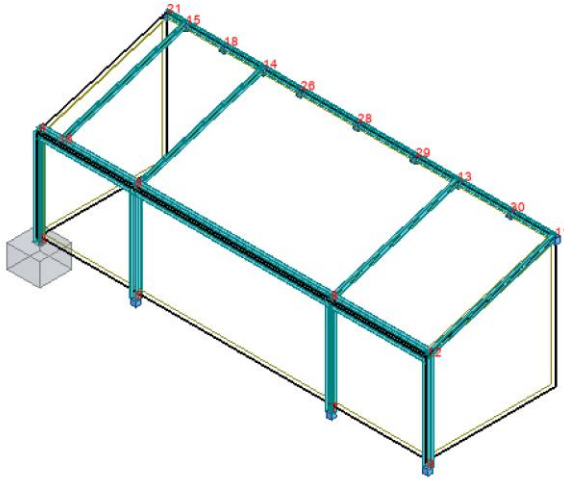
Steel Frame Lean To

Project:

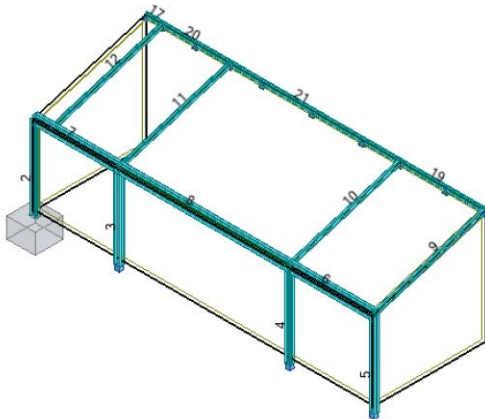
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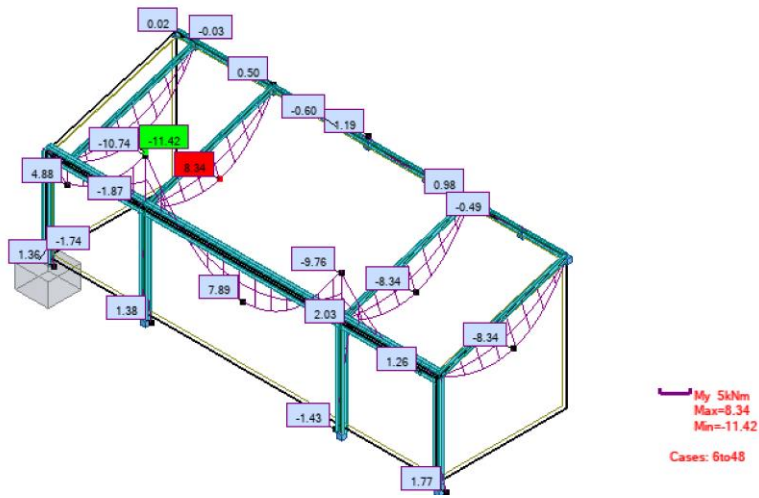
nodes



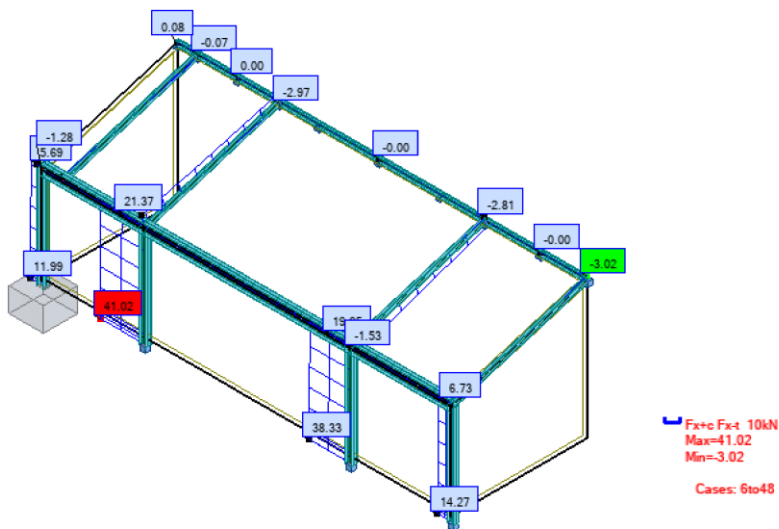
bar number



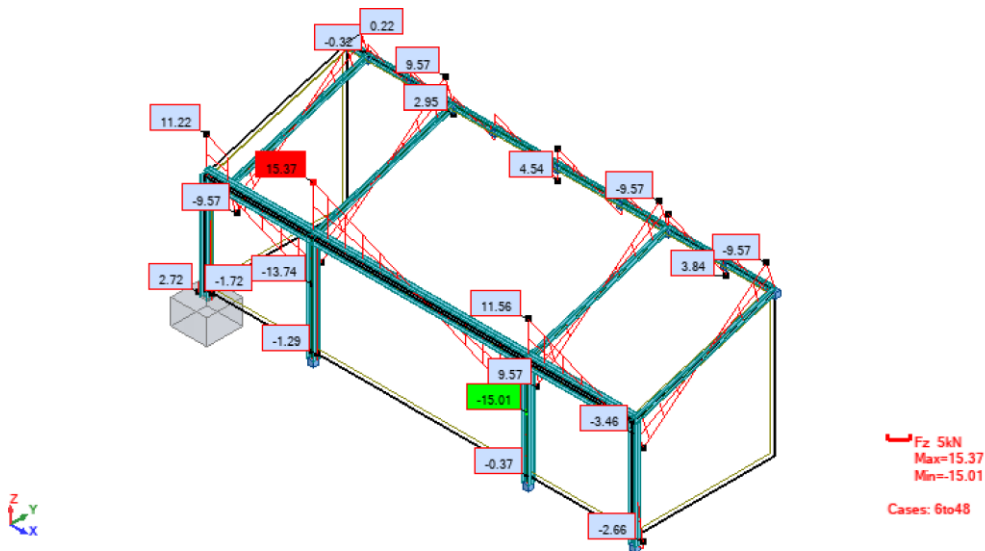
View - MY, Cases: 6to48



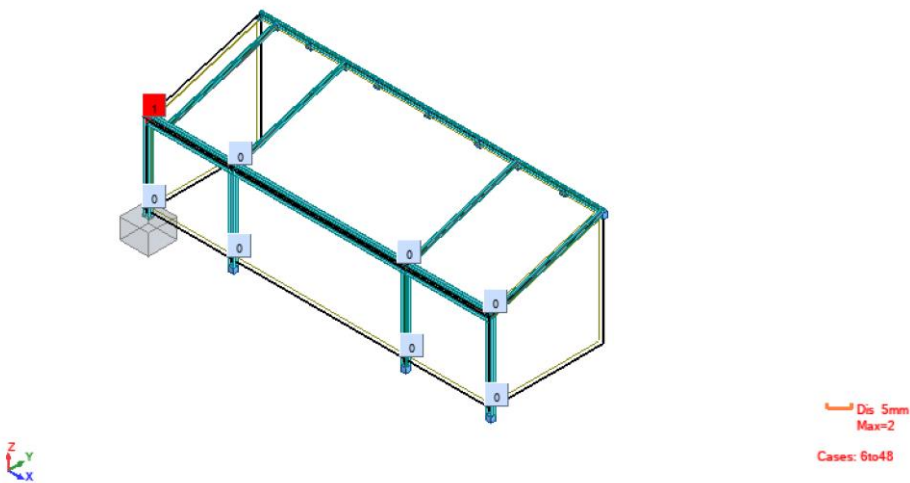
View - FX, Cases: 6to48



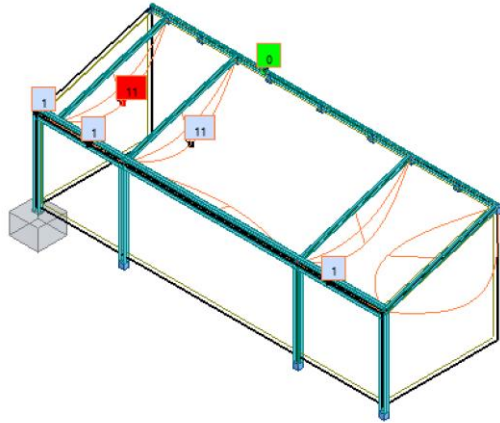
View - FZ, Cases: 6to48



View - Deformation, Cases: 6to48 1

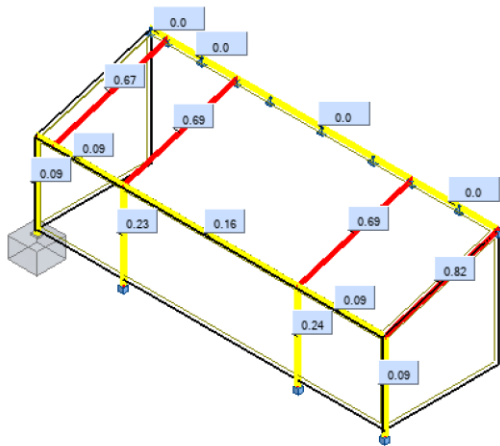


View - Exact deformation(s), Cases: 6to48



Dis 5mm
Max=21
Cases: 6to48

View - Ratio 1



Cases: 6to48

Data - Nodes

Node	X (m)	Y (m)	Z (m)	Support code	Support
3	0.0	0.0	-0.15	xxxxxx	Fixed
4	0.0	0.0	2.37		
5	2.52	0.0	-0.15	xxxxxx	Fixed
6	2.52	0.0	2.37		
7	7.62	0.0	-0.15	xxxxxx	Fixed
8	7.62	0.0	2.37		
9	10.15	0.0	-0.15	xxxxxx	Fixed
11	10.15	3.33	3.41	xxxxxx	Fixed
12	10.15	0.0	2.37		
13	7.62	3.33	3.41	xxxxxx	Fixed
14	2.52	3.33	3.41	xxxxxx	Fixed
15	0.50	3.33	3.41	xxxxxx	Fixed
16	0.50	0.0	2.37		
18	1.50	3.33	3.41	xxxfff	Pinned
21	0.0	3.33	3.41	xxxfff	Pinned
22	0.50	3.58	3.41		
23	2.52	3.58	3.41		
26	3.50	3.33	3.41	xxxfff	Pinned
28	5.00	3.33	3.41	xxxfff	Pinned
29	6.50	3.33	3.41	xxxfff	Pinned
30	9.00	3.33	3.41	xxxfff	Pinned

Data - Bars

Bar	Node 1	Node 2	Section	Material	Length (m)	Gamma (Deg)	Type
2	3	4	UC 152x15 2x23	S275	2.52	0.0	Column1
3	5	6	UC 152x15 2x23	S275	2.52	0.0	Column1
4	7	8	UC 152x15 2x23	S275	2.52	0.0	Column1
5	9	12	UC 152x15 2x23	S275	2.52	0.0	Column1
6	8	12	UB 254x14 6x43	S275	2.38	0.0	Beam1
7	4	6	UB 254x14 6x43	S275	2.37	0.0	Beam1

8	6	8	UB 254x14 6x43	S275	4.95	0.0	Beam1
9	11	12	PFCH 125x65 x15	S275	3.49	180.0	Beam2c
10	13	8	PFCH 125x65 x15	S275	3.49	180.0	Beam2c
11	14	6	PFCH 125x65 x15	S275	3.49	0.0	Beam2c
12	15	16	PFCH 125x65 x15	S275	3.49	0.0	Beam2c
17	21	15	PFCH 125x65 x15	S275	0.50	180.0	Beam
19	13	11	PFCH 125x65 x15	S275	2.53	180.0	Beam
20	15	14	PFCH 125x65 x15	S275	2.02	180.0	Beam
21	14	13	PFCH 125x65 x15	S275	5.10	180.0	Beam

Data - Sections

	Section name	Bar list	AX (mm ²)	AY (mm ²)	AZ (mm ²)	IX (mm ⁴)	IY (mm ⁴)	IZ (mm ⁴)
	UB 254x146x43	6to8	5480	3741	1895	239000	6544000 0	6770000
	UC 152x152x23	2to5	2920	2073	930	46300	1250000 0	4000000
	PFCH 125x65x15	9to12 17 19to21	1880	1235	688	47200	4830000	800000

Data - Supports

	Support name	List of nodes	List of edges	List of objects	Support conditions
	Fixed	3to11By2 13to15			UX UY UZ RX RY RZ
	Pinned	18 21 26 28to30			UX UY UZ

Loads - Cases

Case	Label	Case name	Nature	Analysis type
1	DL1	DL1	Structural	Static - Linear
2	LL1	LL1	Category A	Static - Linear
3	WIND1	Wind Simulation X+ 27 m/s	wind	Static - Linear
4	WIND2	Wind Simulation Y+ 27 m/s	wind	Static - Linear
5	WIND3	Wind Simulation X- 27 m/s	wind	Static - Linear
6		ULS/1=1*1.35 + 2*1.50	Structural	Linear Combination
7		ULS/2=1*1.35 + 2*1.50 + 3*0.75	Structural	Linear Combination
8		ULS/3=1*1.35 + 2*1.50 + 4*0.75	Structural	Linear Combination
9		ULS/4=1*1.35 + 2*1.50 + 5*0.75	Structural	Linear Combination
10		ULS/5=1*1.35	Structural	Linear Combination
11		ULS/6=1*1.00 + 2*1.50	Structural	Linear Combination
12		ULS/7=1*1.00 + 2*1.50 + 3*0.75	Structural	Linear Combination
13		ULS/8=1*1.00 + 2*1.50 + 4*0.75	Structural	Linear Combination
14		ULS/9=1*1.00 + 2*1.50 + 5*0.75	Structural	Linear Combination
15		ULS/10=1*1.00	Structural	Linear Combination
16		ULS/11=1*1.35 + 2*1.05 + 3*1.50	Structural	Linear Combination
17		ULS/12=1*1.35 + 2*1.05 + 4*1.50	Structural	Linear Combination
18		ULS/13=1*1.35 + 2*1.05 + 5*1.50	Structural	Linear Combination
19		ULS/14=1*1.35 + 3*1.50	Structural	Linear Combination
20		ULS/15=1*1.35 + 4*1.50	Structural	Linear Combination
21		ULS/16=1*1.35 + 5*1.50	Structural	Linear Combination
22		ULS/17=1*1.00 + 2*1.05 + 3*1.50	Structural	Linear Combination
23		ULS/18=1*1.00 + 2*1.05 + 4*1.50	Structural	Linear Combination
24		ULS/19=1*1.00 + 2*1.05 + 5*1.50	Structural	Linear Combination
25		ULS/20=1*1.00 + 3*1.50	Structural	Linear Combination
26		ULS/21=1*1.00 + 4*1.50	Structural	Linear Combination
27		ULS/22=1*1.00 + 5*1.50	Structural	Linear Combination
28		SLS:CHR/1=1*1.00 + 2*1.00	dead	Linear Combination
29		SLS:CHR/2=1*1.00 + 2*1.00 + 3*0.50	dead	Linear Combination

30		SLS:CHR/3=1*1.00 + 2*1.00 + 4*0.50	dead	Linear Combination
31		SLS:CHR/4=1*1.00 + 2*1.00 + 5*0.50	dead	Linear Combination
32		SLS:CHR/5=1*1.00	dead	Linear Combination
33		SLS:CHR/6=1*1.00 + 2*0.70 + 3*1.00	dead	Linear Combination
34		SLS:CHR/7=1*1.00 + 2*0.70 + 4*1.00	dead	Linear Combination
35		SLS:CHR/8=1*1.00 + 2*0.70 + 5*1.00	dead	Linear Combination
36		SLS:CHR/9=1*1.00 + 3*1.00	dead	Linear Combination
37		SLS:CHR/10=1*1.00 + 4*1.00	dead	Linear Combination
38		SLS:CHR/11=1*1.00 + 5*1.00	dead	Linear Combination
39		SLS:FRE/12=1*1.00 + 2*0.50	dead	Linear Combination
40		SLS:FRE/13=1*1.00	dead	Linear Combination
41		SLS:FRE/14=1*1.00 + 2*0.30 + 3*0.20	dead	Linear Combination
42		SLS:FRE/15=1*1.00 + 2*0.30 + 4*0.20	dead	Linear Combination
43		SLS:FRE/16=1*1.00 + 2*0.30 + 5*0.20	dead	Linear Combination
44		SLS:FRE/17=1*1.00 + 3*0.20	dead	Linear Combination
45		SLS:FRE/18=1*1.00 + 4*0.20	dead	Linear Combination
46		SLS:FRE/19=1*1.00 + 5*0.20	dead	Linear Combination
47		SLS:QPR/20=1*1.00 + 2*0.30	dead	Linear Combination
48		SLS:QPR/21=1*1.00	dead	Linear Combination

Loads - Values

- Cases: 1to48

	Case	Load type	List	Load values
	1	self-weight	1to12 14to17 19to21	PZ Negative Factor=1.00
	1	uniform load	6to8 10 11	PZ=-3.00(kN/m)
	1	uniform load	9 12	PZ=-3.00(kN/m)
	1	uniform load	19to21	PZ=-3.00(kN/m)
	2	uniform load	6to12	PZ=-1.00(kN/m)
	2	uniform load	19to21	PZ=-1.00(kN/m)
	3	(FE) linear on edges	1_EDGE(3)	PY=0.00(kN/m) PZ=0.26(kN/m) local
	3	(FE) uniform	1	PZ=-0.07(kN/m2) local

	3	(FE) uniform	14	PZ=0.07(kN/m2) local
	3	(FE) linear on edges	15_EDGE (3)	PY=-0.23(kN/m) local
	3	(FE) uniform	15	PZ=0.03(kN/m2) local
	3	(FE) linear on edges	16_EDGE (2)	PZ=-0.06(kN/m) local
	3	(FE) uniform	16	PZ=0.49(kN/m2) local
	4	(FE) linear on edges	1_EDGE(2)	PY=0.03(kN/m) PZ=0.09(kN/m) local
	4	(FE) uniform	1	PZ=0.06(kN/m2) local
	4	(FE) linear on edges	14_EDGE (2)	PZ=0.11(kN/m) local
	4	(FE) linear on edges	14_EDGE (4)	PZ=0.06(kN/m) local
	4	(FE) uniform	14	PZ=0.27(kN/m2) local
	4	(FE) linear on edges	15_EDGE (1)	PY=-0.14(kN/m) local
	4	(FE) linear on edges	15_EDGE (3)	PY=-0.15(kN/m) local
	4	(FE) linear on edges	15_EDGE (4)	PY=-0.09(kN/m) local
	4	(FE) uniform	15	PZ=0.90(kN/m2) local
	4	(FE) linear on edges	16_EDGE (2)	PZ=-0.11(kN/m) local
	4	(FE) linear on edges	16_EDGE (4)	PZ=-0.06(kN/m) local
	4	(FE) uniform	16	PZ=-0.26(kN/m2) local
	5	(FE) linear on edges	1_EDGE(1)	PY=-0.00(kN/m) PZ=0.28(kN/m) local
	5	(FE) uniform	1	PZ=-0.09(kN/m2) local
	5	(FE) linear on edges	14_EDGE (2)	PZ=0.05(kN/m) local
	5	(FE) uniform	14	PZ=-0.50(kN/m2) local
	5	(FE) linear on edges	15_EDGE (1)	PY=-0.24(kN/m) local
	5	(FE) linear on edges	15_EDGE (3)	PY=-0.06(kN/m) local
	5	(FE) uniform	15	PZ=0.06(kN/m2) local
	5	(FE) uniform	16	PZ=-0.07(kN/m2) local

Combinations

- Cases: 6to48

Combinations	Name	Analysis type	Combination type	Case nature	Definition
6 (C)	ULS/1=1*1.35 + 2*1.50	Linear Combination		Structural	1*1.35+2*1.50
7 (C)	ULS/2=1*1.35 + 2*1.50 + 3*0.75	Linear Combination		Structural	1*1.35+2*1.50+3*0.75
8 (C)	ULS/3=1*1.35 + 2*1.50	Linear Combination		Structural	1*1.35+2*1.50+4*0.75

