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Structural, economic and material comparison of various steel grades under fatigue loading

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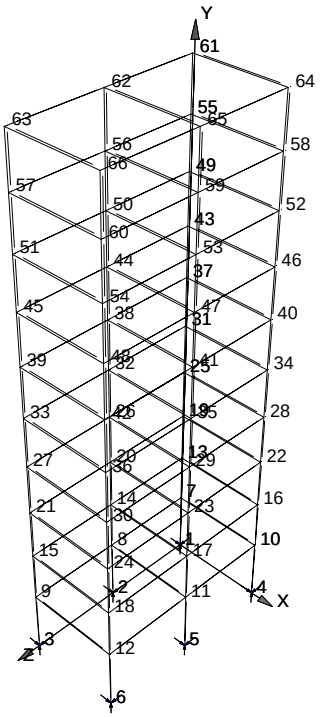
APPENDIX A

Space Frame Analysis Ver W2.1.33 - 23 Sep 2005
Input file:D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created : 8/24/2006 1:13:48 PM

A03

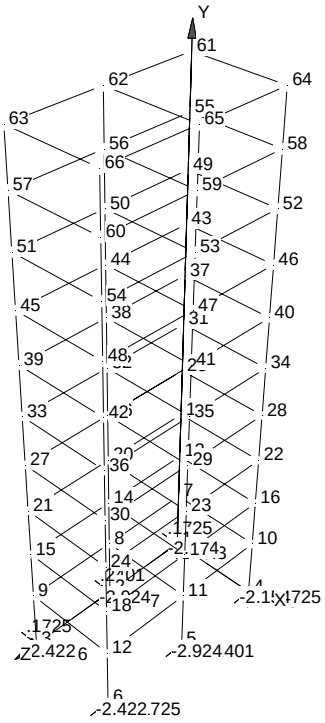
Deflections for Load Case LO1

Maximum Deflections for Load Case LO1:
X :0.00 mm at node 61
Y :-0.66 mm at node 62
Z :12.36 mm at node 61

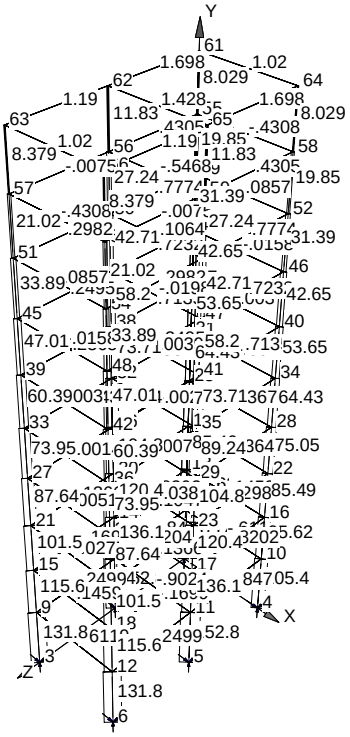


Reactions for Load Case LO1

Reactions: Load Case :LO1



Axial Forces for Load Case LO1



========== S p a c e - F r a m e A n a l y s i s - P R O K O N ==========
Ver W2.1.33 - 23 Sep 2005

TITLE :

Data file : D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created on: 8/24/2006

========== NODAL POINT COORDINATES ==========

Node no.	X-coord m	Y-coord m	Z-coord m	Node no.	X-coord m	Y-coord m	Z-coord m
1	0.000	0.000	0.000	2	0.000	0.000	7.500
3	0.000	0.000	15.000	4	7.500	0.000	0.000
5	7.500	0.000	7.500	6	7.500	0.000	15.000
7	0.000	5.000	0.000	8	0.000	5.000	7.500
9	0.000	5.000	15.000	10	7.500	5.000	0.000
11	7.500	5.000	7.500	12	7.500	5.000	15.000
13	0.000	9.000	0.000	14	0.000	9.000	7.500
15	0.000	9.000	15.000	16	7.500	9.000	0.000
17	7.500	9.000	7.500	18	7.500	9.000	15.000
19	0.000	13.000	0.000	20	0.000	13.000	7.500
21	0.000	13.000	15.000	22	7.500	13.000	0.000
23	7.500	13.000	7.500	24	7.500	13.000	15.000
25	0.000	17.000	0.000	26	0.000	17.000	7.500
27	0.000	17.000	15.000	28	7.500	17.000	0.000
29	7.500	17.000	7.500	30	7.500	17.000	15.000
31	0.000	21.000	0.000	32	0.000	21.000	7.500
33	0.000	21.000	15.000	34	7.500	21.000	0.000
35	7.500	21.000	7.500	36	7.500	21.000	15.000
37	0.000	25.000	0.000	38	0.000	25.000	7.500
39	0.000	25.000	15.000	40	7.500	25.000	0.000
41	7.500	25.000	7.500	42	7.500	25.000	15.000
43	0.000	29.000	0.000	44	0.000	29.000	7.500
45	0.000	29.000	15.000	46	7.500	29.000	0.000
47	7.500	29.000	7.500	48	7.500	29.000	15.000
49	0.000	33.000	0.000	50	0.000	33.000	7.500
51	0.000	33.000	15.000	52	7.500	33.000	0.000
53	7.500	33.000	7.500	54	7.500	33.000	15.000
55	0.000	37.000	0.000	56	0.000	37.000	7.500
57	0.000	37.000	15.000	58	7.500	37.000	0.000
59	7.500	37.000	7.500	60	7.500	37.000	15.000
61	0.000	41.000	0.000	62	0.000	41.000	7.500
63	0.000	41.000	15.000	64	7.500	41.000	0.000
65	7.500	41.000	7.500	66	7.500	41.000	15.000

========== ELEMENT DATA ==========

Beam	Secn. type	Fixity	Length m	ß (°)
7-8	BEAM1	00	7.500	0.00
8-9	BEAM1	00	7.500	0.00
7-10	BEAM1	00	7.500	0.00
10-11	BEAM1	00	7.500	0.00
11-12	BEAM1	00	7.500	0.00
9-12	BEAM1	00	7.500	0.00
13-14	BEAM1	00	7.500	0.00
14-15	BEAM1	00	7.500	0.00
13-16	BEAM1	00	7.500	0.00
16-17	BEAM1	00	7.500	0.00
17-18	BEAM1	00	7.500	0.00
15-18	BEAM1	00	7.500	0.00
19-20	BEAM1	00	7.500	0.00
20-21	BEAM1	00	7.500	0.00
19-22	BEAM1	00	7.500	0.00
22-23	BEAM1	00	7.500	0.00
23-24	BEAM1	00	7.500	0.00
21-24	BEAM1	00	7.500	0.00
25-26	BEAM1	00	7.500	0.00
26-27	BEAM1	00	7.500	0.00
25-28	BEAM1	00	7.500	0.00
28-29	BEAM1	00	7.500	0.00
29-30	BEAM1	00	7.500	0.00
27-30	BEAM1	00	7.500	0.00
31-32	BEAM1	00	7.500	0.00

32-33	BEAM1	00	7.500	0.00
31-34	BEAM1	00	7.500	0.00
34-35	BEAM1	00	7.500	0.00
35-36	BEAM1	00	7.500	0.00
33-36	BEAM1	00	7.500	0.00
37-38	BEAM1	00	7.500	0.00
38-39	BEAM1	00	7.500	0.00
37-40	BEAM1	00	7.500	0.00
40-41	BEAM1	00	7.500	0.00
41-42	BEAM1	00	7.500	0.00
39-42	BEAM1	00	7.500	0.00
43-44	BEAM1	00	7.500	0.00
44-45	BEAM1	00	7.500	0.00
43-46	BEAM1	00	7.500	0.00
46-47	BEAM1	00	7.500	0.00
47-48	BEAM1	00	7.500	0.00
45-48	BEAM1	00	7.500	0.00
49-50	BEAM1	00	7.500	0.00
50-51	BEAM1	00	7.500	0.00
49-52	BEAM1	00	7.500	0.00
52-53	BEAM1	00	7.500	0.00
53-54	BEAM1	00	7.500	0.00
51-54	BEAM1	00	7.500	0.00
55-56	BEAM1	00	7.500	0.00
56-57	BEAM1	00	7.500	0.00
55-58	BEAM1	00	7.500	0.00
58-59	BEAM1	00	7.500	0.00
59-60	BEAM1	00	7.500	0.00
57-60	BEAM1	00	7.500	0.00
61-62	BEAM1	00	7.500	0.00
62-63	BEAM1	00	7.500	0.00
61-64	BEAM1	00	7.500	0.00
64-65	BEAM1	00	7.500	0.00
65-66	BEAM1	00	7.500	0.00
63-66	BEAM1	00	7.500	0.00
8-11	BEAM3	00	7.500	0.00
14-17	BEAM3	00	7.500	0.00
20-23	BEAM3	00	7.500	0.00
26-29	BEAM3	00	7.500	0.00
32-35	BEAM3	00	7.500	0.00
38-41	BEAM3	00	7.500	0.00
44-47	BEAM3	00	7.500	0.00
50-53	BEAM3	00	7.500	0.00
56-59	BEAM3	00	7.500	0.00
62-65	BEAM3	00	7.500	0.00
1-7	COL	00	5.000	0.00
7-13	COL	00	4.000	0.00
13-19	COL	00	4.000	0.00
19-25	COL	00	4.000	0.00
25-31	COL	00	4.000	0.00
31-37	COL	00	4.000	0.00
37-43	COL	00	4.000	0.00
43-49	COL	00	4.000	0.00
49-55	COL	00	4.000	0.00
55-61	COL	00	4.000	0.00
2-8	COL	00	5.000	-0.00
8-14	COL	00	4.000	0.00
14-20	COL	00	4.000	0.00
20-26	COL	00	4.000	0.00
26-32	COL	00	4.000	0.00
32-38	COL	00	4.000	0.00
38-44	COL	00	4.000	0.00
44-50	COL	00	4.000	0.00
50-56	COL	00	4.000	0.00
56-62	COL	00	4.000	0.00
3-9	COL	00	5.000	-0.00
9-15	COL	00	4.000	0.00
15-21	COL	00	4.000	0.00
21-27	COL	00	4.000	0.00
27-33	COL	00	4.000	0.00
33-39	COL	00	4.000	0.00
39-45	COL	00	4.000	0.00
45-51	COL	00	4.000	0.00
51-57	COL	00	4.000	0.00
57-63	COL	00	4.000	0.00
4-10	COL	00	5.000	-0.00
10-16	COL	00	4.000	0.00
16-22	COL	00	4.000	0.00

22-28	COL		00	4.000	0.00
28-34	COL		00	4.000	0.00
34-40	COL		00	4.000	0.00
40-46	COL		00	4.000	0.00
46-52	COL		00	4.000	0.00
52-58	COL		00	4.000	0.00
58-64	COL		00	4.000	0.00
5-11	COL		00	5.000	-0.00
11-17	COL		00	4.000	0.00
17-23	COL		00	4.000	0.00
23-29	COL		00	4.000	0.00
29-35	COL		00	4.000	0.00
35-41	COL		00	4.000	0.00
41-47	COL		00	4.000	0.00
47-53	COL		00	4.000	0.00
53-59	COL		00	4.000	0.00
59-65	COL		00	4.000	0.00
6-12	COL		00	5.000	-0.00
12-18	COL		00	4.000	0.00
18-24	COL		00	4.000	0.00
24-30	COL		00	4.000	0.00
30-36	COL		00	4.000	0.00
36-42	COL		00	4.000	0.00
42-48	COL		00	4.000	0.00
48-54	COL		00	4.000	0.00
54-60	COL		00	4.000	0.00
60-66	COL		00	4.000	0.00

========== SECTION PROPERTIES ==========

Section : BEAM1 Section designation: 406x178x60 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
7.610E-3	0.000	0.000	215E-6	12.0E-6	332E-9	Steel:300W

Section : BEAM3 Section designation: 533x210x93 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
11.80E-3	0.000	0.000	553E-6	23.9E-6	772E-9	Steel:300W

Section : COL Section designation: 305x305x198 H1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
25.20E-3	0.000	0.000	509E-6	162E-6	7.44E-6	Steel:300W

========== MATERIALS ==========

Designation	E	poisson	Density	Exp. coeff.
	kPa		kN/m^3	
Steel:300W	206.0E6	0.30	77.00	11.70E-6

========== SUPPORT DATA ==========

					Prescribed displacements		
Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		m	m	m	rad.	rad.	rad.
1	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
2	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
3	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
4	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
5	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
6	XYZ	0.00	0.00	0.00	0.00	0.00	0.00

					Spring constants		
Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		kN/m	kN/m	kN/m	kNm/rad	kNm/rad	kNm/rad

========== LOADS ==========

Load Case Description

LO1

Add own weight to load case : LO1

========== LOAD CASE LO1 ==========

*** POINT LOADS ***

Node	Fx kN	Fy kN	Fz kN	Mx kNm	My kNm	Mz kNm
7	0.00	0.00	0.50	0.00	0.00	0.00
10	0.00	0.00	0.50	0.00	0.00	0.00
13	0.00	0.00	0.50	0.00	0.00	0.00
16	0.00	0.00	0.50	0.00	0.00	0.00
19	0.00	0.00	0.50	0.00	0.00	0.00
22	0.00	0.00	0.50	0.00	0.00	0.00
25	0.00	0.00	0.50	0.00	0.00	0.00
28	0.00	0.00	0.50	0.00	0.00	0.00
31	0.00	0.00	0.50	0.00	0.00	0.00
34	0.00	0.00	0.50	0.00	0.00	0.00
37	0.00	0.00	1.00	0.00	0.00	0.00
40	0.00	0.00	1.00	0.00	0.00	0.00
43	0.00	0.00	1.00	0.00	0.00	0.00
46	0.00	0.00	1.00	0.00	0.00	0.00
49	0.00	0.00	1.00	0.00	0.00	0.00
52	0.00	0.00	1.00	0.00	0.00	0.00
55	0.00	0.00	1.00	0.00	0.00	0.00
58	0.00	0.00	1.00	0.00	0.00	0.00
61	0.00	0.00	1.00	0.00	0.00	0.00
64	0.00	0.00	1.00	0.00	0.00	0.00

========== OUTPUT: LINEAR ANALYSIS ==========
========== NODAL POINT DISPLACEMENTS at SLS ==========

Node	Lcase	X-disp. mm	Y-disp. mm	Z-disp. mm	X-rot. rad.	Y-rot. rad.	Z-rot. rad.
1	LO1	0.00	0.00	0.00	0.0013	0.0000	0.0000
2	LO1	0.00	0.00	0.00	0.0014	0.0000	0.0000
3	LO1	0.00	0.00	0.00	0.0013	-0.0000	0.0000
4	LO1	0.00	0.00	0.00	0.0013	-0.0000	-0.0000
5	LO1	0.00	0.00	0.00	0.0014	0.0000	-0.0000
6	LO1	0.00	0.00	0.00	0.0013	0.0000	-0.0000
7	LO1	-0.00	-0.10	4.95	0.0005	0.0000	-0.0000
8	LO1	-0.00	-0.15	4.95	0.0003	0.0000	-0.0000
9	LO1	-0.00	-0.13	4.95	0.0004	-0.0000	-0.0000
10	LO1	0.00	-0.10	4.95	0.0005	-0.0000	0.0000
11	LO1	0.00	-0.15	4.95	0.0003	0.0000	0.0000
12	LO1	0.00	-0.13	4.95	0.0004	0.0000	0.0000
13	LO1	0.00	-0.18	6.50	0.0003	-0.0000	-0.0000
14	LO1	0.00	-0.25	6.50	0.0002	0.0000	-0.0000
15	LO1	0.00	-0.22	6.50	0.0002	0.0000	-0.0000
16	LO1	-0.00	-0.18	6.50	0.0003	0.0000	0.0000
17	LO1	-0.00	-0.25	6.50	0.0002	0.0000	0.0000
18	LO1	-0.00	-0.22	6.50	0.0002	-0.0000	0.0000
19	LO1	-0.00	-0.24	7.67	0.0002	0.0000	-0.0000
20	LO1	-0.00	-0.34	7.67	0.0002	0.0000	-0.0000
21	LO1	-0.00	-0.29	7.67	0.0002	-0.0000	-0.0000
22	LO1	0.00	-0.24	7.67	0.0002	-0.0000	0.0000
23	LO1	0.00	-0.34	7.67	0.0002	0.0000	0.0000
24	LO1	0.00	-0.29	7.67	0.0002	0.0000	0.0000
25	LO1	0.00	-0.30	8.72	0.0002	-0.0000	-0.0000
26	LO1	0.00	-0.43	8.72	0.0001	0.0000	-0.0000
27	LO1	0.00	-0.36	8.72	0.0002	0.0000	-0.0000
28	LO1	-0.00	-0.30	8.72	0.0002	0.0000	0.0000
29	LO1	-0.00	-0.43	8.72	0.0001	0.0000	0.0000
30	LO1	-0.00	-0.36	8.72	0.0002	-0.0000	0.0000
31	LO1	-0.00	-0.35	9.68	0.0002	0.0000	-0.0000
32	LO1	-0.00	-0.49	9.68	0.0001	0.0000	-0.0000
33	LO1	-0.00	-0.42	9.68	0.0001	-0.0000	-0.0000

34	LO1	0.00	-0.35	9.68	0.0002	-0.0000	0.0000
35	LO1	0.00	-0.49	9.68	0.0001	0.0000	0.0000
36	LO1	0.00	-0.42	9.68	0.0001	0.0000	0.0000
37	LO1	0.00	-0.39	10.54	0.0002	-0.0000	-0.0000
38	LO1	0.00	-0.55	10.54	0.0001	0.0000	-0.0000
39	LO1	0.00	-0.47	10.54	0.0001	0.0000	-0.0000
40	LO1	-0.00	-0.39	10.54	0.0002	0.0000	0.0000
41	LO1	-0.00	-0.55	10.54	0.0001	0.0000	0.0000
42	LO1	-0.00	-0.47	10.54	0.0001	-0.0000	0.0000
43	LO1	-0.00	-0.42	11.25	0.0001	0.0000	-0.0000
44	LO1	-0.00	-0.60	11.25	0.0001	0.0000	-0.0000
45	LO1	-0.00	-0.50	11.25	0.0001	-0.0000	-0.0000
46	LO1	0.00	-0.42	11.25	0.0001	-0.0000	0.0000
47	LO1	0.00	-0.60	11.25	0.0001	0.0000	0.0000
48	LO1	0.00	-0.50	11.25	0.0001	0.0000	0.0000
49	LO1	0.00	-0.45	11.79	0.0001	-0.0000	-0.0000
50	LO1	0.00	-0.63	11.78	0.0001	0.0000	-0.0000
51	LO1	0.00	-0.53	11.78	0.0001	0.0000	-0.0000
52	LO1	-0.00	-0.45	11.79	0.0001	0.0000	0.0000
53	LO1	-0.00	-0.63	11.78	0.0001	0.0000	0.0000
54	LO1	-0.00	-0.53	11.78	0.0001	-0.0000	0.0000
55	LO1	-0.00	-0.46	12.15	0.0001	0.0000	-0.0000
56	LO1	-0.00	-0.65	12.15	0.0000	0.0000	-0.0000
57	LO1	-0.00	-0.54	12.15	0.0000	-0.0000	-0.0000
58	LO1	0.00	-0.46	12.15	0.0001	-0.0000	0.0000
59	LO1	0.00	-0.65	12.15	0.0000	0.0000	0.0000
60	LO1	0.00	-0.54	12.15	0.0000	0.0000	0.0000
61	LO1	0.00	-0.47	12.36	0.0001	-0.0000	-0.0000
62	LO1	0.00	-0.66	12.35	0.0000	0.0000	-0.0000
63	LO1	0.00	-0.55	12.35	-0.0000	0.0000	-0.0000
64	LO1	-0.00	-0.47	12.36	0.0001	0.0000	0.0000
65	LO1	-0.00	-0.66	12.35	0.0000	0.0000	0.0000
66	LO1	-0.00	-0.55	12.35	-0.0000	-0.0000	0.0000

============================== REACTIONS at ULS ==============================

Note:Only load combinations have ULS load factors. Factor for Load cases = 1

Node	Lcase	X-force kN	Y-force kN	Z-force kN	X-moment kNm	Y-moment kNm	Z-moment kNm
1	LO1	0.17	110.29	-2.15	0.00	0.00	0.00
2	LO1	0.24	157.67	-2.92	0.00	0.00	0.00
3	LO1	0.17	136.62	-2.42	0.00	0.00	0.00
4	LO1	-0.17	110.29	-2.15	0.00	0.00	0.00
5	LO1	-0.24	157.67	-2.92	0.00	0.00	0.00
6	LO1	-0.17	136.62	-2.42	0.00	0.00	0.00

EQUILIBRIUM CHECK AT ULS:

LC APPLIED LOADS & MOMENTS about (0.0,0.0,0.0)

Sum of:	Px	Py	Pz	Mx	My	Mz
LO1	0.00	-809.17	15.00	6463.77	-56.25	-3034.39

LC REACTIONS & REACTION MOMENTS about (0.0,0.0,0.0)

Sum of:	Rx	Ry	Rz	MRx	MRy	MRz
LO1	0.00	809.17	-15.00	-6463.77	56.25	3034.39

============ BEAM ELEMENT END FORCES IN LOCAL ELEMENT AXES at ULS ==============

Elem	Lcase	Axial kN	Y-Shear kN	X-Shear kN	Torsion kNm	M-yy kNm	M-xx kNm
7-	LO1	-0.85	-1.11	0.00	0.00	-0.00	-10.78
8		0.85	5.50	-0.00	-0.00	-0.00	-14.02
8-	LO1	0.25	-0.88	-0.00	-0.00	0.00	-8.05
9		-0.25	5.27	0.00	0.00	0.00	-15.02
7-	LO1	-0.61	2.20	0.00	0.00	0.00	2.59
10		0.61	2.20	-0.00	0.00	-0.00	-2.59
10-	LO1	-0.85	-1.11	-0.00	-0.00	0.00	-10.78
11		0.85	5.50	0.00	0.00	0.00	-14.02
11-	LO1	0.25	-0.88	0.00	0.00	-0.00	-8.05
12		-0.25	5.27	-0.00	-0.00	-0.00	-15.02
9-	LO1	-0.61	2.20	0.00	0.00	-0.00	2.59