	+ 4*0.75				
9 (C)	ULS/4=1*1.35 + 2*1.50 + 5*0.75	Linear Combination		Structural	1*1.35+2*1.50+5*0.75
10 (C)	ULS/5=1*1.35	Linear Combination		Structural	1*1.35
11 (C)	ULS/6=1*1.00 + 2*1.50	Linear Combination		Structural	1*1.00+2*1.50
12 (C)	ULS/7=1*1.00 + 2*1.50 + 3*0.75	Linear Combination		Structural	1*1.00+2*1.50+3*0.75
13 (C)	ULS/8=1*1.00 + 2*1.50 + 4*0.75	Linear Combination		Structural	1*1.00+2*1.50+4*0.75
14 (C)	ULS/9=1*1.00 + 2*1.50 + 5*0.75	Linear Combination		Structural	1*1.00+2*1.50+5*0.75
15 (C)	ULS/10=1*1.00	Linear Combination		Structural	1*1.00
16 (C)	ULS/11=1*1.35 + 2*1.05 + 3*1.50	Linear Combination		Structural	1*1.35+2*1.05+3*1.50
17 (C)	ULS/12=1*1.35 + 2*1.05 + 4*1.50	Linear Combination		Structural	1*1.35+2*1.05+4*1.50
18 (C)	ULS/13=1*1.35 + 2*1.05 + 5*1.50	Linear Combination		Structural	1*1.35+2*1.05+5*1.50
19 (C)	ULS/14=1*1.35 + 3*1.50	Linear Combination		Structural	1*1.35+3*1.50
20 (C)	ULS/15=1*1.35 + 4*1.50	Linear Combination		Structural	1*1.35+4*1.50
21 (C)	ULS/16=1*1.35 + 5*1.50	Linear Combination		Structural	1*1.35+5*1.50
22 (C)	ULS/17=1*1.00 + 2*1.05 + 3*1.50	Linear Combination		Structural	1*1.00+2*1.05+3*1.50
23 (C)	ULS/18=1*1.00 + 2*1.05 + 4*1.50	Linear Combination		Structural	1*1.00+2*1.05+4*1.50
24 (C)	ULS/19=1*1.00 + 2*1.05 + 5*1.50	Linear Combination		Structural	1*1.00+2*1.05+5*1.50
25 (C)	ULS/20=1*1.00 + 3*1.50	Linear Combination		Structural	1*1.00+3*1.50
26 (C)	ULS/21=1*1.00 + 4*1.50	Linear Combination		Structural	1*1.00+4*1.50
27 (C)	ULS/22=1*1.00 + 5*1.50	Linear Combination		Structural	1*1.00+5*1.50
28 (C)	SLS:CHR/1=1*1.00 + 2*1.00	Linear Combination	SLS:CHR	dead	(1+2)*1.00
29 (C)	SLS:CHR/2=1*1.00 + 2*1.00 + 3*0.50	Linear Combination	SLS:CHR	dead	(1+2)*1.00+3*0.50
30 (C)	SLS:CHR/3=1*1.00 + 2*1.00 + 4*0.50	Linear Combination	SLS:CHR	dead	(1+2)*1.00+4*0.50
31 (C)	SLS:CHR/4=1*1.00 + 2*1.00 + 5*0.50	Linear Combination	SLS:CHR	dead	(1+2)*1.00+5*0.50

32 (C)	SLS:CHR/5 =1*1.00	Linear Combination	SLS :CH R	dead	1*1.00
33 (C)	SLS:CHR/6 =1*1.00 + 2*0.70 + 3*1.00	Linear Combination	SLS :CH R	dead	(1+3)*1.00+2*0.70
34 (C)	SLS:CHR/7 =1*1.00 + 2*0.70 + 4*1.00	Linear Combination	SLS :CH R	dead	(1+4)*1.00+2*0.70
35 (C)	SLS:CHR/8 =1*1.00 + 2*0.70 + 5*1.00	Linear Combination	SLS :CH R	dead	(1+5)*1.00+2*0.70
36 (C)	SLS:CHR/9 =1*1.00 + 3*1.00	Linear Combination	SLS :CH R	dead	(1+3)*1.00
37 (C)	SLS:CHR/10 =1*1.00 + 4*1.00	Linear Combination	SLS :CH R	dead	(1+4)*1.00
38 (C)	SLS:CHR/11 =1*1.00 + 5*1.00	Linear Combination	SLS :CH R	dead	(1+5)*1.00
39 (C)	SLS:FRE/12 =1*1.00 + 2*0.50	Linear Combination	SLS :FR E	dead	1*1.00+2*0.50
40 (C)	SLS:FRE/13 =1*1.00	Linear Combination	SLS :FR E	dead	1*1.00
41 (C)	SLS:FRE/14 =1*1.00 + 2*0.30 + 3*0.20	Linear Combination	SLS :FR E	dead	1*1.00+2*0.30+3*0.20
42 (C)	SLS:FRE/15 =1*1.00 + 2*0.30 + 4*0.20	Linear Combination	SLS :FR E	dead	1*1.00+2*0.30+4*0.20
43 (C)	SLS:FRE/16 =1*1.00 + 2*0.30 + 5*0.20	Linear Combination	SLS :FR E	dead	1*1.00+2*0.30+5*0.20
44 (C)	SLS:FRE/17 =1*1.00 + 3*0.20	Linear Combination	SLS :FR E	dead	1*1.00+3*0.20
45 (C)	SLS:FRE/18 =1*1.00 + 4*0.20	Linear Combination	SLS :FR E	dead	1*1.00+4*0.20
46 (C)	SLS:FRE/19 =1*1.00 + 5*0.20	Linear Combination	SLS :FR E	dead	1*1.00+5*0.20
47 (C)	SLS:QPR/20 =1*1.00 + 2*0.30	Linear Combination	SLS :QP R	dead	1*1.00+2*0.30
48 (C)	SLS:QPR/21 =1*1.00	Linear Combination	SLS :QP R	dead	1*1.00

Reactions - Values

in the coordinate system: global - Cases: 1to48

Node/Case	FX (kN)	FY (kN)	FZ (kN)	MX (kNm)	MY (kNm)	MZ (kNm)
3/ 1	0.18	0.09	6.60	-0.11	0.13	0.0
3/ 2	0.06	0.03	1.87	-0.04	0.04	0.0
3/ 3	-1.94	0.28	-0.23	-0.17	-1.24	0.0
3/ 4	0.95	-1.22	-0.12	0.70	0.41	0.0
3/ 5	0.73	-0.01	0.35	0.00	0.76	0.0
3/ 6 (C)	0.33	0.16	11.72	-0.21	0.23	0.0
3/ 7 (C)	-1.12	0.36	11.55	-0.33	-0.70	0.0
3/ 8 (C)	1.04	-0.76	11.64	0.32	0.54	0.0
3/ 9 (C)	0.88	0.15	11.99	-0.20	0.80	0.0
3/ 10 (C)	0.24	0.12	8.91	-0.15	0.17	0.0
3/ 11 (C)	0.27	0.13	9.41	-0.17	0.19	0.0
3/ 12 (C)	-1.19	0.33	9.24	-0.29	-0.75	0.0
3/ 13 (C)	0.98	-0.79	9.33	0.36	0.50	0.0
3/ 14 (C)	0.82	0.12	9.68	-0.16	0.76	0.0
3/ 15 (C)	0.18	0.09	6.60	-0.11	0.13	0.0
3/ 16 (C)	-2.60	0.56	10.53	-0.44	-1.65	0.0
3/ 17 (C)	1.72	-1.69	10.71	0.86	0.83	0.0
3/ 18 (C)	1.41	0.13	11.41	-0.19	1.36	0.0
3/ 19 (C)	-2.66	0.53	8.56	-0.40	-1.69	0.0
3/ 20 (C)	1.66	-1.72	8.74	0.90	0.79	0.0
3/ 21 (C)	1.35	0.10	9.44	-0.15	1.32	0.0
3/ 22 (C)	-2.66	0.53	8.22	-0.40	-1.69	0.0
3/ 23 (C)	1.66	-1.72	8.40	0.90	0.79	0.0
3/ 24 (C)	1.34	0.10	9.10	-0.15	1.31	0.0
3/ 25 (C)	-2.72	0.50	6.25	-0.37	-1.74	0.0
3/ 26 (C)	1.60	-1.75	6.43	0.94	0.74	0.0
3/ 27 (C)	1.28	0.07	7.13	-0.11	1.27	0.0
3/ 28 (C)	0.24	0.11	8.48	-0.15	0.17	0.0
3/ 29 (C)	-0.73	0.25	8.36	-0.23	-0.45	0.0
3/ 30 (C)	0.71	-0.50	8.42	0.20	0.37	0.0
3/ 31 (C)	0.61	0.11	8.65	-0.15	0.55	0.0
3/ 32 (C)	0.18	0.09	6.60	-0.11	0.13	0.0
3/ 33 (C)	-1.72	0.38	7.68	-0.31	-1.09	0.0
3/ 34 (C)	1.17	-1.12	7.80	0.56	0.57	0.0
3/ 35 (C)	0.96	0.10	8.27	-0.13	0.92	0.0
3/ 36 (C)	-1.76	0.36	6.37	-0.28	-1.12	0.0
3/ 37 (C)	1.13	-1.14	6.49	0.59	0.54	0.0
3/ 38 (C)	0.92	0.08	6.95	-0.11	0.89	0.0
3/ 39 (C)	0.21	0.10	7.54	-0.13	0.15	0.0
3/ 40 (C)	0.18	0.09	6.60	-0.11	0.13	0.0
3/ 41 (C)	-0.19	0.15	7.12	-0.16	-0.11	0.0
3/ 42 (C)	0.39	-0.15	7.14	0.02	0.22	0.0
3/ 43 (C)	0.34	0.09	7.23	-0.12	0.29	0.0
3/ 44 (C)	-0.21	0.14	6.56	-0.15	-0.12	0.0
3/ 45 (C)	0.37	-0.16	6.58	0.03	0.21	0.0
3/ 46 (C)	0.33	0.08	6.67	-0.11	0.28	0.0
3/ 47 (C)	0.20	0.09	7.16	-0.12	0.14	0.0
3/ 48 (C)	0.18	0.09	6.60	-0.11	0.13	0.0
5/ 1	0.30	0.06	22.20	-0.04	0.22	0.0
5/ 2	0.08	0.02	6.50	-0.01	0.06	0.0
5/ 3	-0.43	-0.13	0.16	0.07	-0.56	0.0
5/ 4	-0.04	-3.47	1.74	1.77	-0.04	0.0
5/ 5	0.53	-0.24	-0.18	0.12	0.68	0.0
5/ 6 (C)	0.53	0.11	39.72	-0.08	0.39	0.0
5/ 7 (C)	0.21	0.01	39.84	-0.02	-0.03	0.0
5/ 8 (C)	0.50	-2.49	41.02	1.26	0.35	0.0

5/	9 (C)	0.93	-0.07	39.58	0.02	0.90	0.0
5/	10 (C)	0.40	0.08	29.97	-0.06	0.30	0.0
5/	11 (C)	0.42	0.09	31.95	-0.06	0.31	0.0
5/	12 (C)	0.10	-0.01	32.07	-0.01	-0.11	0.0
5/	13 (C)	0.40	-2.51	33.25	1.27	0.28	0.0
5/	14 (C)	0.82	-0.09	31.81	0.03	0.82	0.0
5/	15 (C)	0.30	0.06	22.20	-0.04	0.22	0.0
5/	16 (C)	-0.15	-0.09	37.04	0.03	-0.47	0.0
5/	17 (C)	0.43	-5.10	39.40	2.59	0.29	0.0
5/	18 (C)	1.29	-0.26	36.53	0.11	1.38	0.0
5/	19 (C)	-0.24	-0.11	30.22	0.05	-0.54	0.0
5/	20 (C)	0.35	-5.12	32.57	2.61	0.23	0.0
5/	21 (C)	1.20	-0.28	29.71	0.13	1.32	0.0
5/	22 (C)	-0.26	-0.11	29.27	0.05	-0.55	0.0
5/	23 (C)	0.33	-5.12	31.63	2.61	0.22	0.0
5/	24 (C)	1.18	-0.28	28.76	0.13	1.30	0.0
5/	25 (C)	-0.35	-0.13	22.45	0.06	-0.61	0.0
5/	26 (C)	0.24	-5.14	24.80	2.62	0.15	0.0
5/	27 (C)	1.10	-0.30	21.94	0.14	1.24	0.0
5/	28 (C)	0.38	0.08	28.70	-0.05	0.28	0.0
5/	29 (C)	0.17	0.01	28.78	-0.02	0.00	0.0
5/	30 (C)	0.36	-1.65	29.57	0.83	0.26	0.0
5/	31 (C)	0.65	-0.04	28.61	0.01	0.62	0.0
5/	32 (C)	0.30	0.06	22.20	-0.04	0.22	0.0
5/	33 (C)	-0.07	-0.06	26.91	0.02	-0.29	0.0
5/	34 (C)	0.32	-3.39	28.48	1.72	0.22	0.0
5/	35 (C)	0.89	-0.16	26.57	0.07	0.94	0.0
5/	36 (C)	-0.13	-0.07	22.36	0.03	-0.34	0.0
5/	37 (C)	0.26	-3.41	23.94	1.73	0.17	0.0
5/	38 (C)	0.83	-0.18	22.03	0.08	0.90	0.0
5/	39 (C)	0.34	0.07	25.45	-0.05	0.25	0.0
5/	40 (C)	0.30	0.06	22.20	-0.04	0.22	0.0
5/	41 (C)	0.24	0.04	24.18	-0.03	0.13	0.0
5/	42 (C)	0.32	-0.63	24.50	0.31	0.23	0.0
5/	43 (C)	0.43	0.02	24.12	-0.02	0.37	0.0
5/	44 (C)	0.21	0.03	22.23	-0.03	0.11	0.0
5/	45 (C)	0.29	-0.63	22.55	0.31	0.21	0.0
5/	46 (C)	0.40	0.01	22.17	-0.02	0.36	0.0
5/	47 (C)	0.32	0.07	24.15	-0.04	0.24	0.0
5/	48 (C)	0.30	0.06	22.20	-0.04	0.22	0.0
7/	1	-0.43	0.06	20.77	-0.04	-0.36	0.0
7/	2	-0.13	0.02	6.04	-0.01	-0.10	0.0
7/	3	-0.44	-0.13	-0.17	0.07	-0.56	0.0
7/	4	-0.04	-3.47	1.64	1.78	-0.05	0.0
7/	5	0.53	-0.24	0.36	0.12	0.68	0.0
7/	6 (C)	-0.77	0.10	37.10	-0.07	-0.64	0.0
7/	7 (C)	-1.10	0.01	36.97	-0.02	-1.06	0.0
7/	8 (C)	-0.80	-2.50	38.33	1.26	-0.68	0.0
7/	9 (C)	-0.37	-0.07	37.38	0.02	-0.13	0.0
7/	10 (C)	-0.58	0.08	28.04	-0.05	-0.48	0.0
7/	11 (C)	-0.62	0.08	29.83	-0.06	-0.51	0.0
7/	12 (C)	-0.95	-0.01	29.70	-0.01	-0.93	0.0
7/	13 (C)	-0.65	-2.52	31.06	1.28	-0.55	0.0
7/	14 (C)	-0.22	-0.09	30.11	0.03	-0.00	0.0
7/	15 (C)	-0.43	0.06	20.77	-0.04	-0.36	0.0
7/	16 (C)	-1.37	-0.10	34.13	0.03	-1.43	0.0
7/	17 (C)	-0.77	-5.11	36.85	2.60	-0.67	0.0
7/	18 (C)	0.08	-0.26	34.93	0.12	0.43	0.0
7/	19 (C)	-1.24	-0.11	27.78	0.05	-1.32	0.0
7/	20 (C)	-0.64	-5.13	30.50	2.61	-0.56	0.0
7/	21 (C)	0.22	-0.28	28.59	0.13	0.54	0.0

7/	22 (C)	-1.22	-0.12	26.86	0.05	-1.31	0.0
7/	23 (C)	-0.62	-5.13	29.58	2.61	-0.54	0.0
7/	24 (C)	0.24	-0.28	27.66	0.13	0.56	0.0
7/	25 (C)	-1.09	-0.13	20.51	0.06	-1.20	0.0
7/	26 (C)	-0.49	-5.15	23.23	2.63	-0.43	0.0
7/	27 (C)	0.37	-0.30	21.32	0.14	0.67	0.0
7/	28 (C)	-0.56	0.07	26.81	-0.05	-0.46	0.0
7/	29 (C)	-0.78	0.01	26.73	-0.02	-0.74	0.0
7/	30 (C)	-0.58	-1.66	27.63	0.84	-0.49	0.0
7/	31 (C)	-0.29	-0.04	26.99	0.01	-0.12	0.0
7/	32 (C)	-0.43	0.06	20.77	-0.04	-0.36	0.0
7/	33 (C)	-0.96	-0.06	24.83	0.02	-0.99	0.0
7/	34 (C)	-0.56	-3.40	26.64	1.73	-0.48	0.0
7/	35 (C)	0.01	-0.17	25.36	0.07	0.25	0.0
7/	36 (C)	-0.87	-0.07	20.60	0.03	-0.92	0.0
7/	37 (C)	-0.47	-3.41	22.41	1.74	-0.41	0.0
7/	38 (C)	0.10	-0.18	21.13	0.08	0.33	0.0
7/	39 (C)	-0.49	0.07	23.79	-0.04	-0.41	0.0
7/	40 (C)	-0.43	0.06	20.77	-0.04	-0.36	0.0
7/	41 (C)	-0.56	0.04	22.55	-0.03	-0.50	0.0
7/	42 (C)	-0.48	-0.63	22.91	0.31	-0.40	0.0
7/	43 (C)	-0.36	0.01	22.66	-0.02	-0.25	0.0
7/	44 (C)	-0.52	0.03	20.74	-0.03	-0.47	0.0
7/	45 (C)	-0.44	-0.64	21.10	0.32	-0.37	0.0
7/	46 (C)	-0.32	0.01	20.84	-0.01	-0.22	0.0
7/	47 (C)	-0.47	0.06	22.58	-0.04	-0.39	0.0
7/	48 (C)	-0.43	0.06	20.77	-0.04	-0.36	0.0
9/	1	-0.05	0.06	7.87	-0.05	-0.05	0.0
9/	2	-0.01	0.02	2.28	-0.01	-0.02	0.0
9/	3	-0.59	-0.05	0.31	0.03	-0.62	0.0
9/	4	-0.89	-1.19	0.01	0.61	-0.42	0.0
9/	5	1.80	0.24	-0.39	-0.13	1.22	0.0
9/	6 (C)	-0.09	0.11	14.04	-0.09	-0.09	0.0
9/	7 (C)	-0.53	0.07	14.27	-0.07	-0.56	0.0
9/	8 (C)	-0.76	-0.79	14.05	0.37	-0.41	0.0
9/	9 (C)	1.27	0.29	13.75	-0.18	0.82	0.0
9/	10 (C)	-0.06	0.08	10.63	-0.06	-0.07	0.0
9/	11 (C)	-0.07	0.09	11.29	-0.07	-0.08	0.0
9/	12 (C)	-0.51	0.05	11.52	-0.05	-0.54	0.0
9/	13 (C)	-0.74	-0.81	11.30	0.39	-0.39	0.0
9/	14 (C)	1.28	0.27	11.00	-0.17	0.84	0.0
9/	15 (C)	-0.05	0.06	7.87	-0.05	-0.05	0.0
9/	16 (C)	-0.97	0.03	13.48	-0.04	-1.01	0.0
9/	17 (C)	-1.42	-1.69	13.04	0.83	-0.72	0.0
9/	18 (C)	2.63	0.46	12.44	-0.28	1.74	0.0
9/	19 (C)	-0.95	0.00	11.09	-0.02	-1.00	0.0
9/	20 (C)	-1.40	-1.71	10.65	0.85	-0.71	0.0
9/	21 (C)	2.64	0.44	10.05	-0.26	1.75	0.0
9/	22 (C)	-0.95	0.00	10.72	-0.02	-1.00	0.0
9/	23 (C)	-1.40	-1.71	10.28	0.85	-0.71	0.0
9/	24 (C)	2.64	0.44	9.68	-0.26	1.76	0.0
9/	25 (C)	-0.94	-0.02	8.33	-0.01	-0.98	0.0
9/	26 (C)	-1.39	-1.73	7.89	0.86	-0.69	0.0
9/	27 (C)	2.66	0.42	7.29	-0.25	1.77	0.0
9/	28 (C)	-0.06	0.08	10.15	-0.06	-0.07	0.0
9/	29 (C)	-0.36	0.05	10.30	-0.05	-0.38	0.0
9/	30 (C)	-0.51	-0.52	10.16	0.24	-0.28	0.0
9/	31 (C)	0.84	0.20	9.96	-0.13	0.54	0.0
9/	32 (C)	-0.05	0.06	7.87	-0.05	-0.05	0.0
9/	33 (C)	-0.65	0.02	9.77	-0.03	-0.68	0.0
9/	34 (C)	-0.95	-1.12	9.48	0.55	-0.49	0.0