12		0.61	2.20	-0.00	0.00	0.00	-2.59
13-	LO1	0.82	0.17	-0.00	0.00	0.00	-5.27
14		-0.82	4.23	0.00	-0.00	0.00	-9.94
14-	LO1	-0.17	0.24	0.00	-0.00	-0.00	-4.44
15		0.17	4.15	-0.00	0.00	-0.00	-10.22
13-	LO1	0.15	2.20	0.00	0.00	-0.00	2.66
16		-0.15	2.20	0.00	0.00	0.00	-2.66
16-	LO1	0.82	0.17	0.00	-0.00	-0.00	-5.27
17		-0.82	4.23	-0.00	0.00	-0.00	-9.94
17-	LO1	-0.17	0.24	-0.00	0.00	0.00	-4.44
18		0.17	4.15	0.00	-0.00	0.00	-10.22
15-	LO1	0.15	2.20	0.00	0.00	0.00	2.66
18		-0.15	2.20	0.00	0.00	-0.00	-2.66
19-	LO1	0.30	0.49	0.00	0.00	-0.00	-4.15
20		-0.30	3.91	-0.00	-0.00	-0.00	-8.68
20-	LO1	0.14	0.53	-0.00	-0.00	0.00	-3.32
21		-0.14	3.86	0.00	0.00	0.00	-9.17
19-	LO1	-0.03	2.20	0.00	0.00	0.00	2.65
22		0.03	2.20	0.00	0.00	-0.00	-2.65
22-	LO1	0.30	0.49	-0.00	-0.00	0.00	-4.15
23		-0.30	3.91	0.00	0.00	0.00	-8.68
23-	LO1	0.14	0.53	0.00	0.00	-0.00	-3.32
24		-0.14	3.86	-0.00	-0.00	-0.00	-9.17
21-	LO1	-0.03	2.20	0.00	0.00	-0.00	2.65
24		0.03	2.20	0.00	0.00	0.00	-2.65
25-	LO1	0.36	0.66	-0.00	0.00	0.00	-3.46
26		-0.36	3.73	0.00	-0.00	0.00	-8.07
26-	LO1	0.10	0.66	0.00	-0.00	-0.00	-2.87
27		-0.10	3.73	-0.00	0.00	-0.00	-8.63
25-	LO1	0.01	2.20	0.00	0.00	-0.00	2.65
28		-0.01	2.20	-0.00	0.00	0.00	-2.65
28-	LO1	0.36	0.66	0.00	-0.00	-0.00	-3.46
29		-0.36	3.73	-0.00	0.00	-0.00	-8.07
29-	LO1	0.10	0.66	-0.00	0.00	0.00	-2.87
30		-0.10	3.73	0.00	-0.00	0.00	-8.63
27-	LO1	0.01	2.20	0.00	0.00	0.00	2.65
30		-0.01	2.20	-0.00	0.00	-0.00	-2.65
31-	LO1	0.37	0.82	0.00	0.00	-0.00	-2.83
32		-0.37	3.57	-0.00	-0.00	-0.00	-7.48
32-	LO1	0.11	0.79	-0.00	-0.00	0.00	-2.41
33		-0.11	3.60	0.00	0.00	0.00	-8.12
31-	LO1	-0.00	2.20	0.00	0.00	0.00	2.65
34		0.00	2.20	-0.00	0.00	-0.00	-2.65
34-	LO1	0.37	0.82	-0.00	-0.00	0.00	-2.83
35		-0.37	3.57	0.00	0.00	0.00	-7.48
35-	LO1	0.11	0.79	0.00	0.00	-0.00	-2.41
36		-0.11	3.60	-0.00	-0.00	-0.00	-8.12
33-	LO1	-0.00	2.20	0.00	0.00	-0.00	2.65
36		0.00	2.20	-0.00	0.00	0.00	-2.65
37-	LO1	0.71	1.04	-0.00	0.00	0.00	-1.99
38		-0.71	3.36	0.00	-0.00	0.00	-6.72
38-	LO1	0.26	0.98	0.00	-0.00	-0.00	-1.75
39		-0.26	3.41	-0.00	0.00	-0.00	-7.38
37-	LO1	0.00	2.20	0.00	0.00	-0.00	2.65
40		-0.00	2.20	-0.00	0.00	0.00	-2.65
40-	LO1	0.71	1.04	0.00	-0.00	-0.00	-1.99
41		-0.71	3.36	-0.00	0.00	-0.00	-6.72
41-	LO1	0.26	0.98	-0.00	0.00	0.00	-1.75
42		-0.26	3.41	0.00	-0.00	0.00	-7.38
39-	LO1	0.00	2.20	0.00	0.00	0.00	2.65
42		-0.00	2.20	-0.00	0.00	-0.00	-2.65
43-	LO1	0.72	1.31	0.00	0.00	-0.00	-0.93
44		-0.72	3.09	-0.00	-0.00	-0.00	-5.76
44-	LO1	0.25	1.23	-0.00	-0.00	0.00	-0.88
45		-0.25	3.17	0.00	0.00	0.00	-6.41
43-	LO1	-0.02	2.20	0.00	0.00	0.00	2.65
46		0.02	2.20	-0.00	0.00	-0.00	-2.65
46-	LO1	0.72	1.31	-0.00	-0.00	0.00	-0.93
47		-0.72	3.09	0.00	0.00	0.00	-5.76
47-	LO1	0.25	1.23	0.00	0.00	-0.00	-0.88
48		-0.25	3.17	-0.00	-0.00	-0.00	-6.41
45-	LO1	-0.02	2.20	0.00	0.00	-0.00	2.65
48		0.02	2.20	-0.00	0.00	0.00	-2.65
49-	LO1	0.78	1.58	-0.00	0.00	0.00	0.12
50		-0.78	2.82	0.00	-0.00	0.00	-4.79
50-	LO1	0.30	1.49	0.00	-0.00	-0.00	0.04
51		-0.30	2.91	-0.00	0.00	-0.00	-5.38
49-	LO1	0.09	2.20	0.00	0.00	-0.00	2.64

52		-0.09	2.20	-0.00	0.00	0.00	-2.64
52-	LO1	0.78	1.58	0.00	-0.00	-0.00	0.12
53		-0.78	2.82	-0.00	0.00	-0.00	-4.79
53-	LO1	0.30	1.49	-0.00	0.00	0.00	0.04
54		-0.30	2.91	0.00	-0.00	0.00	-5.38
51-	LO1	0.09	2.20	0.00	0.00	0.00	2.64
54		-0.09	2.20	-0.00	0.00	-0.00	-2.64
55-	LO1	0.43	1.87	0.00	0.00	-0.00	1.29
56		-0.43	2.53	-0.00	-0.00	-0.00	-3.78
56-	LO1	-0.01	1.72	-0.00	-0.00	0.00	0.87
57		0.01	2.68	0.00	0.00	0.00	-4.49
55-	LO1	-0.43	2.20	0.00	0.00	0.00	2.68
58		0.43	2.20	-0.00	0.00	-0.00	-2.68
58-	LO1	0.43	1.87	-0.00	-0.00	0.00	1.29
59		-0.43	2.53	0.00	0.00	0.00	-3.78
59-	LO1	-0.01	1.72	0.00	0.00	-0.00	0.87
60		0.01	2.68	-0.00	-0.00	-0.00	-4.49
57-	LO1	-0.43	2.20	0.00	0.00	-0.00	2.68
60		0.43	2.20	-0.00	0.00	0.00	-2.68
61-	LO1	1.70	1.95	-0.00	0.00	0.00	1.44
62		-1.70	2.44	0.00	-0.00	0.00	-3.29
62-	LO1	1.19	2.09	0.00	-0.00	-0.00	2.09
63		-1.19	2.30	-0.00	0.00	-0.00	-2.86
61-	LO1	1.02	2.20	0.00	0.00	-0.00	2.48
64		-1.02	2.20	-0.00	0.00	0.00	-2.48
64-	LO1	1.70	1.95	0.00	-0.00	-0.00	1.44
65		-1.70	2.44	-0.00	0.00	-0.00	-3.29
65-	LO1	1.19	2.09	-0.00	0.00	0.00	2.09
66		-1.19	2.30	0.00	-0.00	0.00	-2.86
63-	LO1	1.02	2.20	0.00	0.00	0.00	2.48
66		-1.02	2.20	-0.00	0.00	-0.00	-2.48
8-	LO1	-0.90	3.41	0.00	0.00	-0.00	3.69
11		0.90	3.41	-0.00	0.00	-0.00	-3.69
14-	LO1	0.20	3.41	-0.00	0.00	0.00	3.92
17		-0.20	3.41	0.00	0.00	0.00	-3.92
20-	LO1	-0.04	3.41	0.00	0.00	-0.00	3.88
23		0.04	3.41	0.00	0.00	-0.00	-3.88
26-	LO1	0.01	3.41	0.00	0.00	-0.00	3.89
29		-0.01	3.41	-0.00	0.00	-0.00	-3.89
32-	LO1	-0.00	3.41	0.00	0.00	-0.00	3.88
35		0.00	3.41	-0.00	0.00	-0.00	-3.88
38-	LO1	0.00	3.41	0.00	0.00	-0.00	3.88
41		-0.00	3.41	-0.00	0.00	-0.00	-3.88
44-	LO1	-0.02	3.41	0.00	0.00	-0.00	3.89
47		0.02	3.41	-0.00	0.00	-0.00	-3.89
50-	LO1	0.11	3.41	0.00	0.00	-0.00	3.86
53		-0.11	3.41	-0.00	0.00	-0.00	-3.86
56-	LO1	-0.55	3.41	0.00	0.00	-0.00	3.99
59		0.55	3.41	-0.00	0.00	-0.00	-3.99
62-	LO1	1.43	3.41	0.00	0.00	-0.00	3.38
65		-1.43	3.41	-0.00	0.00	-0.00	-3.38
1-	LO1	105.44	-0.17	-2.15	0.00	-0.00	0.00
7		-105.44	0.17	2.15	0.00	10.77	-0.86
7-	LO1	95.62	-0.78	-0.81	0.00	0.01	-1.73
13		-95.62	0.78	0.81	-0.00	3.22	-1.41
13-	LO1	85.49	-0.64	-1.13	-0.00	2.05	-1.25
19		-85.49	0.64	1.13	0.00	2.46	-1.31
19-	LO1	75.05	-0.67	-0.93	0.00	1.69	-1.34
25		-75.05	0.67	0.93	-0.00	2.01	-1.33
25-	LO1	64.43	-0.66	-0.79	-0.00	1.45	-1.32
31		-64.43	0.66	0.79	0.00	1.71	-1.32
31-	LO1	53.65	-0.66	-0.66	0.00	1.12	-1.32
37		-53.65	0.66	0.66	-0.00	1.51	-1.33
37-	LO1	42.65	-0.66	-0.37	-0.00	0.48	-1.32
43		-42.65	0.66	0.37	0.00	1.00	-1.32
43-	LO1	31.39	-0.68	-0.09	0.00	-0.07	-1.33
49		-31.39	0.68	0.09	-0.00	0.45	-1.37
49-	LO1	19.85	-0.59	0.13	-0.00	-0.57	-1.27
55		-19.85	0.59	-0.13	0.00	0.05	-1.09
55-	LO1	8.03	-1.02	0.70	0.00	-1.35	-1.60
61		-8.03	1.02	-0.70	-0.00	-1.44	-2.48
2-	LO1	152.82	-0.24	-2.92	0.00	0.00	0.00
8		-152.82	0.24	2.92	0.00	14.62	-1.20
8-	LO1	136.06	-1.14	-4.02	-0.00	7.45	-2.49
14		-136.06	1.14	4.02	0.00	8.63	-2.08
14-	LO1	120.42	-0.94	-3.03	-0.00	5.76	-1.84
20		-120.42	0.94	3.03	0.00	6.36	-1.92
20-	LO1	104.81	-0.98	-2.87	-0.00	5.64	-1.96

26		-104.81	0.98	2.87	0.00	5.84	-1.95
26-	LO1	89.24	-0.97	-2.61	-0.00	5.11	-1.94
32		-89.24	0.97	2.61	0.00	5.33	-1.94
32-	LO1	73.71	-0.97	-2.36	-0.00	4.56	-1.94
38		-73.71	0.97	2.36	0.00	4.86	-1.94
38-	LO1	58.20	-0.97	-1.90	-0.00	3.61	-1.94
44		-58.20	0.97	1.90	0.00	3.99	-1.93
44-	LO1	42.71	-0.99	-1.43	-0.00	2.65	-1.96
50		-42.71	0.99	1.43	0.00	3.05	-2.00
50-	LO1	27.24	-0.88	-0.95	-0.00	1.70	-1.87
56		-27.24	0.88	0.95	0.00	2.08	-1.66
56-	LO1	11.83	-1.43	-0.51	-0.00	0.82	-2.33
62		-11.83	1.43	0.51	0.00	1.21	-3.38
3-	LO1	131.77	-0.17	-2.42	0.00	0.00	0.00
9		-131.77	0.17	2.42	0.00	12.11	-0.86
9-	LO1	115.57	-0.78	-2.17	-0.00	2.91	-1.73
15		-115.57	0.78	2.17	0.00	5.78	-1.41
15-	LO1	101.46	-0.64	-2.34	0.00	4.44	-1.25
21		-101.46	0.64	2.34	-0.00	4.93	-1.31
21-	LO1	87.64	-0.67	-2.21	-0.00	4.25	-1.34
27		-87.64	0.67	2.21	0.00	4.58	-1.33
27-	LO1	73.95	-0.66	-2.10	0.00	4.05	-1.32
33		-73.95	0.66	2.10	-0.00	4.35	-1.32
33-	LO1	60.39	-0.66	-1.99	-0.00	3.77	-1.32
39		-60.39	0.66	1.99	0.00	4.18	-1.33
39-	LO1	47.01	-0.66	-1.73	0.00	3.20	-1.32
45		-47.01	0.66	1.73	-0.00	3.72	-1.32
45-	LO1	33.89	-0.68	-1.48	-0.00	2.68	-1.33
51		-33.89	0.68	1.48	0.00	3.24	-1.37
51-	LO1	21.02	-0.59	-1.18	0.00	2.14	-1.27
57		-21.02	0.59	1.18	-0.00	2.59	-1.09
57-	LO1	8.38	-1.02	-1.19	-0.00	1.90	-1.60
63		-8.38	1.02	1.19	0.00	2.86	-2.48
4-	LO1	105.44	0.17	-2.15	0.00	0.00	0.00
10		-105.44	-0.17	2.15	0.00	10.77	0.86
10-	LO1	95.62	0.78	-0.81	-0.00	0.01	1.73
16		-95.62	-0.78	0.81	0.00	3.22	1.41
16-	LO1	85.49	0.64	-1.13	0.00	2.05	1.25
22		-85.49	-0.64	1.13	-0.00	2.46	1.31
22-	LO1	75.05	0.67	-0.93	-0.00	1.69	1.34
28		-75.05	-0.67	0.93	0.00	2.01	1.33
28-	LO1	64.43	0.66	-0.79	0.00	1.45	1.32
34		-64.43	-0.66	0.79	-0.00	1.71	1.32
34-	LO1	53.65	0.66	-0.66	-0.00	1.12	1.32
40		-53.65	-0.66	0.66	0.00	1.51	1.33
40-	LO1	42.65	0.66	-0.37	0.00	0.48	1.32
46		-42.65	-0.66	0.37	-0.00	1.00	1.32
46-	LO1	31.39	0.68	-0.09	-0.00	-0.07	1.33
52		-31.39	-0.68	0.09	0.00	0.45	1.37
52-	LO1	19.85	0.59	0.13	0.00	-0.57	1.27
58		-19.85	-0.59	-0.13	-0.00	0.05	1.09
58-	LO1	8.03	1.02	0.70	-0.00	-1.35	1.60
64		-8.03	-1.02	-0.70	0.00	-1.44	2.48
5-	LO1	152.82	0.24	-2.92	0.00	-0.00	0.00
11		-152.82	-0.24	2.92	0.00	14.62	1.20
11-	LO1	136.06	1.14	-4.02	-0.00	7.45	2.49
17		-136.06	-1.14	4.02	0.00	8.63	2.08
17-	LO1	120.42	0.94	-3.03	-0.00	5.76	1.84
23		-120.42	-0.94	3.03	0.00	6.36	1.92
23-	LO1	104.81	0.98	-2.87	-0.00	5.64	1.96
29		-104.81	-0.98	2.87	0.00	5.84	1.95
29-	LO1	89.24	0.97	-2.61	-0.00	5.11	1.94
35		-89.24	-0.97	2.61	0.00	5.33	1.94
35-	LO1	73.71	0.97	-2.36	-0.00	4.56	1.94
41		-73.71	-0.97	2.36	0.00	4.86	1.94
41-	LO1	58.20	0.97	-1.90	-0.00	3.61	1.94
47		-58.20	-0.97	1.90	0.00	3.99	1.93
47-	LO1	42.71	0.99	-1.43	-0.00	2.65	1.96
53		-42.71	-0.99	1.43	0.00	3.05	2.00
53-	LO1	27.24	0.88	-0.95	-0.00	1.70	1.87
59		-27.24	-0.88	0.95	0.00	2.08	1.66
59-	LO1	11.83	1.43	-0.51	-0.00	0.82	2.33
65		-11.83	-1.43	0.51	0.00	1.21	3.38
6-	LO1	131.77	0.17	-2.42	0.00	0.00	0.00
12		-131.77	-0.17	2.42	0.00	12.11	0.86
12-	LO1	115.57	0.78	-2.17	0.00	2.91	1.73
18		-115.57	-0.78	2.17	-0.00	5.78	1.41
18-	LO1	101.46	0.64	-2.34	-0.00	4.44	1.25

24		-101.46	-0.64	2.34	0.00	4.93	1.31
24-	LO1	87.64	0.67	-2.21	0.00	4.25	1.34
30		-87.64	-0.67	2.21	-0.00	4.58	1.33
30-	LO1	73.95	0.66	-2.10	-0.00	4.05	1.32
36		-73.95	-0.66	2.10	0.00	4.35	1.32
36-	LO1	60.39	0.66	-1.99	0.00	3.77	1.32
42		-60.39	-0.66	1.99	-0.00	4.18	1.33
42-	LO1	47.01	0.66	-1.73	-0.00	3.20	1.32
48		-47.01	-0.66	1.73	0.00	3.72	1.32
48-	LO1	33.89	0.68	-1.48	0.00	2.68	1.33
54		-33.89	-0.68	1.48	-0.00	3.24	1.37
54-	LO1	21.02	0.59	-1.18	-0.00	2.14	1.27
60		-21.02	-0.59	1.18	0.00	2.59	1.09
60-	LO1	8.38	1.02	-1.19	0.00	1.90	1.60
66		-8.38	-1.02	1.19	-0.00	2.86	2.48

```
============================== STATISTICAL DATA ==============================

Own weight of structure = 809.17 kN

No. of real numbers in Stiffness matrix = 0  (0 bytes)
Time used to analyse = 0: 0:0.040 seconds
Total number of : Nodes              = 66
                  Beam Elements      = 130
                  Cable Elements     = 0
                  Shell Elements     = 0
                  Supports           = 6
                  Section properties = 3
                  Load cases         = 1
                  Load combinations  = 0

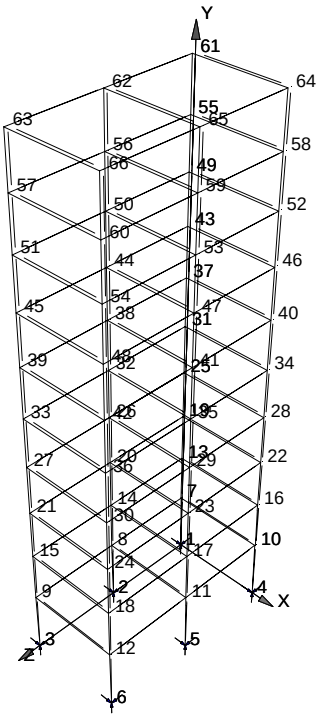
============================== END OF OUTPUT ================================
```

Space Frame Analysis Ver W2.1.33 - 23 Sep 2005
Input file:D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created : 8/24/2006 1:07:57 PM

A03

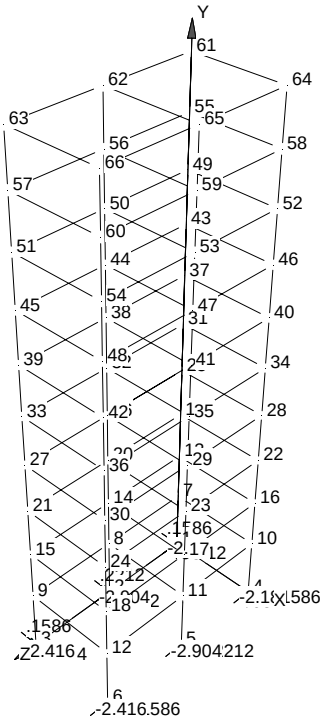
Deflections for Load Case LO1

Maximum Deflections for Load Case LO1:
X :0.00 mm at node 61
Y :-0.71 mm at node 62
Z :18.27 mm at node 61

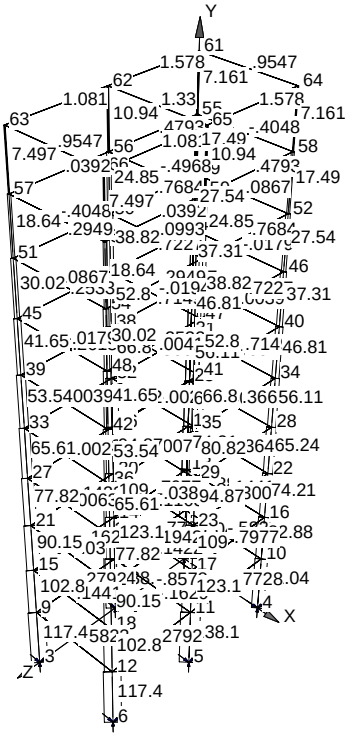


Reactions for Load Case LO1

Reactions: Load Case :LO1



Axial Forces for Load Case LO1



========== S p a c e - F r a m e A n a l y s i s - P R O K O N ==========
Ver W2.1.33 - 23 Sep 2005

TITLE :

Data file : D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created on: 8/24/2006

========== NODAL POINT COORDINATES ==========

Node no.	X-coord m	Y-coord m	Z-coord m	Node no.	X-coord m	Y-coord m	Z-coord m
1	0.000	0.000	0.000	2	0.000	0.000	7.500
3	0.000	0.000	15.000	4	7.500	0.000	0.000
5	7.500	0.000	7.500	6	7.500	0.000	15.000
7	0.000	5.000	0.000	8	0.000	5.000	7.500
9	0.000	5.000	15.000	10	7.500	5.000	0.000
11	7.500	5.000	7.500	12	7.500	5.000	15.000
13	0.000	9.000	0.000	14	0.000	9.000	7.500
15	0.000	9.000	15.000	16	7.500	9.000	0.000
17	7.500	9.000	7.500	18	7.500	9.000	15.000
19	0.000	13.000	0.000	20	0.000	13.000	7.500
21	0.000	13.000	15.000	22	7.500	13.000	0.000
23	7.500	13.000	7.500	24	7.500	13.000	15.000
25	0.000	17.000	0.000	26	0.000	17.000	7.500
27	0.000	17.000	15.000	28	7.500	17.000	0.000
29	7.500	17.000	7.500	30	7.500	17.000	15.000
31	0.000	21.000	0.000	32	0.000	21.000	7.500
33	0.000	21.000	15.000	34	7.500	21.000	0.000
35	7.500	21.000	7.500	36	7.500	21.000	15.000
37	0.000	25.000	0.000	38	0.000	25.000	7.500
39	0.000	25.000	15.000	40	7.500	25.000	0.000
41	7.500	25.000	7.500	42	7.500	25.000	15.000
43	0.000	29.000	0.000	44	0.000	29.000	7.500
45	0.000	29.000	15.000	46	7.500	29.000	0.000
47	7.500	29.000	7.500	48	7.500	29.000	15.000
49	0.000	33.000	0.000	50	0.000	33.000	7.500
51	0.000	33.000	15.000	52	7.500	33.000	0.000
53	7.500	33.000	7.500	54	7.500	33.000	15.000
55	0.000	37.000	0.000	56	0.000	37.000	7.500
57	0.000	37.000	15.000	58	7.500	37.000	0.000
59	7.500	37.000	7.500	60	7.500	37.000	15.000
61	0.000	41.000	0.000	62	0.000	41.000	7.500
63	0.000	41.000	15.000	64	7.500	41.000	0.000
65	7.500	41.000	7.500	66	7.500	41.000	15.000

========== ELEMENT DATA ==========

Beam	Secn. type	Fixity	Length m	ß (°)
7-8	BEAM1	00	7.500	0.00
8-9	BEAM1	00	7.500	0.00
7-10	BEAM1	00	7.500	0.00
10-11	BEAM1	00	7.500	0.00
11-12	BEAM1	00	7.500	0.00
9-12	BEAM1	00	7.500	0.00
13-14	BEAM1	00	7.500	0.00
14-15	BEAM1	00	7.500	0.00
13-16	BEAM1	00	7.500	0.00
16-17	BEAM1	00	7.500	0.00
17-18	BEAM1	00	7.500	0.00
15-18	BEAM1	00	7.500	0.00
19-20	BEAM1	00	7.500	0.00
20-21	BEAM1	00	7.500	0.00
19-22	BEAM1	00	7.500	0.00
22-23	BEAM1	00	7.500	0.00
23-24	BEAM1	00	7.500	0.00
21-24	BEAM1	00	7.500	0.00
25-26	BEAM1	00	7.500	0.00
26-27	BEAM1	00	7.500	0.00
25-28	BEAM1	00	7.500	0.00
28-29	BEAM1	00	7.500	0.00
29-30	BEAM1	00	7.500	0.00
27-30	BEAM1	00	7.500	0.00
31-32	BEAM1	00	7.500	0.00

32-33	BEAM1	00	7.500	0.00
31-34	BEAM1	00	7.500	0.00
34-35	BEAM1	00	7.500	0.00
35-36	BEAM1	00	7.500	0.00
33-36	BEAM1	00	7.500	0.00
37-38	BEAM1	00	7.500	0.00
38-39	BEAM1	00	7.500	0.00
37-40	BEAM1	00	7.500	0.00
40-41	BEAM1	00	7.500	0.00
41-42	BEAM1	00	7.500	0.00
39-42	BEAM1	00	7.500	0.00
43-44	BEAM1	00	7.500	0.00
44-45	BEAM1	00	7.500	0.00
43-46	BEAM1	00	7.500	0.00
46-47	BEAM1	00	7.500	0.00
47-48	BEAM1	00	7.500	0.00
45-48	BEAM1	00	7.500	0.00
49-50	BEAM1	00	7.500	0.00
50-51	BEAM1	00	7.500	0.00
49-52	BEAM1	00	7.500	0.00
52-53	BEAM1	00	7.500	0.00
53-54	BEAM1	00	7.500	0.00
51-54	BEAM1	00	7.500	0.00
55-56	BEAM1	00	7.500	0.00
56-57	BEAM1	00	7.500	0.00
55-58	BEAM1	00	7.500	0.00
58-59	BEAM1	00	7.500	0.00
59-60	BEAM1	00	7.500	0.00
57-60	BEAM1	00	7.500	0.00
61-62	BEAM1	00	7.500	0.00
62-63	BEAM1	00	7.500	0.00
61-64	BEAM1	00	7.500	0.00
64-65	BEAM1	00	7.500	0.00
65-66	BEAM1	00	7.500	0.00
63-66	BEAM1	00	7.500	0.00
8-11	BEAM3	00	7.500	0.00
14-17	BEAM3	00	7.500	0.00
20-23	BEAM3	00	7.500	0.00
26-29	BEAM3	00	7.500	0.00
32-35	BEAM3	00	7.500	0.00
38-41	BEAM3	00	7.500	0.00
44-47	BEAM3	00	7.500	0.00
50-53	BEAM3	00	7.500	0.00
56-59	BEAM3	00	7.500	0.00
62-65	BEAM3	00	7.500	0.00
1-7	COL	00	5.000	0.00
7-13	COL	00	4.000	0.00
13-19	COL	00	4.000	0.00
19-25	COL	00	4.000	0.00
25-31	COL	00	4.000	0.00
31-37	COL	00	4.000	0.00
37-43	COL	00	4.000	0.00
43-49	COL	00	4.000	0.00
49-55	COL	00	4.000	0.00
55-61	COL	00	4.000	0.00
2-8	COL	00	5.000	-0.00
8-14	COL	00	4.000	0.00
14-20	COL	00	4.000	0.00
20-26	COL	00	4.000	0.00
26-32	COL	00	4.000	0.00
32-38	COL	00	4.000	0.00
38-44	COL	00	4.000	0.00
44-50	COL	00	4.000	0.00
50-56	COL	00	4.000	0.00
56-62	COL	00	4.000	0.00
3-9	COL	00	5.000	-0.00
9-15	COL	00	4.000	0.00
15-21	COL	00	4.000	0.00
21-27	COL	00	4.000	0.00
27-33	COL	00	4.000	0.00
33-39	COL	00	4.000	0.00
39-45	COL	00	4.000	0.00
45-51	COL	00	4.000	0.00
51-57	COL	00	4.000	0.00
57-63	COL	00	4.000	0.00
4-10	COL	00	5.000	-0.00
10-16	COL	00	4.000	0.00
16-22	COL	00	4.000	0.00

22-28	COL	00	4.000	0.00	
28-34	COL	00	4.000	0.00	
34-40	COL	00	4.000	0.00	
40-46	COL	00	4.000	0.00	
46-52	COL	00	4.000	0.00	
52-58	COL	00	4.000	0.00	
58-64	COL	00	4.000	0.00	
5-11	COL	00	5.000	-0.00	
11-17	COL	00	4.000	0.00	
17-23	COL	00	4.000	0.00	
23-29	COL	00	4.000	0.00	
29-35	COL	00	4.000	0.00	
35-41	COL	00	4.000	0.00	
41-47	COL	00	4.000	0.00	
47-53	COL	00	4.000	0.00	
53-59	COL	00	4.000	0.00	
59-65	COL	00	4.000	0.00	
6-12	COL	00	5.000	-0.00	
12-18	COL	00	4.000	0.00	
18-24	COL	00	4.000	0.00	
24-30	COL	00	4.000	0.00	
30-36	COL	00	4.000	0.00	
36-42	COL	00	4.000	0.00	
42-48	COL	00	4.000	0.00	
48-54	COL	00	4.000	0.00	
54-60	COL	00	4.000	0.00	
60-66	COL	00	4.000	0.00	

========== SECTION PROPERTIES ==========

Section : BEAM1 Section designation: 356x171x57 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
7.220E-3	0.000	0.000	161E-6	11.1E-6	334E-9	Steel:350W

Section : BEAM3 Section designation: 457x191x90 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
11.40E-3	0.000	0.000	411E-6	20.9E-6	921E-9	Steel:350W

Section : COL Section designation: 254x254x167 H1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
21.20E-3	0.000	0.000	299E-6	97.9E-6	6.34E-6	Steel:350W

========== MATERIALS ==========

Designation	E	poisson	Density	Exp. coeff.
	kPa		kN/m^3	
Steel:350W	206.0E6	0.30	77.00	11.70E-6

========== SUPPORT DATA ==========

Prescribed displacements

Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		m	m	m	rad.	rad.	rad.
1	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
2	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
3	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
4	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
5	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
6	XYZ	0.00	0.00	0.00	0.00	0.00	0.00

Spring constants

Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		kN/m	kN/m	kN/m	kNm/rad	kNm/rad	kNm/rad

========== LOADS ==========

Load Case Description

LO1

Add own weight to load case : LO1

========== LOAD CASE LO1 ==========

*** POINT LOADS ***

Node	Fx kN	Fy kN	Fz kN	Mx kNm	My kNm	Mz kNm
7	0.00	0.00	0.50	0.00	0.00	0.00
10	0.00	0.00	0.50	0.00	0.00	0.00
13	0.00	0.00	0.50	0.00	0.00	0.00
16	0.00	0.00	0.50	0.00	0.00	0.00
19	0.00	0.00	0.50	0.00	0.00	0.00
22	0.00	0.00	0.50	0.00	0.00	0.00
25	0.00	0.00	0.50	0.00	0.00	0.00
28	0.00	0.00	0.50	0.00	0.00	0.00
31	0.00	0.00	0.50	0.00	0.00	0.00
34	0.00	0.00	0.50	0.00	0.00	0.00
37	0.00	0.00	1.00	0.00	0.00	0.00
40	0.00	0.00	1.00	0.00	0.00	0.00
43	0.00	0.00	1.00	0.00	0.00	0.00
46	0.00	0.00	1.00	0.00	0.00	0.00
49	0.00	0.00	1.00	0.00	0.00	0.00
52	0.00	0.00	1.00	0.00	0.00	0.00
55	0.00	0.00	1.00	0.00	0.00	0.00
58	0.00	0.00	1.00	0.00	0.00	0.00
61	0.00	0.00	1.00	0.00	0.00	0.00
64	0.00	0.00	1.00	0.00	0.00	0.00

========== OUTPUT: LINEAR ANALYSIS ==========
========== NODAL POINT DISPLACEMENTS at SLS ==========

Node	Lcase	X-disp. mm	Y-disp. mm	Z-disp. mm	X-rot. rad.	Y-rot. rad.	Z-rot. rad.
1	LO1	0.00	0.00	0.00	0.0020	0.0000	0.0000
2	LO1	0.00	0.00	0.00	0.0021	0.0000	0.0000
3	LO1	0.00	0.00	0.00	0.0020	-0.0000	0.0000
4	LO1	0.00	0.00	0.00	0.0020	-0.0000	-0.0000
5	LO1	0.00	0.00	0.00	0.0021	0.0000	-0.0000
6	LO1	0.00	0.00	0.00	0.0020	0.0000	-0.0000
7	LO1	-0.00	-0.10	7.66	0.0006	0.0000	-0.0000
8	LO1	-0.00	-0.16	7.66	0.0003	0.0000	-0.0000
9	LO1	-0.00	-0.13	7.66	0.0005	-0.0000	-0.0000
10	LO1	0.00	-0.10	7.66	0.0006	-0.0000	0.0000
11	LO1	0.00	-0.16	7.66	0.0003	0.0000	0.0000
12	LO1	0.00	-0.13	7.66	0.0005	0.0000	0.0000
13	LO1	0.00	-0.18	9.87	0.0004	-0.0000	-0.0000
14	LO1	0.00	-0.27	9.87	0.0002	0.0000	-0.0000
15	LO1	0.00	-0.23	9.87	0.0003	0.0000	-0.0000
16	LO1	-0.00	-0.18	9.87	0.0004	0.0000	0.0000
17	LO1	-0.00	-0.27	9.87	0.0002	0.0000	0.0000
18	LO1	-0.00	-0.23	9.87	0.0003	-0.0000	0.0000
19	LO1	-0.00	-0.25	11.54	0.0003	0.0000	-0.0000
20	LO1	-0.00	-0.37	11.54	0.0002	0.0000	-0.0000
21	LO1	-0.00	-0.31	11.54	0.0002	-0.0000	-0.0000
22	LO1	0.00	-0.25	11.54	0.0003	-0.0000	0.0000
23	LO1	0.00	-0.37	11.54	0.0002	0.0000	0.0000
24	LO1	0.00	-0.31	11.54	0.0002	0.0000	0.0000
25	LO1	0.00	-0.31	13.06	0.0003	-0.0000	-0.0000
26	LO1	0.00	-0.46	13.05	0.0002	0.0000	-0.0000
27	LO1	0.00	-0.38	13.05	0.0002	0.0000	-0.0000
28	LO1	-0.00	-0.31	13.06	0.0003	0.0000	0.0000
29	LO1	-0.00	-0.46	13.05	0.0002	0.0000	0.0000
30	LO1	-0.00	-0.38	13.05	0.0002	-0.0000	0.0000
31	LO1	-0.00	-0.36	14.44	0.0003	0.0000	-0.0000
32	LO1	-0.00	-0.53	14.44	0.0002	0.0000	-0.0000
33	LO1	-0.00	-0.44	14.44	0.0002	-0.0000	-0.0000

34	LO1	0.00	-0.36	14.44	0.0003	-0.0000	0.0000
35	LO1	0.00	-0.53	14.44	0.0002	0.0000	0.0000
36	LO1	0.00	-0.44	14.44	0.0002	0.0000	0.0000
37	LO1	0.00	-0.40	15.68	0.0002	-0.0000	-0.0000
38	LO1	0.00	-0.59	15.67	0.0001	0.0000	-0.0000
39	LO1	0.00	-0.49	15.67	0.0002	0.0000	-0.0000
40	LO1	-0.00	-0.40	15.68	0.0002	0.0000	0.0000
41	LO1	-0.00	-0.59	15.67	0.0001	0.0000	0.0000
42	LO1	-0.00	-0.49	15.67	0.0002	-0.0000	0.0000
43	LO1	-0.00	-0.44	16.69	0.0002	0.0000	-0.0000
44	LO1	-0.00	-0.64	16.69	0.0001	0.0000	-0.0000
45	LO1	-0.00	-0.53	16.69	0.0001	-0.0000	-0.0000
46	LO1	0.00	-0.44	16.69	0.0002	-0.0000	0.0000
47	LO1	0.00	-0.64	16.69	0.0001	0.0000	0.0000
48	LO1	0.00	-0.53	16.69	0.0001	0.0000	0.0000
49	LO1	0.00	-0.46	17.46	0.0002	-0.0000	-0.0000
50	LO1	0.00	-0.68	17.46	0.0001	0.0000	-0.0000
51	LO1	0.00	-0.56	17.45	0.0001	0.0000	-0.0000
52	LO1	-0.00	-0.46	17.46	0.0002	0.0000	0.0000
53	LO1	-0.00	-0.68	17.46	0.0001	0.0000	0.0000
54	LO1	-0.00	-0.56	17.45	0.0001	-0.0000	0.0000
55	LO1	-0.00	-0.48	17.98	0.0001	0.0000	-0.0000
56	LO1	-0.00	-0.70	17.98	0.0001	0.0000	-0.0000
57	LO1	-0.00	-0.57	17.98	0.0000	-0.0000	-0.0000
58	LO1	0.00	-0.48	17.98	0.0001	-0.0000	0.0000
59	LO1	0.00	-0.70	17.98	0.0001	0.0000	0.0000
60	LO1	0.00	-0.57	17.98	0.0000	0.0000	0.0000
61	LO1	0.00	-0.48	18.27	0.0001	-0.0000	-0.0000
62	LO1	0.00	-0.71	18.26	0.0000	0.0000	-0.0000
63	LO1	0.00	-0.58	18.26	-0.0000	0.0000	-0.0000
64	LO1	-0.00	-0.48	18.27	0.0001	0.0000	0.0000
65	LO1	-0.00	-0.71	18.26	0.0000	0.0000	0.0000
66	LO1	-0.00	-0.58	18.26	-0.0000	-0.0000	0.0000

============================== REACTIONS at ULS ==============================

Note:Only load combinations have ULS load factors. Factor for Load cases = 1

Node	Lcase	X-force kN	Y-force kN	Z-force kN	X-moment kNm	Y-moment kNm	Z-moment kNm
1	LO1	0.16	95.12	-2.18	0.00	0.00	0.00
2	LO1	0.22	142.22	-2.90	0.00	0.00	0.00
3	LO1	0.16	121.45	-2.42	0.00	0.00	0.00
4	LO1	-0.16	95.12	-2.18	0.00	0.00	0.00
5	LO1	-0.22	142.22	-2.90	0.00	0.00	0.00
6	LO1	-0.16	121.45	-2.42	0.00	0.00	0.00

EQUILIBRIUM CHECK AT ULS:

LC APPLIED LOADS & MOMENTS about (0.0,0.0,0.0)

Sum of:	Px	Py	Pz	Mx	My	Mz
LO1	0.00	-717.58	15.00	5776.84	-56.25	-2690.92

LC REACTIONS & REACTION MOMENTS about (0.0,0.0,0.0)

Sum of:	Rx	Ry	Rz	MRx	MRy	MRz
LO1	0.00	717.58	-15.00	-5776.84	56.25	2690.92

============ BEAM ELEMENT END FORCES IN LOCAL ELEMENT AXES at ULS ==============

Elem	Lcase	Axial kN	Y-Shear kN	X-Shear kN	Torsion kNm	M-yy kNm	M-xx kNm
7-	LO1	-0.77	-1.28	0.00	0.00	-0.00	-11.31
8		0.77	5.45	-0.00	-0.00	-0.00	-13.89
8-	LO1	0.28	-1.01	-0.00	-0.00	0.00	-8.10
9		-0.28	5.18	0.00	0.00	0.00	-15.09
7-	LO1	-0.58	2.08	0.00	0.00	0.00	2.42
10		0.58	2.08	-0.00	0.00	-0.00	-2.42
10-	LO1	-0.77	-1.28	-0.00	-0.00	0.00	-11.31
11		0.77	5.45	0.00	0.00	0.00	-13.89
11-	LO1	0.28	-1.01	0.00	0.00	-0.00	-8.10
12		-0.28	5.18	-0.00	-0.00	-0.00	-15.09
9-	LO1	-0.58	2.08	0.00	0.00	-0.00	2.42

12		0.58	2.08	-0.00	0.00	0.00	-2.42
13-	LO1	0.80	0.06	-0.00	0.00	0.00	-5.48
14		-0.80	4.11	0.00	-0.00	0.00	-9.73
14-	LO1	-0.16	0.17	0.00	-0.00	-0.00	-4.38
15		0.16	4.00	-0.00	0.00	-0.00	-9.95
13-	LO1	0.14	2.08	0.00	0.00	-0.00	2.50
16		-0.14	2.08	-0.00	0.00	0.00	-2.50
16-	LO1	0.80	0.06	0.00	-0.00	-0.00	-5.48
17		-0.80	4.11	-0.00	0.00	-0.00	-9.73
17-	LO1	-0.16	0.17	-0.00	0.00	0.00	-4.38
18		0.16	4.00	0.00	-0.00	0.00	-9.95
15-	LO1	0.14	2.08	0.00	0.00	0.00	2.50
18		-0.14	2.08	-0.00	0.00	-0.00	-2.50
19-	LO1	0.30	0.35	0.00	0.00	-0.00	-4.44
20		-0.30	3.81	-0.00	-0.00	-0.00	-8.53
20-	LO1	0.14	0.45	-0.00	-0.00	0.00	-3.30
21		-0.14	3.72	0.00	0.00	0.00	-8.96
19-	LO1	-0.03	2.08	0.00	0.00	0.00	2.48
22		0.03	2.08	-0.00	0.00	-0.00	-2.48
22-	LO1	0.30	0.35	-0.00	-0.00	0.00	-4.44
23		-0.30	3.81	0.00	0.00	0.00	-8.53
23-	LO1	0.14	0.45	0.00	0.00	-0.00	-3.30
24		-0.14	3.72	-0.00	-0.00	-0.00	-8.96
21-	LO1	-0.03	2.08	0.00	0.00	-0.00	2.48
24		0.03	2.08	-0.00	0.00	0.00	-2.48
25-	LO1	0.36	0.52	-0.00	0.00	0.00	-3.77
26		-0.36	3.65	0.00	-0.00	0.00	-7.96
26-	LO1	0.11	0.58	0.00	-0.00	-0.00	-2.87
27		-0.11	3.59	-0.00	0.00	-0.00	-8.42
25-	LO1	0.01	2.08	0.00	0.00	-0.00	2.49
28		-0.01	2.08	-0.00	0.00	0.00	-2.49
28-	LO1	0.36	0.52	0.00	-0.00	-0.00	-3.77
29		-0.36	3.65	-0.00	0.00	-0.00	-7.96
29-	LO1	0.11	0.58	-0.00	0.00	0.00	-2.87
30		-0.11	3.59	0.00	-0.00	0.00	-8.42
27-	LO1	0.01	2.08	0.00	0.00	0.00	2.49
30		-0.01	2.08	-0.00	0.00	-0.00	-2.49
31-	LO1	0.37	0.68	0.00	0.00	-0.00	-3.16
32		-0.37	3.49	-0.00	-0.00	-0.00	-7.39
32-	LO1	0.12	0.71	-0.00	-0.00	0.00	-2.41
33		-0.12	3.46	0.00	0.00	0.00	-7.90
31-	LO1	-0.00	2.08	0.00	0.00	0.00	2.49
34		0.00	2.08	-0.00	0.00	-0.00	-2.49
34-	LO1	0.37	0.68	-0.00	-0.00	0.00	-3.16
35		-0.37	3.49	0.00	0.00	0.00	-7.39
35-	LO1	0.12	0.71	0.00	0.00	-0.00	-2.41
36		-0.12	3.46	-0.00	-0.00	-0.00	-7.90
33-	LO1	-0.00	2.08	0.00	0.00	-0.00	2.49
36		0.00	2.08	-0.00	0.00	0.00	-2.49
37-	LO1	0.71	0.89	-0.00	0.00	0.00	-2.32
38		-0.71	3.28	0.00	-0.00	0.00	-6.64
38-	LO1	0.26	0.90	0.00	-0.00	-0.00	-1.75
39		-0.26	3.27	-0.00	0.00	-0.00	-7.15
37-	LO1	0.00	2.08	0.00	0.00	-0.00	2.49
40		-0.00	2.08	-0.00	0.00	0.00	-2.49
40-	LO1	0.71	0.89	0.00	-0.00	-0.00	-2.32
41		-0.71	3.28	-0.00	0.00	-0.00	-6.64
41-	LO1	0.26	0.90	-0.00	0.00	0.00	-1.75
42		-0.26	3.27	0.00	-0.00	0.00	-7.15
39-	LO1	0.00	2.08	0.00	0.00	0.00	2.49
42		-0.00	2.08	-0.00	0.00	-0.00	-2.49
43-	LO1	0.72	1.16	0.00	0.00	-0.00	-1.25
44		-0.72	3.01	-0.00	-0.00	-0.00	-5.69
44-	LO1	0.25	1.15	-0.00	-0.00	0.00	-0.88
45		-0.25	3.02	0.00	0.00	0.00	-6.16
43-	LO1	-0.02	2.08	0.00	0.00	0.00	2.49
46		0.02	2.08	-0.00	0.00	-0.00	-2.49
46-	LO1	0.72	1.16	-0.00	-0.00	0.00	-1.25
47		-0.72	3.01	0.00	0.00	0.00	-5.69
47-	LO1	0.25	1.15	0.00	0.00	-0.00	-0.88
48		-0.25	3.02	-0.00	-0.00	-0.00	-6.16
45-	LO1	-0.02	2.08	0.00	0.00	-0.00	2.49
48		0.02	2.08	-0.00	0.00	0.00	-2.49
49-	LO1	0.77	1.43	-0.00	0.00	0.00	-0.19
50		-0.77	2.74	0.00	-0.00	0.00	-4.73
50-	LO1	0.29	1.41	0.00	-0.00	-0.00	0.03
51		-0.29	2.76	-0.00	0.00	-0.00	-5.11
49-	LO1	0.09	2.08	-0.00	0.00	-0.00	2.48

52		-0.09	2.08	0.00	0.00	0.00	-2.48
52-	LO1	0.77	1.43	0.00	-0.00	-0.00	-0.19
53		-0.77	2.74	-0.00	0.00	-0.00	-4.73
53-	LO1	0.29	1.41	-0.00	0.00	0.00	0.03
54		-0.29	2.76	0.00	-0.00	0.00	-5.11
51-	LO1	0.09	2.08	-0.00	0.00	0.00	2.48
54		-0.09	2.08	0.00	0.00	-0.00	-2.48
55-	LO1	0.48	1.72	0.00	0.00	-0.00	0.99
56		-0.48	2.45	-0.00	-0.00	-0.00	-3.74
56-	LO1	0.04	1.64	-0.00	-0.00	0.00	0.87
57		-0.04	2.53	0.00	0.00	0.00	-4.20
55-	LO1	-0.40	2.08	-0.00	0.00	0.00	2.53
58		0.40	2.08	0.00	0.00	-0.00	-2.53
58-	LO1	0.48	1.72	-0.00	-0.00	0.00	0.99
59		-0.48	2.45	0.00	0.00	0.00	-3.74
59-	LO1	0.04	1.64	0.00	0.00	-0.00	0.87
60		-0.04	2.53	-0.00	-0.00	-0.00	-4.20
57-	LO1	-0.40	2.08	-0.00	0.00	-0.00	2.53
60		0.40	2.08	0.00	0.00	0.00	-2.53
61-	LO1	1.58	1.81	-0.00	0.00	0.00	1.18
62		-1.58	2.36	0.00	-0.00	0.00	-3.23
62-	LO1	1.08	2.02	0.00	-0.00	-0.00	2.09
63		-1.08	2.15	-0.00	0.00	-0.00	-2.56
61-	LO1	0.95	2.08	-0.00	0.00	-0.00	2.30
64		-0.95	2.08	0.00	0.00	0.00	-2.30
64-	LO1	1.58	1.81	0.00	-0.00	-0.00	1.18
65		-1.58	2.36	-0.00	0.00	-0.00	-3.23
65-	LO1	1.08	2.02	-0.00	0.00	0.00	2.09
66		-1.08	2.15	0.00	-0.00	0.00	-2.56
63-	LO1	0.95	2.08	-0.00	0.00	0.00	2.30
66		-0.95	2.08	0.00	0.00	-0.00	-2.30
8-	LO1	-0.86	3.29	0.00	0.00	-0.00	3.45
11		0.86	3.29	-0.00	0.00	-0.00	-3.45
14-	LO1	0.19	3.29	0.00	0.00	-0.00	3.71
17		-0.19	3.29	-0.00	0.00	-0.00	-3.71
20-	LO1	-0.04	3.29	0.00	0.00	-0.00	3.66
23		0.04	3.29	-0.00	0.00	-0.00	-3.66
26-	LO1	0.01	3.29	0.00	0.00	-0.00	3.67
29		-0.01	3.29	-0.00	0.00	-0.00	-3.67
32-	LO1	-0.00	3.29	0.00	0.00	-0.00	3.67
35		0.00	3.29	-0.00	0.00	-0.00	-3.67
38-	LO1	0.00	3.29	0.00	0.00	-0.00	3.67
41		-0.00	3.29	-0.00	0.00	-0.00	-3.67
44-	LO1	-0.02	3.29	0.00	0.00	-0.00	3.67
47		0.02	3.29	-0.00	0.00	-0.00	-3.67
50-	LO1	0.10	3.29	-0.00	0.00	0.00	3.64
53		-0.10	3.29	0.00	0.00	0.00	-3.64
56-	LO1	-0.50	3.29	-0.00	0.00	0.00	3.78
59		0.50	3.29	0.00	0.00	0.00	-3.78
62-	LO1	1.33	3.29	-0.00	0.00	0.00	3.12
65		-1.33	3.29	0.00	0.00	0.00	-3.12
1-	LO1	91.04	-0.16	-2.18	0.00	0.00	0.00
7		-91.04	0.16	2.18	0.00	10.90	-0.79
7-	LO1	82.88	-0.74	-0.91	0.00	0.41	-1.63
13		-82.88	0.74	0.91	-0.00	3.22	-1.34
13-	LO1	74.21	-0.60	-1.21	-0.00	2.26	-1.16
19		-74.21	0.60	1.21	0.00	2.56	-1.22
19-	LO1	65.24	-0.63	-1.01	0.00	1.88	-1.26
25		-65.24	0.63	1.01	-0.00	2.14	-1.25
25-	LO1	56.11	-0.62	-0.87	-0.00	1.63	-1.24
31		-56.11	0.62	0.87	0.00	1.85	-1.24
31-	LO1	46.81	-0.62	-0.74	0.00	1.31	-1.24
37		-46.81	0.62	0.74	-0.00	1.64	-1.25
37-	LO1	37.31	-0.62	-0.45	-0.00	0.69	-1.24
43		-37.31	0.62	0.45	0.00	1.12	-1.23
43-	LO1	27.54	-0.64	-0.17	0.00	0.13	-1.26
49		-27.54	0.64	0.17	-0.00	0.56	-1.29
49-	LO1	17.49	-0.55	0.06	-0.00	-0.37	-1.19
55		-17.49	0.55	-0.06	0.00	0.14	-1.01
55-	LO1	7.16	-0.95	0.58	0.00	-1.13	-1.52
61		-7.16	0.95	-0.58	-0.00	-1.18	-2.30
2-	LO1	138.14	-0.22	-2.90	0.00	0.00	0.00
8		-138.14	0.22	2.90	0.00	14.52	-1.11
8-	LO1	123.07	-1.08	-3.96	-0.00	7.47	-2.34
14		-123.07	1.08	3.96	0.00	8.36	-1.98
14-	LO1	108.96	-0.88	-3.00	-0.00	5.75	-1.73
20		-108.96	0.88	3.00	0.00	6.23	-1.81
20-	LO1	94.87	-0.92	-2.84	0.00	5.60	-1.85