9/	35 (C)	1.75	0.32	9.08	-0.19	1.15	0.0
9/	36 (C)	-0.64	0.01	8.18	-0.02	-0.67	0.0
9/	37 (C)	-0.94	-1.13	7.89	0.56	-0.48	0.0
9/	38 (C)	1.76	0.30	7.49	-0.18	1.16	0.0
9/	39 (C)	-0.05	0.07	9.01	-0.05	-0.06	0.0
9/	40 (C)	-0.05	0.06	7.87	-0.05	-0.05	0.0
9/	41 (C)	-0.17	0.06	8.62	-0.05	-0.18	0.0
9/	42 (C)	-0.23	-0.17	8.56	0.07	-0.14	0.0
9/	43 (C)	0.31	0.11	8.48	-0.08	0.19	0.0
9/	44 (C)	-0.17	0.05	7.93	-0.04	-0.18	0.0
9/	45 (C)	-0.23	-0.18	7.87	0.07	-0.14	0.0
9/	46 (C)	0.31	0.11	7.79	-0.07	0.19	0.0
9/	47 (C)	-0.05	0.07	8.56	-0.05	-0.06	0.0
9/	48 (C)	-0.05	0.06	7.87	-0.05	-0.05	0.0
11/	1	0.00	-0.05	7.16	0.10	0.30	-0.00
11/	2	0.00	-0.02	2.28	0.03	0.10	-0.00
11/	3	-0.22	-0.05	-0.01	-0.00	0.01	0.01
11/	4	-0.74	-0.06	-0.14	-0.01	0.02	0.01
11/	5	1.67	0.16	0.08	0.01	-0.10	-0.02
11/	6 (C)	0.00	-0.10	13.09	0.18	0.56	-0.00
11/	7 (C)	-0.16	-0.14	13.08	0.18	0.57	0.01
11/	8 (C)	-0.55	-0.14	12.98	0.17	0.57	0.01
11/	9 (C)	1.25	0.02	13.15	0.19	0.48	-0.02
11/	10 (C)	0.00	-0.07	9.67	0.13	0.41	-0.00
11/	11 (C)	0.00	-0.08	10.58	0.14	0.45	-0.00
11/	12 (C)	-0.16	-0.12	10.58	0.14	0.46	0.01
11/	13 (C)	-0.55	-0.13	10.47	0.14	0.47	0.01
11/	14 (C)	1.25	0.04	10.64	0.15	0.38	-0.02
11/	15 (C)	0.00	-0.05	7.16	0.10	0.30	-0.00
11/	16 (C)	-0.33	-0.17	12.05	0.16	0.53	0.02
11/	17 (C)	-1.10	-0.18	11.85	0.16	0.55	0.01
11/	18 (C)	2.50	0.15	12.18	0.19	0.37	-0.03
11/	19 (C)	-0.33	-0.15	9.66	0.13	0.43	0.02
11/	20 (C)	-1.10	-0.17	9.46	0.12	0.45	0.01
11/	21 (C)	2.50	0.17	9.78	0.15	0.27	-0.03
11/	22 (C)	-0.33	-0.15	9.54	0.13	0.42	0.02
11/	23 (C)	-1.10	-0.16	9.34	0.12	0.44	0.01
11/	24 (C)	2.50	0.17	9.67	0.15	0.26	-0.03
11/	25 (C)	-0.33	-0.13	7.15	0.10	0.32	0.02
11/	26 (C)	-1.10	-0.15	6.95	0.09	0.34	0.01
11/	27 (C)	2.50	0.19	7.28	0.12	0.16	-0.03
11/	28 (C)	0.00	-0.07	9.44	0.13	0.40	-0.00
11/	29 (C)	-0.11	-0.10	9.44	0.13	0.41	0.01
11/	30 (C)	-0.37	-0.10	9.37	0.13	0.41	0.00
11/	31 (C)	0.83	0.01	9.48	0.14	0.35	-0.01
11/	32 (C)	0.00	-0.05	7.16	0.10	0.30	-0.00
11/	33 (C)	-0.22	-0.12	8.75	0.12	0.38	0.01
11/	34 (C)	-0.74	-0.13	8.62	0.11	0.40	0.01
11/	35 (C)	1.67	0.09	8.83	0.13	0.28	-0.02
11/	36 (C)	-0.22	-0.10	7.16	0.10	0.32	0.01
11/	37 (C)	-0.74	-0.12	7.02	0.09	0.33	0.01
11/	38 (C)	1.67	0.11	7.24	0.11	0.21	-0.02
11/	39 (C)	0.00	-0.06	8.30	0.11	0.35	-0.00
11/	40 (C)	0.00	-0.05	7.16	0.10	0.30	-0.00
11/	41 (C)	-0.04	-0.07	7.85	0.11	0.34	0.00
11/	42 (C)	-0.15	-0.07	7.82	0.11	0.34	0.00
11/	43 (C)	0.33	-0.03	7.86	0.11	0.31	-0.00
11/	44 (C)	-0.04	-0.06	7.16	0.10	0.31	0.00
11/	45 (C)	-0.15	-0.07	7.14	0.10	0.31	0.00
11/	46 (C)	0.33	-0.02	7.18	0.10	0.29	-0.00
11/	47 (C)	0.00	-0.06	7.85	0.11	0.33	-0.00

11/ 48 (C)	0.00	-0.05	7.16	0.10	0.30	-0.00
13/ 1	-0.00	-0.08	9.27	0.10	-0.28	-0.00
13/ 2	0.0	-0.02	2.95	0.03	-0.09	-0.00
13/ 3	0.00	-0.30	-0.08	-0.01	0.00	-0.01
13/ 4	0.00	-5.17	-1.88	-0.34	0.02	0.01
13/ 5	0.00	-0.48	-0.06	-0.02	0.01	-0.01
13/ 6 (C)	-0.00	-0.14	16.93	0.18	-0.51	-0.00
13/ 7 (C)	0.00	-0.36	16.87	0.17	-0.51	-0.00
13/ 8 (C)	0.00	-4.02	15.52	-0.08	-0.50	0.00
13/ 9 (C)	0.00	-0.50	16.89	0.16	-0.51	-0.01
13/ 10 (C)	-0.00	-0.11	12.51	0.13	-0.38	-0.00
13/ 11 (C)	-0.00	-0.12	13.69	0.14	-0.41	-0.00
13/ 12 (C)	0.00	-0.34	13.63	0.13	-0.41	-0.00
13/ 13 (C)	0.00	-3.99	12.28	-0.12	-0.40	0.00
13/ 14 (C)	0.00	-0.47	13.64	0.12	-0.41	-0.01
13/ 15 (C)	-0.00	-0.08	9.27	0.10	-0.28	-0.00
13/ 16 (C)	0.00	-0.57	15.48	0.14	-0.47	-0.01
13/ 17 (C)	0.00	-7.89	12.78	-0.35	-0.44	0.01
13/ 18 (C)	0.00	-0.85	15.52	0.13	-0.46	-0.01
13/ 19 (C)	0.00	-0.55	12.39	0.11	-0.37	-0.01
13/ 20 (C)	0.00	-7.86	9.69	-0.39	-0.35	0.01
13/ 21 (C)	0.00	-0.82	12.42	0.09	-0.37	-0.01
13/ 22 (C)	0.00	-0.55	12.24	0.11	-0.37	-0.01
13/ 23 (C)	0.00	-7.86	9.54	-0.39	-0.34	0.01
13/ 24 (C)	0.00	-0.82	12.28	0.09	-0.36	-0.01
13/ 25 (C)	0.00	-0.52	9.15	0.08	-0.28	-0.01
13/ 26 (C)	0.00	-7.83	6.45	-0.42	-0.25	0.01
13/ 27 (C)	0.00	-0.80	9.18	0.06	-0.27	-0.01
13/ 28 (C)	-0.00	-0.10	12.21	0.13	-0.37	-0.00
13/ 29 (C)	0.00	-0.25	12.17	0.12	-0.37	-0.00
13/ 30 (C)	0.00	-2.69	11.27	-0.04	-0.36	0.00
13/ 31 (C)	0.00	-0.34	12.18	0.11	-0.36	-0.00
13/ 32 (C)	-0.00	-0.08	9.27	0.10	-0.28	-0.00
13/ 33 (C)	0.00	-0.39	11.25	0.10	-0.34	-0.01
13/ 34 (C)	0.00	-5.27	9.45	-0.23	-0.32	0.01
13/ 35 (C)	0.00	-0.57	11.27	0.09	-0.34	-0.01
13/ 36 (C)	0.00	-0.37	9.19	0.08	-0.28	-0.01
13/ 37 (C)	0.00	-5.25	7.39	-0.25	-0.26	0.01
13/ 38 (C)	0.00	-0.56	9.21	0.07	-0.27	-0.01
13/ 39 (C)	-0.00	-0.09	10.74	0.11	-0.32	-0.00
13/ 40 (C)	-0.00	-0.08	9.27	0.10	-0.28	-0.00
13/ 41 (C)	0.00	-0.14	10.13	0.10	-0.31	-0.00
13/ 42 (C)	0.00	-1.12	9.77	0.04	-0.30	0.00
13/ 43 (C)	0.00	-0.18	10.14	0.10	-0.30	-0.00
13/ 44 (C)	0.00	-0.14	9.25	0.09	-0.28	-0.00
13/ 45 (C)	0.00	-1.11	8.89	0.03	-0.28	0.00
13/ 46 (C)	0.00	-0.17	9.25	0.09	-0.28	-0.00
13/ 47 (C)	-0.00	-0.09	10.15	0.11	-0.31	-0.00
13/ 48 (C)	-0.00	-0.08	9.27	0.10	-0.28	-0.00
14/ 1	0.00	0.01	8.32	0.10	0.13	-0.00
14/ 2	0.00	0.00	2.65	0.03	0.04	-0.00
14/ 3	0.00	-0.32	-0.09	-0.02	0.00	0.00
14/ 4	-0.00	-5.18	-1.81	-0.34	-0.01	-0.00
14/ 5	0.00	-0.48	-0.07	-0.03	-0.00	0.00
14/ 6 (C)	0.00	0.01	15.20	0.19	0.23	-0.00
14/ 7 (C)	0.00	-0.23	15.13	0.17	0.23	0.00
14/ 8 (C)	-0.00	-3.88	13.84	-0.07	0.23	-0.00
14/ 9 (C)	0.00	-0.35	15.15	0.17	0.23	0.00
14/ 10 (C)	0.00	0.01	11.23	0.14	0.17	-0.00
14/ 11 (C)	0.00	0.01	12.29	0.15	0.19	-0.00
14/ 12 (C)	0.00	-0.24	12.22	0.14	0.19	0.00

14/	13 (C)	-0.00	-3.88	10.93	-0.11	0.18	-0.00
14/	14 (C)	0.00	-0.35	12.23	0.13	0.18	0.00
14/	15 (C)	0.00	0.01	8.32	0.10	0.13	-0.00
14/	16 (C)	0.00	-0.48	13.87	0.15	0.21	0.00
14/	17 (C)	-0.00	-7.76	11.29	-0.34	0.20	-0.00
14/	18 (C)	0.00	-0.71	13.90	0.13	0.21	0.01
14/	19 (C)	0.00	-0.48	11.09	0.11	0.17	0.00
14/	20 (C)	-0.00	-7.76	8.51	-0.38	0.16	-0.00
14/	21 (C)	0.00	-0.71	11.12	0.10	0.16	0.01
14/	22 (C)	0.00	-0.48	10.96	0.11	0.17	0.00
14/	23 (C)	-0.00	-7.76	8.38	-0.38	0.16	-0.00
14/	24 (C)	0.00	-0.71	10.99	0.10	0.16	0.01
14/	25 (C)	0.00	-0.48	8.18	0.08	0.13	0.00
14/	26 (C)	-0.00	-7.76	5.60	-0.41	0.11	-0.00
14/	27 (C)	0.00	-0.71	8.21	0.06	0.12	0.01
14/	28 (C)	0.00	0.01	10.97	0.13	0.17	-0.00
14/	29 (C)	0.00	-0.16	10.92	0.13	0.17	0.00
14/	30 (C)	-0.00	-2.58	10.06	-0.04	0.16	-0.00
14/	31 (C)	0.00	-0.23	10.93	0.12	0.16	0.00
14/	32 (C)	0.00	0.01	8.32	0.10	0.13	-0.00
14/	33 (C)	0.00	-0.32	10.08	0.11	0.16	0.00
14/	34 (C)	-0.00	-5.17	8.36	-0.22	0.15	-0.00
14/	35 (C)	0.00	-0.47	10.10	0.10	0.15	0.00
14/	36 (C)	0.00	-0.32	8.23	0.08	0.13	0.00
14/	37 (C)	-0.00	-5.17	6.51	-0.24	0.12	-0.00
14/	38 (C)	0.00	-0.47	8.25	0.08	0.12	0.00
14/	39 (C)	0.00	0.01	9.64	0.12	0.15	-0.00
14/	40 (C)	0.00	0.01	8.32	0.10	0.13	-0.00
14/	41 (C)	0.00	-0.06	9.09	0.11	0.14	0.00
14/	42 (C)	-0.00	-1.03	8.75	0.04	0.14	-0.00
14/	43 (C)	0.00	-0.09	9.10	0.11	0.14	0.00
14/	44 (C)	0.00	-0.06	8.30	0.10	0.13	0.00
14/	45 (C)	-0.00	-1.03	7.96	0.03	0.13	-0.00
14/	46 (C)	0.00	-0.09	8.31	0.10	0.13	0.00
14/	47 (C)	0.00	0.01	9.11	0.11	0.14	-0.00
14/	48 (C)	0.00	0.01	8.32	0.10	0.13	-0.00
15/	1	-0.00	-0.14	7.05	0.09	-0.25	0.00
15/	2	0.0	-0.04	2.23	0.03	-0.08	0.0
15/	3	0.00	0.20	0.07	0.02	0.00	-0.00
15/	4	0.04	0.11	-0.34	0.00	-0.01	-0.00
15/	5	0.00	-0.02	0.03	0.00	-0.00	-0.00
15/	6 (C)	-0.00	-0.25	12.86	0.17	-0.47	0.00
15/	7 (C)	0.00	-0.10	12.91	0.18	-0.47	-0.00
15/	8 (C)	0.03	-0.17	12.60	0.17	-0.47	-0.00
15/	9 (C)	0.00	-0.26	12.88	0.17	-0.47	-0.00
15/	10 (C)	-0.00	-0.18	9.52	0.12	-0.34	0.00
15/	11 (C)	-0.00	-0.20	10.39	0.14	-0.38	0.00
15/	12 (C)	0.00	-0.05	10.44	0.15	-0.38	-0.00
15/	13 (C)	0.03	-0.12	10.13	0.14	-0.38	-0.00
15/	14 (C)	0.00	-0.21	10.41	0.14	-0.38	-0.00
15/	15 (C)	-0.00	-0.14	7.05	0.09	-0.25	0.00
15/	16 (C)	0.00	0.07	11.96	0.18	-0.43	-0.01
15/	17 (C)	0.07	-0.07	11.34	0.16	-0.44	-0.00
15/	18 (C)	0.00	-0.25	11.91	0.16	-0.43	-0.01
15/	19 (C)	0.00	0.11	9.62	0.15	-0.34	-0.01
15/	20 (C)	0.07	-0.02	9.00	0.13	-0.36	-0.00
15/	21 (C)	0.00	-0.21	9.57	0.13	-0.35	-0.01
15/	22 (C)	0.00	0.11	9.49	0.15	-0.34	-0.01
15/	23 (C)	0.07	-0.02	8.87	0.12	-0.35	-0.00
15/	24 (C)	0.00	-0.20	9.44	0.13	-0.34	-0.01
15/	25 (C)	0.00	0.16	7.15	0.12	-0.25	-0.01

15/	26 (C)	0.07	0.03	6.53	0.09	-0.27	-0.00
15/	27 (C)	0.00	-0.16	7.10	0.10	-0.26	-0.01
15/	28 (C)	-0.00	-0.18	9.28	0.12	-0.34	0.00
15/	29 (C)	0.00	-0.08	9.31	0.13	-0.34	-0.00
15/	30 (C)	0.02	-0.12	9.10	0.12	-0.34	-0.00
15/	31 (C)	0.00	-0.19	9.29	0.12	-0.34	-0.00
15/	32 (C)	-0.00	-0.14	7.05	0.09	-0.25	0.00
15/	33 (C)	0.00	0.03	8.68	0.13	-0.31	-0.00
15/	34 (C)	0.04	-0.06	8.26	0.11	-0.32	-0.00
15/	35 (C)	0.00	-0.18	8.64	0.12	-0.31	-0.00
15/	36 (C)	0.00	0.06	7.12	0.11	-0.25	-0.00
15/	37 (C)	0.04	-0.03	6.70	0.09	-0.26	-0.00
15/	38 (C)	0.00	-0.15	7.08	0.10	-0.26	-0.00
15/	39 (C)	-0.00	-0.16	8.16	0.11	-0.30	0.00
15/	40 (C)	-0.00	-0.14	7.05	0.09	-0.25	0.00
15/	41 (C)	-0.00	-0.11	7.73	0.10	-0.28	-0.00
15/	42 (C)	0.01	-0.13	7.65	0.10	-0.28	-0.00
15/	43 (C)	0.00	-0.15	7.72	0.10	-0.28	-0.00
15/	44 (C)	-0.00	-0.10	7.06	0.10	-0.25	-0.00
15/	45 (C)	0.01	-0.11	6.98	0.09	-0.26	-0.00
15/	46 (C)	0.00	-0.14	7.06	0.09	-0.26	-0.00
15/	47 (C)	-0.00	-0.15	7.72	0.10	-0.28	0.00
15/	48 (C)	-0.00	-0.14	7.05	0.09	-0.25	0.00
18/	1	0.0	0.0	3.18	0.0	-0.00	-0.00
18/	2	0.0	-0.00	1.01	0.0	0.00	0.00
18/	3	0.0	-0.08	-0.01	0.0	0.0	0.0
18/	4	0.0	0.06	-0.21	0.0	-0.00	-0.00
18/	5	0.00	-0.09	0.02	0.0	-0.00	0.0
18/	6 (C)	0.0	-0.00	5.80	0.0	-0.00	0.00
18/	7 (C)	0.0	-0.06	5.80	0.0	-0.00	0.00
18/	8 (C)	0.0	0.05	5.64	0.0	-0.00	-0.00
18/	9 (C)	0.00	-0.07	5.82	0.0	-0.00	0.00
18/	10 (C)	0.0	0.0	4.29	0.0	-0.00	-0.00
18/	11 (C)	0.0	-0.00	4.69	0.0	-0.00	0.00
18/	12 (C)	0.0	-0.06	4.69	0.0	-0.00	0.00
18/	13 (C)	0.0	0.05	4.53	0.0	-0.00	-0.00
18/	14 (C)	0.00	-0.07	4.71	0.0	-0.00	0.00
18/	15 (C)	0.0	0.0	3.18	0.0	-0.00	-0.00
18/	16 (C)	0.0	-0.11	5.34	0.0	-0.00	-0.00
18/	17 (C)	0.0	0.10	5.03	0.0	-0.00	-0.00
18/	18 (C)	0.00	-0.14	5.38	0.0	-0.00	-0.00
18/	19 (C)	0.0	-0.11	4.28	0.0	-0.00	-0.00
18/	20 (C)	0.0	0.10	3.97	0.0	-0.00	-0.00
18/	21 (C)	0.00	-0.14	4.32	0.0	-0.00	-0.00
18/	22 (C)	0.0	-0.11	4.22	0.0	-0.00	0.00
18/	23 (C)	0.0	0.10	3.92	0.0	-0.00	-0.00
18/	24 (C)	0.00	-0.14	4.27	0.0	-0.00	0.00
18/	25 (C)	0.0	-0.11	3.16	0.0	-0.00	-0.00
18/	26 (C)	0.0	0.10	2.86	0.0	-0.00	-0.00
18/	27 (C)	0.00	-0.14	3.21	0.0	-0.00	-0.00
18/	28 (C)	0.0	-0.00	4.19	0.0	-0.00	0.0
18/	29 (C)	0.0	-0.04	4.18	0.0	-0.00	0.0
18/	30 (C)	0.0	0.03	4.08	0.0	-0.00	-0.00
18/	31 (C)	0.00	-0.05	4.20	0.0	-0.00	0.0
18/	32 (C)	0.0	0.0	3.18	0.0	-0.00	-0.00
18/	33 (C)	0.0	-0.08	3.88	0.0	-0.00	-0.00
18/	34 (C)	0.0	0.06	3.67	0.0	-0.00	-0.00
18/	35 (C)	0.00	-0.09	3.91	0.0	-0.00	-0.00
18/	36 (C)	0.0	-0.08	3.17	0.0	-0.00	-0.00
18/	37 (C)	0.0	0.06	2.96	0.0	-0.00	-0.00
18/	38 (C)	0.00	-0.09	3.20	0.0	-0.00	-0.00