26		-94.87	0.92	2.84	0.00	5.75	-1.84
26-	LO1	80.82	-0.92	-2.58	0.00	5.08	-1.83
32		-80.82	0.92	2.58	-0.00	5.25	-1.83
32-	LO1	66.80	-0.92	-2.33	0.00	4.55	-1.83
38		-66.80	0.92	2.33	-0.00	4.78	-1.84
38-	LO1	52.80	-0.91	-1.88	0.00	3.61	-1.83
44		-52.80	0.91	1.88	-0.00	3.91	-1.82
44-	LO1	38.82	-0.93	-1.41	0.00	2.67	-1.85
50		-38.82	0.93	1.41	-0.00	2.98	-1.88
50-	LO1	24.85	-0.83	-0.94	0.00	1.72	-1.76
56		-24.85	0.83	0.94	-0.00	2.02	-1.57
56-	LO1	10.94	-1.33	-0.50	0.00	0.84	-2.21
62		-10.94	1.33	0.50	0.00	1.15	-3.11
3-	LO1	117.37	-0.16	-2.42	0.00	0.00	0.00
9		-117.37	0.16	2.42	0.00	12.08	-0.79
9-	LO1	102.76	-0.74	-2.14	-0.00	3.01	-1.63
15		-102.76	0.74	2.14	0.00	5.53	-1.34
15-	LO1	90.15	-0.60	-2.30	0.00	4.42	-1.16
21		-90.15	0.60	2.30	-0.00	4.78	-1.22
21-	LO1	77.82	-0.63	-2.16	-0.00	4.18	-1.26
27		-77.82	0.63	2.16	0.00	4.45	-1.25
27-	LO1	65.61	-0.62	-2.05	0.00	3.97	-1.24
33		-65.61	0.62	2.05	-0.00	4.21	-1.24
33-	LO1	53.54	-0.62	-1.93	-0.00	3.69	-1.24
39		-53.54	0.62	1.93	0.00	4.03	-1.25
39-	LO1	41.65	-0.62	-1.67	0.00	3.12	-1.24
45		-41.65	0.62	1.67	-0.00	3.56	-1.23
45-	LO1	30.02	-0.64	-1.42	-0.00	2.60	-1.26
51		-30.02	0.64	1.42	0.00	3.06	-1.29
51-	LO1	18.64	-0.55	-1.12	0.00	2.05	-1.19
57		-18.64	0.55	1.12	-0.00	2.43	-1.01
57-	LO1	7.50	-0.95	-1.08	-0.00	1.77	-1.52
63		-7.50	0.95	1.08	0.00	2.56	-2.30
4-	LO1	91.04	0.16	-2.18	0.00	0.00	0.00
10		-91.04	-0.16	2.18	0.00	10.90	0.79
10-	LO1	82.88	0.74	-0.91	-0.00	0.41	1.63
16		-82.88	-0.74	0.91	0.00	3.22	1.34
16-	LO1	74.21	0.60	-1.21	0.00	2.26	1.16
22		-74.21	-0.60	1.21	-0.00	2.56	1.22
22-	LO1	65.24	0.63	-1.01	-0.00	1.88	1.26
28		-65.24	-0.63	1.01	0.00	2.14	1.25
28-	LO1	56.11	0.62	-0.87	0.00	1.63	1.24
34		-56.11	-0.62	0.87	-0.00	1.85	1.24
34-	LO1	46.81	0.62	-0.74	-0.00	1.31	1.24
40		-46.81	-0.62	0.74	0.00	1.64	1.25
40-	LO1	37.31	0.62	-0.45	0.00	0.69	1.24
46		-37.31	-0.62	0.45	-0.00	1.12	1.23
46-	LO1	27.54	0.64	-0.17	-0.00	0.13	1.26
52		-27.54	-0.64	0.17	0.00	0.56	1.29
52-	LO1	17.49	0.55	0.06	0.00	-0.37	1.19
58		-17.49	-0.55	-0.06	-0.00	0.14	1.01
58-	LO1	7.16	0.95	0.58	-0.00	-1.13	1.52
64		-7.16	-0.95	-0.58	0.00	-1.18	2.30
5-	LO1	138.14	0.22	-2.90	0.00	0.00	0.00
11		-138.14	-0.22	2.90	0.00	14.52	1.11
11-	LO1	123.07	1.08	-3.96	-0.00	7.47	2.34
17		-123.07	-1.08	3.96	0.00	8.36	1.98
17-	LO1	108.96	0.88	-3.00	-0.00	5.75	1.73
23		-108.96	-0.88	3.00	0.00	6.23	1.81
23-	LO1	94.87	0.92	-2.84	0.00	5.60	1.85
29		-94.87	-0.92	2.84	0.00	5.75	1.84
29-	LO1	80.82	0.92	-2.58	0.00	5.08	1.83
35		-80.82	-0.92	2.58	-0.00	5.25	1.83
35-	LO1	66.80	0.92	-2.33	0.00	4.55	1.83
41		-66.80	-0.92	2.33	-0.00	4.78	1.84
41-	LO1	52.80	0.91	-1.88	0.00	3.61	1.83
47		-52.80	-0.91	1.88	-0.00	3.91	1.82
47-	LO1	38.82	0.93	-1.41	0.00	2.67	1.85
53		-38.82	-0.93	1.41	-0.00	2.98	1.88
53-	LO1	24.85	0.83	-0.94	0.00	1.72	1.76
59		-24.85	-0.83	0.94	-0.00	2.02	1.57
59-	LO1	10.94	1.33	-0.50	0.00	0.84	2.21
65		-10.94	-1.33	0.50	0.00	1.15	3.11
6-	LO1	117.37	0.16	-2.42	0.00	0.00	0.00
12		-117.37	-0.16	2.42	0.00	12.08	0.79
12-	LO1	102.76	0.74	-2.14	0.00	3.01	1.63
18		-102.76	-0.74	2.14	-0.00	5.53	1.34
18-	LO1	90.15	0.60	-2.30	-0.00	4.42	1.16