18/	39 (C)	0.0	-0.00	3.68	0.0	-0.00	-0.00
18/	40 (C)	0.0	0.0	3.18	0.0	-0.00	-0.00
18/	41 (C)	0.0	-0.02	3.48	0.0	-0.00	-0.00
18/	42 (C)	0.0	0.01	3.44	0.0	-0.00	-0.00
18/	43 (C)	0.00	-0.02	3.48	0.0	-0.00	-0.00
18/	44 (C)	0.0	-0.02	3.17	0.0	-0.00	-0.00
18/	45 (C)	0.0	0.01	3.13	0.0	-0.00	-0.00
18/	46 (C)	0.00	-0.02	3.18	0.0	-0.00	-0.00
18/	47 (C)	0.0	-0.00	3.48	0.0	-0.00	-0.00
18/	48 (C)	0.0	0.0	3.18	0.0	-0.00	-0.00
21/	1	0.0	0.00	0.03	0.0	0.0	0.00
21/	2	0.0	0.0	0.0	0.0	0.0	0.0
21/	3	-1.73	-0.01	-0.00	0.0	0.0	0.0
21/	4	0.75	0.05	-0.17	0.0	0.0	-0.00
21/	5	0.25	-0.02	0.00	0.0	0.0	0.0
21/	6 (C)	0.0	0.00	0.04	0.0	0.0	0.00
21/	7 (C)	-1.30	-0.01	0.03	0.0	0.0	0.00
21/	8 (C)	0.56	0.04	-0.09	0.0	0.0	-0.00
21/	9 (C)	0.19	-0.01	0.04	0.0	0.0	0.00
21/	10 (C)	0.0	0.00	0.04	0.0	0.0	0.00
21/	11 (C)	0.0	0.00	0.03	0.0	0.0	0.00
21/	12 (C)	-1.30	-0.01	0.03	0.0	0.0	0.00
21/	13 (C)	0.56	0.04	-0.10	0.0	0.0	-0.00
21/	14 (C)	0.19	-0.01	0.03	0.0	0.0	0.00
21/	15 (C)	0.0	0.00	0.03	0.0	0.0	0.00
21/	16 (C)	-2.59	-0.02	0.03	0.0	0.0	0.00
21/	17 (C)	1.13	0.08	-0.21	0.0	0.0	-0.00
21/	18 (C)	0.38	-0.03	0.04	0.0	0.0	0.00
21/	19 (C)	-2.59	-0.02	0.03	0.0	0.0	0.00
21/	20 (C)	1.13	0.08	-0.21	0.0	0.0	-0.00
21/	21 (C)	0.38	-0.03	0.04	0.0	0.0	0.00
21/	22 (C)	-2.59	-0.02	0.02	0.0	0.0	0.00
21/	23 (C)	1.13	0.08	-0.22	0.0	0.0	-0.00
21/	24 (C)	0.38	-0.03	0.03	0.0	0.0	0.00
21/	25 (C)	-2.59	-0.02	0.02	0.0	0.0	0.00
21/	26 (C)	1.13	0.08	-0.22	0.0	0.0	-0.00
21/	27 (C)	0.38	-0.03	0.03	0.0	0.0	0.00
21/	28 (C)	0.0	0.00	0.03	0.0	0.0	0.00
21/	29 (C)	-0.86	-0.01	0.03	0.0	0.0	0.00
21/	30 (C)	0.38	0.03	-0.06	0.0	0.0	-0.00
21/	31 (C)	0.13	-0.01	0.03	0.0	0.0	0.00
21/	32 (C)	0.0	0.00	0.03	0.0	0.0	0.00
21/	33 (C)	-1.73	-0.01	0.02	0.0	0.0	0.00
21/	34 (C)	0.75	0.05	-0.14	0.0	0.0	-0.00
21/	35 (C)	0.25	-0.02	0.03	0.0	0.0	0.00
21/	36 (C)	-1.73	-0.01	0.02	0.0	0.0	0.00
21/	37 (C)	0.75	0.05	-0.14	0.0	0.0	-0.00
21/	38 (C)	0.25	-0.02	0.03	0.0	0.0	0.00
21/	39 (C)	0.0	0.00	0.03	0.0	0.0	0.00
21/	40 (C)	0.0	0.00	0.03	0.0	0.0	0.00
21/	41 (C)	-0.35	-0.00	0.03	0.0	0.0	0.00
21/	42 (C)	0.15	0.01	-0.01	0.0	0.0	-0.00
21/	43 (C)	0.05	-0.00	0.03	0.0	0.0	0.00
21/	44 (C)	-0.35	-0.00	0.03	0.0	0.0	0.00
21/	45 (C)	0.15	0.01	-0.01	0.0	0.0	-0.00
21/	46 (C)	0.05	-0.00	0.03	0.0	0.0	0.00
21/	47 (C)	0.0	0.00	0.03	0.0	0.0	0.00
21/	48 (C)	0.0	0.00	0.03	0.0	0.0	0.00
26/	1	0.0	-0.00	4.09	0.0	0.0	0.0
26/	2	0.0	0.00	1.30	0.0	-0.00	0.0
26/	3	0.0	-0.10	-0.02	0.0	0.00	0.00

26/	4	0.0	0.08	-0.27	0.0	0.0	-0.00
26/	5	0.00	-0.12	0.02	0.0	0.00	0.00
26/	6 (C)	0.0	-0.00	7.47	0.0	-0.00	0.0
26/	7 (C)	0.0	-0.07	7.45	0.0	-0.00	0.00
26/	8 (C)	0.0	0.06	7.26	0.0	-0.00	-0.00
26/	9 (C)	0.00	-0.09	7.48	0.0	-0.00	0.00
26/	10 (C)	0.0	-0.00	5.52	0.0	0.0	0.0
26/	11 (C)	0.0	-0.00	6.04	0.0	-0.00	0.0
26/	12 (C)	0.0	-0.07	6.02	0.0	-0.00	0.00
26/	13 (C)	0.0	0.06	5.83	0.0	-0.00	-0.00
26/	14 (C)	0.00	-0.09	6.05	0.0	-0.00	0.00
26/	15 (C)	0.0	-0.00	4.09	0.0	0.0	0.0
26/	16 (C)	0.0	-0.15	6.86	0.0	-0.00	0.00
26/	17 (C)	0.0	0.12	6.47	0.0	-0.00	-0.00
26/	18 (C)	0.00	-0.18	6.91	0.0	-0.00	0.00
26/	19 (C)	0.0	-0.15	5.49	0.0	0.00	0.00
26/	20 (C)	0.0	0.12	5.11	0.0	0.0	-0.00
26/	21 (C)	0.00	-0.18	5.55	0.0	0.00	0.00
26/	22 (C)	0.0	-0.15	5.43	0.0	-0.00	0.00
26/	23 (C)	0.0	0.12	5.04	0.0	-0.00	-0.00
26/	24 (C)	0.00	-0.18	5.48	0.0	-0.00	0.00
26/	25 (C)	0.0	-0.15	4.06	0.0	0.00	0.00
26/	26 (C)	0.0	0.12	3.68	0.0	0.0	-0.00
26/	27 (C)	0.00	-0.18	4.12	0.0	0.00	0.00
26/	28 (C)	0.0	-0.00	5.39	0.0	-0.00	0.0
26/	29 (C)	0.0	-0.05	5.38	0.0	-0.00	0.00
26/	30 (C)	0.0	0.04	5.25	0.0	-0.00	-0.00
26/	31 (C)	0.00	-0.06	5.40	0.0	-0.00	0.00
26/	32 (C)	0.0	-0.00	4.09	0.0	0.0	0.0
26/	33 (C)	0.0	-0.10	4.98	0.0	-0.00	0.00
26/	34 (C)	0.0	0.08	4.72	0.0	-0.00	-0.00
26/	35 (C)	0.00	-0.12	5.02	0.0	-0.00	0.00
26/	36 (C)	0.0	-0.10	4.07	0.0	0.00	0.00
26/	37 (C)	0.0	0.08	3.81	0.0	0.0	-0.00
26/	38 (C)	0.00	-0.12	4.11	0.0	0.00	0.00
26/	39 (C)	0.0	-0.00	4.74	0.0	-0.00	0.0
26/	40 (C)	0.0	-0.00	4.09	0.0	0.0	0.0
26/	41 (C)	0.0	-0.02	4.47	0.0	-0.00	0.00
26/	42 (C)	0.0	0.02	4.42	0.0	-0.00	-0.00
26/	43 (C)	0.00	-0.02	4.48	0.0	-0.00	0.00
26/	44 (C)	0.0	-0.02	4.08	0.0	0.00	0.00
26/	45 (C)	0.0	0.02	4.03	0.0	0.0	-0.00
26/	46 (C)	0.00	-0.02	4.09	0.0	0.00	0.00
26/	47 (C)	0.0	-0.00	4.48	0.0	-0.00	0.0
26/	48 (C)	0.0	-0.00	4.09	0.0	0.0	0.0
28/	1	0.0	0.00	4.96	0.0	-0.00	0.0
28/	2	0.0	-0.00	1.58	0.0	0.0	0.0
28/	3	0.0	-0.12	-0.02	0.0	-0.00	0.00
28/	4	0.0	0.10	-0.33	0.0	-0.00	-0.00
28/	5	0.00	-0.14	-0.02	0.0	0.00	0.00
28/	6 (C)	0.0	0.00	9.07	0.0	-0.00	0.0
28/	7 (C)	0.0	-0.09	9.05	0.0	-0.00	0.00
28/	8 (C)	0.0	0.08	8.82	0.0	-0.00	-0.00
28/	9 (C)	0.00	-0.11	9.05	0.0	-0.00	0.00
28/	10 (C)	0.0	0.00	6.70	0.0	-0.00	0.0
28/	11 (C)	0.0	0.00	7.33	0.0	-0.00	0.0
28/	12 (C)	0.0	-0.09	7.31	0.0	-0.00	0.00
28/	13 (C)	0.0	0.08	7.08	0.0	-0.00	-0.00
28/	14 (C)	0.00	-0.11	7.31	0.0	-0.00	0.00
28/	15 (C)	0.0	0.00	4.96	0.0	-0.00	0.0
28/	16 (C)	0.0	-0.18	8.33	0.0	-0.00	0.00

28/	17 (C)	0.0	0.15	7.86	0.0	-0.00	-0.00
28/	18 (C)	0.00	-0.22	8.33	0.0	-0.00	0.00
28/	19 (C)	0.0	-0.18	6.67	0.0	-0.00	0.00
28/	20 (C)	0.0	0.15	6.20	0.0	-0.00	-0.00
28/	21 (C)	0.00	-0.22	6.67	0.0	-0.00	0.00
28/	22 (C)	0.0	-0.18	6.59	0.0	-0.00	0.00
28/	23 (C)	0.0	0.15	6.12	0.0	-0.00	-0.00
28/	24 (C)	0.00	-0.22	6.59	0.0	-0.00	0.00
28/	25 (C)	0.0	-0.18	4.93	0.0	-0.00	0.00
28/	26 (C)	0.0	0.15	4.46	0.0	-0.00	-0.00
28/	27 (C)	0.00	-0.22	4.93	0.0	-0.00	0.00
28/	28 (C)	0.0	0.00	6.54	0.0	-0.00	0.0
28/	29 (C)	0.0	-0.06	6.53	0.0	-0.00	0.00
28/	30 (C)	0.0	0.05	6.37	0.0	-0.00	-0.00
28/	31 (C)	0.00	-0.07	6.53	0.0	-0.00	0.00
28/	32 (C)	0.0	0.00	4.96	0.0	-0.00	0.0
28/	33 (C)	0.0	-0.12	6.05	0.0	-0.00	0.00
28/	34 (C)	0.0	0.10	5.74	0.0	-0.00	-0.00
28/	35 (C)	0.00	-0.14	6.05	0.0	-0.00	0.00
28/	36 (C)	0.0	-0.12	4.94	0.0	-0.00	0.00
28/	37 (C)	0.0	0.10	4.63	0.0	-0.00	-0.00
28/	38 (C)	0.00	-0.14	4.94	0.0	-0.00	0.00
28/	39 (C)	0.0	0.00	5.75	0.0	-0.00	0.0
28/	40 (C)	0.0	0.00	4.96	0.0	-0.00	0.0
28/	41 (C)	0.0	-0.02	5.43	0.0	-0.00	0.00
28/	42 (C)	0.0	0.02	5.37	0.0	-0.00	-0.00
28/	43 (C)	0.00	-0.03	5.43	0.0	-0.00	0.00
28/	44 (C)	0.0	-0.02	4.96	0.0	-0.00	0.00
28/	45 (C)	0.0	0.02	4.90	0.0	-0.00	-0.00
28/	46 (C)	0.00	-0.03	4.96	0.0	-0.00	0.00
28/	47 (C)	0.0	0.00	5.44	0.0	-0.00	0.0
28/	48 (C)	0.0	0.00	4.96	0.0	-0.00	0.0
29/	1	0.0	0.00	4.20	0.0	-0.00	0.00
29/	2	0.0	0.00	1.34	0.0	0.0	0.00
29/	3	0.0	-0.10	-0.02	0.0	0.00	0.0
29/	4	0.0	0.09	-0.28	0.0	0.00	0.0
29/	5	0.00	-0.12	0.01	0.0	0.00	-0.00
29/	6 (C)	0.0	0.00	7.68	0.0	-0.00	0.00
29/	7 (C)	0.0	-0.08	7.66	0.0	-0.00	0.00
29/	8 (C)	0.0	0.06	7.46	0.0	-0.00	0.00
29/	9 (C)	0.00	-0.09	7.69	0.0	-0.00	-0.00
29/	10 (C)	0.0	0.00	5.67	0.0	-0.00	0.00
29/	11 (C)	0.0	0.00	6.20	0.0	-0.00	0.00
29/	12 (C)	0.0	-0.08	6.19	0.0	-0.00	0.00
29/	13 (C)	0.0	0.06	5.99	0.0	-0.00	0.00
29/	14 (C)	0.00	-0.09	6.22	0.0	-0.00	-0.00
29/	15 (C)	0.0	0.00	4.20	0.0	-0.00	0.00
29/	16 (C)	0.0	-0.15	7.05	0.0	-0.00	0.00
29/	17 (C)	0.0	0.13	6.65	0.0	-0.00	0.00
29/	18 (C)	0.00	-0.18	7.10	0.0	-0.00	-0.00
29/	19 (C)	0.0	-0.15	5.65	0.0	-0.00	0.00
29/	20 (C)	0.0	0.13	5.25	0.0	-0.00	0.00
29/	21 (C)	0.00	-0.18	5.69	0.0	-0.00	-0.00
29/	22 (C)	0.0	-0.15	5.58	0.0	-0.00	0.00
29/	23 (C)	0.0	0.13	5.18	0.0	-0.00	0.00
29/	24 (C)	0.00	-0.18	5.62	0.0	-0.00	-0.00
29/	25 (C)	0.0	-0.15	4.18	0.0	-0.00	0.00
29/	26 (C)	0.0	0.13	3.78	0.0	-0.00	0.00
29/	27 (C)	0.00	-0.18	4.22	0.0	-0.00	-0.00
29/	28 (C)	0.0	0.00	5.54	0.0	-0.00	0.00
29/	29 (C)	0.0	-0.05	5.53	0.0	-0.00	0.00

29/	30 (C)	0.0	0.04	5.40	0.0	-0.00	0.00
29/	31 (C)	0.00	-0.06	5.54	0.0	-0.00	-0.00
29/	32 (C)	0.0	0.00	4.20	0.0	-0.00	0.00
29/	33 (C)	0.0	-0.10	5.12	0.0	-0.00	0.00
29/	34 (C)	0.0	0.09	4.86	0.0	-0.00	0.00
29/	35 (C)	0.00	-0.12	5.15	0.0	-0.00	-0.00
29/	36 (C)	0.0	-0.10	4.18	0.0	-0.00	0.00
29/	37 (C)	0.0	0.09	3.92	0.0	-0.00	0.00
29/	38 (C)	0.00	-0.12	4.22	0.0	-0.00	-0.00
29/	39 (C)	0.0	0.00	4.87	0.0	-0.00	0.00
29/	40 (C)	0.0	0.00	4.20	0.0	-0.00	0.00
29/	41 (C)	0.0	-0.02	4.60	0.0	-0.00	0.00
29/	42 (C)	0.0	0.02	4.55	0.0	-0.00	0.00
29/	43 (C)	0.00	-0.02	4.60	0.0	-0.00	-0.00
29/	44 (C)	0.0	-0.02	4.20	0.0	-0.00	0.00
29/	45 (C)	0.0	0.02	4.14	0.0	-0.00	0.00
29/	46 (C)	0.00	-0.02	4.20	0.0	-0.00	-0.00
29/	47 (C)	0.0	0.00	4.60	0.0	-0.00	0.00
29/	48 (C)	0.0	0.00	4.20	0.0	-0.00	0.00
30/	1	0.0	0.00	4.01	0.0	0.0	-0.00
30/	2	0.0	-0.00	1.28	0.0	-0.00	0.0
30/	3	0.0	-0.10	-0.02	0.0	0.0	0.00
30/	4	0.0	0.08	-0.27	0.0	0.00	0.00
30/	5	0.00	-0.12	0.02	0.0	0.00	-0.00
30/	6 (C)	0.0	-0.00	7.33	0.0	-0.00	-0.00
30/	7 (C)	0.0	-0.07	7.32	0.0	-0.00	0.00
30/	8 (C)	0.0	0.06	7.13	0.0	-0.00	0.00
30/	9 (C)	0.00	-0.09	7.35	0.0	-0.00	-0.00
30/	10 (C)	0.0	0.00	5.42	0.0	0.0	-0.00
30/	11 (C)	0.0	-0.00	5.92	0.0	-0.00	-0.00
30/	12 (C)	0.0	-0.07	5.91	0.0	-0.00	0.00
30/	13 (C)	0.0	0.06	5.72	0.0	-0.00	0.00
30/	14 (C)	0.00	-0.09	5.94	0.0	-0.00	-0.00
30/	15 (C)	0.0	0.00	4.01	0.0	0.0	-0.00
30/	16 (C)	0.0	-0.14	6.73	0.0	-0.00	0.00
30/	17 (C)	0.0	0.12	6.35	0.0	-0.00	0.00
30/	18 (C)	0.00	-0.17	6.79	0.0	-0.00	-0.00
30/	19 (C)	0.0	-0.14	5.39	0.0	0.0	0.00
30/	20 (C)	0.0	0.12	5.01	0.0	0.00	0.00
30/	21 (C)	0.00	-0.17	5.45	0.0	0.00	-0.00
30/	22 (C)	0.0	-0.14	5.33	0.0	-0.00	0.00
30/	23 (C)	0.0	0.12	4.95	0.0	-0.00	0.00
30/	24 (C)	0.00	-0.17	5.39	0.0	-0.00	-0.00
30/	25 (C)	0.0	-0.14	3.99	0.0	0.0	0.00
30/	26 (C)	0.0	0.12	3.61	0.0	0.00	0.00
30/	27 (C)	0.00	-0.17	4.05	0.0	0.00	-0.00
30/	28 (C)	0.0	-0.00	5.29	0.0	-0.00	-0.00
30/	29 (C)	0.0	-0.05	5.28	0.0	-0.00	0.00
30/	30 (C)	0.0	0.04	5.15	0.0	-0.00	0.00
30/	31 (C)	0.00	-0.06	5.30	0.0	-0.00	-0.00
30/	32 (C)	0.0	0.00	4.01	0.0	0.0	-0.00
30/	33 (C)	0.0	-0.10	4.89	0.0	-0.00	0.00
30/	34 (C)	0.0	0.08	4.64	0.0	-0.00	0.00
30/	35 (C)	0.00	-0.12	4.93	0.0	-0.00	-0.00
30/	36 (C)	0.0	-0.10	4.00	0.0	0.0	0.00
30/	37 (C)	0.0	0.08	3.74	0.0	0.00	0.00
30/	38 (C)	0.00	-0.12	4.04	0.0	0.00	-0.00
30/	39 (C)	0.0	-0.00	4.65	0.0	-0.00	-0.00
30/	40 (C)	0.0	0.00	4.01	0.0	0.0	-0.00
30/	41 (C)	0.0	-0.02	4.39	0.0	-0.00	0.00
30/	42 (C)	0.0	0.02	4.34	0.0	-0.00	0.00

30/ 43 (C)	0.00	-0.02	4.40	0.0	-0.00	-0.00
30/ 44 (C)	0.0	-0.02	4.01	0.0	0.0	0.00
30/ 45 (C)	0.0	0.02	3.96	0.0	0.00	0.00
30/ 46 (C)	0.00	-0.02	4.02	0.0	0.00	-0.00
30/ 47 (C)	0.0	-0.00	4.39	0.0	-0.00	-0.00
30/ 48 (C)	0.0	0.00	4.01	0.0	0.0	-0.00
Case 1	DL1					
Sum of val.	0.00	-0.00	109.71	0.15	-0.16	-0.00
Sum of reac.	0.00	-0.00	109.71	175.12	-569.38	-0.00
Sum of forc.	0.00	0.00	-109.71	-175.12	569.38	0.00
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	1.80251e-15	3.46108e-31				
Case 2	LL1					
Sum of val.	0.00	-0.00	33.29	0.05	-0.05	-0.00
Sum of reac.	0.00	-0.00	33.29	55.61	-173.05	-0.00
Sum of forc.	0.0	0.0	-33.29	-55.61	173.05	0.00
Check val.	0.00	-0.00	-0.00	0.0	0.0	-0.00
Precision	1.28842e-15	5.69303e-32				
Case 3	Wind Simulation X+ 27 m/s					
Sum of val.	-5.35	-1.01	-0.13	-0.02	-2.96	0.00
Sum of reac.	-5.35	-1.01	-0.13	2.65	-9.99	-1.37
Sum of forc.	5.35	1.01	0.13	-2.65	9.99	1.37
Check val.	0.00	-0.00	-0.00	0.00	0.00	0.00
Precision	5.53165e-14	4.09924e-28				
Case 4	Wind Simulation Y+ 27 m/s					
Sum of val.	0.04	-19.19	-2.44	4.17	-0.08	0.01
Sum of reac.	0.04	-19.19	-2.44	17.25	10.79	-98.36
Sum of forc.	-0.04	19.19	2.44	-17.25	-10.79	98.36
Check val.	0.00	0.0	0.00	-0.00	0.00	-0.00
Precision	2.41421e-15	2.78413e-31				
Case 5	Wind Simulation X- 27 m/s					
Sum of val.	5.52	-1.67	0.20	0.08	3.25	-0.03
Sum of reac.	5.52	-1.67	0.20	5.04	10.33	-12.72
Sum of forc.	-5.52	1.67	-0.20	-5.04	-10.33	12.72
Check val.	-0.00	-0.00	-0.00	0.0	-0.00	-0.00
Precision	5.79702e-14	5.66806e-28				
Case 6 (C)	ULS/1=1*1.35 + 2*1.50					
Sum of val.	0.00	-0.00	198.04	0.27	-0.30	-0.00
Sum of reac.	0.00	-0.00	198.04	319.82	-1028.24	-0.00
Sum of forc.	0.00	0.00	-198.04	-319.82	1028.24	0.00
Check val.	0.00	0.00	-0.00	0.00	0.00	-0.00
Precision	4.36602e-15	5.52641e-31				
Case 7 (C)	ULS/2=1*1.35 + 2*1.50 + 3*0.75					
Sum of val.	-4.01	-0.76	197.94	0.25	-2.52	0.00
Sum of reac.	-4.01	-0.76	197.94	321.81	-1035.73	-1.03
Sum of forc.	4.01	0.76	-197.94	-321.81	1035.73	1.03