24		-90.15	-0.60	2.30	0.00	4.78	1.22
24-	LO1	77.82	0.63	-2.16	0.00	4.18	1.26
30		-77.82	-0.63	2.16	-0.00	4.45	1.25
30-	LO1	65.61	0.62	-2.05	-0.00	3.97	1.24
36		-65.61	-0.62	2.05	0.00	4.21	1.24
36-	LO1	53.54	0.62	-1.93	0.00	3.69	1.24
42		-53.54	-0.62	1.93	-0.00	4.03	1.25
42-	LO1	41.65	0.62	-1.67	-0.00	3.12	1.24
48		-41.65	-0.62	1.67	0.00	3.56	1.23
48-	LO1	30.02	0.64	-1.42	0.00	2.60	1.26
54		-30.02	-0.64	1.42	-0.00	3.06	1.29
54-	LO1	18.64	0.55	-1.12	-0.00	2.05	1.19
60		-18.64	-0.55	1.12	0.00	2.43	1.01
60-	LO1	7.50	0.95	-1.08	0.00	1.77	1.52
66		-7.50	-0.95	1.08	-0.00	2.56	2.30

```
============================== STATISTICAL DATA ==============================

Own weight of structure = 717.58 kN

No. of real numbers in Stiffness matrix = 0  (0 bytes)
Time used to analyse = 0: 0:0.040 seconds
Total number of : Nodes              = 66
                  Beam Elements      = 130
                  Cable Elements     = 0
                  Shell Elements     = 0
                  Supports           = 6
                  Section properties = 3
                  Load cases         = 1
                  Load combinations  = 0

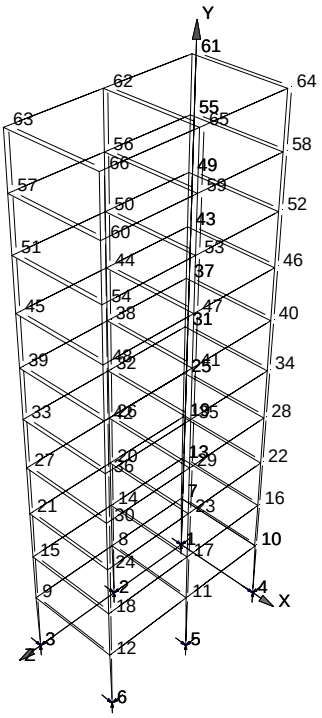
============================== END OF OUTPUT ==============================
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Space Frame Analysis Ver W2.1.33 - 23 Sep 2005
Input file:D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created : 8/24/2006 1:11:02 PM

A03

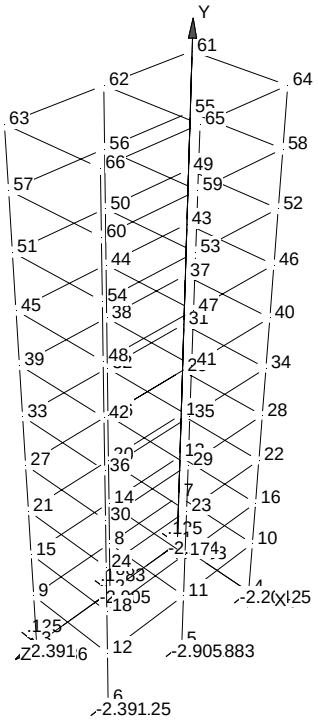
Deflections for Load Case LO1

Maximum Deflections for Load Case LO1:
X :0.00 mm at node 61
Y :-0.72 mm at node 62
Z :24.15 mm at node 61

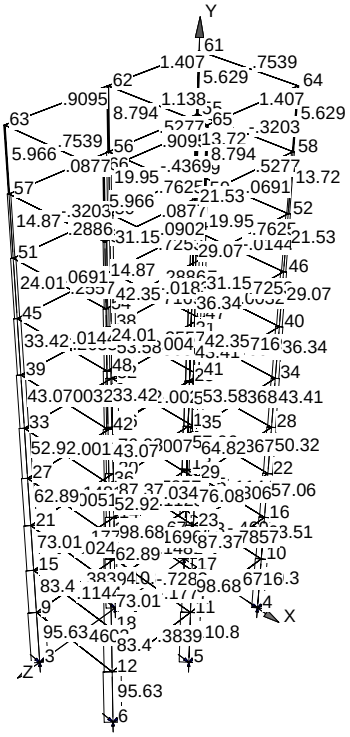


Reactions for Load Case LO1

Reactions: Load Case :LO1



Axial Forces for Load Case LO1



========== S p a c e - F r a m e A n a l y s i s - P R O K O N ==========
Ver W2.1.33 - 23 Sep 2005

TITLE :

Data file : D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created on: 8/24/2006

========== NODAL POINT COORDINATES ==========

Node no.	X-coord m	Y-coord m	Z-coord m	Node no.	X-coord m	Y-coord m	Z-coord m
1	0.000	0.000	0.000	2	0.000	0.000	7.500
3	0.000	0.000	15.000	4	7.500	0.000	0.000
5	7.500	0.000	7.500	6	7.500	0.000	15.000
7	0.000	5.000	0.000	8	0.000	5.000	7.500
9	0.000	5.000	15.000	10	7.500	5.000	0.000
11	7.500	5.000	7.500	12	7.500	5.000	15.000
13	0.000	9.000	0.000	14	0.000	9.000	7.500
15	0.000	9.000	15.000	16	7.500	9.000	0.000
17	7.500	9.000	7.500	18	7.500	9.000	15.000
19	0.000	13.000	0.000	20	0.000	13.000	7.500
21	0.000	13.000	15.000	22	7.500	13.000	0.000
23	7.500	13.000	7.500	24	7.500	13.000	15.000
25	0.000	17.000	0.000	26	0.000	17.000	7.500
27	0.000	17.000	15.000	28	7.500	17.000	0.000
29	7.500	17.000	7.500	30	7.500	17.000	15.000
31	0.000	21.000	0.000	32	0.000	21.000	7.500
33	0.000	21.000	15.000	34	7.500	21.000	0.000
35	7.500	21.000	7.500	36	7.500	21.000	15.000
37	0.000	25.000	0.000	38	0.000	25.000	7.500
39	0.000	25.000	15.000	40	7.500	25.000	0.000
41	7.500	25.000	7.500	42	7.500	25.000	15.000
43	0.000	29.000	0.000	44	0.000	29.000	7.500
45	0.000	29.000	15.000	46	7.500	29.000	0.000
47	7.500	29.000	7.500	48	7.500	29.000	15.000
49	0.000	33.000	0.000	50	0.000	33.000	7.500
51	0.000	33.000	15.000	52	7.500	33.000	0.000
53	7.500	33.000	7.500	54	7.500	33.000	15.000
55	0.000	37.000	0.000	56	0.000	37.000	7.500
57	0.000	37.000	15.000	58	7.500	37.000	0.000
59	7.500	37.000	7.500	60	7.500	37.000	15.000
61	0.000	41.000	0.000	62	0.000	41.000	7.500
63	0.000	41.000	15.000	64	7.500	41.000	0.000
65	7.500	41.000	7.500	66	7.500	41.000	15.000

========== ELEMENT DATA ==========

Beam	Secn. type	Fixity	Length m	ß (°)
7-8	BEAM1	00	7.500	0.00
8-9	BEAM1	00	7.500	0.00
7-10	BEAM1	00	7.500	0.00
10-11	BEAM1	00	7.500	0.00
11-12	BEAM1	00	7.500	0.00
9-12	BEAM1	00	7.500	0.00
13-14	BEAM1	00	7.500	0.00
14-15	BEAM1	00	7.500	0.00
13-16	BEAM1	00	7.500	0.00
16-17	BEAM1	00	7.500	0.00
17-18	BEAM1	00	7.500	0.00
15-18	BEAM1	00	7.500	0.00
19-20	BEAM1	00	7.500	0.00
20-21	BEAM1	00	7.500	0.00
19-22	BEAM1	00	7.500	0.00
22-23	BEAM1	00	7.500	0.00
23-24	BEAM1	00	7.500	0.00
21-24	BEAM1	00	7.500	0.00
25-26	BEAM1	00	7.500	0.00
26-27	BEAM1	00	7.500	0.00
25-28	BEAM1	00	7.500	0.00
28-29	BEAM1	00	7.500	0.00
29-30	BEAM1	00	7.500	0.00
27-30	BEAM1	00	7.500	0.00
31-32	BEAM1	00	7.500	0.00

32-33	BEAM1	00	7.500	0.00
31-34	BEAM1	00	7.500	0.00
34-35	BEAM1	00	7.500	0.00
35-36	BEAM1	00	7.500	0.00
33-36	BEAM1	00	7.500	0.00
37-38	BEAM1	00	7.500	0.00
38-39	BEAM1	00	7.500	0.00
37-40	BEAM1	00	7.500	0.00
40-41	BEAM1	00	7.500	0.00
41-42	BEAM1	00	7.500	0.00
39-42	BEAM1	00	7.500	0.00
43-44	BEAM1	00	7.500	0.00
44-45	BEAM1	00	7.500	0.00
43-46	BEAM1	00	7.500	0.00
46-47	BEAM1	00	7.500	0.00
47-48	BEAM1	00	7.500	0.00
45-48	BEAM1	00	7.500	0.00
49-50	BEAM1	00	7.500	0.00
50-51	BEAM1	00	7.500	0.00
49-52	BEAM1	00	7.500	0.00
52-53	BEAM1	00	7.500	0.00
53-54	BEAM1	00	7.500	0.00
51-54	BEAM1	00	7.500	0.00
55-56	BEAM1	00	7.500	0.00
56-57	BEAM1	00	7.500	0.00
55-58	BEAM1	00	7.500	0.00
58-59	BEAM1	00	7.500	0.00
59-60	BEAM1	00	7.500	0.00
57-60	BEAM1	00	7.500	0.00
61-62	BEAM1	00	7.500	0.00
62-63	BEAM1	00	7.500	0.00
61-64	BEAM1	00	7.500	0.00
64-65	BEAM1	00	7.500	0.00
65-66	BEAM1	00	7.500	0.00
63-66	BEAM1	00	7.500	0.00
8-11	BEAM3	00	7.500	0.00
14-17	BEAM3	00	7.500	0.00
20-23	BEAM3	00	7.500	0.00
26-29	BEAM3	00	7.500	0.00
32-35	BEAM3	00	7.500	0.00
38-41	BEAM3	00	7.500	0.00
44-47	BEAM3	00	7.500	0.00
50-53	BEAM3	00	7.500	0.00
56-59	BEAM3	00	7.500	0.00
62-65	BEAM3	00	7.500	0.00
1-7	COL	00	5.000	0.00
7-13	COL	00	4.000	0.00
13-19	COL	00	4.000	0.00
19-25	COL	00	4.000	0.00
25-31	COL	00	4.000	0.00
31-37	COL	00	4.000	0.00
37-43	COL	00	4.000	0.00
43-49	COL	00	4.000	0.00
49-55	COL	00	4.000	0.00
55-61	COL	00	4.000	0.00
2-8	COL	00	5.000	-0.00
8-14	COL	00	4.000	0.00
14-20	COL	00	4.000	0.00
20-26	COL	00	4.000	0.00
26-32	COL	00	4.000	0.00
32-38	COL	00	4.000	0.00
38-44	COL	00	4.000	0.00
44-50	COL	00	4.000	0.00
50-56	COL	00	4.000	0.00
56-62	COL	00	4.000	0.00
3-9	COL	00	5.000	-0.00
9-15	COL	00	4.000	0.00
15-21	COL	00	4.000	0.00
21-27	COL	00	4.000	0.00
27-33	COL	00	4.000	0.00
33-39	COL	00	4.000	0.00
39-45	COL	00	4.000	0.00
45-51	COL	00	4.000	0.00
51-57	COL	00	4.000	0.00
57-63	COL	00	4.000	0.00
4-10	COL	00	5.000	-0.00
10-16	COL	00	4.000	0.00
16-22	COL	00	4.000	0.00

22-28	COL		00	4.000	0.00
28-34	COL		00	4.000	0.00
34-40	COL		00	4.000	0.00
40-46	COL		00	4.000	0.00
46-52	COL		00	4.000	0.00
52-58	COL		00	4.000	0.00
58-64	COL		00	4.000	0.00
5-11	COL		00	5.000	-0.00
11-17	COL		00	4.000	0.00
17-23	COL		00	4.000	0.00
23-29	COL		00	4.000	0.00
29-35	COL		00	4.000	0.00
35-41	COL		00	4.000	0.00
41-47	COL		00	4.000	0.00
47-53	COL		00	4.000	0.00
53-59	COL		00	4.000	0.00
59-65	COL		00	4.000	0.00
6-12	COL		00	5.000	-0.00
12-18	COL		00	4.000	0.00
18-24	COL		00	4.000	0.00
24-30	COL		00	4.000	0.00
30-36	COL		00	4.000	0.00
36-42	COL		00	4.000	0.00
42-48	COL		00	4.000	0.00
48-54	COL		00	4.000	0.00
54-60	COL		00	4.000	0.00
60-66	COL		00	4.000	0.00

========== SECTION PROPERTIES ==========

Section : BEAM1 Section designation: 356x171x45 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
5.700E-3	0.000	0.000	121E-6	8.10E-6	160E-9	Steel:460W

Section : BEAM3 Section designation: 406x178x75 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
9.530E-3	0.000	0.000	274E-6	15.5E-6	642E-9	Steel:460W

Section : COL Section designation: 254x254x132 H1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
16.80E-3	0.000	0.000	224E-6	74.5E-6	3.18E-6	Steel:460W

========== MATERIALS ==========

Designation	E	poisson	Density	Exp. coeff.
	kPa		kN/m^3	
Steel:460W	206.0E6	0.30	77.00	11.70E-6

========== SUPPORT DATA ==========

Prescribed displacements

Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		m	m	m	rad.	rad.	rad.
1	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
2	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
3	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
4	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
5	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
6	XYZ	0.00	0.00	0.00	0.00	0.00	0.00

Spring constants

Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		kN/m	kN/m	kN/m	kNm/rad	kNm/rad	kNm/rad

========== LOADS ==========

Load Case Description

LO1

Add own weight to load case : LO1

========== LOAD CASE LO1 ==========

*** POINT LOADS ***

Node	Fx kN	Fy kN	Fz kN	Mx kNm	My kNm	Mz kNm
7	0.00	0.00	0.50	0.00	0.00	0.00
10	0.00	0.00	0.50	0.00	0.00	0.00
13	0.00	0.00	0.50	0.00	0.00	0.00
16	0.00	0.00	0.50	0.00	0.00	0.00
19	0.00	0.00	0.50	0.00	0.00	0.00
22	0.00	0.00	0.50	0.00	0.00	0.00
25	0.00	0.00	0.50	0.00	0.00	0.00
28	0.00	0.00	0.50	0.00	0.00	0.00
31	0.00	0.00	0.50	0.00	0.00	0.00
34	0.00	0.00	0.50	0.00	0.00	0.00
37	0.00	0.00	1.00	0.00	0.00	0.00
40	0.00	0.00	1.00	0.00	0.00	0.00
43	0.00	0.00	1.00	0.00	0.00	0.00
46	0.00	0.00	1.00	0.00	0.00	0.00
49	0.00	0.00	1.00	0.00	0.00	0.00
52	0.00	0.00	1.00	0.00	0.00	0.00
55	0.00	0.00	1.00	0.00	0.00	0.00
58	0.00	0.00	1.00	0.00	0.00	0.00
61	0.00	0.00	1.00	0.00	0.00	0.00
64	0.00	0.00	1.00	0.00	0.00	0.00

========== OUTPUT: LINEAR ANALYSIS ==========
========== NODAL POINT DISPLACEMENTS at SLS ==========

Node	Lcase	X-disp. mm	Y-disp. mm	Z-disp. mm	X-rot. rad.	Y-rot. rad.	Z-rot. rad.
1	LO1	0.00	0.00	0.00	0.0026	0.0000	0.0000
2	LO1	0.00	0.00	0.00	0.0028	0.0000	0.0000
3	LO1	0.00	0.00	0.00	0.0027	-0.0000	0.0000
4	LO1	0.00	0.00	0.00	0.0026	-0.0000	-0.0000
5	LO1	0.00	0.00	0.00	0.0028	0.0000	-0.0000
6	LO1	0.00	0.00	0.00	0.0027	0.0000	-0.0000
7	LO1	-0.00	-0.10	10.10	0.0008	0.0000	-0.0000
8	LO1	-0.00	-0.16	10.11	0.0004	0.0000	-0.0000
9	LO1	-0.00	-0.14	10.11	0.0007	-0.0000	-0.0000
10	LO1	0.00	-0.10	10.10	0.0008	-0.0000	0.0000
11	LO1	0.00	-0.16	10.11	0.0004	0.0000	0.0000
12	LO1	0.00	-0.14	10.11	0.0007	0.0000	0.0000
13	LO1	0.00	-0.17	13.03	0.0005	-0.0000	-0.0000
14	LO1	0.00	-0.27	13.02	0.0003	0.0000	-0.0000
15	LO1	0.00	-0.23	13.03	0.0004	0.0000	-0.0000
16	LO1	-0.00	-0.17	13.03	0.0005	0.0000	0.0000
17	LO1	-0.00	-0.27	13.02	0.0003	0.0000	0.0000
18	LO1	-0.00	-0.23	13.03	0.0004	-0.0000	0.0000
19	LO1	-0.00	-0.24	15.25	0.0004	0.0000	-0.0000
20	LO1	-0.00	-0.38	15.24	0.0003	0.0000	-0.0000
21	LO1	-0.00	-0.32	15.24	0.0003	-0.0000	-0.0000
22	LO1	0.00	-0.24	15.25	0.0004	-0.0000	0.0000
23	LO1	0.00	-0.38	15.24	0.0003	0.0000	0.0000
24	LO1	0.00	-0.32	15.24	0.0003	0.0000	0.0000
25	LO1	0.00	-0.30	17.25	0.0004	-0.0000	-0.0000
26	LO1	0.00	-0.46	17.24	0.0002	0.0000	-0.0000
27	LO1	0.00	-0.39	17.24	0.0003	0.0000	-0.0000
28	LO1	-0.00	-0.30	17.25	0.0004	0.0000	0.0000
29	LO1	-0.00	-0.46	17.24	0.0002	0.0000	0.0000
30	LO1	-0.00	-0.39	17.24	0.0003	-0.0000	0.0000
31	LO1	-0.00	-0.35	19.08	0.0004	0.0000	-0.0000
32	LO1	-0.00	-0.54	19.07	0.0002	0.0000	-0.0000
33	LO1	-0.00	-0.45	19.07	0.0003	-0.0000	-0.0000

34	LO1	0.00	-0.35	19.08	0.0004	-0.0000	0.0000
35	LO1	0.00	-0.54	19.07	0.0002	0.0000	0.0000
36	LO1	0.00	-0.45	19.07	0.0003	0.0000	0.0000
37	LO1	0.00	-0.39	20.72	0.0003	-0.0000	-0.0000
38	LO1	0.00	-0.60	20.71	0.0002	0.0000	-0.0000
39	LO1	0.00	-0.50	20.71	0.0002	0.0000	-0.0000
40	LO1	-0.00	-0.39	20.72	0.0003	0.0000	0.0000
41	LO1	-0.00	-0.60	20.71	0.0002	0.0000	0.0000
42	LO1	-0.00	-0.50	20.71	0.0002	-0.0000	0.0000
43	LO1	-0.00	-0.42	22.06	0.0003	0.0000	-0.0000
44	LO1	-0.00	-0.65	22.05	0.0002	0.0000	-0.0000
45	LO1	-0.00	-0.54	22.05	0.0002	-0.0000	-0.0000
46	LO1	0.00	-0.42	22.06	0.0003	-0.0000	0.0000
47	LO1	0.00	-0.65	22.05	0.0002	0.0000	0.0000
48	LO1	0.00	-0.54	22.05	0.0002	0.0000	0.0000
49	LO1	0.00	-0.45	23.07	0.0002	-0.0000	-0.0000
50	LO1	0.00	-0.68	23.07	0.0001	0.0000	-0.0000
51	LO1	0.00	-0.57	23.07	0.0001	0.0000	-0.0000
52	LO1	-0.00	-0.45	23.07	0.0002	0.0000	0.0000
53	LO1	-0.00	-0.68	23.07	0.0001	0.0000	0.0000
54	LO1	-0.00	-0.57	23.07	0.0001	-0.0000	0.0000
55	LO1	-0.00	-0.46	23.76	0.0001	0.0000	-0.0000
56	LO1	-0.00	-0.71	23.76	0.0001	0.0000	-0.0000
57	LO1	-0.00	-0.59	23.76	0.0001	-0.0000	-0.0000
58	LO1	0.00	-0.46	23.76	0.0001	-0.0000	0.0000
59	LO1	0.00	-0.71	23.76	0.0001	0.0000	0.0000
60	LO1	0.00	-0.59	23.76	0.0001	0.0000	0.0000
61	LO1	0.00	-0.47	24.15	0.0001	-0.0000	-0.0000
62	LO1	0.00	-0.72	24.14	0.0000	0.0000	-0.0001
63	LO1	0.00	-0.59	24.13	-0.0000	0.0000	-0.0000
64	LO1	-0.00	-0.47	24.15	0.0001	0.0000	0.0000
65	LO1	-0.00	-0.72	24.14	0.0000	0.0000	0.0001
66	LO1	-0.00	-0.59	24.13	-0.0000	-0.0000	0.0000

REACTIONS at ULS

Note:Only load combinations have ULS load factors. Factor for Load cases = 1

Node	Lcase	X-force kN	Y-force kN	Z-force kN	X-moment kNm	Y-moment kNm	Z-moment kNm
1	LO1	0.13	72.53	-2.20	0.00	0.00	0.00
2	LO1	0.19	113.99	-2.91	0.00	0.00	0.00
3	LO1	0.13	98.86	-2.39	0.00	0.00	0.00
4	LO1	-0.13	72.53	-2.20	0.00	0.00	0.00
5	LO1	-0.19	113.99	-2.91	0.00	0.00	0.00
6	LO1	-0.13	98.86	-2.39	0.00	0.00	0.00

EQUILIBRIUM CHECK AT ULS:

LC APPLIED LOADS & MOMENTS about (0.0,0.0,0.0)

Sum of:	Px	Py	Pz	Mx	My	Mz
LO1	0.00	-570.77	15.00	4675.75	-56.25	-2140.37

LC REACTIONS & REACTION MOMENTS about (0.0,0.0,0.0)

Sum of:	Rx	Ry	Rz	MRx	MRy	MRz
LO1	-0.00	570.77	-15.00	-4675.75	56.25	2140.37

BEAM ELEMENT END FORCES IN LOCAL ELEMENT AXES at ULS

Elem	Lcase	Axial kN	Y-Shear kN	X-Shear kN	Torsion kNm	M-yy kNm	M-xx kNm
7-	LO1	-0.67	-1.68	0.00	0.00	-0.00	-11.69
8		0.67	4.97	-0.00	-0.00	-0.00	-13.28
8-	LO1	0.38	-1.47	-0.00	-0.00	0.00	-8.71
9		-0.38	4.76	0.00	0.00	0.00	-14.68
7-	LO1	-0.46	1.65	-0.00	0.00	0.00	1.91
10		0.46	1.65	0.00	0.00	-0.00	-1.91
10-	LO1	-0.67	-1.68	-0.00	-0.00	0.00	-11.69
11		0.67	4.97	0.00	0.00	0.00	-13.28
11-	LO1	0.38	-1.47	0.00	0.00	-0.00	-8.71
12		-0.38	4.76	-0.00	-0.00	-0.00	-14.68
9-	LO1	-0.46	1.65	-0.00	0.00	-0.00	1.91

12		0.46	1.65	0.00	0.00	0.00	-1.91
13-	LO1	0.79	-0.37	-0.00	0.00	0.00	-5.95
14		-0.79	3.66	0.00	-0.00	0.00	-9.17
14-	LO1	-0.18	-0.28	0.00	-0.00	-0.00	-4.96
15		0.18	3.57	-0.00	0.00	-0.00	-9.49
13-	LO1	0.11	1.65	-0.00	0.00	-0.00	1.97
16		-0.11	1.65	0.00	0.00	0.00	-1.97
16-	LO1	0.79	-0.37	0.00	-0.00	-0.00	-5.95
17		-0.79	3.66	-0.00	0.00	-0.00	-9.17
17-	LO1	-0.18	-0.28	-0.00	0.00	0.00	-4.96
18		0.18	3.57	0.00	-0.00	0.00	-9.49
15-	LO1	0.11	1.65	-0.00	0.00	0.00	1.97
18		-0.11	1.65	0.00	0.00	-0.00	-1.97
19-	LO1	0.31	-0.07	0.00	0.00	-0.00	-4.91
20		-0.31	3.36	-0.00	-0.00	-0.00	-7.98
20-	LO1	0.15	0.00	-0.00	-0.00	0.00	-3.86
21		-0.15	3.29	0.00	0.00	0.00	-8.49
19-	LO1	-0.02	1.65	-0.00	0.00	0.00	1.96
22		0.02	1.65	0.00	0.00	-0.00	-1.96
22-	LO1	0.31	-0.07	-0.00	-0.00	0.00	-4.91
23		-0.31	3.36	0.00	0.00	0.00	-7.98
23-	LO1	0.15	0.00	0.00	0.00	-0.00	-3.86
24		-0.15	3.29	-0.00	-0.00	-0.00	-8.49
21-	LO1	-0.02	1.65	-0.00	0.00	-0.00	1.96
24		0.02	1.65	0.00	0.00	0.00	-1.96
25-	LO1	0.37	0.09	-0.00	0.00	0.00	-4.25
26		-0.37	3.20	0.00	-0.00	0.00	-7.43
26-	LO1	0.11	0.13	0.00	-0.00	-0.00	-3.41
27		-0.11	3.16	-0.00	0.00	-0.00	-7.93
25-	LO1	0.01	1.65	-0.00	0.00	-0.00	1.96
28		-0.01	1.65	0.00	0.00	0.00	-1.96
28-	LO1	0.37	0.09	0.00	-0.00	-0.00	-4.25
29		-0.37	3.20	-0.00	0.00	-0.00	-7.43
29-	LO1	0.11	0.13	-0.00	0.00	0.00	-3.41
30		-0.11	3.16	0.00	-0.00	0.00	-7.93
27-	LO1	0.01	1.65	-0.00	0.00	0.00	1.96
30		-0.01	1.65	0.00	0.00	-0.00	-1.96
31-	LO1	0.37	0.24	0.00	0.00	-0.00	-3.65
32		-0.37	3.05	-0.00	-0.00	-0.00	-6.87
32-	LO1	0.12	0.27	-0.00	-0.00	0.00	-2.94
33		-0.12	3.03	0.00	0.00	0.00	-7.41
31-	LO1	-0.00	1.65	-0.00	0.00	0.00	1.96
34		0.00	1.65	0.00	0.00	-0.00	-1.96
34-	LO1	0.37	0.24	-0.00	-0.00	0.00	-3.65
35		-0.37	3.05	0.00	0.00	0.00	-6.87
35-	LO1	0.12	0.27	0.00	0.00	-0.00	-2.94
36		-0.12	3.03	-0.00	-0.00	-0.00	-7.41
33-	LO1	-0.00	1.65	-0.00	0.00	-0.00	1.96
36		0.00	1.65	0.00	0.00	0.00	-1.96
37-	LO1	0.72	0.45	-0.00	0.00	0.00	-2.82
38		-0.72	2.84	0.00	-0.00	0.00	-6.13
38-	LO1	0.26	0.46	0.00	-0.00	-0.00	-2.27
39		-0.26	2.83	-0.00	0.00	-0.00	-6.64
37-	LO1	0.00	1.65	-0.00	0.00	-0.00	1.96
40		-0.00	1.65	0.00	0.00	0.00	-1.96
40-	LO1	0.72	0.45	0.00	-0.00	-0.00	-2.82
41		-0.72	2.84	-0.00	0.00	-0.00	-6.13
41-	LO1	0.26	0.46	-0.00	0.00	0.00	-2.27
42		-0.26	2.83	0.00	-0.00	0.00	-6.64
39-	LO1	0.00	1.65	-0.00	0.00	0.00	1.96
42		-0.00	1.65	0.00	0.00	-0.00	-1.96
43-	LO1	0.73	0.72	0.00	0.00	-0.00	-1.76
44		-0.73	2.57	-0.00	-0.00	-0.00	-5.18
44-	LO1	0.26	0.71	-0.00	-0.00	0.00	-1.40
45		-0.26	2.58	0.00	0.00	0.00	-5.65
43-	LO1	-0.01	1.65	-0.00	0.00	0.00	1.96
46		0.01	1.65	0.00	0.00	-0.00	-1.96
46-	LO1	0.73	0.72	-0.00	-0.00	0.00	-1.76
47		-0.73	2.57	0.00	0.00	0.00	-5.18
47-	LO1	0.26	0.71	0.00	0.00	-0.00	-1.40
48		-0.26	2.58	-0.00	-0.00	-0.00	-5.65
45-	LO1	-0.01	1.65	-0.00	0.00	-0.00	1.96
48		0.01	1.65	0.00	0.00	0.00	-1.96
49-	LO1	0.76	0.99	-0.00	0.00	0.00	-0.70
50		-0.76	2.30	0.00	-0.00	0.00	-4.23
50-	LO1	0.29	0.97	0.00	-0.00	-0.00	-0.47
51		-0.29	2.32	-0.00	0.00	-0.00	-4.60
49-	LO1	0.07	1.65	-0.00	0.00	-0.00	1.96

52		-0.07	1.65	0.00	0.00	0.00	-1.96
52-	LO1	0.76	0.99	0.00	-0.00	-0.00	-0.70
53		-0.76	2.30	-0.00	0.00	-0.00	-4.23
53-	LO1	0.29	0.97	-0.00	0.00	0.00	-0.47
54		-0.29	2.32	0.00	-0.00	0.00	-4.60
51-	LO1	0.07	1.65	-0.00	0.00	0.00	1.96
54		-0.07	1.65	0.00	0.00	-0.00	-1.96
55-	LO1	0.53	1.27	0.00	0.00	-0.00	0.45
56		-0.53	2.02	-0.00	-0.00	-0.00	-3.25
56-	LO1	0.09	1.21	-0.00	-0.00	0.00	0.38
57		-0.09	2.08	0.00	0.00	0.00	-3.66
55-	LO1	-0.32	1.65	-0.00	0.00	0.00	2.00
58		0.32	1.65	0.00	0.00	-0.00	-2.00
58-	LO1	0.53	1.27	-0.00	-0.00	0.00	0.45
59		-0.53	2.02	0.00	0.00	0.00	-3.25
59-	LO1	0.09	1.21	0.00	0.00	-0.00	0.38
60		-0.09	2.08	-0.00	-0.00	-0.00	-3.66
57-	LO1	-0.32	1.65	-0.00	0.00	-0.00	2.00
60		0.32	1.65	0.00	0.00	0.00	-2.00
61-	LO1	1.41	1.40	-0.00	0.00	0.00	0.79
62		-1.41	1.90	0.00	-0.00	0.00	-2.67
62-	LO1	0.91	1.56	0.00	-0.00	-0.00	1.52
63		-0.91	1.73	-0.00	0.00	-0.00	-2.17
61-	LO1	0.75	1.65	-0.00	0.00	-0.00	1.82
64		-0.75	1.65	0.00	0.00	0.00	-1.82
64-	LO1	1.41	1.40	0.00	-0.00	-0.00	0.79
65		-1.41	1.90	-0.00	0.00	-0.00	-2.67
65-	LO1	0.91	1.56	-0.00	0.00	0.00	1.52
66		-0.91	1.73	0.00	-0.00	0.00	-2.17
63-	LO1	0.75	1.65	-0.00	0.00	0.00	1.82
66		-0.75	1.65	0.00	0.00	-0.00	-1.82
8-	LO1	-0.73	2.75	-0.00	0.00	0.00	2.93
11		0.73	2.75	0.00	0.00	0.00	-2.93
14-	LO1	0.17	2.75	-0.00	0.00	0.00	3.14
17		-0.17	2.75	0.00	0.00	0.00	-3.14
20-	LO1	-0.03	2.75	-0.00	0.00	0.00	3.10
23		0.03	2.75	0.00	0.00	0.00	-3.10
26-	LO1	0.01	2.75	-0.00	0.00	0.00	3.10
29		-0.01	2.75	0.00	0.00	0.00	-3.10
32-	LO1	-0.00	2.75	-0.00	0.00	0.00	3.10
35		0.00	2.75	0.00	0.00	0.00	-3.10
38-	LO1	0.00	2.75	-0.00	0.00	0.00	3.10
41		-0.00	2.75	0.00	0.00	0.00	-3.10
44-	LO1	-0.02	2.75	-0.00	0.00	0.00	3.11
47		0.02	2.75	0.00	0.00	0.00	-3.11
50-	LO1	0.09	2.75	-0.00	0.00	0.00	3.08
53		-0.09	2.75	0.00	0.00	0.00	-3.08
56-	LO1	-0.44	2.75	-0.00	0.00	0.00	3.19
59		0.44	2.75	0.00	0.00	0.00	-3.19
62-	LO1	1.14	2.75	-0.00	0.00	0.00	2.67
65		-1.14	2.75	0.00	0.00	0.00	-2.67
1-	LO1	69.30	-0.13	-2.20	0.00	-0.00	0.00
7		-69.30	0.13	2.20	0.00	11.02	-0.63
7-	LO1	63.51	-0.59	-1.03	0.00	0.67	-1.28
13		-63.51	0.59	1.03	-0.00	3.46	-1.06
13-	LO1	57.06	-0.47	-1.32	-0.00	2.48	-0.92
19		-57.06	0.47	1.32	0.00	2.79	-0.97
19-	LO1	50.32	-0.49	-1.12	0.00	2.12	-0.99
25		-50.32	0.49	1.12	-0.00	2.38	-0.98
25-	LO1	43.41	-0.49	-0.99	-0.00	1.87	-0.98
31		-43.41	0.49	0.99	0.00	2.10	-0.98
31-	LO1	36.34	-0.49	-0.86	0.00	1.56	-0.98
37		-36.34	0.49	0.86	-0.00	1.89	-0.98
37-	LO1	29.07	-0.49	-0.58	-0.00	0.94	-0.98
43		-29.07	0.49	0.58	0.00	1.37	-0.97
43-	LO1	21.53	-0.50	-0.30	0.00	0.39	-0.99
49		-21.53	0.50	0.30	-0.00	0.82	-1.02
49-	LO1	13.72	-0.43	-0.07	-0.00	-0.12	-0.94
55		-13.72	0.43	0.07	0.00	0.38	-0.80
55-	LO1	5.63	-0.75	0.41	0.00	-0.83	-1.20
61		-5.63	0.75	-0.41	-0.00	-0.79	-1.82
2-	LO1	110.75	-0.19	-2.91	0.00	-0.00	0.00
8		-110.75	0.19	2.91	0.00	14.53	-0.94
8-	LO1	98.68	-0.92	-3.96	0.00	7.47	-1.99
14		-98.68	0.92	3.96	-0.00	8.38	-1.68
14-	LO1	87.37	-0.75	-3.00	0.00	5.75	-1.46
20		-87.37	0.75	3.00	-0.00	6.23	-1.53
20-	LO1	76.08	-0.78	-2.84	0.00	5.60	-1.57

26		-76.08	0.78	2.84	-0.00	5.75	-1.56
26-	LO1	64.82	-0.77	-2.58	0.00	5.08	-1.55
32		-64.82	0.77	2.58	-0.00	5.25	-1.55
32-	LO1	53.58	-0.78	-2.33	0.00	4.55	-1.55
38		-53.58	0.78	2.33	-0.00	4.79	-1.55
38-	LO1	42.35	-0.77	-1.88	0.00	3.61	-1.55
44		-42.35	0.77	1.88	-0.00	3.91	-1.54
44-	LO1	31.15	-0.79	-1.41	0.00	2.67	-1.56
50		-31.15	0.79	1.41	-0.00	2.98	-1.60
50-	LO1	19.95	-0.70	-0.94	0.00	1.72	-1.49
56		-19.95	0.70	0.94	-0.00	2.03	-1.32
56-	LO1	8.79	-1.14	-0.50	0.00	0.84	-1.88
62		-8.79	1.14	0.50	-0.00	1.15	-2.67
3-	LO1	95.63	-0.13	-2.39	0.00	-0.00	0.00
9		-95.63	0.13	2.39	0.00	11.95	-0.63
9-	LO1	83.40	-0.59	-2.01	-0.00	2.73	-1.28
15		-83.40	0.59	2.01	0.00	5.30	-1.06
15-	LO1	73.01	-0.47	-2.18	0.00	4.19	-0.92
21		-73.01	0.47	2.18	-0.00	4.55	-0.97
21-	LO1	62.89	-0.49	-2.04	-0.00	3.94	-0.99
27		-62.89	0.49	2.04	0.00	4.21	-0.98
27-	LO1	52.92	-0.49	-1.92	0.00	3.73	-0.98
33		-52.92	0.49	1.92	-0.00	3.97	-0.98
33-	LO1	43.07	-0.49	-1.80	-0.00	3.44	-0.98
39		-43.07	0.49	1.80	0.00	3.78	-0.98
39-	LO1	33.42	-0.49	-1.54	0.00	2.86	-0.98
45		-33.42	0.49	1.54	-0.00	3.30	-0.97
45-	LO1	24.01	-0.50	-1.29	-0.00	2.34	-0.99
51		-24.01	0.50	1.29	0.00	2.80	-1.02
51-	LO1	14.87	-0.43	-1.00	0.00	1.79	-0.94
57		-14.87	0.43	1.00	-0.00	2.19	-0.80
57-	LO1	5.97	-0.75	-0.91	-0.00	1.46	-1.20
63		-5.97	0.75	0.91	0.00	2.17	-1.82
4-	LO1	69.30	0.13	-2.20	0.00	-0.00	0.00
10		-69.30	-0.13	2.20	0.00	11.02	0.63
10-	LO1	63.51	0.59	-1.03	-0.00	0.67	1.28
16		-63.51	-0.59	1.03	0.00	3.46	1.06
16-	LO1	57.06	0.47	-1.32	0.00	2.48	0.92
22		-57.06	-0.47	1.32	-0.00	2.79	0.97
22-	LO1	50.32	0.49	-1.12	-0.00	2.12	0.99
28		-50.32	-0.49	1.12	0.00	2.38	0.98
28-	LO1	43.41	0.49	-0.99	0.00	1.87	0.98
34		-43.41	-0.49	0.99	-0.00	2.10	0.98
34-	LO1	36.34	0.49	-0.86	-0.00	1.56	0.98
40		-36.34	-0.49	0.86	0.00	1.89	0.98
40-	LO1	29.07	0.49	-0.58	0.00	0.94	0.98
46		-29.07	-0.49	0.58	-0.00	1.37	0.97
46-	LO1	21.53	0.50	-0.30	-0.00	0.39	0.99
52		-21.53	-0.50	0.30	0.00	0.82	1.02
52-	LO1	13.72	0.43	-0.07	0.00	-0.12	0.94
58		-13.72	-0.43	0.07	-0.00	0.38	0.80
58-	LO1	5.63	0.75	0.41	-0.00	-0.83	1.20
64		-5.63	-0.75	-0.41	0.00	-0.79	1.82
5-	LO1	110.75	0.19	-2.91	0.00	0.00	0.00
11		-110.75	-0.19	2.91	0.00	14.53	0.94
11-	LO1	98.68	0.92	-3.96	0.00	7.47	1.99
17		-98.68	-0.92	3.96	-0.00	8.38	1.68
17-	LO1	87.37	0.75	-3.00	0.00	5.75	1.46
23		-87.37	-0.75	3.00	-0.00	6.23	1.53
23-	LO1	76.08	0.78	-2.84	0.00	5.60	1.57
29		-76.08	-0.78	2.84	-0.00	5.75	1.56
29-	LO1	64.82	0.77	-2.58	0.00	5.08	1.55
35		-64.82	-0.77	2.58	-0.00	5.25	1.55
35-	LO1	53.58	0.78	-2.33	0.00	4.55	1.55
41		-53.58	-0.78	2.33	-0.00	4.79	1.55
41-	LO1	42.35	0.77	-1.88	0.00	3.61	1.55
47		-42.35	-0.77	1.88	-0.00	3.91	1.54
47-	LO1	31.15	0.79	-1.41	0.00	2.67	1.56
53		-31.15	-0.79	1.41	-0.00	2.98	1.60
53-	LO1	19.95	0.70	-0.94	0.00	1.72	1.49
59		-19.95	-0.70	0.94	-0.00	2.03	1.32
59-	LO1	8.79	1.14	-0.50	0.00	0.84	1.88
65		-8.79	-1.14	0.50	-0.00	1.15	2.67
6-	LO1	95.63	0.13	-2.39	0.00	-0.00	0.00
12		-95.63	-0.13	2.39	0.00	11.95	0.63
12-	LO1	83.40	0.59	-2.01	0.00	2.73	1.28
18		-83.40	-0.59	2.01	-0.00	5.30	1.06
18-	LO1	73.01	0.47	-2.18	-0.00	4.19	0.92

24		-73.01	-0.47	2.18	0.00	4.55	0.97
24-	LO1	62.89	0.49	-2.04	0.00	3.94	0.99
30		-62.89	-0.49	2.04	-0.00	4.21	0.98
30-	LO1	52.92	0.49	-1.92	-0.00	3.73	0.98
36		-52.92	-0.49	1.92	0.00	3.97	0.98
36-	LO1	43.07	0.49	-1.80	0.00	3.44	0.98
42		-43.07	-0.49	1.80	-0.00	3.78	0.98
42-	LO1	33.42	0.49	-1.54	-0.00	2.86	0.98
48		-33.42	-0.49	1.54	0.00	3.30	0.97
48-	LO1	24.01	0.50	-1.29	0.00	2.34	0.99
54		-24.01	-0.50	1.29	-0.00	2.80	1.02
54-	LO1	14.87	0.43	-1.00	-0.00	1.79	0.94
60		-14.87	-0.43	1.00	0.00	2.19	0.80
60-	LO1	5.97	0.75	-0.91	0.00	1.46	1.20
66		-5.97	-0.75	0.91	-0.00	2.17	1.82

```
============================== STATISTICAL DATA ==============================

Own weight of structure = 570.77 kN

No. of real numbers in Stiffness matrix = 0  (0 bytes)
Time used to analyse = 0: 0:0.040 seconds
Total number of : Nodes              = 66
                  Beam Elements      = 130
                  Cable Elements     = 0
                  Shell Elements     = 0
                  Supports           = 6
                  Section properties = 3
                  Load cases         = 1
                  Load combinations  = 0