Check val.	0.00	-0.00	-0.00	0.00	0.00	-0.00
Precision	4.58534e-14	3.07996e-28				
Case 8 (C)	ULS/3=1*1. 35 + 2*1.50 + 4*0.75					
Sum of val.	0.03	-14.39	196.21	3.40	-0.36	0.01
Sum of reac.	0.03	-14.39	196.21	332.76	-1020.15	-73.77
Sum of forc.	-0.03	14.39	-196.21	-332.76	1020.15	73.77
Check val.	0.00	0.0	-0.00	0.00	0.00	-0.00
Precision	6.17668e-15	7.61450e-31				
Case 9 (C)	ULS/4=1*1. 35 + 2*1.50 + 5*0.75					
Sum of val.	4.14	-1.25	198.19	0.33	2.13	-0.02
Sum of reac.	4.14	-1.25	198.19	323.61	-1020.50	-9.54
Sum of forc.	-4.14	1.25	-198.19	-323.61	1020.50	9.54
Check val.	-0.00	-0.00	-0.00	0.00	0.00	-0.00
Precision	4.78437e-14	4.25657e-28				
Case 10 (C)	ULS/5=1*1. 35					
Sum of val.	0.00	-0.00	148.11	0.20	-0.22	-0.00
Sum of reac.	0.00	-0.00	148.11	236.41	-768.66	-0.00
Sum of forc.	0.00	0.00	-148.11	-236.41	768.66	0.00
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	2.43339e-15	4.67245e-31				
Case 11 (C)	ULS/6=1*1. 00 + 2*1.50					
Sum of val.	0.00	-0.00	159.64	0.22	-0.24	-0.00
Sum of reac.	0.00	-0.00	159.64	258.53	-828.96	-0.00
Sum of forc.	0.00	0.00	-159.64	-258.53	828.96	0.00
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	3.73514e-15	4.31503e-31				
Case 12 (C)	ULS/7=1*1. 00 + 2*1.50 + 3*0.75					
Sum of val.	-4.01	-0.76	159.54	0.20	-2.47	0.00
Sum of reac.	-4.01	-0.76	159.54	260.52	-836.45	-1.03
Sum of forc.	4.01	0.76	-159.54	-260.52	836.45	1.03
Check val.	0.00	-0.00	0.0	0.00	0.00	-0.00
Precision	4.52225e-14	3.07875e-28				
Case 13 (C)	ULS/8=1*1. 00 + 2*1.50 + 4*0.75					
Sum of val.	0.03	-14.39	157.81	3.34	-0.31	0.01
Sum of reac.	0.03	-14.39	157.81	271.47	-820.86	-73.77
Sum of forc.	-0.03	14.39	-157.81	-271.47	820.86	73.77
Check val.	0.00	0.0	0.0	0.00	0.00	-0.00
Precision	5.54580e-15	6.40313e-31				
Case 14 (C)	ULS/9=1*1. 00 + 2*1.50 + 5*0.75					
Sum of val.	4.14	-1.25	159.79	0.28	2.19	-0.02
Sum of reac.	4.14	-1.25	159.79	262.31	-821.21	-9.54
Sum of forc.	-4.14	1.25	-159.79	-262.31	821.21	9.54
Check val.	-0.00	-0.00	0.0	0.00	0.00	-0.00

Precision	4.72128e-14	4.25536e-28				
Case 15 (C)	ULS/10=1*1 .00					
Sum of val.	0.00	-0.00	109.71	0.15	-0.16	-0.00
Sum of reac.	0.00	-0.00	109.71	175.12	-569.38	-0.00
Sum of forc.	0.00	0.00	-109.71	-175.12	569.38	0.00
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	1.80251e-15	3.46108e-31				
Case 16 (C)	ULS/11=1*1 .35 + 2*1.05 + 3*1.50					
Sum of val.	-8.02	-1.51	182.87	0.22	-4.72	0.01
Sum of reac.	-8.02	-1.51	182.87	298.78	-965.35	-2.05
Sum of forc.	8.02	1.51	-182.87	-298.78	965.35	2.05
Check val.	0.00	-0.00	-0.00	0.00	0.00	-0.00
Precision	8.67610e-14	6.15413e-28				
Case 17 (C)	ULS/12=1*1 .35 + 2*1.05 + 4*1.50					
Sum of val.	0.06	-28.79	179.40	6.50	-0.40	0.01
Sum of reac.	0.06	-28.79	179.40	320.68	-934.18	-147.55
Sum of forc.	-0.06	28.79	-179.40	-320.68	934.18	147.55
Check val.	0.00	0.0	-0.00	0.00	0.00	-0.00
Precision	7.40754e-15	9.44641e-31				
Case 18 (C)	ULS/13=1*1 .35 + 2*1.05 + 5*1.50					
Sum of val.	8.28	-2.50	183.36	0.37	4.59	-0.05
Sum of reac.	8.28	-2.50	183.36	302.36	-934.88	-19.07
Sum of forc.	-8.28	2.50	-183.36	-302.36	934.88	19.07
Check val.	-0.00	-0.00	-0.00	0.00	0.00	-0.00
Precision	9.07416e-14	8.50736e-28				
Case 19 (C)	ULS/14=1*1 .35 + 3*1.50					
Sum of val.	-8.02	-1.51	147.92	0.17	-4.67	0.01
Sum of reac.	-8.02	-1.51	147.92	240.39	-783.64	-2.05
Sum of forc.	8.02	1.51	-147.92	-240.39	783.64	2.05
Check val.	0.00	-0.00	0.0	0.00	0.00	0.00
Precision	8.54082e-14	6.15354e-28				
Case 20 (C)	ULS/15=1*1 .35 + 4*1.50					
Sum of val.	0.06	-28.79	144.45	6.45	-0.34	0.01
Sum of reac.	0.06	-28.79	144.45	262.29	-752.47	-147.55
Sum of forc.	-0.06	28.79	-144.45	-262.29	752.47	147.55
Check val.	0.00	0.0	0.0	0.00	0.00	-0.00
Precision	6.05470e-15	8.84864e-31				
Case 21 (C)	ULS/16=1*1 .35 + 5*1.50					
Sum of val.	8.28	-2.50	148.41	0.32	4.65	-0.05
Sum of reac.	8.28	-2.50	148.41	243.98	-753.18	-19.07
Sum of forc.	-8.28	2.50	-148.41	-243.98	753.18	19.07
Check val.	-0.00	-0.00	0.0	0.00	0.00	-0.00
Precision	8.93887e-14	8.50676e-28				
Case 22 (C)	ULS/17=1*1					

	.00 + 2*1.05 + 3*1.50					
Sum of val.	-8.02	-1.51	144.47	0.16	-4.66	0.01
Sum of reac.	-8.02	-1.51	144.47	237.49	-766.06	-2.05
Sum of forc.	8.02	1.51	-144.47	-237.49	766.06	2.05
Check val.	0.00	-0.00	0.0	0.00	0.00	-0.00
Precision	8.61302e-14	6.15292e-28				
Case 23 (C)	ULS/18=1*1 .00 + 2*1.05 + 4*1.50					
Sum of val.	0.06	-28.79	141.01	6.45	-0.34	0.01
Sum of reac.	0.06	-28.79	141.01	259.39	-734.89	-147.55
Sum of forc.	-0.06	28.79	-141.01	-259.39	734.89	147.55
Check val.	0.00	0.0	0.0	0.00	0.00	-0.00
Precision	6.77667e-15	8.23504e-31				
Case 24 (C)	ULS/19=1*1 .00 + 2*1.05 + 5*1.50					
Sum of val.	8.28	-2.50	144.96	0.32	4.65	-0.05
Sum of reac.	8.28	-2.50	144.96	241.07	-735.60	-19.07
Sum of forc.	-8.28	2.50	-144.96	-241.07	735.60	19.07
Check val.	-0.00	-0.00	0.0	0.00	0.0	-0.00
Precision	9.01107e-14	8.50615e-28				
Case 25 (C)	ULS/20=1*1 .00 + 3*1.50					
Sum of val.	-8.02	-1.51	109.52	0.11	-4.61	0.01
Sum of reac.	-8.02	-1.51	109.52	179.10	-584.36	-2.05
Sum of forc.	8.02	1.51	-109.52	-179.10	584.36	2.05
Check val.	0.00	-0.00	0.0	0.00	0.00	0.00
Precision	8.47773e-14	6.15232e-28				
Case 26 (C)	ULS/21=1*1 .00 + 4*1.50					
Sum of val.	0.06	-28.79	106.06	6.40	-0.29	0.01
Sum of reac.	0.06	-28.79	106.06	201.00	-553.19	-147.55
Sum of forc.	-0.06	28.79	-106.06	-201.00	553.19	147.55
Check val.	0.00	0.0	0.0	0.00	0.00	-0.00
Precision	5.42383e-15	7.63727e-31				
Case 27 (C)	ULS/22=1*1 .00 + 5*1.50					
Sum of val.	8.28	-2.50	110.01	0.27	4.70	-0.05
Sum of reac.	8.28	-2.50	110.01	182.68	-553.89	-19.07
Sum of forc.	-8.28	2.50	-110.01	-182.68	553.89	19.07
Check val.	-0.00	-0.00	0.0	0.00	0.0	-0.00
Precision	8.87578e-14	8.50555e-28				
Case 28 (C)	SLS:CHR/1 =1*1.00 + 2*1.00					
Sum of val.	0.00	-0.00	143.00	0.20	-0.22	-0.00
Sum of reac.	0.00	-0.00	143.00	230.73	-742.43	-0.00
Sum of forc.	0.00	0.00	-143.00	-230.73	742.43	0.00
Check val.	0.00	0.00	0.0	0.0	0.00	-0.00
Precision	3.09093e-15	4.03038e-31				
Case 29 (C)	SLS:CHR/2 =1*1.00 + 2*1.00 +					

	3*0.50					
Sum of val.	-2.67	-0.50	142.93	0.18	-1.70	0.00
Sum of reac.	-2.67	-0.50	142.93	232.05	-747.43	-0.68
Sum of forc.	2.67	0.50	-142.93	-232.05	747.43	0.68
Check val.	0.00	-0.00	0.0	0.0	0.00	-0.00
Precision	3.07492e-14	2.05365e-28				
Case 30 (C)	SLS:CHR/3 =1*1.00 + 2*1.00 + 4*0.50					
Sum of val.	0.02	-9.60	141.78	2.28	-0.26	0.00
Sum of reac.	0.02	-9.60	141.78	239.35	-737.04	-49.18
Sum of forc.	-0.02	9.60	-141.78	-239.35	737.04	49.18
Check val.	0.00	0.0	0.0	0.0	0.00	-0.00
Precision	4.29803e-15	5.42244e-31				
Case 31 (C)	SLS:CHR/4 =1*1.00 + 2*1.00 + 5*0.50					
Sum of val.	2.76	-0.83	143.10	0.24	1.40	-0.02
Sum of reac.	2.76	-0.83	143.10	233.25	-737.27	-6.36
Sum of forc.	-2.76	0.83	-143.10	-233.25	737.27	6.36
Check val.	-0.00	-0.00	0.0	0.0	0.00	-0.00
Precision	3.20760e-14	2.83806e-28				
Case 32 (C)	SLS:CHR/5 =1*1.00					
Sum of val.	0.00	-0.00	109.71	0.15	-0.16	-0.00
Sum of reac.	0.00	-0.00	109.71	175.12	-569.38	-0.00
Sum of forc.	0.00	0.00	-109.71	-175.12	569.38	0.00
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	1.80251e-15	3.46108e-31				
Case 33 (C)	SLS:CHR/6 =1*1.00 + 2*0.70 + 3*1.00					
Sum of val.	-5.35	-1.01	132.88	0.16	-3.16	0.00
Sum of reac.	-5.35	-1.01	132.88	216.70	-700.50	-1.37
Sum of forc.	5.35	1.01	-132.88	-216.70	700.50	1.37
Check val.	0.00	-0.00	0.0	0.00	0.00	-0.00
Precision	5.80209e-14	4.10310e-28				
Case 34 (C)	SLS:CHR/7 =1*1.00 + 2*0.70 + 4*1.00					
Sum of val.	0.04	-19.19	130.57	4.35	-0.28	0.01
Sum of reac.	0.04	-19.19	130.57	231.30	-679.72	-98.36
Sum of forc.	-0.04	19.19	-130.57	-231.30	679.72	98.36
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	5.11861e-15	6.64372e-31				
Case 35 (C)	SLS:CHR/8 =1*1.00 + 2*0.70 + 5*1.00					
Sum of val.	5.52	-1.67	133.21	0.26	3.04	-0.03
Sum of reac.	5.52	-1.67	133.21	219.09	-680.19	-12.72
Sum of forc.	-5.52	1.67	-133.21	-219.09	680.19	12.72

Check val.	-0.00	-0.00	0.0	0.00	0.00	-0.00
Precision	6.06746e-14	5.67192e-28				
Case 36 (C)	SLS:CHR/9 =1*1.00 + 3*1.00					
Sum of val.	-5.35	-1.01	109.58	0.13	-3.13	0.00
Sum of reac.	-5.35	-1.01	109.58	177.77	-579.37	-1.37
Sum of forc.	5.35	1.01	-109.58	-177.77	579.37	1.37
Check val.	0.00	-0.00	0.0	0.00	0.00	0.00
Precision	5.71191e-14	4.10270e-28				
Case 37 (C)	SLS:CHR/1 0=1*1.00 + 4*1.00					
Sum of val.	0.04	-19.19	107.27	4.32	-0.25	0.01
Sum of reac.	0.04	-19.19	107.27	192.37	-558.59	-98.36
Sum of forc.	-0.04	19.19	-107.27	-192.37	558.59	98.36
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	4.21672e-15	6.24520e-31				
Case 38 (C)	SLS:CHR/1 1=1*1.00 + 5*1.00					
Sum of val.	5.52	-1.67	109.91	0.23	3.08	-0.03
Sum of reac.	5.52	-1.67	109.91	180.16	-559.06	-12.72
Sum of forc.	-5.52	1.67	-109.91	-180.16	559.06	12.72
Check val.	-0.00	-0.00	0.0	0.00	0.00	-0.00
Precision	5.97727e-14	5.67152e-28				
Case 39 (C)	SLS:FRE/12 =1*1.00 + 2*0.50					
Sum of val.	0.00	-0.00	126.35	0.17	-0.19	-0.00
Sum of reac.	0.00	-0.00	126.35	202.92	-655.91	-0.00
Sum of forc.	0.00	0.00	-126.35	-202.92	655.91	0.00
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	2.44672e-15	3.74573e-31				
Case 40 (C)	SLS:FRE/13 =1*1.00					
Sum of val.	0.00	-0.00	109.71	0.15	-0.16	-0.00
Sum of reac.	0.00	-0.00	109.71	175.12	-569.38	-0.00
Sum of forc.	0.00	0.00	-109.71	-175.12	569.38	0.00
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	1.80251e-15	3.46108e-31				
Case 41 (C)	SLS:FRE/14 =1*1.00 + 2*0.30 + 3*0.20					
Sum of val.	-1.07	-0.20	119.67	0.16	-0.77	0.00
Sum of reac.	-1.07	-0.20	119.67	192.33	-623.29	-0.27
Sum of forc.	1.07	0.20	-119.67	-192.33	623.29	0.27
Check val.	0.00	-0.00	0.0	0.00	0.00	-0.00
Precision	1.32523e-14	8.23480e-29				
Case 42 (C)	SLS:FRE/15 =1*1.00 + 2*0.30 + 4*0.20					
Sum of val.	0.01	-3.84	119.21	1.00	-0.20	0.00

Sum of reac.	0.01	-3.84	119.21	195.25	-619.14	-19.67
Sum of forc.	-0.01	3.84	-119.21	-195.25	619.14	19.67
Check val.	0.00	0.0	0.0	0.00	0.00	-0.00
Precision	2.67188e-15	4.18869e-31				
Case 43 (C)	SLS:FRE/16 =1*1.00 + 2*0.30 + 5*0.20					
Sum of val.	1.10	-0.33	119.73	0.18	0.47	-0.01
Sum of reac.	1.10	-0.33	119.73	192.81	-619.23	-2.54
Sum of forc.	-1.10	0.33	-119.73	-192.81	619.23	2.54
Check val.	-0.00	-0.00	0.0	0.00	0.00	-0.00
Precision	1.37831e-14	1.13724e-28				
Case 44 (C)	SLS:FRE/17 =1*1.00 + 3*0.20					
Sum of val.	-1.07	-0.20	109.68	0.14	-0.76	0.00
Sum of reac.	-1.07	-0.20	109.68	175.65	-571.38	-0.27
Sum of forc.	1.07	0.20	-109.68	-175.65	571.38	0.27
Check val.	0.00	-0.00	0.0	0.00	0.00	-0.00
Precision	1.28658e-14	8.23310e-29				
Case 45 (C)	SLS:FRE/18 =1*1.00 + 4*0.20					
Sum of val.	0.01	-3.84	109.22	0.98	-0.18	0.00
Sum of reac.	0.01	-3.84	109.22	178.57	-567.22	-19.67
Sum of forc.	-0.01	3.84	-109.22	-178.57	567.22	19.67
Check val.	0.00	0.0	0.0	0.00	0.00	-0.00
Precision	2.28535e-15	4.01790e-31				
Case 46 (C)	SLS:FRE/19 =1*1.00 + 5*0.20					
Sum of val.	1.10	-0.33	109.75	0.17	0.48	-0.01
Sum of reac.	1.10	-0.33	109.75	176.13	-567.32	-2.54
Sum of forc.	-1.10	0.33	-109.75	-176.13	567.32	2.54
Check val.	-0.00	-0.00	0.0	0.00	0.00	-0.00
Precision	1.33966e-14	1.13707e-28				
Case 47 (C)	SLS:QPR/2 0=1*1.00 + 2*0.30					
Sum of val.	0.00	-0.00	119.69	0.16	-0.18	-0.00
Sum of reac.	0.00	-0.00	119.69	191.80	-621.30	-0.00
Sum of forc.	0.00	0.00	-119.69	-191.80	621.30	0.00
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	2.18904e-15	3.63187e-31				
Case 48 (C)	SLS:QPR/2 1=1*1.00					
Sum of val.	0.00	-0.00	109.71	0.15	-0.16	-0.00
Sum of reac.	0.00	-0.00	109.71	175.12	-569.38	-0.00
Sum of forc.	0.00	0.00	-109.71	-175.12	569.38	0.00
Check val.	0.00	0.00	0.0	0.00	0.00	-0.00
Precision	1.80251e-15	3.46108e-31				

Reactions ULS: global extremes

in the coordinate system: global - Cases: 1to27

	FX (kN)	FY (kN)	FZ (kN)	MX (kNm)	MY (kNm)	MZ (kNm)
MAX	2.66	0.56	41.02	2.63	1.77	0.02
Node	9	3	5	7	9	11
Case	27 (C)	16 (C)	8 (C)	26 (C)	27 (C)	16 (C)
MIN	-2.72	-7.89	-1.88	-0.44	-1.74	-0.03
Node	3	13	13	3	3	11
Case	25 (C)	17 (C)	4	16 (C)	25 (C)	18 (C)

Forces - Envelope

- Cases: 1to48

Bar/Node/Case	FX (kN)	FY (kN)	FZ (kN)	MX (kNm)	MY (kNm)	MZ (kNm)
2/ 3/ 9 (C)	11.99>>	0.15	-0.88	0.0	0.80	0.20
2/ 3/ 3	-0.23<<	0.28	1.94	0.0	-1.24	0.17
2/ 4/ 17 (C)	9.94	0.73>>	0.98	0.0	-0.01	-0.25
2/ 3/ 26 (C)	6.43	-1.75<<	-1.60	0.0	0.74	-0.94
2/ 3/ 25 (C)	6.25	0.50	2.72>>	0.0	-1.74	0.37
2/ 3/ 17 (C)	10.71	-1.69	-1.72<<	0.0	0.83	-0.86
2/ 3/ 1	6.60	0.09	-0.18	0.0>>	0.13	0.11
2/ 3/ 1	6.60	0.09	-0.18	0.0<<	0.13	0.11
2/ 3/ 18 (C)	11.41	0.13	-1.41	0.0	1.36>>	0.19
2/ 3/ 25 (C)	6.25	0.50	2.72	0.0	-1.74<<	0.37
2/ 3/ 16 (C)	10.53	0.56	2.60	0.0	-1.65	0.44>>
2/ 3/ 26 (C)	6.43	-1.75	-1.60	0.0	0.74	-0.94<<
3/ 5/ 8 (C)	41.02>>	-2.49	-0.50	0.0	0.35	-1.26
3/ 5/ 5	-0.18<<	-0.24	-0.53	0.0	0.68	-0.12
3/ 6/ 17 (C)	38.63	1.64>>	-0.43	0.0	-0.80	0.12
3/ 5/ 26 (C)	24.80	-5.14<<	-0.24	0.0	0.15	-2.62
3/ 6/ 3	0.16	0.03	0.43>>	0.0	0.53	0.01
3/ 6/ 18 (C)	35.76	0.20	-1.29<<	0.0	-1.87	-0.16
3/ 5/ 1	22.20	0.06	-0.30	0.0>>	0.22	0.04
3/ 5/ 1	22.20	0.06	-0.30	0.0<<	0.22	0.04
3/ 5/ 18 (C)	36.53	-0.26	-1.29	0.0	1.38>>	-0.11
3/ 6/ 18 (C)	35.76	0.20	-1.29	0.0	-1.87<<	-0.16
3/ 6/ 4	1.74	1.02	0.04	0.0	0.05	0.20>>
3/ 5/ 26 (C)	24.80	-5.14	-0.24	0.0	0.15	-2.62<<
4/ 7/ 8 (C)	38.33>>	-2.50	0.80	0.0	-0.68	-1.26
4/ 8/ 3	-0.17<<	0.04	0.44	0.0	0.55	0.01
4/ 8/ 17 (C)	36.08	1.63>>	0.77	0.0	1.28	0.13
4/ 7/ 26 (C)	23.23	-5.15<<	0.49	0.0	-0.43	-2.63
4/ 8/ 16 (C)	33.36	0.15	1.37>>	0.0	2.03	-0.16
4/ 8/ 5	0.36	0.07	-0.53<<	0.0	-0.66	0.01
4/ 7/ 1	20.77	0.06	0.43	0.0>>	-0.36	0.04