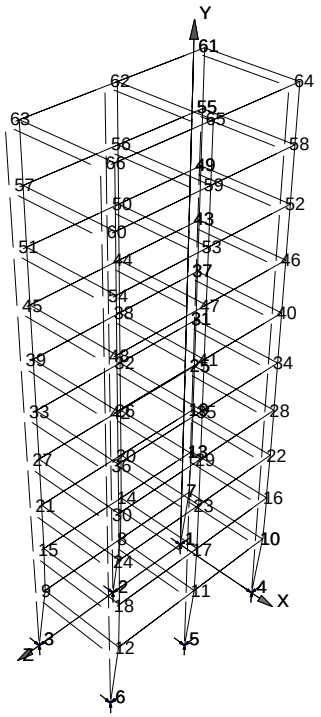
============================== END OF OUTPUT ================================
```

Space Frame Analysis Ver W2.1.33 - 23 Sep 2005
Input file:D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created : 8/24/2006 1:19:50 PM

A03

Mode shape number 1

Load factor for Load Case LO1
Mode no 1: 19.47



========== S p a c e - F r a m e A n a l y s i s - P R O K O N ==========
Ver W2.1.33 - 23 Sep 2005
========= D Y N A M I C A N A L Y S I S M O D U L E ==========

TITLE :

Data file : D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created on: 8/24/2006

========== NODAL POINT COORDINATES ==========

Node no.	X-coord m	Y-coord m	Z-coord m	Node no.	X-coord m	Y-coord m	Z-coord m
1	0.000	0.000	0.000	2	0.000	0.000	7.500
3	0.000	0.000	15.000	4	7.500	0.000	0.000
5	7.500	0.000	7.500	6	7.500	0.000	15.000
7	0.000	5.000	0.000	8	0.000	5.000	7.500
9	0.000	5.000	15.000	10	7.500	5.000	0.000
11	7.500	5.000	7.500	12	7.500	5.000	15.000
13	0.000	9.000	0.000	14	0.000	9.000	7.500
15	0.000	9.000	15.000	16	7.500	9.000	0.000
17	7.500	9.000	7.500	18	7.500	9.000	15.000
19	0.000	13.000	0.000	20	0.000	13.000	7.500
21	0.000	13.000	15.000	22	7.500	13.000	0.000
23	7.500	13.000	7.500	24	7.500	13.000	15.000
25	0.000	17.000	0.000	26	0.000	17.000	7.500
27	0.000	17.000	15.000	28	7.500	17.000	0.000
29	7.500	17.000	7.500	30	7.500	17.000	15.000
31	0.000	21.000	0.000	32	0.000	21.000	7.500
33	0.000	21.000	15.000	34	7.500	21.000	0.000
35	7.500	21.000	7.500	36	7.500	21.000	15.000
37	0.000	25.000	0.000	38	0.000	25.000	7.500
39	0.000	25.000	15.000	40	7.500	25.000	0.000
41	7.500	25.000	7.500	42	7.500	25.000	15.000
43	0.000	29.000	0.000	44	0.000	29.000	7.500
45	0.000	29.000	15.000	46	7.500	29.000	0.000
47	7.500	29.000	7.500	48	7.500	29.000	15.000
49	0.000	33.000	0.000	50	0.000	33.000	7.500
51	0.000	33.000	15.000	52	7.500	33.000	0.000
53	7.500	33.000	7.500	54	7.500	33.000	15.000
55	0.000	37.000	0.000	56	0.000	37.000	7.500
57	0.000	37.000	15.000	58	7.500	37.000	0.000
59	7.500	37.000	7.500	60	7.500	37.000	15.000
61	0.000	41.000	0.000	62	0.000	41.000	7.500
63	0.000	41.000	15.000	64	7.500	41.000	0.000
65	7.500	41.000	7.500	66	7.500	41.000	15.000

========== ELEMENT DATA ==========

Beam	Secn. type	Fixity	Length m	ß (°)
7-8	BEAM1	00	7.500	0.00
8-9	BEAM1	00	7.500	0.00
7-10	BEAM1	00	7.500	0.00
10-11	BEAM1	00	7.500	0.00
11-12	BEAM1	00	7.500	0.00
9-12	BEAM1	00	7.500	0.00
13-14	BEAM1	00	7.500	0.00
14-15	BEAM1	00	7.500	0.00
13-16	BEAM1	00	7.500	0.00
16-17	BEAM1	00	7.500	0.00
17-18	BEAM1	00	7.500	0.00
15-18	BEAM1	00	7.500	0.00
19-20	BEAM1	00	7.500	0.00
20-21	BEAM1	00	7.500	0.00
19-22	BEAM1	00	7.500	0.00
22-23	BEAM1	00	7.500	0.00
23-24	BEAM1	00	7.500	0.00
21-24	BEAM1	00	7.500	0.00
25-26	BEAM1	00	7.500	0.00
26-27	BEAM1	00	7.500	0.00
25-28	BEAM1	00	7.500	0.00
28-29	BEAM1	00	7.500	0.00
29-30	BEAM1	00	7.500	0.00
27-30	BEAM1	00	7.500	0.00

31-32	BEAM1	00	7.500	0.00
32-33	BEAM1	00	7.500	0.00
31-34	BEAM1	00	7.500	0.00
34-35	BEAM1	00	7.500	0.00
35-36	BEAM1	00	7.500	0.00
33-36	BEAM1	00	7.500	0.00
37-38	BEAM1	00	7.500	0.00
38-39	BEAM1	00	7.500	0.00
37-40	BEAM1	00	7.500	0.00
40-41	BEAM1	00	7.500	0.00
41-42	BEAM1	00	7.500	0.00
39-42	BEAM1	00	7.500	0.00
43-44	BEAM1	00	7.500	0.00
44-45	BEAM1	00	7.500	0.00
43-46	BEAM1	00	7.500	0.00
46-47	BEAM1	00	7.500	0.00
47-48	BEAM1	00	7.500	0.00
45-48	BEAM1	00	7.500	0.00
49-50	BEAM1	00	7.500	0.00
50-51	BEAM1	00	7.500	0.00
49-52	BEAM1	00	7.500	0.00
52-53	BEAM1	00	7.500	0.00
53-54	BEAM1	00	7.500	0.00
51-54	BEAM1	00	7.500	0.00
55-56	BEAM1	00	7.500	0.00
56-57	BEAM1	00	7.500	0.00
55-58	BEAM1	00	7.500	0.00
58-59	BEAM1	00	7.500	0.00
59-60	BEAM1	00	7.500	0.00
57-60	BEAM1	00	7.500	0.00
61-62	BEAM1	00	7.500	0.00
62-63	BEAM1	00	7.500	0.00
61-64	BEAM1	00	7.500	0.00
64-65	BEAM1	00	7.500	0.00
65-66	BEAM1	00	7.500	0.00
63-66	BEAM1	00	7.500	0.00
8-11	BEAM3	00	7.500	0.00
14-17	BEAM3	00	7.500	0.00
20-23	BEAM3	00	7.500	0.00
26-29	BEAM3	00	7.500	0.00
32-35	BEAM3	00	7.500	0.00
38-41	BEAM3	00	7.500	0.00
44-47	BEAM3	00	7.500	0.00
50-53	BEAM3	00	7.500	0.00
56-59	BEAM3	00	7.500	0.00
62-65	BEAM3	00	7.500	0.00
1-7	COL	00	5.000	0.00
7-13	COL	00	4.000	0.00
13-19	COL	00	4.000	0.00
19-25	COL	00	4.000	0.00
25-31	COL	00	4.000	0.00
31-37	COL	00	4.000	0.00
37-43	COL	00	4.000	0.00
43-49	COL	00	4.000	0.00
49-55	COL	00	4.000	0.00
55-61	COL	00	4.000	0.00
2-8	COL	00	5.000	-0.00
8-14	COL	00	4.000	0.00
14-20	COL	00	4.000	0.00
20-26	COL	00	4.000	0.00
26-32	COL	00	4.000	0.00
32-38	COL	00	4.000	0.00
38-44	COL	00	4.000	0.00
44-50	COL	00	4.000	0.00
50-56	COL	00	4.000	0.00
56-62	COL	00	4.000	0.00
3-9	COL	00	5.000	-0.00
9-15	COL	00	4.000	0.00
15-21	COL	00	4.000	0.00
21-27	COL	00	4.000	0.00
27-33	COL	00	4.000	0.00
33-39	COL	00	4.000	0.00
39-45	COL	00	4.000	0.00
45-51	COL	00	4.000	0.00
51-57	COL	00	4.000	0.00
57-63	COL	00	4.000	0.00
4-10	COL	00	5.000	-0.00
10-16	COL	00	4.000	0.00

16-22	COL	00	4.000	0.00
22-28	COL	00	4.000	0.00
28-34	COL	00	4.000	0.00
34-40	COL	00	4.000	0.00
40-46	COL	00	4.000	0.00
46-52	COL	00	4.000	0.00
52-58	COL	00	4.000	0.00
58-64	COL	00	4.000	0.00
5-11	COL	00	5.000	-0.00
11-17	COL	00	4.000	0.00
17-23	COL	00	4.000	0.00
23-29	COL	00	4.000	0.00
29-35	COL	00	4.000	0.00
35-41	COL	00	4.000	0.00
41-47	COL	00	4.000	0.00
47-53	COL	00	4.000	0.00
53-59	COL	00	4.000	0.00
59-65	COL	00	4.000	0.00
6-12	COL	00	5.000	-0.00
12-18	COL	00	4.000	0.00
18-24	COL	00	4.000	0.00
24-30	COL	00	4.000	0.00
30-36	COL	00	4.000	0.00
36-42	COL	00	4.000	0.00
42-48	COL	00	4.000	0.00
48-54	COL	00	4.000	0.00
54-60	COL	00	4.000	0.00
60-66	COL	00	4.000	0.00

========== SECTION PROPERTIES ==========

Section : BEAM1 Section designation: 406x178x60 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
7.610E-3	0.000	0.000	215E-6	12.0E-6	332E-9	Steel:300W

Section : BEAM3 Section designation: 533x210x93 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
11.80E-3	0.000	0.000	553E-6	23.9E-6	772E-9	Steel:300W

Section : COL Section designation: 305x305x198 H1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
25.20E-3	0.000	0.000	509E-6	162E-6	7.44E-6	Steel:300W

========== MATERIALS ==========

Designation	E	poisson	Density	Exp. coeff.
	kPa		kN/m^3	
Steel:300W	206.0E6	0.30	77.00	11.70E-6

========== SUPPORT DATA ==========

Prescribed displacements

Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		m	m	m	rad.	rad.	rad.
1	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
2	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
3	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
4	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
5	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
6	XYZ	0.00	0.00	0.00	0.00	0.00	0.00

Spring constants

Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		kN/m	kN/m	kN/m	kNm/rad	kNm/rad	kNm/rad

========== LOADS ==========

Load Case Description

LO1

Add own weight to load case : LO1

The Y component(s) of the following load cases have been added as masses
in the structure for purposes of the dynamic analysis: none

========== LOAD CASE LO1 ==========

*** POINT LOADS ***

Node	Fx kN	Fy kN	Fz kN	Mx kNm	My kNm	Mz kNm
7	0.00	0.00	0.50	0.00	0.00	0.00
10	0.00	0.00	0.50	0.00	0.00	0.00
13	0.00	0.00	0.50	0.00	0.00	0.00
16	0.00	0.00	0.50	0.00	0.00	0.00
19	0.00	0.00	0.50	0.00	0.00	0.00
22	0.00	0.00	0.50	0.00	0.00	0.00
25	0.00	0.00	0.50	0.00	0.00	0.00
28	0.00	0.00	0.50	0.00	0.00	0.00
31	0.00	0.00	0.50	0.00	0.00	0.00
34	0.00	0.00	0.50	0.00	0.00	0.00
37	0.00	0.00	1.00	0.00	0.00	0.00
40	0.00	0.00	1.00	0.00	0.00	0.00
43	0.00	0.00	1.00	0.00	0.00	0.00
46	0.00	0.00	1.00	0.00	0.00	0.00
49	0.00	0.00	1.00	0.00	0.00	0.00
52	0.00	0.00	1.00	0.00	0.00	0.00
55	0.00	0.00	1.00	0.00	0.00	0.00
58	0.00	0.00	1.00	0.00	0.00	0.00
61	0.00	0.00	1.00	0.00	0.00	0.00
64	0.00	0.00	1.00	0.00	0.00	0.00

========== OUTPUT: BUCKLING ANALYSIS ==========

********** LOAD CASE LO1 **********

========== BUCKLING LOAD FACTOR FOR EACH MODE SHAPE ==========

Mode shape	Load factor
1	19.4665
2	27.9503
3	42.9334

========== NORMALIZED BUCKLING MODE SHAPES ==========

Node	Shape No.	X-disp.	Y-disp.	Z-disp.	X-rot.	Y-rot.	Z-rot.
1	1	0.00	0.00	0.00	-0.2325	-0.0000	-0.0000
	2	0.00	0.00	0.00	-0.1703	-0.1101	-0.0942
	3	0.00	0.00	0.00	0.0391	0.0091	0.1096
2	1	0.00	0.00	0.00	-0.2487	-0.0000	-0.0000
	2	0.00	0.00	0.00	-0.1827	-0.1111	0.0115
	3	0.00	0.00	0.00	0.0439	0.0098	0.1539
3	1	0.00	0.00	0.00	-0.2343	-0.0000	0.0000
	2	0.00	0.00	0.00	-0.1723	-0.1131	0.1247
	3	0.00	0.00	0.00	0.0418	0.0103	0.1680
4	1	0.00	0.00	0.00	-0.2325	-0.0000	-0.0000
	2	0.00	0.00	0.00	0.1703	-0.1101	-0.0942
	3	0.00	0.00	0.00	-0.0410	0.0091	0.1097
5	1	0.00	0.00	0.00	-0.2487	-0.0000	-0.0000
	2	0.00	0.00	0.00	0.1827	-0.1111	0.0115
	3	0.00	0.00	0.00	-0.0430	0.0098	0.1541

6	1	0.00	0.00	0.00	-0.2344	-0.0000	0.0000
	2	0.00	0.00	0.00	0.1724	-0.1131	0.1247
	3	0.00	0.00	0.00	-0.0412	0.0103	0.1680
7	1	0.00	-0.48	-850.84	-0.0548	-0.0000	0.0000
	2	392.65	1.08	-604.28	-0.0327	-0.1101	-0.0483
	3	-449.32	-1.07	131.57	0.0038	0.0091	0.0524
8	1	-0.00	0.00	-851.55	-0.0303	-0.0000	0.0000
	2	-43.86	-0.19	-604.83	-0.0164	-0.1111	0.0036
	3	-574.01	-1.59	131.75	0.0005	0.0098	0.0425
9	1	-0.00	0.48	-851.28	-0.0540	-0.0000	-0.0000
	2	-515.68	-1.23	-604.77	-0.0318	-0.1131	0.0620
	3	-679.90	-0.77	131.83	0.0027	0.0103	0.0762
10	1	0.00	-0.48	-850.84	-0.0548	-0.0000	0.0000
	2	392.65	-1.08	604.25	0.0327	-0.1101	-0.0483
	3	-449.32	1.07	-131.72	-0.0029	0.0091	0.0524
11	1	-0.00	0.00	-851.54	-0.0303	-0.0000	0.0000
	2	-43.86	0.19	604.80	0.0164	-0.1111	0.0036
	3	-574.01	1.59	-131.85	-0.0007	0.0098	0.0425
12	1	-0.00	0.48	-851.28	-0.0540	-0.0000	-0.0000
	2	-515.68	1.24	604.75	0.0317	-0.1131	0.0620
	3	-679.90	0.77	-131.91	-0.0028	0.0103	0.0762
13	1	-0.00	-0.55	-971.71	-0.0078	0.0000	0.0000
	2	554.66	1.77	-639.19	0.0052	-0.1253	-0.0273
	3	-612.85	-1.56	107.50	-0.0081	0.0094	0.0247
14	1	-0.01	0.00	-971.29	-0.0092	0.0000	0.0000
	2	-56.06	-0.28	-638.85	0.0011	-0.1273	0.0017
	3	-698.62	-2.07	107.37	-0.0051	0.0045	0.0137
15	1	0.01	0.55	-971.72	-0.0078	0.0000	0.0000
	2	-717.23	-1.95	-639.20	0.0052	-0.1290	0.0326
	3	-903.13	-0.82	107.44	-0.0080	-0.0001	0.0302
16	1	-0.00	-0.55	-971.71	-0.0078	0.0000	0.0000
	2	554.66	-1.77	639.22	-0.0052	-0.1253	-0.0273
	3	-612.85	1.56	-106.78	0.0079	0.0094	0.0247
17	1	-0.01	0.00	-971.30	-0.0092	0.0000	0.0000
	2	-56.06	0.28	638.88	-0.0011	-0.1273	0.0017
	3	-698.61	2.07	-106.68	0.0050	0.0045	0.0137
18	1	0.01	0.55	-971.72	-0.0078	0.0000	0.0000
	2	-717.23	1.95	639.23	-0.0052	-0.1290	0.0326
	3	-903.13	0.82	-106.77	0.0080	-0.0001	0.0302
19	1	-0.01	-0.57	-993.02	-0.0019	0.0000	-0.0000
	2	649.81	2.24	-601.55	0.0076	-0.1274	-0.0168
	3	-688.83	-1.82	63.47	-0.0075	0.0061	0.0113
20	1	-0.00	0.00	-993.05	-0.0010	-0.0000	-0.0000
	2	-62.90	-0.34	-601.57	0.0059	-0.1293	0.0011
	3	-743.80	-2.31	63.45	-0.0054	-0.0013	0.0060
21	1	-0.01	0.56	-993.03	-0.0019	-0.0000	0.0000
	2	-825.56	-2.41	-601.56	0.0075	-0.1313	0.0181
	3	-982.97	-0.70	63.42	-0.0075	-0.0085	0.0089
22	1	-0.01	-0.57	-993.02	-0.0019	0.0000	-0.0000
	2	649.81	-2.24	601.53	-0.0076	-0.1274	-0.0168
	3	-688.83	1.82	-64.14	0.0073	0.0061	0.0113
23	1	-0.00	0.00	-993.05	-0.0010	-0.0000	-0.0000
	2	-62.90	0.34	601.55	-0.0059	-0.1293	0.0011
	3	-743.80	2.31	-64.12	0.0054	-0.0013	0.0060
24	1	-0.01	0.56	-993.03	-0.0019	-0.0000	0.0000
	2	-825.56	2.41	601.54	-0.0075	-0.1313	0.0181
	3	-982.97	0.70	-64.09	0.0074	-0.0085	0.0089
25	1	-0.00	-0.57	-997.21	-0.0003	0.0000	-0.0000
	2	710.45	2.55	-564.73	0.0061	-0.1270	-0.0112
	3	-722.35	-1.96	30.54	-0.0052	0.0024	0.0048
26	1	0.00	0.00	-997.20	-0.0004	0.0000	-0.0000
	2	-67.81	-0.38	-564.73	0.0045	-0.1285	0.0009
	3	-766.81	-2.45	30.53	-0.0040	-0.0052	0.0036
27	1	-0.02	0.56	-997.22	-0.0003	-0.0000	-0.0000
	2	-887.64	-2.70	-564.73	0.0061	-0.1302	0.0108
	3	-1000.00	-0.56	30.50	-0.0053	-0.0126	0.0004
28	1	-0.00	-0.57	-997.23	-0.0003	0.0000	-0.0000
	2	710.45	-2.56	564.73	-0.0061	-0.1270	-0.0112
	3	-722.35	1.96	-30.68	0.0054	0.0024	0.0048
29	1	0.00	0.00	-997.22	-0.0004	0.0000	-0.0000
	2	-67.81	0.38	564.73	-0.0045	-0.1285	0.0009
	3	-766.81	2.45	-30.66	0.0040	-0.0052	0.0037
30	1	-0.02	0.56	-997.23	-0.0003	-0.0000	-0.0000
	2	-887.64	2.70	564.73	-0.0061	-0.1302	0.0108
	3	-1000.00	0.56	-30.63	0.0054	-0.0126	0.0004
31	1	0.01	-0.57	-998.20	-0.0001	-0.0000	-0.0000
	2	751.75	2.75	-538.19	0.0042	-0.1265	-0.0078
	3	-736.35	-2.04	6.77	-0.0037	-0.0010	0.0020

32	1	0.00	0.00	-998.21	-0.0001	-0.0000	-0.0000
	2	-71.61	-0.41	-538.19	0.0032	-0.1277	0.0007
	3	-781.86	-2.53	6.75	-0.0027	-0.0078	0.0026
33	1	-0.00	0.57	-998.20	-0.0001	-0.0000	-0.0000
	2	-926.05	-2.87	-538.19	0.0042	-0.1290	0.0070
	3	-994.45	-0.45	6.73	-0.0037	-0.0144	-0.0021
34	1	0.01	-0.57	-998.19	-0.0001	-0.0000	-0.0000
	2	751.75	-2.75	538.33	-0.0042	-0.1265	-0.0078
	3	-736.35	2.03	-5.89	0.0039	-0.0010	0.0020
35	1	0.00	0.00	-998.19	-0.0001	-0.0000	-0.0000
	2	-71.61	0.41	538.33	-0.0032	-0.1277	0.0007
	3	-781.86	2.53	-5.87	0.0028	-0.0078	0.0026
36	1	-0.00	0.57	-998.19	-0.0001	-0.0000	-0.0000
	2	-926.05	2.88	538.33	-0.0042	-0.1290	0.0070
	3	-994.45	0.45	-5.85	0.0040	-0.0144	-0.0021
37	1	0.02	-0.57	-998.66	-0.0001	0.0000	-0.0000
	2	781.17	2.87	-520.66	0.0028	-0.1264	-0.0057
	3	-742.45	-2.08	-8.41	-0.0022	-0.0036	0.0010
38	1	0.00	0.00	-998.66	-0.0001	0.0000	0.0000
	2	-74.65	-0.43	-520.66	0.0021	-0.1272	0.0005
	3	-792.83	-2.59	-8.42	-0.0017	-0.0093	0.0020
39	1	0.01	0.57	-998.66	-0.0001	0.0000	-0.0000
	2	-951.64	-2.98	-520.66	0.0027	-0.1280	0.0049
	3	-984.26	-0.37	-8.44	-0.0023	-0.0149	-0.0022
40	1	0.02	-0.57	-998.70	-0.0001	0.0000	-0.0000
	2	781.17	-2.88	520.43	-0.0028	-0.1264	-0.0057
	3	-742.45	2.07	10.18	0.0021	-0.0036	0.0010
41	1	0.00	0.00	-998.70	-0.0001	0.0000	0.0000
	2	-74.65	0.43	520.43	-0.0022	-0.1272	0.0005
	3	-792.83	2.58	10.19	0.0017	-0.0093	0.0020
42	1	0.01	0.57	-998.70	-0.0001	0.0000	-0.0000
	2	-951.64	2.98	520.43	-0.0028	-0.1280	0.0049
	3	-984.26	0.38	10.21	0.0022	-0.0149	-0.0022
43	1	0.02	-0.57	-998.99	-0.0001	0.0000	-0.0000
	2	802.61	2.95	-509.33	0.0018	-0.1265	-0.0042
	3	-745.69	-2.10	-17.65	-0.0014	-0.0053	0.0006
44	1	0.00	0.00	-998.99	-0.0001	0.0000	-0.0000
	2	-77.03	-0.44	-509.33	0.0014	-0.1270	0.0004
	3	-801.34	-2.61	-17.66	-0.0011	-0.0101	0.0016
45	1	0.02	0.57	-998.99	-0.0001	0.0000	-0.0000
	2	-969.68	-3.04	-509.33	0.0018	-0.1275	0.0035
	3	-975.36	-0.33	-17.68	-0.0015	-0.0148	-0.0017
46	1	0.02	-0.57	-999.05	-0.0001	0.0000	-0.0000
	2	802.61	-2.95	508.87	-0.0018	-0.1265	-0.0042
	3	-745.69	2.09	18.28	0.0011	-0.0053	0.0006
47	1	0.00	0.00	-999.05	-0.0001	0.0000	-0.0000
	2	-77.03	0.44	508.87	-0.0014	-0.1270	0.0004
	3	-801.34	2.61	18.29	0.0009	-0.0101	0.0016
48	1	0.02	0.57	-999.05	-0.0001	0.0000	-0.0000
	2	-969.68	3.05	508.87	-0.0018	-0.1275	0.0035
	3	-975.36	0.34	18.31	0.0012	-0.0148	-0.0017
49	1	0.02	-0.57	-999.31	-0.0001	0.0000	0.0000
	2	818.34	2.99	-502.39	0.0011	-0.1268	-0.0031
	3	-747.94	-2.11	-23.97	-0.0009	-0.0064	0.0005
50	1	0.01	0.00	-999.31	-0.0001	0.0000	-0.0000
	2	-78.85	-0.45	-502.39	0.0009	-0.1270	0.0003
	3	-807.94	-2.63	-23.98	-0.0008	-0.0105	0.0013
51	1	0.03	0.57	-999.31	-0.0001	0.0000	-0.0000
	2	-982.81	-3.08	-502.39	0.0011	-0.1273	0.0026
	3	-969.01	-0.31	-23.99	-0.0010	-0.0146	-0.0011
52	1	0.02	-0.57	-999.37	-0.0001	0.0000	0.0000
	2	818.34	-2.99	501.96	-0.0011	-0.1268	-0.0031
	3	-747.94	2.10	23.30	0.0008	-0.0064	0.0005
53	1	0.01	0.00	-999.37	-0.0001	0.0000	-0.0000
	2	-78.85	0.45	501.96	-0.0009	-0.1270	0.0003
	3	-807.94	2.62	23.31	0.0006	-0.0105	0.0013
54	1	0.03	0.57	-999.37	-0.0001	0.0000	-0.0000
	2	-982.81	3.08	501.96	-0.0011	-0.1273	0.0026
	3	-969.01	0.32	23.32	0.0009	-0.0146	-0.0011
55	1	0.02	-0.57	-999.63	-0.0001	0.0000	0.0000
	2	829.84	3.00	-498.56	0.0006	-0.1271	-0.0023
	3	-749.90	-2.12	-27.94	-0.0005	-0.0072	0.0005
56	1	0.01	0.00	-999.63	-0.0001	0.0000	-0.0000
	2	-80.17	-0.45	-498.55	0.0006	-0.1272	0.0002
	3	-813.04	-2.63	-27.94	-0.0005	-0.0108	0.0010
57	1	0.04	0.57	-999.63	-0.0001	0.0000	-0.0000
	2	-992.57	-3.09	-498.55	0.0006	-0.1273	0.0020
	3	-965.11	-0.30	-27.95	-0.0006	-0.0144	-0.0006

58	1	0.02	-0.57	-999.69	-0.0001	0.0000	0.0000
	2	829.84	-3.01	498.15	-0.0006	-0.1271	-0.0023
	3	-749.90	2.10	26.87	0.0005	-0.0072	0.0005
59	1	0.01	0.00	-999.69	-0.0001	0.0000	-0.0000
	2	-80.17	0.45	498.15	-0.0006	-0.1272	0.0002
	3	-813.04	2.63	26.88	0.0004	-0.0108	0.0010
60	1	0.04	0.57	-999.69	-0.0001	0.0000	-0.0000
	2	-992.57	3.10	498.15	-0.0006	-0.1273	0.0020
	3	-965.11	0.31	26.88	0.0006	-0.0144	-0.0006
61	1	0.01	-0.57	-999.95	-0.0001	0.0000	0.0000
	2	838.31	3.01	-496.68	0.0004	-0.1275	-0.0017
	3	-751.84	-2.12	-30.06	-0.0002	-0.0077	0.0005
62	1	0.01	0.00	-999.95	-0.0001	0.0000	-0.0000
	2	-81.10	-0.45	-496.69	0.0004	-0.1275	0.0002
	3	-816.98	-2.63	-30.08	-0.0002	-0.0109	0.0008
63	1	0.04	0.57	-999.95	-0.0001	0.0000	-0.0000
	2	-1000.00	-3.10	-496.69	0.0004	-0.1275	0.0015
	3	-963.09	-0.29	-30.10	-0.0004	-0.0143	-0.0003
64	1	0.01	-0.57	-1000.00	-0.0001	0.0000	0.0000
	2	838.31	-3.01	496.29	-0.0004	-0.1275	-0.0017
	3	-751.84	2.11	28.93	0.0002	-0.0076	0.0005
65	1	0.01	0.00	-1000.00	-0.0001	0.0000	-0.0000
	2	-81.10	0.45	496.29	-0.0004	-0.1275	0.0002
	3	-816.98	2.63	28.94	0.0002	-0.0110	0.0008
66	1	0.04	0.57	-1000.00	-0.0001	0.0000	-0.0000
	2	-1000.00	3.10	496.30	-0.0004	-0.1274	0.0015
	3	-963.09	0.31	28.96	0.0004	-0.0142	-0.0003