4/	7/	1	20.77	0.06	0.43	0.0<<	-0.36	0.04
4/	8/	16 (C)	33.36	0.15	1.37	0.0	2.03>>	-0.16
4/	7/	16 (C)	34.13	-0.10	1.37	0.0	-1.43<<	-0.03
4/	8/	4	1.64	1.02	0.04	0.0	0.05	0.20>>
4/	7/	26 (C)	23.23	-5.15	0.49	0.0	-0.43	-2.63<<
5/	9/	7 (C)	14.27>>	0.07	0.53	0.0	-0.56	0.07
5/	9/	5	-0.39<<	0.24	-1.80	0.0	1.22	0.13
5/	12/	17 (C)	12.27	0.76>>	-0.58	0.0	-0.15	-0.25
5/	9/	26 (C)	7.89	-1.73<<	1.39	0.0	-0.69	-0.86
5/	9/	17 (C)	13.04	-1.69	1.42>>	0.0	-0.72	-0.83
5/	9/	27 (C)	7.29	0.42	-2.66<<	0.0	1.77	0.25
5/	9/	1	7.87	0.06	0.05	0.0>>	-0.05	0.05
5/	9/	1	7.87	0.06	0.05	0.0<<	-0.05	0.05
5/	9/	27 (C)	7.29	0.42	-2.66	0.0	1.77>>	0.25
5/	9/	16 (C)	13.48	0.03	0.97	0.0	-1.01<<	0.04
5/	9/	18 (C)	12.44	0.46	-2.63	0.0	1.74	0.28>>
5/	9/	26 (C)	7.89	-1.73	1.39	0.0	-0.69	-0.86<<
6/	8/	18 (C)	2.10>>	-0.17	10.97	0.0	-9.35	-0.27
6/	8/	26 (C)	-1.53<<	-2.35	6.35	0.0	-5.25	-3.43
6/	8/	2	0.01	-0.00>>	1.85	0.0	-1.55	-0.01
6/	8/	17 (C)	-1.50	-2.35<<	10.51	0.0	-8.73	-3.44
6/	8/	9 (C)	1.10	-0.09	11.56>>	0.0	-9.76	-0.15
6/	12/	7 (C)	0.21	-0.02	-3.46<<	0.0	-0.17	0.00
6/	8/	1	0.05	-0.01	6.33	0.0>>	-5.30	-0.02
6/	8/	1	0.05	-0.01	6.33	0.0<<	-5.30	-0.02
6/	12/	18 (C)	2.10	-0.02	-2.51	0.0	0.71>>	-0.04
6/	8/	9 (C)	1.10	-0.09	11.56	0.0	-9.76<<	-0.15
6/	12/	25 (C)	0.29	-0.02	-2.26	0.0	-0.54	0.00>>
6/	8/	17 (C)	-1.50	-2.35	10.51	0.0	-8.73	-3.44<<
7/	6/	16 (C)	1.85>>	0.09	-12.84	0.0	-10.17	-0.05
7/	4/	26 (C)	-1.28<<	0.67	5.86	0.09	0.50	-0.05
7/	6/	26 (C)	-1.28	2.23>>	-7.76	0.0	-5.95	-3.46
7/	4/	25 (C)	1.73	-0.20<<	5.69	0.12	0.34	0.02
7/	4/	9 (C)	0.54	0.14	11.22>>	0.17	-0.08	-0.01
7/	6/	7 (C)	1.10	-0.00	-13.74<<	0.0	-10.74	0.03
7/	4/	7 (C)	1.10	0.01	10.78	0.18>>	0.37	-0.00
7/	6/	1	0.18	-0.05	-7.59	0.0<<	-5.89	0.05
7/	4/	17 (C)	-1.16	0.73	9.94	0.16	0.60>>	-0.06
7/	6/	7 (C)	1.10	-0.00	-13.74	0.0	-10.74<<	0.03
7/	6/	6 (C)	0.33	-0.09	-13.62	0.0	-10.54	0.10>>
7/	6/	26 (C)	-1.28	2.23	-7.76	0.0	-5.95	-3.46<<
8/	6/	18 (C)	2.02>>	-0.28	14.30	0.0	-10.71	-0.15
8/	6/	26 (C)	-1.04<<	-4.02	8.56	0.0	-6.31	-3.33
8/	8/	17 (C)	-0.73	4.02>>	-13.86	0.0	-9.66	-3.32
8/	6/	26 (C)	-1.04	-4.02<<	8.56	0.0	-6.31	-3.33
8/	6/	9 (C)	1.47	-0.12	15.37>>	0.0	-11.42	-0.02
8/	8/	7 (C)	1.31	0.10	-15.01<<	0.0	-10.52	-0.09
8/	6/	1	0.48	0.01	8.56	0.0>>	-6.30	0.06
8/	6/	1	0.48	0.01	8.56	0.0<<	-6.30	0.06
8/	6/	3	0.60	-0.11	-0.07	0.0	0.19>>	-0.09
8/	6/	9 (C)	1.47	-0.12	15.37	0.0	-11.42<<	-0.02
8/	6/	6 (C)	0.86	0.03	15.32	0.0	-11.29	0.10>>
8/	6/	26 (C)	-1.04	-4.02	8.56	0.0	-6.31	-3.33<<
9/	12/	8 (C)	3.14>>	-0.46	9.57	0.0	0.0	0.0
9/	11/	9 (C)	-3.02<<	-1.25	-9.57	0.0	0.0	0.0
9/	12/	18 (C)	2.50	1.91>>	8.82	0.0	0.0	0.0
9/	11/	18 (C)	-2.96	-2.50<<	-8.82	0.0	0.0	0.0
9/	12/	6 (C)	3.06	0.00	9.57>>	0.0	0.0	0.0
9/	11/	6 (C)	-2.86	-0.00	-9.57<<	0.0	0.0	0.0
9/	11/	1	-1.57	-0.00	-5.24	0.0>>	0.0	0.0
9/	11/	1	-1.57	-0.00	-5.24	0.0<<	0.0	0.0

9/	11/	1	-1.57	-0.00	-5.24	0.0	0.0>>	0.0
9/	11/	1	-1.57	-0.00	-5.24	0.0	0.0<<	0.0
9/	11/	1	-1.57	-0.00	-5.24	0.0	0.0	0.0>>
9/	11/	1	-1.57	-0.00	-5.24	0.0	0.0	0.0<<
10/	8/	17 (C)	11.11>>	0.00	8.82	0.0	0.0	0.0
10/	13/	6 (C)	-2.81<<	-0.00	-9.57	0.0	0.0	0.0
10/	8/	9 (C)	3.40	0.00>>	9.57	0.0	0.0	0.0
10/	13/	8 (C)	1.31	-0.00<<	-9.57	0.0	0.0	0.0
10/	8/	6 (C)	3.11	0.00	9.57>>	0.0	0.0	0.0
10/	13/	6 (C)	-2.81	-0.00	-9.57<<	0.0	0.0	0.0
10/	13/	1	-1.54	-0.00	-5.24	0.0>>	0.0	0.0
10/	13/	1	-1.54	-0.00	-5.24	0.0<<	0.0	0.0
10/	13/	1	-1.54	-0.00	-5.24	0.0	0.0>>	0.0
10/	13/	1	-1.54	-0.00	-5.24	0.0	0.0<<	0.0
10/	13/	1	-1.54	-0.00	-5.24	0.0	0.0	0.0>>
10/	13/	1	-1.54	-0.00	-5.24	0.0	0.0	0.0<<
11/	6/	17 (C)	10.95>>	-0.00	-8.82	0.0	0.0	0.0
11/	14/	6 (C)	-2.97<<	0.00	9.57	0.0	0.0	0.0
11/	14/	16 (C)	-2.33	0.00>>	8.82	0.0	0.0	0.0
11/	14/	26 (C)	6.60	-0.00<<	5.24	0.0	0.0	0.0
11/	14/	6 (C)	-2.97	0.00	9.57>>	0.0	0.0	0.0
11/	6/	6 (C)	2.95	0.00	-9.57<<	0.0	0.0	0.0
11/	14/	1	-1.63	0.00	5.24	0.0>>	0.0	0.0
11/	14/	1	-1.63	0.00	5.24	0.0<<	0.0	0.0
11/	14/	1	-1.63	0.00	5.24	0.0	0.0>>	0.0
11/	14/	1	-1.63	0.00	5.24	0.0	0.0<<	0.0
11/	14/	1	-1.63	0.00	5.24	0.0	0.0	0.0>>
11/	14/	1	-1.63	0.00	5.24	0.0	0.0	0.0<<
12/	16/	6 (C)	3.22>>	-0.00	-9.57	0.0	0.0	0.0
12/	15/	7 (C)	-2.90<<	0.00	9.57	0.0	0.0	0.0
12/	15/	22 (C)	-2.38	0.00>>	6.98	0.0	0.0	0.0
12/	15/	18 (C)	-2.58	-0.00<<	8.82	0.0	0.0	0.0
12/	15/	6 (C)	-2.70	-0.00	9.57>>	0.0	0.0	0.0
12/	16/	6 (C)	3.22	-0.00	-9.57<<	0.0	0.0	0.0
12/	15/	1	-1.48	-0.00	5.24	0.0>>	0.0	0.0
12/	15/	1	-1.48	-0.00	5.24	0.0<<	0.0	0.0
12/	15/	1	-1.48	-0.00	5.24	0.0	0.0>>	0.0
12/	15/	1	-1.48	-0.00	5.24	0.0	0.0<<	0.0
12/	15/	1	-1.48	-0.00	5.24	0.0	0.0	0.0>>
12/	15/	1	-1.48	-0.00	5.24	0.0	0.0	0.0<<
17/	21/	17 (C)	0.08>>	-0.08	0.21	0.0	0.0	0.00
17/	15/	17 (C)	-0.07<<	0.11	-0.30	0.0	-0.03	-0.01
17/	15/	17 (C)	-0.07	0.11>>	-0.30	0.0	-0.03	-0.01
17/	21/	17 (C)	0.08	-0.08<<	0.21	0.0	0.0	0.00
17/	21/	23 (C)	0.08	-0.08	0.22>>	0.0	0.0	0.00
17/	15/	23 (C)	-0.07	0.11	-0.32<<	0.0	-0.03	-0.01
17/	21/	1	0.0	-0.00	-0.03	0.0>>	0.0	-0.00
17/	21/	1	0.0	-0.00	-0.03	0.0<<	0.0	-0.00
17/	15/	18 (C)	-0.00	-0.04	0.07	0.0	0.01>>	0.00
17/	15/	23 (C)	-0.07	0.11	-0.32	0.0	-0.03<<	-0.01
17/	15/	24 (C)	-0.00	-0.04	0.05	0.0	0.01	0.00>>
17/	15/	17 (C)	-0.07	0.11	-0.30	0.0	-0.03	-0.01<<
19/	13/	18 (C)	0.00>>	0.10	-3.80	0.0	0.90	0.02
19/	11/	18 (C)	-0.00<<	-0.07	2.88	0.0	0.52	0.01
19/	13/	27 (C)	0.00	0.10>>	-2.27	0.0	0.54	0.02
19/	11/	27 (C)	-0.00	-0.07<<	1.72	0.0	0.31	0.01
19/	11/	9 (C)	-0.00	-0.04	3.11>>	0.0	0.56	0.01
19/	13/	9 (C)	0.00	0.05	-4.11<<	0.0	0.98	0.01
19/	13/	1	0.0	-0.00	-2.25	0.0>>	0.53	-0.00
19/	13/	1	0.0	-0.00	-2.25	0.0<<	0.53	-0.00
19/	13/	9 (C)	0.00	0.05	-4.11	0.0	0.98>>	0.01

19/	13/	4	0.0	-0.05	0.15	0.0	-0.04<<	-0.01
19/	13/	27 (C)	0.00	0.10	-2.27	0.0	0.54	0.02>>
19/	13/	17 (C)	0.0	-0.07	-3.56	0.0	0.85	-0.02<<
20/	15/	18 (C)	0.00>>	0.07	-2.65	0.0	0.44	0.01
20/	14/	18 (C)	-0.00<<	-0.07	2.73	0.0	0.47	0.01
20/	15/	27 (C)	0.00	0.07>>	-1.58	0.0	0.26	0.01
20/	14/	27 (C)	-0.00	-0.07<<	1.63	0.0	0.28	0.01
20/	14/	9 (C)	-0.00	-0.04	2.95>>	0.0	0.50	0.01
20/	15/	9 (C)	0.00	0.03	-2.87<<	0.0	0.48	0.01
20/	15/	1	0.0	-0.00	-1.56	0.0>>	0.26	-0.00
20/	15/	1	0.0	-0.00	-1.56	0.0<<	0.26	-0.00
20/	14/	9 (C)	-0.00	-0.04	2.95	0.0	0.50>>	0.01
20/	14/	4	0.0	0.03	-0.11	0.0	-0.02<<	-0.01
20/	14/	27 (C)	-0.00	-0.07	1.63	0.0	0.28	0.01>>
20/	14/	17 (C)	0.0	0.05	2.55	0.0	0.44	-0.01<<
21/	14/	18 (C)	0.00>>	0.05	-2.12	0.0	0.26	0.01
21/	13/	18 (C)	-0.00<<	-0.07	2.70	0.0	0.44	0.01
21/	14/	27 (C)	0.00	0.05>>	-1.28	0.0	0.16	0.01
21/	13/	27 (C)	-0.00	-0.07<<	1.63	0.0	0.27	0.01
21/	13/	9 (C)	-0.00	-0.03	2.89>>	0.0	0.47	0.01
21/	14/	9 (C)	0.00	0.03	-2.27<<	0.0	0.28	0.00
21/	14/	1	0.0	-0.00	-1.23	0.0>>	0.15	-0.00
21/	14/	1	0.0	-0.00	-1.23	0.0<<	0.15	-0.00
21/	13/	9 (C)	-0.00	-0.03	2.89	0.0	0.47>>	0.01
21/	13/	4	0.0	0.03	-0.10	0.0	-0.02<<	-0.01
21/	13/	27 (C)	-0.00	-0.07	1.63	0.0	0.27	0.01>>
21/	13/	17 (C)	0.0	0.05	2.48	0.0	0.40	-0.01<<

Member Forces ULS: envelope

- Cases: 1to27

Bar	FX (kN)	FY (kN)	FZ (kN)	MX (kNm)	MY (kNm)	MZ (kNm)
2 / MAX	11.99	0.73	2.72	0.0	1.36	0.44
Node	3	4	3	3	3	3
Case	9 (C)	17 (C)	25 (C)	1	18 (C)	16 (C)
2 / MIN	-0.23	-1.75	-1.72	0.0	-1.74	-0.94
Node	3	3	3	3	3	3
Case	3	26 (C)	17 (C)	1	25 (C)	26 (C)
3 / MAX	41.02	1.64	0.43	0.0	1.38	0.20
Node	5	6	6	5	5	6
Case	8 (C)	17 (C)	3	1	18 (C)	4
3 / MIN	-0.18	-5.14	-1.29	0.0	-1.87	-2.62
Node	5	5	6	5	6	5
Case	5	26 (C)	18 (C)	1	18 (C)	26 (C)
4 / MAX	38.33	1.63	1.37	0.0	2.03	0.20
Node	7	8	8	7	8	8
Case	8 (C)	17 (C)	16 (C)	1	16 (C)	4
4 / MIN	-0.17	-5.15	-0.53	0.0	-1.43	-2.63
Node	8	7	8	7	7	7
Case	3	26 (C)	5	1	16 (C)	26 (C)
5 / MAX	14.27	0.76	1.42	0.0	1.77	0.28
Node	9	12	9	9	9	9
Case	7 (C)	17 (C)	17 (C)	1	27 (C)	18 (C)
5 / MIN	-0.39	-1.73	-2.66	0.0	-1.01	-0.86

Node	9	9	9	9	9	9
Case	5	26 (C)	27 (C)	1	16 (C)	26 (C)
6 / MAX	2.10	-0.00	11.56	0.0	0.71	0.00
Node	8	8	8	8	12	12
Case	18 (C)	2	9 (C)	1	18 (C)	25 (C)
6 / MIN	-1.53	-2.35	-3.46	0.0	-9.76	-3.44
Node	8	8	12	8	8	8
Case	26 (C)	17 (C)	7 (C)	1	9 (C)	17 (C)
7 / MAX	1.85	2.23	11.22	0.18	0.60	0.10
Node	6	6	4	4	4	6
Case	16 (C)	26 (C)	9 (C)	7 (C)	17 (C)	6 (C)
7 / MIN	-1.28	-0.20	-13.74	0.0	-10.74	-3.46
Node	4	4	6	6	6	6
Case	26 (C)	25 (C)	7 (C)	1	7 (C)	26 (C)
8 / MAX	2.02	4.02	15.37	0.0	0.19	0.10
Node	6	8	6	6	6	6
Case	18 (C)	17 (C)	9 (C)	1	3	6 (C)
8 / MIN	-1.04	-4.02	-15.01	0.0	-11.42	-3.33
Node	6	6	8	6	6	6
Case	26 (C)	26 (C)	7 (C)	1	9 (C)	26 (C)
9 / MAX	3.14	1.91	9.57	0.0	0.0	0.0
Node	12	12	12	11	11	11
Case	8 (C)	18 (C)	6 (C)	1	1	1
9 / MIN	-3.02	-2.50	-9.57	0.0	0.0	0.0
Node	11	11	11	11	11	11
Case	9 (C)	18 (C)	6 (C)	1	1	1
10 / MAX	11.11	0.00	9.57	0.0	0.0	0.0
Node	8	8	8	13	13	13
Case	17 (C)	9 (C)	6 (C)	1	1	1
10 / MIN	-2.81	-0.00	-9.57	0.0	0.0	0.0
Node	13	13	13	13	13	13
Case	6 (C)	8 (C)	6 (C)	1	1	1
11 / MAX	10.95	0.00	9.57	0.0	0.0	0.0
Node	6	14	14	14	14	14
Case	17 (C)	16 (C)	6 (C)	1	1	1
11 / MIN	-2.97	-0.00	-9.57	0.0	0.0	0.0
Node	14	14	6	14	14	14
Case	6 (C)	26 (C)	6 (C)	1	1	1
12 / MAX	3.22	0.00	9.57	0.0	0.0	0.0
Node	16	15	15	15	15	15
Case	6 (C)	22 (C)	6 (C)	1	1	1
12 / MIN	-2.90	-0.00	-9.57	0.0	0.0	0.0
Node	15	15	16	15	15	15
Case	7 (C)	18 (C)	6 (C)	1	1	1
17 / MAX	0.08	0.11	0.22	0.0	0.01	0.00
Node	21	15	21	21	15	15
Case	17 (C)	17 (C)	23 (C)	1	18 (C)	24 (C)
17 / MIN	-0.07	-0.08	-0.32	0.0	-0.03	-0.01
Node	15	21	15	21	15	15
Case	17 (C)	17 (C)	23 (C)	1	23 (C)	17 (C)
19 / MAX	0.00	0.10	3.11	0.0	0.98	0.02
Node	13	13	11	13	13	13
Case	18 (C)	27 (C)	9 (C)	1	9 (C)	27 (C)
19 / MIN	-0.00	-0.07	-4.11	0.0	-0.04	-0.02
Node	11	11	13	13	13	13
Case	18 (C)	27 (C)	9 (C)	1	4	17 (C)
20 / MAX	0.00	0.07	2.95	0.0	0.50	0.01
Node	15	15	14	15	14	14
Case	18 (C)	27 (C)	9 (C)	1	9 (C)	27 (C)
20 / MIN	-0.00	-0.07	-2.87	0.0	-0.02	-0.01
Node	14	14	15	15	14	14

Case	18 (C)	27 (C)	9 (C)	1	4	17 (C)
21 / MAX	0.00	0.05	2.89	0.0	0.47	0.01
Node	14	14	13	14	13	13
Case	18 (C)	27 (C)	9 (C)	1	9 (C)	27 (C)
21 / MIN	-0.00	-0.07	-2.27	0.0	-0.02	-0.01
Node	13	13	14	14	13	13
Case	18 (C)	27 (C)	9 (C)	1	4	17 (C)

Stresses - Global extremes

- Cases: 1to48

	S max (MPa)	S min (MPa)	S max(My) (MPa)	S max(Mz) (MPa)	S min(My) (MPa)	S min(Mz) (MPa)	Fx/Ax (MPa)
MAX	66.16	13.00	22.64	49.98	0.00	0.00	14.05
Bar	4	3	8	4	9	12	3
Node	7	5	6	7	12	16	5
Case	17 (C)	7 (C)	9 (C)	26 (C)	4	12 (C)	8 (C)
MIN	-1.61	-56.96	0.0	-0.00	-22.64	-49.98	-1.61
Bar	9	7	9	12	8	4	9
Node	11	6	11	16	6	7	11
Case	9 (C)	17 (C)	1	6 (C)	9 (C)	26 (C)	9 (C)

Code groups - Definition

Code group	Name	Components

Member Verification

STEEL DESIGN

CODE: *BS-EN 1993-1:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.*

ANALYSIS TYPE: *Member Verification*

CODE GROUP:

MEMBER: 2 Column_2

POINT: 1

COORDINATE: x = 0.00 L = 0.00 m

LOADS:

Governing Load Case: 17 ULS/12=1*1.35 + 2*1.05 + 4*1.50 1*1.35+2*1.05+4*1.50

MATERIAL:

S275 (S275) $f_y = 275.00$ MPa

**SECTION PARAMETERS: UC 152x152x23**

h=152 mm	gM0=1.00	gM1=1.00	
b=152 mm	Ay=2203 mm ²	Az=993 mm ²	Ax=2920 mm ²
tw=6 mm	Iy=12500000 mm ⁴	Iz=4000000 mm ⁴	Ix=46300 mm ⁴
tf=7 mm	Wely=164042 mm ³	Welz=52562 mm ³	

INTERNAL FORCES AND CAPACITIES:

N _{Ed} = 10.71 kN	My _{Ed} = 0.83 kN*m	Mz _{Ed} = -0.86 kN*m	Vy _{Ed} = -1.69 kN
N _{c,Rd} = 803.00 kN	My _{Ed,max} = 0.83 kN*m	Mz _{Ed,max} = -0.86 kN*m	Vy _{c,Rd} = 349.79 kN
N _{b,Rd} = 721.60 kN	My _{c,Rd} = 45.11 kN*m	Mz _{c,Rd} = 14.45 kN*m	Vz _{Ed} = -1.72 kN
			Vz _{c,Rd} = 157.64 kN
			Class of section = 3

**LATERAL BUCKLING PARAMETERS:****BUCKLING PARAMETERS:**

About y axis:



About z axis:

Ly = 2.52 m	Lam _y = 0.22	Lz = 2.52 m	Lam _z = 0.40
Lcr,y = 1.26 m	Xy = 0.99	Lcr,z = 1.26 m	Xz = 0.90
Lamy = 19.29	kyy = 0.90	Lamz = 34.10	kyz = 0.90

VERIFICATION FORMULAS:**Section strength check:**

$$N_{Ed}/N_{c,Rd} + My_{Ed}/My_{c,Rd} + Mz_{Ed}/Mz_{c,Rd} = 0.09 < 1.00 \quad (6.2.1(7))$$

$$\sqrt{(\sigma_{x,Ed})^2 + 3(\tau_{y,Ed})^2} / (f_y/gM0) = 0.03 < 1.00 \quad (6.2.1(5))$$

$$Vy_{Ed}/Vy_{c,Rd} = 0.00 < 1.00 \quad (6.2.6(1))$$

$$Vz_{Ed}/Vz_{c,Rd} = 0.01 < 1.00 \quad (6.2.6(1))$$

Global stability check of member:

$$\lambda_{y} = 19.29 < \lambda_{y,max} = 210.00 \quad \lambda_{z} = 34.10 < \lambda_{z,max} = 210.00 \quad \text{STABLE}$$

$$N_{Ed}/(Xy \cdot N_{Rk}/gM1) + kyy \cdot My_{Ed,max}/(XLT \cdot My_{Rk}/gM1) + kyz \cdot Mz_{Ed,max}/(Mz_{Rk}/gM1) = 0.08 < 1.00$$

$$(6.3.3(4))$$

$$N_{Ed}/(Xz \cdot N_{Rk}/gM1) + kzy \cdot My_{Ed,max}/(XLT \cdot My_{Rk}/gM1) + kzz \cdot Mz_{Ed,max}/(Mz_{Rk}/gM1) = 0.08 < 1.00 \quad (6.3.3(4))$$

LIMIT DISPLACEMENTS

Deflections (LOCAL SYSTEM): Not analyzed



Displacements (GLOBAL SYSTEM):

$$v_x = 0 \text{ mm} < v_x \text{ max} = L/300.00 = 8 \text{ mm} \quad \text{Verified}$$

Governing Load Case: 5 Wind Simulation X- 27 m/s

$$v_y = 0 \text{ mm} < v_y \text{ max} = L/300.00 = 8 \text{ mm} \quad \text{Verified}$$

Governing Load Case: 33 SLS:CHR/6=1*1.00 + 2*0.70 + 3*1.00 (1+3)*1.00+2*0.70

Section OK !!!

STEEL DESIGN

CODE: BS-EN 1993-1-2:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 3 Column_3

POINT: 1

COORDINATE: x = 0.00 L = 0.00 m

LOADS:

Governing Load Case: 17 ULS/12=1*1.35 + 2*1.05 + 4*1.50 1*1.35+2*1.05+4*1.50

MATERIAL:

S275 (S275) fy = 275.00 MPa



SECTION PARAMETERS: UC 152x152x23

h=152 mm	gM0=1.00	gM1=1.00	
b=152 mm	Ay=2203 mm ²	Az=993 mm ²	Ax=2920 mm ²
tw=6 mm	Iy=12500000 mm ⁴	Iz=4000000 mm ⁴	Ix=46300 mm ⁴
tf=7 mm	Wely=164042 mm ³	Welz=52562 mm ³	

INTERNAL FORCES AND CAPACITIES:

N,Ed = 39.40 kN	My,Ed = 0.29 kN*m	Mz,Ed = -2.59 kN*m	Vy,Ed = -5.10 kN
Nc,Rd = 803.00 kN	My,Ed,max = -0.80 kN*m	Mz,Ed,max = -2.59 kN*m	Vy,c,Rd = 349.79 kN
Nb,Rd = 721.60 kN	My,c,Rd = 45.11 kN*m	Mz,c,Rd = 14.45 kN*m	Vz,Ed = -0.43 kN
			Vz,c,Rd = 157.64 kN
			Class of section = 3



LATERAL BUCKLING PARAMETERS:

BUCKLING PARAMETERS:



About y axis:

Ly = 2.52 m	Lam_y = 0.22
Lcr,y = 1.26 m	Xy = 0.99
Lamy = 19.29	kzy = 0.72



About z axis:

Lz = 2.52 m	Lam_z = 0.40
Lcr,z = 1.26 m	Xz = 0.90
Lamz = 34.10	kzz = 0.91

VERIFICATION FORMULAS:

Section strength check:

$$N_{Ed}/N_{c,Rd} + M_{y,Ed}/M_{y,c,Rd} + M_{z,Ed}/M_{z,c,Rd} = 0.23 < 1.00 \quad (6.2.1(7))$$

$$\sqrt{(\sigma_{x,Ed})^2 + 3(\tau_{y,Ed})^2} / (f_y/gM0) = 0.06 < 1.00 \quad (6.2.1(5))$$

$$V_{y,Ed}/V_{y,c,Rd} = 0.01 < 1.00 \quad (6.2.6(1))$$

$$V_{z,Ed}/V_{z,c,Rd} = 0.00 < 1.00 \quad (6.2.6(1))$$

Global stability check of member:

$$\lambda_{b,y} = 19.29 < \lambda_{b,max} = 210.00 \quad \lambda_{b,z} = 34.10 < \lambda_{b,max} = 210.00 \quad \text{STABLE}$$

$$N_{Ed}/(X_y \cdot N_{Rk}/gM1) + k_{yy} \cdot M_{y,Ed,max}/(XLT \cdot M_{y,Rk}/gM1) + k_{yz} \cdot M_{z,Ed,max}/(M_{z,Rk}/gM1) = 0.23 < 1.00 \quad (6.3.3(4))$$

$$N_{Ed}/(X_z \cdot N_{Rk}/gM1) + k_{zy} \cdot M_{y,Ed,max}/(XLT \cdot M_{y,Rk}/gM1) + k_{zz} \cdot M_{z,Ed,max}/(M_{z,Rk}/gM1) = 0.23 < 1.00 \quad (6.3.3(4))$$

LIMIT DISPLACEMENTS



Deflections (LOCAL SYSTEM): Not analyzed



Displacements (GLOBAL SYSTEM):

$$v_x = 0 \text{ mm} < v_{x,max} = L/300.00 = 8 \text{ mm}$$

Verified

Governing Load Case: 5 Wind Simulation X- 27 m/s

$v_y = 0 \text{ mm} < v_y \text{ max} = L/300.00 = 8 \text{ mm}$

Verified

Governing Load Case: 29 SLS:CHR/2=1*1.00 + 2*1.00 + 3*0.50 (1+2)*1.00+3*0.50

Section OK !!!

STEEL DESIGN

CODE: BS-EN 1993-1:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 4 Column_4

POINT: 1

COORDINATE: x = 0.00 L = 0.00 m

LOADS:

Governing Load Case: 17 ULS/12=1*1.35 + 2*1.05 + 4*1.50 1*1.35+2*1.05+4*1.50

MATERIAL:

S275 (S275) fy = 275.00 MPa



SECTION PARAMETERS: UC 152x152x23

h=152 mm	gM0=1.00	gM1=1.00	
b=152 mm	Ay=2203 mm ²	Az=993 mm ²	Ax=2920 mm ²
tw=6 mm	Iy=12500000 mm ⁴	Iz=4000000 mm ⁴	Ix=46300 mm ⁴
tf=7 mm	Wely=164042 mm ³	Welz=52562 mm ³	

INTERNAL FORCES AND CAPACITIES:

N,Ed = 36.85 kN	My,Ed = -0.67 kN*m	Mz,Ed = -2.60 kN*m	Vy,Ed = -5.11 kN
Nc,Rd = 803.00 kN	My,Ed,max = 1.28 kN*m	Mz,Ed,max = -2.60 kN*m	Vy,c,Rd = 349.79 kN
Nb,Rd = 721.60 kN	My,c,Rd = 45.11 kN*m	Mz,c,Rd = 14.45 kN*m	Vz,Ed = 0.77 kN
			Vz,c,Rd = 157.64 kN
			Class of section = 3



LATERAL BUCKLING PARAMETERS:

BUCKLING PARAMETERS:



About y axis:

Ly = 2.52 m Lam_y = 0.22
 Lcr,y = 1.26 m Xy = 0.99
 Lamy = 19.29 kyy = 0.91



About z axis:

Lz = 2.52 m Lam_z = 0.40
 Lcr,z = 1.26 m Xz = 0.90
 Lamz = 34.10 kyz = 0.91

VERIFICATION FORMULAS:

Section strength check:

$$N_{Ed}/N_{c,Rd} + M_{y,Ed}/M_{y,c,Rd} + M_{z,Ed}/M_{z,c,Rd} = 0.24 < 1.00 \quad (6.2.1(7))$$

$$\sqrt{(\text{Sig}_{x,Ed})^2 + 3(\text{Tau}_{y,Ed})^2}/(f_y/gM0) = 0.06 < 1.00 \quad (6.2.1(5))$$

$$V_{y,Ed}/V_{y,c,Rd} = 0.01 < 1.00 \quad (6.2.6(1))$$

$$V_{z,Ed}/V_{z,c,Rd} = 0.00 < 1.00 \quad (6.2.6(1))$$

Global stability check of member:

$$\lambda_{y} = 19.29 < \lambda_{b,max} = 210.00 \quad \lambda_{z} = 34.10 < \lambda_{b,max} = 210.00 \quad \text{STABLE}$$

$$N_{Ed}/(X_y \cdot N_{Rk}/gM1) + k_{yy} \cdot M_{y,Ed,max}/(XLT \cdot M_{y,Rk}/gM1) + k_{yz} \cdot M_{z,Ed,max}/(M_{z,Rk}/gM1) = 0.24 < 1.00 \quad (6.3.3(4))$$

$$N_{Ed}/(X_z \cdot N_{Rk}/gM1) + k_{zy} \cdot M_{y,Ed,max}/(XLT \cdot M_{y,Rk}/gM1) + k_{zz} \cdot M_{z,Ed,max}/(M_{z,Rk}/gM1) = 0.24 < 1.00 \quad (6.3.3(4))$$

LIMIT DISPLACEMENTS



Deflections (LOCAL SYSTEM): Not analyzed



Displacements (GLOBAL SYSTEM):

v_x = 0 mm < v_x max = L/300.00 = 8 mm Verified

Governing Load Case: 35 SLS:CHR/8=1*1.00 + 2*0.70 + 5*1.00 (1+5)*1.00+2*0.70

v_y = 0 mm < v_y max = L/300.00 = 8 mm Verified

Governing Load Case: 31 SLS:CHR/4=1*1.00 + 2*1.00 + 5*0.50 (1+2)*1.00+5*0.50

Section OK !!!

STEEL DESIGN

CODE: BS-EN 1993-1:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 5 Column_5

POINT: 1

COORDINATE: x = 0.00 L = 0.00 m

LOADS:

Governing Load Case: 17 ULS/12=1*1.35 + 2*1.05 + 4*1.50 1*1.35+2*1.05+4*1.50

MATERIAL:

S275 (S275) fy = 275.00 MPa



SECTION PARAMETERS: UC 152x152x23

h=152 mm	gM0=1.00	gM1=1.00	
b=152 mm	Ay=2203 mm ²	Az=993 mm ²	Ax=2920 mm ²
tw=6 mm	Iy=12500000 mm ⁴	Iz=4000000 mm ⁴	Ix=46300 mm ⁴
tf=7 mm	Wely=164042 mm ³	Welz=52562 mm ³	

INTERNAL FORCES AND CAPACITIES:

N,Ed = 13.04 kN	My,Ed = -0.72 kN*m	Mz,Ed = -0.83 kN*m	Vy,Ed = -1.69 kN
Nc,Rd = 803.00 kN	My,Ed,max = -0.72 kN*m	Mz,Ed,max = -0.83 kN*m	Vy,c,Rd = 349.79 kN
Nb,Rd = 721.60 kN	My,c,Rd = 45.11 kN*m	Mz,c,Rd = 14.45 kN*m	Vz,Ed = 1.42 kN
			Vz,c,Rd = 157.64 kN
			Class of section = 3



LATERAL BUCKLING PARAMETERS:

BUCKLING PARAMETERS:



About y axis:

Ly = 2.52 m Lam_y = 0.22
 Lcr,y = 1.26 m Xy = 0.99
 Lamy = 19.29 kyy = 0.90



About z axis:

Lz = 2.52 m Lam_z = 0.40
 Lcr,z = 1.26 m Xz = 0.90
 Lamz = 34.10 kyz = 0.90

VERIFICATION FORMULAS:

Section strength check:

$$N_{Ed}/N_{c,Rd} + M_{y,Ed}/M_{y,c,Rd} + M_{z,Ed}/M_{z,c,Rd} = 0.09 < 1.00 \quad (6.2.1(7))$$

$$\sqrt{(\text{Sig}_{x,Ed})^2 + 3(\text{Tau}_{y,Ed})^2}/(f_y/gM0) = 0.03 < 1.00 \quad (6.2.1.(5))$$

$$V_{y,Ed}/V_{y,c,Rd} = 0.00 < 1.00 \quad (6.2.6.(1))$$

$$V_{z,Ed}/V_{z,c,Rd} = 0.01 < 1.00 \quad (6.2.6.(1))$$

Global stability check of member:

$$\lambda_{y} = 19.29 < \lambda_{max} = 210.00 \quad \lambda_{z} = 34.10 < \lambda_{max} = 210.00 \quad \text{STABLE}$$

$$N_{Ed}/(X_y \cdot N_{Rk}/gM1) + k_{yy} \cdot M_{y,Ed,max}/(XLT \cdot M_{y,Rk}/gM1) + k_{yz} \cdot M_{z,Ed,max}/(M_{z,Rk}/gM1) = 0.08 < 1.00 \quad (6.3.3.(4))$$

$$N_{Ed}/(X_z \cdot N_{Rk}/gM1) + k_{zy} \cdot M_{y,Ed,max}/(XLT \cdot M_{y,Rk}/gM1) + k_{zz} \cdot M_{z,Ed,max}/(M_{z,Rk}/gM1) = 0.08 < 1.00 \quad (6.3.3.(4))$$

LIMIT DISPLACEMENTS



Deflections (LOCAL SYSTEM): Not analyzed



Displacements (GLOBAL SYSTEM):

v_x = 0 mm < v_x max = L/300.00 = 8 mm Verified

Governing Load Case: 5 Wind Simulation X- 27 m/s

v_y = 0 mm < v_y max = L/300.00 = 8 mm Verified

Governing Load Case: 31 SLS:CHR/4=1*1.00 + 2*1.00 + 5*0.50 (1+2)*1.00+5*0.50

Section OK !!!

STEEL DESIGN

CODE: BS-EN 1993-1:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 6

POINT: 1

COORDINATE: x = 0.00 L = 0.00 m

LOADS:

Governing Load Case: 17 ULS/12=1*1.35 + 2*1.05 + 4*1.50 1*1.35+2*1.05+4*1.50

MATERIAL:

S275 (S275) fy = 275.00 MPa



SECTION PARAMETERS: UB 254x146x43

h=260 mm	gM0=1.00	gM1=1.00	
b=147 mm	Ay=3903 mm ²	Az=2023 mm ²	Ax=5480 mm ²
tw=7 mm	Iy=65440000 mm ⁴	Iz=6770000 mm ⁴	Ix=239000 mm ⁴
tf=13 mm	Wply=568000 mm ³	Wplz=141000 mm ³	

INTERNAL FORCES AND CAPACITIES:

N,Ed = -1.50 kN	My,Ed = -8.73 kN*m	Mz,Ed = -3.44 kN*m	Vy,Ed = -2.35 kN
Nt,Rd = 1507.00 kN	My,pl,Rd = 156.20 kN*m	Mz,pl,Rd = 38.78 kN*m	Vy,c,Rd = 619.72 kN
	My,c,Rd = 156.20 kN*m	Mz,c,Rd = 38.78 kN*m	Vz,Ed = 10.51 kN
	MN,y,Rd = 156.20 kN*m	MN,z,Rd = 38.78 kN*m	Vz,c,Rd = 321.20 kN
	Mb,Rd = 136.40 kN*m		

Class of section = 1



LATERAL BUCKLING PARAMETERS:

z = 1.00	Mcr = 283.53 kN*m	Curve,LT - b	XLT = 0.85
Lcr,low=2.38 m	Lam_LT = 0.74	fi,LT = 0.76	XLT,mod = 0.87

BUCKLING PARAMETERS:



About y axis:



About z axis:

VERIFICATION FORMULAS:

Section strength check:

$$N,Ed/Nt,Rd = 0.00 < 1.00 \quad (6.2.3.(1))$$

$$My,Ed/MN,y,Rd = 0.06 < 1.00 \quad (6.2.9.1.(2))$$

$$Mz,Ed/MN,z,Rd = 0.09 < 1.00 \quad (6.2.9.1.(2))$$

$$(My,Ed/MN,y,Rd)^{2.00} + (Mz,Ed/MN,z,Rd)^{1.00} = 0.09 < 1.00 \quad (6.2.9.1.(6))$$

$$Vy,Ed/Vy,c,Rd = 0.00 < 1.00 \quad (6.2.6.(1))$$

$$Vz,Ed/Vz,c,Rd = 0.03 < 1.00 \quad (6.2.6.(1))$$

Global stability check of member:

$$My,Ed/Mb,Rd = 0.06 < 1.00 \quad (6.3.2.1.(1))$$

LIMIT DISPLACEMENTS



Deflections (LOCAL SYSTEM):

$$u_y = 0 \text{ mm} < u_y \text{ max} = L/200.00 = 12 \text{ mm} \quad \text{Verified}$$

Governing Load Case: 34 SLS:CHR/7=1*1.00 + 2*0.70 + 4*1.00 (1+4)*1.00+2*0.70

$$u_z = 0 \text{ mm} < u_z \text{ max} = L/200.00 = 12 \text{ mm} \quad \text{Verified}$$

Governing Load Case: 31 SLS:CHR/4=1*1.00 + 2*1.00 + 5*0.50 (1+2)*1.00+5*0.50



Displacements (GLOBAL SYSTEM): Not analyzed

Section OK !!!