```
============================== STATISTICAL DATA ==============================

Own weight of structure = 809.17

No. of real numbers in Stiffness/mass matrix = 15462  (154620 bytes)
Time used to analyse = 0: 0:43.022 seconds
Total number of : Nodes              = 66
                  Beam Elements      = 130
                  Cable Elements     = 0
                  Shell Elements     = 0
                   Supports           = 6
                  Section properties = 3
                  Load cases         = 1
                  Load combinations  = 0
                  Mode shapes        = 3
    No of subspace iterations        = 4

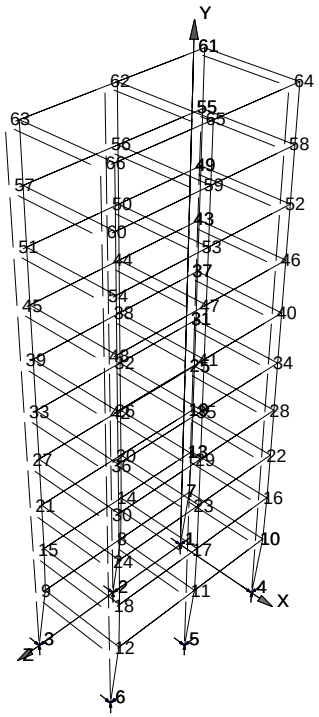
============================== END OF OUTPUT ==============================
```

Space Frame Analysis Ver W2.1.33 - 23 Sep 2005
Input file:D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created : 8/24/2006 1:27:34 PM

A03

Mode shape number 1

Load factor for Load Case LO1
Mode no 1: 13.82



========== S p a c e - F r a m e A n a l y s i s - P R O K O N ==========
Ver W2.1.33 - 23 Sep 2005
========= D Y N A M I C A N A L Y S I S M O D U L E ==========

TITLE :

Data file : D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created on: 8/24/2006

========== NODAL POINT COORDINATES ==========

Node no.	X-coord m	Y-coord m	Z-coord m	Node no.	X-coord m	Y-coord m	Z-coord m
1	0.000	0.000	0.000	2	0.000	0.000	7.500
3	0.000	0.000	15.000	4	7.500	0.000	0.000
5	7.500	0.000	7.500	6	7.500	0.000	15.000
7	0.000	5.000	0.000	8	0.000	5.000	7.500
9	0.000	5.000	15.000	10	7.500	5.000	0.000
11	7.500	5.000	7.500	12	7.500	5.000	15.000
13	0.000	9.000	0.000	14	0.000	9.000	7.500
15	0.000	9.000	15.000	16	7.500	9.000	0.000
17	7.500	9.000	7.500	18	7.500	9.000	15.000
19	0.000	13.000	0.000	20	0.000	13.000	7.500
21	0.000	13.000	15.000	22	7.500	13.000	0.000
23	7.500	13.000	7.500	24	7.500	13.000	15.000
25	0.000	17.000	0.000	26	0.000	17.000	7.500
27	0.000	17.000	15.000	28	7.500	17.000	0.000
29	7.500	17.000	7.500	30	7.500	17.000	15.000
31	0.000	21.000	0.000	32	0.000	21.000	7.500
33	0.000	21.000	15.000	34	7.500	21.000	0.000
35	7.500	21.000	7.500	36	7.500	21.000	15.000
37	0.000	25.000	0.000	38	0.000	25.000	7.500
39	0.000	25.000	15.000	40	7.500	25.000	0.000
41	7.500	25.000	7.500	42	7.500	25.000	15.000
43	0.000	29.000	0.000	44	0.000	29.000	7.500
45	0.000	29.000	15.000	46	7.500	29.000	0.000
47	7.500	29.000	7.500	48	7.500	29.000	15.000
49	0.000	33.000	0.000	50	0.000	33.000	7.500
51	0.000	33.000	15.000	52	7.500	33.000	0.000
53	7.500	33.000	7.500	54	7.500	33.000	15.000
55	0.000	37.000	0.000	56	0.000	37.000	7.500
57	0.000	37.000	15.000	58	7.500	37.000	0.000
59	7.500	37.000	7.500	60	7.500	37.000	15.000
61	0.000	41.000	0.000	62	0.000	41.000	7.500
63	0.000	41.000	15.000	64	7.500	41.000	0.000
65	7.500	41.000	7.500	66	7.500	41.000	15.000

========== ELEMENT DATA ==========

Beam	Secn. type	Fixity	Length m	ß (°)
7-8	BEAM1	00	7.500	0.00
8-9	BEAM1	00	7.500	0.00
7-10	BEAM1	00	7.500	0.00
10-11	BEAM1	00	7.500	0.00
11-12	BEAM1	00	7.500	0.00
9-12	BEAM1	00	7.500	0.00
13-14	BEAM1	00	7.500	0.00
14-15	BEAM1	00	7.500	0.00
13-16	BEAM1	00	7.500	0.00
16-17	BEAM1	00	7.500	0.00
17-18	BEAM1	00	7.500	0.00
15-18	BEAM1	00	7.500	0.00
19-20	BEAM1	00	7.500	0.00
20-21	BEAM1	00	7.500	0.00
19-22	BEAM1	00	7.500	0.00
22-23	BEAM1	00	7.500	0.00
23-24	BEAM1	00	7.500	0.00
21-24	BEAM1	00	7.500	0.00
25-26	BEAM1	00	7.500	0.00
26-27	BEAM1	00	7.500	0.00
25-28	BEAM1	00	7.500	0.00
28-29	BEAM1	00	7.500	0.00
29-30	BEAM1	00	7.500	0.00
27-30	BEAM1	00	7.500	0.00

31-32	BEAM1	00	7.500	0.00
32-33	BEAM1	00	7.500	0.00
31-34	BEAM1	00	7.500	0.00
34-35	BEAM1	00	7.500	0.00
35-36	BEAM1	00	7.500	0.00
33-36	BEAM1	00	7.500	0.00
37-38	BEAM1	00	7.500	0.00
38-39	BEAM1	00	7.500	0.00
37-40	BEAM1	00	7.500	0.00
40-41	BEAM1	00	7.500	0.00
41-42	BEAM1	00	7.500	0.00
39-42	BEAM1	00	7.500	0.00
43-44	BEAM1	00	7.500	0.00
44-45	BEAM1	00	7.500	0.00
43-46	BEAM1	00	7.500	0.00
46-47	BEAM1	00	7.500	0.00
47-48	BEAM1	00	7.500	0.00
45-48	BEAM1	00	7.500	0.00
49-50	BEAM1	00	7.500	0.00
50-51	BEAM1	00	7.500	0.00
49-52	BEAM1	00	7.500	0.00
52-53	BEAM1	00	7.500	0.00
53-54	BEAM1	00	7.500	0.00
51-54	BEAM1	00	7.500	0.00
55-56	BEAM1	00	7.500	0.00
56-57	BEAM1	00	7.500	0.00
55-58	BEAM1	00	7.500	0.00
58-59	BEAM1	00	7.500	0.00
59-60	BEAM1	00	7.500	0.00
57-60	BEAM1	00	7.500	0.00
61-62	BEAM1	00	7.500	0.00
62-63	BEAM1	00	7.500	0.00
61-64	BEAM1	00	7.500	0.00
64-65	BEAM1	00	7.500	0.00
65-66	BEAM1	00	7.500	0.00
63-66	BEAM1	00	7.500	0.00
8-11	BEAM3	00	7.500	0.00
14-17	BEAM3	00	7.500	0.00
20-23	BEAM3	00	7.500	0.00
26-29	BEAM3	00	7.500	0.00
32-35	BEAM3	00	7.500	0.00
38-41	BEAM3	00	7.500	0.00
44-47	BEAM3	00	7.500	0.00
50-53	BEAM3	00	7.500	0.00
56-59	BEAM3	00	7.500	0.00
62-65	BEAM3	00	7.500	0.00
1-7	COL	00	5.000	0.00
7-13	COL	00	4.000	0.00
13-19	COL	00	4.000	0.00
19-25	COL	00	4.000	0.00
25-31	COL	00	4.000	0.00
31-37	COL	00	4.000	0.00
37-43	COL	00	4.000	0.00
43-49	COL	00	4.000	0.00
49-55	COL	00	4.000	0.00
55-61	COL	00	4.000	0.00
2-8	COL	00	5.000	-0.00
8-14	COL	00	4.000	0.00
14-20	COL	00	4.000	0.00
20-26	COL	00	4.000	0.00
26-32	COL	00	4.000	0.00
32-38	COL	00	4.000	0.00
38-44	COL	00	4.000	0.00
44-50	COL	00	4.000	0.00
50-56	COL	00	4.000	0.00
56-62	COL	00	4.000	0.00
3-9	COL	00	5.000	-0.00
9-15	COL	00	4.000	0.00
15-21	COL	00	4.000	0.00
21-27	COL	00	4.000	0.00
27-33	COL	00	4.000	0.00
33-39	COL	00	4.000	0.00
39-45	COL	00	4.000	0.00
45-51	COL	00	4.000	0.00
51-57	COL	00	4.000	0.00
57-63	COL	00	4.000	0.00
4-10	COL	00	5.000	-0.00
10-16	COL	00	4.000	0.00

16-22	COL	00	4.000	0.00	
22-28	COL	00	4.000	0.00	
28-34	COL	00	4.000	0.00	
34-40	COL	00	4.000	0.00	
40-46	COL	00	4.000	0.00	
46-52	COL	00	4.000	0.00	
52-58	COL	00	4.000	0.00	
58-64	COL	00	4.000	0.00	
5-11	COL	00	5.000	-0.00	
11-17	COL	00	4.000	0.00	
17-23	COL	00	4.000	0.00	
23-29	COL	00	4.000	0.00	
29-35	COL	00	4.000	0.00	
35-41	COL	00	4.000	0.00	
41-47	COL	00	4.000	0.00	
47-53	COL	00	4.000	0.00	
53-59	COL	00	4.000	0.00	
59-65	COL	00	4.000	0.00	
6-12	COL	00	5.000	-0.00	
12-18	COL	00	4.000	0.00	
18-24	COL	00	4.000	0.00	
24-30	COL	00	4.000	0.00	
30-36	COL	00	4.000	0.00	
36-42	COL	00	4.000	0.00	
42-48	COL	00	4.000	0.00	
48-54	COL	00	4.000	0.00	
54-60	COL	00	4.000	0.00	
60-66	COL	00	4.000	0.00	

========== SECTION PROPERTIES ==========

Section : BEAM1 Section designation: 356x171x57 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
7.220E-3	0.000	0.000	161E-6	11.1E-6	334E-9	Steel:350W

Section : BEAM3 Section designation: 457x191x90 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
11.40E-3	0.000	0.000	411E-6	20.9E-6	921E-9	Steel:350W

Section : COL Section designation: 254x254x167 H1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
21.20E-3	0.000	0.000	299E-6	97.9E-6	6.34E-6	Steel:350W

========== MATERIALS ==========

Designation	E	poisson	Density	Exp. coeff.
	kPa		kN/m^3	
Steel:350W	206.0E6	0.30	77.00	11.70E-6

========== SUPPORT DATA ==========

		Prescribed displacements					
Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		m	m	m	rad.	rad.	rad.
1	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
2	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
3	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
4	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
5	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
6	XYZ	0.00	0.00	0.00	0.00	0.00	0.00

		Spring constants					
Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		kN/m	kN/m	kN/m	kNm/rad	kNm/rad	kNm/rad

========== LOADS ==========

Load Case Description

LO1

Add own weight to load case : LO1

The Y component(s) of the following load cases have been added as masses
in the structure for purposes of the dynamic analysis: none

========== LOAD CASE LO1 ==========

*** POINT LOADS ***

Node	Fx kN	Fy kN	Fz kN	Mx kNm	My kNm	Mz kNm
7	0.00	0.00	0.50	0.00	0.00	0.00
10	0.00	0.00	0.50	0.00	0.00	0.00
13	0.00	0.00	0.50	0.00	0.00	0.00
16	0.00	0.00	0.50	0.00	0.00	0.00
19	0.00	0.00	0.50	0.00	0.00	0.00
22	0.00	0.00	0.50	0.00	0.00	0.00
25	0.00	0.00	0.50	0.00	0.00	0.00
28	0.00	0.00	0.50	0.00	0.00	0.00
31	0.00	0.00	0.50	0.00	0.00	0.00
34	0.00	0.00	0.50	0.00	0.00	0.00
37	0.00	0.00	1.00	0.00	0.00	0.00
40	0.00	0.00	1.00	0.00	0.00	0.00
43	0.00	0.00	1.00	0.00	0.00	0.00
46	0.00	0.00	1.00	0.00	0.00	0.00
49	0.00	0.00	1.00	0.00	0.00	0.00
52	0.00	0.00	1.00	0.00	0.00	0.00
55	0.00	0.00	1.00	0.00	0.00	0.00
58	0.00	0.00	1.00	0.00	0.00	0.00
61	0.00	0.00	1.00	0.00	0.00	0.00
64	0.00	0.00	1.00	0.00	0.00	0.00

========== OUTPUT: BUCKLING ANALYSIS ==========

********** LOAD CASE LO1 **********

========== BUCKLING LOAD FACTOR FOR EACH MODE SHAPE ==========

Mode shape	Load factor
1	13.8180
2	20.8509
3	31.3277

========== NORMALIZED BUCKLING MODE SHAPES ==========

Node	Shape No.	X-disp.	Y-disp.	Z-disp.	X-rot.	Y-rot.	Z-rot.
1	1	0.00	0.00	0.00	-0.2426	-0.0000	-0.0000
	2	0.00	0.00	0.00	-0.1698	-0.1109	-0.1014
	3	0.00	0.00	0.00	0.0453	0.0098	0.1388
2	1	0.00	0.00	0.00	-0.2600	-0.0000	0.0000
	2	0.00	0.00	0.00	-0.1828	-0.1101	0.0159
	3	0.00	0.00	0.00	0.0512	0.0136	0.1930
3	1	0.00	0.00	0.00	-0.2449	-0.0000	0.0000
	2	0.00	0.00	0.00	-0.1723	-0.1140	0.1405
	3	0.00	0.00	0.00	0.0486	0.0195	0.1830
4	1	0.00	0.00	0.00	-0.2426	-0.0000	-0.0000
	2	0.00	0.00	0.00	0.1698	-0.1109	-0.1014
	3	0.00	0.00	0.00	-0.0476	0.0098	0.1388
5	1	0.00	0.00	0.00	-0.2600	-0.0000	-0.0000
	2	0.00	0.00	0.00	0.1828	-0.1101	0.0159
	3	0.00	0.00	0.00	-0.0504	0.0136	0.1932

6	1	0.00	0.00	0.00	-0.2449	-0.0000	0.0000
	2	0.00	0.00	0.00	0.1725	-0.1140	0.1405
	3	0.00	0.00	0.00	-0.0483	0.0195	0.1830
7	1	0.00	-0.36	-875.06	-0.0500	-0.0000	0.0000
	2	412.49	0.88	-591.94	-0.0273	-0.1109	-0.0462
	3	-555.63	-1.00	151.00	0.0037	0.0098	0.0590
8	1	0.00	0.00	-875.58	-0.0247	-0.0000	-0.0000
	2	-59.22	-0.18	-592.35	-0.0115	-0.1101	0.0041
	3	-701.82	-1.29	151.17	-0.0001	0.0136	0.0440
9	1	-0.00	0.36	-875.41	-0.0490	-0.0000	-0.0000
	2	-566.65	-1.03	-592.34	-0.0262	-0.1140	0.0616
	3	-721.99	-0.61	151.24	0.0025	0.0195	0.0728
10	1	0.00	-0.36	-875.05	-0.0500	-0.0000	0.0000
	2	412.49	-0.88	591.92	0.0273	-0.1109	-0.0462
	3	-555.63	1.00	-151.00	-0.0027	0.0098	0.0590
11	1	0.00	0.00	-875.57	-0.0247	-0.0000	0.0000
	2	-59.22	0.18	592.33	0.0116	-0.1101	0.0042
	3	-701.82	1.29	-151.14	-0.0002	0.0136	0.0439
12	1	-0.00	0.36	-875.41	-0.0490	-0.0000	-0.0000
	2	-566.65	1.03	592.32	0.0262	-0.1140	0.0616
	3	-722.00	0.62	-151.20	-0.0024	0.0195	0.0728
13	1	-0.01	-0.41	-980.08	-0.0054	0.0000	0.0000
	2	565.39	1.41	-608.43	0.0068	-0.1233	-0.0241
	3	-736.53	-1.42	122.02	-0.0085	0.0106	0.0255
14	1	0.00	0.00	-979.80	-0.0072	0.0000	0.0000
	2	-73.18	-0.26	-608.21	0.0020	-0.1238	0.0017
	3	-824.62	-1.60	121.93	-0.0048	0.0090	0.0113
15	1	0.01	0.41	-980.08	-0.0055	0.0000	0.0000
	2	-762.41	-1.58	-608.43	0.0067	-0.1272	0.0292
	3	-928.29	-0.63	121.99	-0.0083	0.0094	0.0251
16	1	-0.01	-0.41	-980.08	-0.0054	0.0000	0.0000
	2	565.39	-1.41	608.47	-0.0068	-0.1233	-0.0241
	3	-736.53	1.42	-121.19	0.0082	0.0106	0.0255
17	1	0.00	0.00	-979.80	-0.0072	0.0000	-0.0000
	2	-73.18	0.26	608.25	-0.0020	-0.1238	0.0017
	3	-824.61	1.60	-121.12	0.0047	0.0090	0.0113
18	1	0.01	0.41	-980.08	-0.0055	0.0000	0.0000
	2	-762.41	1.58	608.47	-0.0067	-0.1272	0.0292
	3	-928.29	0.63	-121.18	0.0083	0.0094	0.0251
19	1	-0.02	-0.42	-995.49	-0.0013	0.0000	0.0000
	2	649.42	1.77	-566.48	0.0072	-0.1240	-0.0141
	3	-814.78	-1.65	76.58	-0.0070	0.0080	0.0111
20	1	-0.00	0.00	-995.51	-0.0005	-0.0000	-0.0000
	2	-80.40	-0.31	-566.50	0.0053	-0.1248	0.0011
	3	-859.82	-1.73	76.57	-0.0048	0.0038	0.0041
21	1	-0.01	0.41	-995.50	-0.0013	-0.0000	0.0000
	2	-858.28	-1.91	-566.49	0.0072	-0.1278	0.0150
	3	-991.32	-0.52	76.55	-0.0070	0.0012	0.0060
22	1	-0.02	-0.42	-995.48	-0.0013	0.0000	0.0000
	2	649.42	-1.77	566.46	-0.0072	-0.1240	-0.0141
	3	-814.78	1.64	-77.20	0.0068	0.0080	0.0111
23	1	-0.00	0.00	-995.51	-0.0005	-0.0000	0.0000
	2	-80.40	0.31	566.48	-0.0053	-0.1248	0.0011
	3	-859.82	1.73	-77.19	0.0048	0.0038	0.0041
24	1	-0.01	0.41	-995.49	-0.0013	-0.0000	0.0000
	2	-858.28	1.92	566.46	-0.0072	-0.1278	0.0150
	3	-991.32	0.52	-77.17	0.0069	0.0012	0.0060
25	1	-0.02	-0.42	-998.15	-0.0002	0.0000	-0.0000
	2	701.11	1.99	-531.23	0.0054	-0.1232	-0.0092
	3	-848.47	-1.76	45.44	-0.0045	0.0050	0.0048
26	1	0.00	0.00	-998.14	-0.0002	0.0000	-0.0000
	2	-85.37	-0.34	-531.23	0.0037	-0.1239	0.0008
	3	-875.36	-1.80	45.44	-0.0033	0.0006	0.0023
27	1	-0.01	0.41	-998.15	-0.0002	-0.0000	-0.0000
	2	-909.88	-2.12	-531.23	0.0053	-0.1262	0.0086
	3	-1000.00	-0.41	45.42	-0.0046	-0.0027	-0.0006
28	1	-0.02	-0.42	-998.15	-0.0002	0.0000	-0.0000
	2	701.11	-1.99	531.24	-0.0053	-0.1232	-0.0092
	3	-848.47	1.76	-45.31	0.0048	0.0050	0.0048
29	1	0.00	0.00	-998.15	-0.0002	0.0000	-0.0000
	2	-85.37	0.34	531.24	-0.0037	-0.1239	0.0008
	3	-875.36	1.80	-45.30	0.0033	0.0006	0.0023
30	1	-0.01	0.41	-998.15	-0.0002	-0.0000	-0.0000
	2	-909.88	2.12	531.24	-0.0053	-0.1262	0.0086
	3	-1000.00	0.42	-45.29	0.0048	-0.0027	-0.0006
31	1	-0.01	-0.42	-998.74	-0.0001	-0.0000	-0.0000
	2	735.81	2.13	-507.56	0.0035	-0.1226	-0.0064
	3	-863.20	-1.82	23.74	-0.0031	0.0023	0.0022

32	1	0.01	0.00	-998.74	-0.0001	-0.0000	-0.0000
	2	-89.12	-0.36	-507.56	0.0025	-0.1231	0.0006
	3	-885.19	-1.85	23.73	-0.0021	-0.0015	0.0016
33	1	0.00	0.41	-998.74	-0.0001	-0.0000	-0.0000
	2	-940.82	-2.24	-507.56	0.0034	-0.1248	0.0055
	3	-992.45	-0.33	23.72	-0.0031	-0.0045	-0.0021
34	1	-0.01	-0.42	-998.71	-0.0001	-0.0000	-0.0000
	2	735.81	-2.13	507.71	-0.0035	-0.1226	-0.0064
	3	-863.20	1.82	-22.69	0.0033	0.0023	0.0022
35	1	0.01	0.00	-998.72	-0.0001	-0.0000	-0.0000
	2	-89.12	0.36	507.71	-0.0025	-0.1231	0.0006
	3	-885.19	1.84	-22.69	0.0023	-0.0015	0.0016
36	1	0.00	0.41	-998.71	-0.0001	-0.0000	-0.0000
	2	-940.82	2.24	507.71	-0.0034	-0.1248	0.0055
	3	-992.45	0.34	-22.67	0.0034	-0.0045	-0.0021
37	1	-0.00	-0.42	-999.03	-0.0001	0.0000	-0.0000
	2	760.38	2.22	-492.74	0.0022	-0.1225	-0.0046
	3	-870.51	-1.86	10.83	-0.0017	0.0004	0.0013
38	1	0.00	0.00	-999.03	-0.0001	0.0000	0.0000
	2	-92.04	-0.38	-492.74	0.0016	-0.1228	0.0005
	3	-892.21	-1.87	10.82	-0.0013	-0.0027	0.0013
39	1	0.02	0.41	-999.03	-0.0001	0.0000	-0.0000
	2	-961.30	-2.31	-492.74	0.0022	-0.1238	0.0038
	3	-983.37	-0.28	10.81	-0.0018	-0.0052	-0.0018
40	1	-0.00	-0.42	-999.06	-0.0001	0.0000	-0.0000
	2	760.38	-2.22	492.51	-0.0023	-0.1225	-0.0046
	3	-870.51	1.85	-8.44	0.0017	0.0004	0.0013
41	1	0.00	0.00	-999.06	-0.0001	0.0000	0.0000
	2	-92.04	0.38	492.51	-0.0016	-0.1228	0.0005
	3	-892.21	1.87	-8.43	0.0013	-0.0027	0.0013
42	1	0.02	0.41	-999.06	-0.0001	0.0000	-0.0000
	2	-961.30	2.31	492.51	-0.0022	-0.1238	0.0038
	3	-983.37	0.29	-8.42	0.0018	-0.0052	-0.0018
43	1	-0.00	-0.42	-999.26	-0.0001	0.0000	0.0000
	2	778.22	2.27	-483.58	0.0014	-0.1226	-0.0034
	3	-874.97	-1.88	3.08	-0.0011	-0.0007	0.0009
44	1	0.00	0.00	-999.26	-0.0001	0.0000	-0.0000
	2	-94.30	-0.39	-483.58	0.0010	-0.1227	0.0004
	3	-897.66	-1.88	3.07	-0.0008	-0.0032	0.0010
45	1	0.03	0.41	-999.26	-0.0001	0.0000	-0.0000
	2	-975.76	-2.35	-483.59	0.0013	-0.1233	0.0028
	3	-976.43	-0.25	3.07	-0.0012	-0.0052	-0.0012
46	1	-0.00	-0.42	-999.31	-0.0001	0.0000	0.0000
	2	778.22	-2.27	483.10	-0.0014	-0.1226	-0.0034
	3	-874.97	1.86	-2.11	0.0008	-0.0007	0.0009
47	1	0.00	0.00	-999.31	-0.0001	0.0000	-0.0000
	2	-94.30	0.39	483.10	-0.0010	-0.1227	0.0004
	3	-897.66	1.88	-2.11	0.0007	-0.0032	0.0010
48	1	0.03	0.41	-999.31	-0.0001	0.0000	-0.0000
	2	-975.76	2.36	483.10	-0.0013	-0.1233	0.0028
	3	-976.43	0.27	-2.10	0.0009	-0.0052	-0.0012
49	1	-0.01	-0.42	-999.50	-0.0001	0.0000	0.0000
	2	791.22	2.30	-478.33	0.0008	-0.1229	-0.0025
	3	-878.17	-1.89	-2.30	-0.0008	-0.0015	0.0007
50	1	0.01	0.00	-999.50	-0.0001	0.0000	-0.0000
	2	-95.98	-0.39	-478.33	0.0006	-0.1228	0.0003
	3	-901.93	-1.89	-2.31	-0.0006	-0.0035	0.0008
51	1	0.03	0.41	-999.50	-0.0001	0.0000	-0.0000
	2	-986.31	-2.38	-478.33	0.0008	-0.1232	0.0021
	3	-971.80	-0.24	-2.31	-0.0008	-0.0052	-0.0008
52	1	-0.01	-0.42	-999.54	-0.0001	0.0000	0.0000
	2	791.22	-2.30	477.82	-0.0008	-0.1229	-0.0025
	3	-878.17	1.87	1.64	0.0006	-0.0015	0.0007
53	1	0.01	0.00	-999.54	-0.0001	0.0000	-0.0000
	2	-95.98	0.39	477.82	-0.0006	-0.1228	0.0003
	3	-901.93	1.89	1.65	0.0005	-0.0035	0.0008
54	1	0.03	0.41	-999.54	-0.0001	0.0000	-0.0000
	2	-986.31	2.38	477.82	-0.0008	-0.1232	0.0021
	3	-971.80	0.25	1.65	0.0007	-0.0052	-0.0008
55	1	-0.01	-0.42	-999.73	-0.0001	0.0000	0.0000
	2	800.62	2.31	-475.67	0.0004	-0.1233	-0.0018
	3	-880.72	-1.89	-5.59	-0.0004	-0.0020	0.0006
56	1	0.01	0.00	-999.73	-0.0001	0.0000	-0.0000
	2	-97.18	-0.39	-475.67	0.0004	-0.1231	0.0002
	3	-905.28	-1.89	-5.59	-0.0004	-0.0037	0.0007
57	1	0.04	0.41	-999.73	-0.0001	0.0000	-0.0000
	2	-994.13	-2.39	-475.67	0.0004	-0.1232	0.0016
	3	-969.08	-0.23	-5.60	-0.0005	-0.0052	-0.0004

58	1	-0.01	-0.42	-999.77	-0.0001	0.0000	0.0000
	2	800.62	-2.31	475.17	-0.0004	-0.1233	-0.0018
	3	-880.72	1.88	4.47	0.0004	-0.0020	0.0006
59	1	0.01	0.00	-999.77	-0.0001	0.0000	-0.0000
	2	-97.18	0.39	475.17	-0.0004	-0.1231	0.0002
	3	-905.28	1.89	4.47	0.0003	-0.0037	0.0007
60	1	0.04	0.41	-999.77	-0.0001	0.0000	-0.0000
	2	-994.13	2.39	475.17	-0.0004	-0.1232	0.0016
	3	-969.08	0.25	4.48	0.0005	-0.0052	-0.0004
61	1	-0.01	-0.42	-999.96	-0.0001	0.0000	0.0000
	2	807.38	2.31	-474.58	0.0003	-0.1236	-0.0013
	3	-882.95	-1.89	-7.27	-0.0002	-0.0023	0.0005
62	1	0.01	0.00	-999.96	-0.0001	0.0000	-0.0000
	2	-98.00	-0.39	-474.58	0.0003	-0.1234	0.0002
	3	-907.94	-1.89	-7.28	-0.0002	-0.0038	0.0006
63	1	0.04	0.41	-999.96	-0.0001	0.0000	-0.0000
	2	-1000.00	-2.39	-474.58	0.0002	-0.1234	0.0012
	3	-967.76	-0.23	-7.29	-0.0003	-0.0051	-0.0002
64	1	-0.01	-0.42	-1000.00	-0.0001	0.0000	0.0000
	2	807.38	-2.31	474.09	-0.0003	-0.1236	-0.0013
	3	-882.95	1.88	6.08	0.0002	-0.0023	0.0005
65	1	0.01	0.00	-1000.00	-0.0001	0.0000	-0.0000
	2	-98.00	0.39	474.09	-0.0003	-0.1234	0.0002
	3	-907.94	1.89	6.09	0.0002	-0.0038	0.0006
66	1	0.04	0.41	-1000.00	-0.0001	0.0000	-0.0000
	2	-1000.00	2.39	474.09	-0.0002	-0.1234	0.0012
	3	-967.76	0.25	6.10	0.0003	-0.0051	-0.0002