STEEL DESIGN

CODE: BS-EN 1993-1:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 7

POINT: 3

COORDINATE: x = 1.00 L = 2.37 m

LOADS:

Governing Load Case: 17 ULS/12=1*1.35 + 2*1.05 + 4*1.50 1*1.35+2*1.05+4*1.50

MATERIAL:

S275 (S275) fy = 275.00 MPa



SECTION PARAMETERS: UB 254x146x43

h=260 mm	gM0=1.00	gM1=1.00	
b=147 mm	Ay=3903 mm ²	Az=2023 mm ²	Ax=5480 mm ²
tw=7 mm	Iy=65440000 mm ⁴	Iz=6770000 mm ⁴	Ix=239000 mm ⁴
tf=13 mm	Wply=568000 mm ³	Wplz=141000 mm ³	

INTERNAL FORCES AND CAPACITIES:

N,Ed = -1.16 kN	My,Ed = -9.83 kN*m	Mz,Ed = -3.43 kN*m	Vy,Ed = 2.20 kN
Nt,Rd = 1507.00 kN	My,pl,Rd = 156.20 kN*m	Mz,pl,Rd = 38.78 kN*m	Vy,c,Rd = 619.72 kN
	My,c,Rd = 156.20 kN*m	Mz,c,Rd = 38.78 kN*m	Vz,Ed = -12.78 kN
	MN,y,Rd = 156.20 kN*m	MN,z,Rd = 38.78 kN*m	Vz,c,Rd = 321.20 kN
	Mb,Rd = 136.60 kN*m		

Class of section = 1



LATERAL BUCKLING PARAMETERS:

z = 1.00	Mcr = 285.38 kN*m	Curve,LT - b	XLT = 0.85
Lcr,low=2.37 m	Lam_LT = 0.74	fi,LT = 0.76	XLT,mod = 0.87

BUCKLING PARAMETERS:



About y axis:



About z axis:

VERIFICATION FORMULAS:

Section strength check:

$$N_{Ed}/N_{t,Rd} = 0.00 < 1.00 \quad (6.2.3.(1))$$

$$M_{y,Ed}/M_{N,y,Rd} = 0.06 < 1.00 \quad (6.2.9.1.(2))$$

$$M_{z,Ed}/M_{N,z,Rd} = 0.09 < 1.00 \quad (6.2.9.1.(2))$$

$$(M_{y,Ed}/M_{N,y,Rd})^{2.00} + (M_{z,Ed}/M_{N,z,Rd})^{1.00} = 0.09 < 1.00 \quad (6.2.9.1.(6))$$

$$V_{y,Ed}/V_{y,c,Rd} = 0.00 < 1.00 \quad (6.2.6.(1))$$

$$V_{z,Ed}/V_{z,c,Rd} = 0.04 < 1.00 \quad (6.2.6.(1))$$

Global stability check of member:

$$M_{y,Ed}/M_{b,Rd} = 0.07 < 1.00 \quad (6.3.2.1.(1))$$

LIMIT DISPLACEMENTS



Deflections (LOCAL SYSTEM):

$$u_y = 0 \text{ mm} < u_{y \text{ max}} = L/200.00 = 12 \text{ mm} \quad \text{Verified}$$

Governing Load Case: 34 SLS:CHR/7=1*1.00 + 2*0.70 + 4*1.00 (1+4)*1.00+2*0.70

$$u_z = 0 \text{ mm} < u_{z \text{ max}} = L/200.00 = 12 \text{ mm} \quad \text{Verified}$$

Governing Load Case: 30 SLS:CHR/3=1*1.00 + 2*1.00 + 4*0.50 (1+2)*1.00+4*0.50



Displacements (GLOBAL SYSTEM): Not analyzed

Section OK !!!

STEEL DESIGN

CODE: BS-EN 1993-1:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 8

POINT: 1

COORDINATE: x = 0.00 L = 0.00 m

LOADS:

Governing Load Case: 8 ULS/3=1*1.35 + 2*1.50 + 4*0.75 1*1.35+2*1.50+4*0.75

MATERIAL:

S275 (S275) fy = 275.00 MPa



SECTION PARAMETERS: UB 254x146x43

h=260 mm	gM0=1.00	gM1=1.00	
b=147 mm	Ay=3903 mm ²	Az=2023 mm ²	Ax=5480 mm ²
tw=7 mm	Iy=65440000 mm ⁴	Iz=6770000 mm ⁴	Ix=239000 mm ⁴
tf=13 mm	Wply=568000 mm ³	Wplz=141000 mm ³	

INTERNAL FORCES AND CAPACITIES:

N,Ed = 0.10 kN	My,Ed = -11.29 kN*m	Mz,Ed = -1.59 kN*m	Vy,Ed = -1.99 kN
Nc,Rd = 1507.00 kN	My,Ed,max = -11.29 kN*m		Mz,Ed,max = 1.75 kN*m
	Vy,c,Rd = 619.72 kN		
Nb,Rd = 1072.52 kN	My,c,Rd = 156.20 kN*m	Mz,c,Rd = 38.78 kN*m	Vz,Ed = 15.32 kN
	MN,y,Rd = 156.20 kN*m	MN,z,Rd = 38.78 kN*m	Vz,c,Rd = 321.20 kN
	Mb,Rd = 91.60 kN*m		

Class of section = 1



LATERAL BUCKLING PARAMETERS:

z = 1.00	Mcr = 107.18 kN*m	Curve,LT - b	XLT = 0.58
Lcr,low=4.95 m	Lam_LT = 1.21	fi,LT = 1.18	XLT,mod = 0.59

BUCKLING PARAMETERS:



About y axis:

Ly = 4.95 m	Lam_y = 0.26
Lcr,y = 2.47 m	Xy = 0.99
Lamy = 22.64	kzy = 1.00



About z axis:

Lz = 4.95 m	Lam_z = 0.82
Lcr,z = 2.47 m	Xz = 0.71
Lamz = 70.38	kzz = 0.90

VERIFICATION FORMULAS:

Section strength check:

N,Ed/Nc,Rd = 0.00 < 1.00 (6.2.4.(1))
 My,Ed/MN,y,Rd = 0.07 < 1.00 (6.2.9.1.(2))
 Mz,Ed/MN,z,Rd = 0.04 < 1.00 (6.2.9.1.(2))
 (My,Ed/MN,y,Rd)^2.00 + (Mz,Ed/MN,z,Rd)^1.00 = 0.05 < 1.00 (6.2.9.1.(6))
 Vy,Ed/Vy,c,Rd = 0.00 < 1.00 (6.2.6.(1))
 Vz,Ed/Vz,c,Rd = 0.05 < 1.00 (6.2.6.(1))

Global stability check of member:

Lambda,y = 22.64 < Lambda,max = 210.00 Lambda,z = 70.38 < Lambda,max = 210.00 STABLE
 My,Ed,max/Mb,Rd = 0.12 < 1.00 (6.3.2.1.(1))
 N,Ed/(Xy*N,Rk/gM1) + kyy*My,Ed,max/(XLT*My,Rk/gM1) + kyz*Mz,Ed,max/(Mz,Rk/gM1) = 0.14 < 1.00 (6.3.3.(4))
 N,Ed/(Xz*N,Rk/gM1) + kzy*My,Ed,max/(XLT*My,Rk/gM1) + kzz*Mz,Ed,max/(Mz,Rk/gM1) = 0.16 < 1.00 (6.3.3.(4))

LIMIT DISPLACEMENTS



Deflections (LOCAL SYSTEM):

$u_y = 3 \text{ mm} < u_y \text{ max} = L/200.00 = 25 \text{ mm}$

Verified

Governing Load Case: 34 SLS:CHR/7=1*1.00 + 2*0.70 + 4*1.00 (1+4)*1.00+2*0.70

$u_z = 1 \text{ mm} < u_z \text{ max} = L/200.00 = 25 \text{ mm}$

Verified

Governing Load Case: 29 SLS:CHR/2=1*1.00 + 2*1.00 + 3*0.50 (1+2)*1.00+3*0.50



Displacements (GLOBAL SYSTEM): *Not analyzed*

Section OK !!!

STEEL DESIGN

CODE: BS-EN 1993-1:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 9 Beam_9

POINT: 2

COORDINATE: x = 0.50 L = 1.74 m

LOADS:

Governing Load Case: 17 ULS/12=1*1.35 + 2*1.05 + 4*1.50 1*1.35+2*1.05+4*1.50

MATERIAL:

S275 (S275) fy = 275.00 MPa



SECTION PARAMETERS: PFCH 125x65x15

h=125 mm	gM0=1.00	gM1=1.00	
b=65 mm	Ay=1429 mm ²	Az=811 mm ²	Ax=1880 mm ²
tw=6 mm	Iy=4830000 mm ⁴	Iz=800000 mm ⁴	Ix=47200 mm ⁴
tf=10 mm	Wely=77280 mm ³	Welz=18605 mm ³	

INTERNAL FORCES AND CAPACITIES:

N,Ed = 0.25 kN	My,Ed = -7.68 kN*m	Mz,Ed = -1.17 kN*m	Vy,Ed = -0.15 kN
Nc,Rd = 517.00 kN	My,Ed,max = -7.68 kN*m	Mz,Ed,max = -1.17 kN*m	Vy,c,Rd = 226.88 kN
Nb,Rd = 184.61 kN	My,c,Rd = 21.25 kN*m	Mz,c,Rd = 5.12 kN*m	
	Mb,Rd = 12.55 kN*m		

Class of section = 3



LATERAL BUCKLING PARAMETERS:

z = 1.00	Mcr = 22.34 kN*m	Curve,LT - d	XLT = 0.57
Lcr,low=3.49 m	Lam_LT = 0.98	fi,LT = 1.08	XLT,mod = 0.59

BUCKLING PARAMETERS:



About y axis:

Ly = 3.49 m	Lam_y = 0.56
Lcr,y = 2.44 m	Xy = 0.81
Lamy = 48.14	kzy = 1.00



About z axis:

Lz = 3.49 m	Lam_z = 1.38
Lcr,z = 2.44 m	Xz = 0.36
Lamz = 118.29	kzz = 0.90

VERIFICATION FORMULAS:

Section strength check:

$$N,Ed/Nc,Rd + My,Ed/My,c,Rd + Mz,Ed/Mz,c,Rd = 0.59 < 1.00 \quad (6.2.1(7))$$

$$\sqrt{(\text{Sig},x,Ed^2 + 3*\text{Tau},y,Ed^2)/(fy/gM0)} = 0.56 < 1.00 \quad (6.2.1.(5))$$

$$Vy,Ed/Vy,c,Rd = 0.00 < 1.00 \quad (6.2.6.(1))$$

Global stability check of member:

$$\text{Lambda},y = 48.14 < \text{Lambda},\text{max} = 210.00 \quad \text{Lambda},z = 118.29 < \text{Lambda},\text{max} = 210.00 \quad \text{STABLE}$$

$$My,Ed,\text{max}/Mb,Rd = 0.61 < 1.00 \quad (6.3.2.1.(1))$$

$$N,Ed/(Xy*N,Rk/gM1) + kyy*My,Ed,\text{max}/(XLT*My,Rk/gM1) + kyz*Mz,Ed,\text{max}/(Mz,Rk/gM1) = 0.76 < 1.00 \quad (6.3.3.(4))$$

$$N,Ed/(Xz*N,Rk/gM1) + kzy*My,Ed,\text{max}/(XLT*My,Rk/gM1) + kzz*Mz,Ed,\text{max}/(Mz,Rk/gM1) = 0.82 < 1.00 \quad (6.3.3.(4))$$

LIMIT DISPLACEMENTS



Deflections (LOCAL SYSTEM):

uy = 12 mm < uy max = L/200.00 = 17 mm

Verified

Governing Load Case: 35 SLS:CHR/8=1*1.00 + 2*0.70 + 5*1.00 (1+5)*1.00+2*0.70

uz = 8 mm < uz max = L/200.00 = 17 mm

Verified

Governing Load Case: 28 SLS:CHR/1=1*1.00 + 2*1.00 (1+2)*1.00



Displacements (GLOBAL SYSTEM): *Not analyzed*

Section OK !!!

STEEL DESIGN

CODE: BS-EN 1993-1:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 10 Beam_10

POINT: 2

COORDINATE: x = 0.50 L = 1.74 m

LOADS:

Governing Load Case: 8 ULS/3=1*1.35 + 2*1.50 + 4*0.75 1*1.35+2*1.50+4*0.75

MATERIAL:

S275 (S275) fy = 275.00 MPa



SECTION PARAMETERS: PFCH 125x65x15

h=125 mm	gM0=1.00	gM1=1.00	
b=65 mm	Ay=1429 mm ²	Az=811 mm ²	Ax=1880 mm ²
tw=6 mm	Iy=4830000 mm ⁴	Iz=800000 mm ⁴	Ix=47200 mm ⁴
tf=10 mm	Wely=77280 mm ³	Welz=18605 mm ³	

INTERNAL FORCES AND CAPACITIES:

N,Ed = 4.27 kN	My,Ed = -8.34 kN*m
Nc,Rd = 517.00 kN	My,Ed,max = -8.34 kN*m
Nb,Rd = 184.61 kN	My,c,Rd = 21.25 kN*m
	Mb,Rd = 12.55 kN*m

Class of section = 3



LATERAL BUCKLING PARAMETERS:

z = 1.00	Mcr = 22.34 kN*m	Curve,LT - d	XLT = 0.57
Lcr,low=3.49 m	Lam_LT = 0.98	fi,LT = 1.08	XLT,mod = 0.59

BUCKLING PARAMETERS:



About y axis:

Ly = 3.49 m	Lam_y = 0.56
Lcr,y = 2.44 m	Xy = 0.81
Lamy = 48.14	kyy = 0.90



About z axis:

Lz = 3.49 m	Lam_z = 1.38
Lcr,z = 2.44 m	Xz = 0.36
Lamz = 118.29	kzy = 1.00

VERIFICATION FORMULAS:

Section strength check:

$M_{y,Ed}/M_{y,c,Rd} = 0.39 < 1.00$ (6.2.5.(1))

$N_{y,Ed}/N_{c,Rd} + M_{y,Ed}/M_{y,c,Rd} = 0.40 < 1.00$ (6.2.1(7))

Global stability check of member:

$\lambda_{b,y} = 48.14 < \lambda_{b,max} = 210.00$ $\lambda_{b,z} = 118.29 < \lambda_{b,max} = 210.00$ STABLE

$M_{y,Ed,max}/M_{b,Rd} = 0.66 < 1.00$ (6.3.2.1.(1))

$N_{y,Ed}/(X_y \cdot N_{Rk}/g_{M1}) + k_{yy} \cdot M_{y,Ed,max}/(XLT \cdot M_{y,Rk}/g_{M1}) = 0.61 < 1.00$ (6.3.3.(4))

$N_{z,Ed}/(X_z \cdot N_{Rk}/g_{M1}) + k_{zy} \cdot M_{y,Ed,max}/(XLT \cdot M_{y,Rk}/g_{M1}) = 0.69 < 1.00$ (6.3.3.(4))

LIMIT DISPLACEMENTS



Deflections (LOCAL SYSTEM):

uy = 0 mm < uy max = L/200.00 = 17 mm Verified

Governing Load Case: 30 SLS:CHR/3=1*1.00 + 2*1.00 + 4*0.50 (1+2)*1.00+4*0.50

uz = 8 mm < uz max = L/200.00 = 17 mm Verified

Governing Load Case: 28 SLS:CHR/1=1*1.00 + 2*1.00 (1+2)*1.00



Displacements (GLOBAL SYSTEM): Not analyzed

Section OK !!!

STEEL DESIGN

CODE: BS-EN 1993-1:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 11 Beam_11

POINT: 2

COORDINATE: x = 0.50 L = 1.74 m

LOADS:

Governing Load Case: 8 ULS/3=1*1.35 + 2*1.50 + 4*0.75 1*1.35+2*1.50+4*0.75

MATERIAL:

S275 (S275) fy = 275.00 MPa



SECTION PARAMETERS: PFCH 125x65x15

h=125 mm	gM0=1.00	gM1=1.00	
b=65 mm	Ay=1429 mm ²	Az=811 mm ²	Ax=1880 mm ²
tw=6 mm	Iy=4830000 mm ⁴	Iz=800000 mm ⁴	Ix=47200 mm ⁴
tf=10 mm	Wely=77280 mm ³	Welz=18605 mm ³	

INTERNAL FORCES AND CAPACITIES:

N,Ed = 4.10 kN	My,Ed = 8.34 kN*m
Nc,Rd = 517.00 kN	My,Ed,max = 8.34 kN*m
Nb,Rd = 184.61 kN	My,c,Rd = 21.25 kN*m
	Mb,Rd = 12.55 kN*m

Class of section = 3



LATERAL BUCKLING PARAMETERS:

z = 1.00	Mcr = 22.34 kN*m	Curve,LT - d	XLT = 0.57
Lcr,upp=3.49 m	Lam_LT = 0.98	fi,LT = 1.08	XLT,mod = 0.59

BUCKLING PARAMETERS:



About y axis:

Ly = 3.49 m	Lam_y = 0.56
Lcr,y = 2.44 m	Xy = 0.81
Lamy = 48.14	kyy = 0.90

About z axis:

Lz = 3.49 m	Lam_z = 1.38
Lcr,z = 2.44 m	Xz = 0.36
Lamz = 118.29	kzy = 1.00

VERIFICATION FORMULAS:

Section strength check:

$$My,Ed/My,c,Rd = 0.39 < 1.00 \quad (6.2.5.(1))$$

$$N,Ed/Nc,Rd + My,Ed/My,c,Rd = 0.40 < 1.00 \quad (6.2.1(7))$$

Global stability check of member:

$$\Lambda_{b,y} = 48.14 < \Lambda_{b,max} = 210.00 \quad \Lambda_{b,z} = 118.29 < \Lambda_{b,max} = 210.00 \quad \text{STABLE}$$

$$My,Ed,max/Mb,Rd = 0.66 < 1.00 \quad (6.3.2.1.(1))$$

$$N,Ed/(Xy*N,Rk/gM1) + kyy*My,Ed,max/(XLT*My,Rk/gM1) = 0.61 < 1.00 \quad (6.3.3.(4))$$

$$N,Ed/(Xz*N,Rk/gM1) + kzy*My,Ed,max/(XLT*My,Rk/gM1) = 0.69 < 1.00 \quad (6.3.3.(4))$$

LIMIT DISPLACEMENTS



Deflections (LOCAL SYSTEM):

uy = 0 mm < uy max = L/200.00 = 17 mm Verified

Governing Load Case: 4 Wind Simulation Y+ 27 m/s

uz = 8 mm < uz max = L/200.00 = 17 mm Verified

Governing Load Case: 28 SLS:CHR/1=1*1.00 + 2*1.00 (1+2)*1.00



Displacements (GLOBAL SYSTEM): Not analyzed

Section OK !!!

STEEL DESIGN

CODE: BS-EN 1993-1:2005/NA:2008/A1:2014, Eurocode 3: Design of steel structures.

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 12 Beam_12

POINT: 2

COORDINATE: x = 0.50 L = 1.74 m

LOADS:

Governing Load Case: 6 ULS/1=1*1.35 + 2*1.50 1*1.35+2*1.50

MATERIAL:

S275 (S275) fy = 275.00 MPa



SECTION PARAMETERS: PFCH 125x65x15

h=125 mm	gM0=1.00	gM1=1.00	
b=65 mm	Ay=1429 mm ²	Az=811 mm ²	Ax=1880 mm ²
tw=6 mm	Iy=4830000 mm ⁴	Iz=800000 mm ⁴	Ix=47200 mm ⁴
tf=10 mm	Wely=77280 mm ³	Welz=18605 mm ³	

INTERNAL FORCES AND CAPACITIES:

N,Ed = 0.26 kN	My,Ed = 8.34 kN*m
Nc,Rd = 517.00 kN	My,Ed,max = 8.34 kN*m
Nb,Rd = 184.61 kN	My,c,Rd = 21.25 kN*m
	Mb,Rd = 12.55 kN*m

Class of section = 3



LATERAL BUCKLING PARAMETERS:

z = 1.00	Mcr = 22.34 kN*m	Curve,LT - d	XLT = 0.57
Lcr,upp=3.49 m	Lam_LT = 0.98	fi,LT = 1.08	XLT,mod = 0.59

BUCKLING PARAMETERS:



About y axis:

Ly = 3.49 m	Lam_y = 0.56
Lcr,y = 2.44 m	Xy = 0.81
Lamy = 48.14	kyy = 0.90



About z axis:

Lz = 3.49 m	Lam_z = 1.38
Lcr,z = 2.44 m	Xz = 0.36
Lamz = 118.29	kzy = 1.00

VERIFICATION FORMULAS:

Section strength check:

$$My,Ed/My,c,Rd = 0.39 < 1.00 \quad (6.2.5.(1))$$

$$N,Ed/Nc,Rd + My,Ed/My,c,Rd = 0.39 < 1.00 \quad (6.2.1(7))$$

Global stability check of member:

$$\Lambda_{b,y} = 48.14 < \Lambda_{b,max} = 210.00 \quad \Lambda_{b,z} = 118.29 < \Lambda_{b,max} = 210.00 \quad \text{STABLE}$$

$$My,Ed,max/Mb,Rd = 0.66 < 1.00 \quad (6.3.2.1.(1))$$

$$N,Ed/(Xy*N,Rk/gM1) + kyy*My,Ed,max/(XLT*My,Rk/gM1) = 0.60 < 1.00 \quad (6.3.3.(4))$$

$$N,Ed/(Xz*N,Rk/gM1) + kzy*My,Ed,max/(XLT*My,Rk/gM1) = 0.67 < 1.00 \quad (6.3.3.(4))$$

LIMIT DISPLACEMENTS



Deflections (LOCAL SYSTEM):

uy = 0 mm < uy max = L/200.00 = 17 mm Verified

Governing Load Case: 33 SLS:CHR/6=1*1.00 + 2*0.70 + 3*1.00 (1+3)*1.00+2*0.70

uz = 8 mm < uz max = L/200.00 = 17 mm Verified

Governing Load Case: 28 SLS:CHR/1=1*1.00 + 2*1.00 (1+2)*1.00



Displacements (GLOBAL SYSTEM): Not analyzed

Section OK !!!