```
============================== STATISTICAL DATA ==============================

Own weight of structure = 717.58

No. of real numbers in Stiffness/mass matrix = 15462  (154620 bytes)
Time used to analyse = 0: 0:48.099 seconds
Total number of : Nodes              = 66
                  Beam Elements      = 130
                  Cable Elements     = 0
                  Shell Elements     = 0
                   Supports           = 6
                  Section properties = 3
                  Load cases         = 1
                  Load combinations  = 0
                  Mode shapes        = 3
    No of subspace iterations        = 4

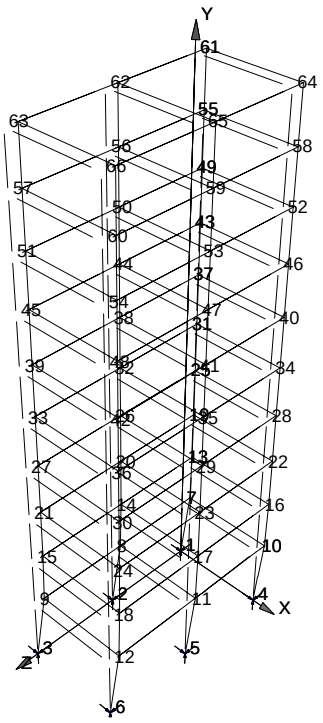
============================== END OF OUTPUT ==============================
```

Space Frame Analysis Ver W2.1.33 - 23 Sep 2005
Input file:D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created : 8/24/2006 1:32:41 PM

A03

Mode shape number 1

Load factor for Load Case LO1
Mode no 1: 13.19



========== S p a c e - F r a m e A n a l y s i s - P R O K O N ==========
Ver W2.1.33 - 23 Sep 2005
========= D Y N A M I C A N A L Y S I S M O D U L E ==========

TITLE :

Data file : D:\Documents and Settings\mobi\mobi's doc\project\last model\last model.A03
Created on: 8/24/2006

========== NODAL POINT COORDINATES ==========

Node no.	X-coord m	Y-coord m	Z-coord m	Node no.	X-coord m	Y-coord m	Z-coord m
1	0.000	0.000	0.000	2	0.000	0.000	7.500
3	0.000	0.000	15.000	4	7.500	0.000	0.000
5	7.500	0.000	7.500	6	7.500	0.000	15.000
7	0.000	5.000	0.000	8	0.000	5.000	7.500
9	0.000	5.000	15.000	10	7.500	5.000	0.000
11	7.500	5.000	7.500	12	7.500	5.000	15.000
13	0.000	9.000	0.000	14	0.000	9.000	7.500
15	0.000	9.000	15.000	16	7.500	9.000	0.000
17	7.500	9.000	7.500	18	7.500	9.000	15.000
19	0.000	13.000	0.000	20	0.000	13.000	7.500
21	0.000	13.000	15.000	22	7.500	13.000	0.000
23	7.500	13.000	7.500	24	7.500	13.000	15.000
25	0.000	17.000	0.000	26	0.000	17.000	7.500
27	0.000	17.000	15.000	28	7.500	17.000	0.000
29	7.500	17.000	7.500	30	7.500	17.000	15.000
31	0.000	21.000	0.000	32	0.000	21.000	7.500
33	0.000	21.000	15.000	34	7.500	21.000	0.000
35	7.500	21.000	7.500	36	7.500	21.000	15.000
37	0.000	25.000	0.000	38	0.000	25.000	7.500
39	0.000	25.000	15.000	40	7.500	25.000	0.000
41	7.500	25.000	7.500	42	7.500	25.000	15.000
43	0.000	29.000	0.000	44	0.000	29.000	7.500
45	0.000	29.000	15.000	46	7.500	29.000	0.000
47	7.500	29.000	7.500	48	7.500	29.000	15.000
49	0.000	33.000	0.000	50	0.000	33.000	7.500
51	0.000	33.000	15.000	52	7.500	33.000	0.000
53	7.500	33.000	7.500	54	7.500	33.000	15.000
55	0.000	37.000	0.000	56	0.000	37.000	7.500
57	0.000	37.000	15.000	58	7.500	37.000	0.000
59	7.500	37.000	7.500	60	7.500	37.000	15.000
61	0.000	41.000	0.000	62	0.000	41.000	7.500
63	0.000	41.000	15.000	64	7.500	41.000	0.000
65	7.500	41.000	7.500	66	7.500	41.000	15.000

========== ELEMENT DATA ==========

Beam	Secn. type	Fixity	Length m	ß (°)
7-8	BEAM1	00	7.500	0.00
8-9	BEAM1	00	7.500	0.00
7-10	BEAM1	00	7.500	0.00
10-11	BEAM1	00	7.500	0.00
11-12	BEAM1	00	7.500	0.00
9-12	BEAM1	00	7.500	0.00
13-14	BEAM1	00	7.500	0.00
14-15	BEAM1	00	7.500	0.00
13-16	BEAM1	00	7.500	0.00
16-17	BEAM1	00	7.500	0.00
17-18	BEAM1	00	7.500	0.00
15-18	BEAM1	00	7.500	0.00
19-20	BEAM1	00	7.500	0.00
20-21	BEAM1	00	7.500	0.00
19-22	BEAM1	00	7.500	0.00
22-23	BEAM1	00	7.500	0.00
23-24	BEAM1	00	7.500	0.00
21-24	BEAM1	00	7.500	0.00
25-26	BEAM1	00	7.500	0.00
26-27	BEAM1	00	7.500	0.00
25-28	BEAM1	00	7.500	0.00
28-29	BEAM1	00	7.500	0.00
29-30	BEAM1	00	7.500	0.00
27-30	BEAM1	00	7.500	0.00

31-32	BEAM1	00	7.500	0.00
32-33	BEAM1	00	7.500	0.00
31-34	BEAM1	00	7.500	0.00
34-35	BEAM1	00	7.500	0.00
35-36	BEAM1	00	7.500	0.00
33-36	BEAM1	00	7.500	0.00
37-38	BEAM1	00	7.500	0.00
38-39	BEAM1	00	7.500	0.00
37-40	BEAM1	00	7.500	0.00
40-41	BEAM1	00	7.500	0.00
41-42	BEAM1	00	7.500	0.00
39-42	BEAM1	00	7.500	0.00
43-44	BEAM1	00	7.500	0.00
44-45	BEAM1	00	7.500	0.00
43-46	BEAM1	00	7.500	0.00
46-47	BEAM1	00	7.500	0.00
47-48	BEAM1	00	7.500	0.00
45-48	BEAM1	00	7.500	0.00
49-50	BEAM1	00	7.500	0.00
50-51	BEAM1	00	7.500	0.00
49-52	BEAM1	00	7.500	0.00
52-53	BEAM1	00	7.500	0.00
53-54	BEAM1	00	7.500	0.00
51-54	BEAM1	00	7.500	0.00
55-56	BEAM1	00	7.500	0.00
56-57	BEAM1	00	7.500	0.00
55-58	BEAM1	00	7.500	0.00
58-59	BEAM1	00	7.500	0.00
59-60	BEAM1	00	7.500	0.00
57-60	BEAM1	00	7.500	0.00
61-62	BEAM1	00	7.500	0.00
62-63	BEAM1	00	7.500	0.00
61-64	BEAM1	00	7.500	0.00
64-65	BEAM1	00	7.500	0.00
65-66	BEAM1	00	7.500	0.00
63-66	BEAM1	00	7.500	0.00
8-11	BEAM3	00	7.500	0.00
14-17	BEAM3	00	7.500	0.00
20-23	BEAM3	00	7.500	0.00
26-29	BEAM3	00	7.500	0.00
32-35	BEAM3	00	7.500	0.00
38-41	BEAM3	00	7.500	0.00
44-47	BEAM3	00	7.500	0.00
50-53	BEAM3	00	7.500	0.00
56-59	BEAM3	00	7.500	0.00
62-65	BEAM3	00	7.500	0.00
1-7	COL	00	5.000	0.00
7-13	COL	00	4.000	0.00
13-19	COL	00	4.000	0.00
19-25	COL	00	4.000	0.00
25-31	COL	00	4.000	0.00
31-37	COL	00	4.000	0.00
37-43	COL	00	4.000	0.00
43-49	COL	00	4.000	0.00
49-55	COL	00	4.000	0.00
55-61	COL	00	4.000	0.00
2-8	COL	00	5.000	-0.00
8-14	COL	00	4.000	0.00
14-20	COL	00	4.000	0.00
20-26	COL	00	4.000	0.00
26-32	COL	00	4.000	0.00
32-38	COL	00	4.000	0.00
38-44	COL	00	4.000	0.00
44-50	COL	00	4.000	0.00
50-56	COL	00	4.000	0.00
56-62	COL	00	4.000	0.00
3-9	COL	00	5.000	-0.00
9-15	COL	00	4.000	0.00
15-21	COL	00	4.000	0.00
21-27	COL	00	4.000	0.00
27-33	COL	00	4.000	0.00
33-39	COL	00	4.000	0.00
39-45	COL	00	4.000	0.00
45-51	COL	00	4.000	0.00
51-57	COL	00	4.000	0.00
57-63	COL	00	4.000	0.00
4-10	COL	00	5.000	-0.00
10-16	COL	00	4.000	0.00

16-22	COL	00	4.000	0.00	
22-28	COL	00	4.000	0.00	
28-34	COL	00	4.000	0.00	
34-40	COL	00	4.000	0.00	
40-46	COL	00	4.000	0.00	
46-52	COL	00	4.000	0.00	
52-58	COL	00	4.000	0.00	
58-64	COL	00	4.000	0.00	
5-11	COL	00	5.000	-0.00	
11-17	COL	00	4.000	0.00	
17-23	COL	00	4.000	0.00	
23-29	COL	00	4.000	0.00	
29-35	COL	00	4.000	0.00	
35-41	COL	00	4.000	0.00	
41-47	COL	00	4.000	0.00	
47-53	COL	00	4.000	0.00	
53-59	COL	00	4.000	0.00	
59-65	COL	00	4.000	0.00	
6-12	COL	00	5.000	-0.00	
12-18	COL	00	4.000	0.00	
18-24	COL	00	4.000	0.00	
24-30	COL	00	4.000	0.00	
30-36	COL	00	4.000	0.00	
36-42	COL	00	4.000	0.00	
42-48	COL	00	4.000	0.00	
48-54	COL	00	4.000	0.00	
54-60	COL	00	4.000	0.00	
60-66	COL	00	4.000	0.00	

========== SECTION PROPERTIES ==========

Section : BEAM1 Section designation: 356x171x45 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
5.700E-3	0.000	0.000	121E-6	8.10E-6	160E-9	Steel:460W

Section : BEAM3 Section designation: 406x178x75 I1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
9.530E-3	0.000	0.000	274E-6	15.5E-6	642E-9	Steel:460W

Section : COL Section designation: 254x254x132 H1

A	Ay	Ax	Ixx	Iyy	J	Material
m^2	m^2	m^2	m^4	m^4	m^4	
16.80E-3	0.000	0.000	224E-6	74.5E-6	3.18E-6	Steel:460W

========== MATERIALS ==========

Designation	E	poisson	Density	Exp. coeff.
	kPa		kN/m^3	
Steel:460W	206.0E6	0.30	77.00	11.70E-6

========== SUPPORT DATA ==========

Prescribed displacements

Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		m	m	m	rad.	rad.	rad.
1	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
2	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
3	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
4	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
5	XYZ	0.00	0.00	0.00	0.00	0.00	0.00
6	XYZ	0.00	0.00	0.00	0.00	0.00	0.00

Spring constants

Node	Fixity	X	Y	Z	X-Rot	Y-Rot	Z-Rot
		kN/m	kN/m	kN/m	kNm/rad	kNm/rad	kNm/rad

========== LOADS ==========

Load Case Description

LO1

Add own weight to load case : LO1

The Y component(s) of the following load cases have been added as masses
in the structure for purposes of the dynamic analysis: none

========== LOAD CASE LO1 ==========

*** POINT LOADS ***

Node	Fx kN	Fy kN	Fz kN	Mx kNm	My kNm	Mz kNm
7	0.00	0.00	0.50	0.00	0.00	0.00
10	0.00	0.00	0.50	0.00	0.00	0.00
13	0.00	0.00	0.50	0.00	0.00	0.00
16	0.00	0.00	0.50	0.00	0.00	0.00
19	0.00	0.00	0.50	0.00	0.00	0.00
22	0.00	0.00	0.50	0.00	0.00	0.00
25	0.00	0.00	0.50	0.00	0.00	0.00
28	0.00	0.00	0.50	0.00	0.00	0.00
31	0.00	0.00	0.50	0.00	0.00	0.00
34	0.00	0.00	0.50	0.00	0.00	0.00
37	0.00	0.00	1.00	0.00	0.00	0.00
40	0.00	0.00	1.00	0.00	0.00	0.00
43	0.00	0.00	1.00	0.00	0.00	0.00
46	0.00	0.00	1.00	0.00	0.00	0.00
49	0.00	0.00	1.00	0.00	0.00	0.00
52	0.00	0.00	1.00	0.00	0.00	0.00
55	0.00	0.00	1.00	0.00	0.00	0.00
58	0.00	0.00	1.00	0.00	0.00	0.00
61	0.00	0.00	1.00	0.00	0.00	0.00
64	0.00	0.00	1.00	0.00	0.00	0.00

========== OUTPUT: BUCKLING ANALYSIS ==========

********** LOAD CASE LO1 **********

========== BUCKLING LOAD FACTOR FOR EACH MODE SHAPE ==========

Mode shape	Load factor
1	13.1856
2	19.6215
3	28.9978

========== NORMALIZED BUCKLING MODE SHAPES ==========

Node	Shape No.	X-disp.	Y-disp.	Z-disp.	X-rot.	Y-rot.	Z-rot.
1	1	0.00	0.00	0.00	-0.2418	-0.0000	-0.0000
	2	0.00	0.00	0.00	-0.1608	-0.1056	-0.0926
	3	0.00	0.00	0.00	0.0565	0.0133	0.1368
2	1	0.00	0.00	0.00	-0.2595	-0.0000	0.0000
	2	0.00	0.00	0.00	-0.1736	-0.1057	0.0202
	3	0.00	0.00	0.00	0.0635	0.0186	0.1950
3	1	0.00	0.00	0.00	-0.2446	-0.0000	0.0000
	2	0.00	0.00	0.00	-0.1638	-0.1091	0.1415
	3	0.00	0.00	0.00	0.0604	0.0258	0.1834
4	1	0.00	0.00	0.00	-0.2418	-0.0000	-0.0000
	2	0.00	0.00	0.00	0.1608	-0.1056	-0.0926
	3	0.00	0.00	0.00	-0.0585	0.0133	0.1369
5	1	0.00	0.00	0.00	-0.2595	-0.0000	-0.0000
	2	0.00	0.00	0.00	0.1736	-0.1057	0.0201
	3	0.00	0.00	0.00	-0.0628	0.0186	0.1953

6	1	0.00	0.00	0.00	-0.2446	-0.0000	0.0000
	2	0.00	0.00	0.00	0.1640	-0.1091	0.1415
	3	0.00	0.00	0.00	-0.0600	0.0258	0.1834
7	1	0.00	-0.35	-873.83	-0.0504	-0.0000	0.0000
	2	377.24	0.78	-563.27	-0.0266	-0.1056	-0.0425
	3	-549.46	-1.02	189.18	0.0051	0.0133	0.0589
8	1	-0.00	0.00	-874.38	-0.0249	-0.0000	-0.0000
	2	-75.59	-0.20	-563.69	-0.0113	-0.1057	0.0056
	3	-715.62	-1.17	189.41	0.0003	0.0186	0.0480
9	1	-0.00	0.34	-874.25	-0.0492	-0.0000	-0.0000
	2	-570.12	-0.96	-563.72	-0.0254	-0.1091	0.0618
	3	-722.96	-0.55	189.51	0.0036	0.0258	0.0727
10	1	0.00	-0.35	-873.83	-0.0504	-0.0000	0.0000
	2	377.24	-0.78	563.25	0.0267	-0.1056	-0.0425
	3	-549.47	1.02	-189.26	-0.0043	0.0133	0.0589
11	1	-0.00	0.00	-874.37	-0.0249	-0.0000	0.0000
	2	-75.59	0.20	563.67	0.0114	-0.1057	0.0056
	3	-715.62	1.17	-189.45	-0.0005	0.0186	0.0479
12	1	-0.00	0.34	-874.25	-0.0492	-0.0000	-0.0000
	2	-570.12	0.96	563.70	0.0254	-0.1091	0.0618
	3	-722.96	0.56	-189.55	-0.0036	0.0258	0.0727
13	1	-0.01	-0.39	-979.77	-0.0056	0.0000	0.0000
	2	518.65	1.26	-581.95	0.0061	-0.1181	-0.0225
	3	-733.16	-1.48	157.14	-0.0098	0.0132	0.0265
14	1	-0.00	0.00	-979.51	-0.0073	0.0000	0.0000
	2	-94.30	-0.29	-581.75	0.0016	-0.1194	0.0024
	3	-848.80	-1.44	157.05	-0.0055	0.0137	0.0126
15	1	0.01	0.39	-979.78	-0.0056	0.0000	0.0000
	2	-765.64	-1.47	-581.95	0.0059	-0.1226	0.0290
	3	-928.67	-0.54	157.12	-0.0096	0.0159	0.0250
16	1	-0.01	-0.39	-979.77	-0.0055	0.0000	0.0000
	2	518.65	-1.26	581.99	-0.0061	-0.1181	-0.0225
	3	-733.16	1.48	-156.29	0.0096	0.0132	0.0266
17	1	-0.00	0.00	-979.51	-0.0073	0.0000	0.0000
	2	-94.30	0.29	581.79	-0.0016	-0.1194	0.0024
	3	-848.80	1.44	-156.20	0.0054	0.0137	0.0126
18	1	0.01	0.39	-979.78	-0.0056	0.0000	0.0000
	2	-765.64	1.47	581.99	-0.0059	-0.1226	0.0290
	3	-928.67	0.54	-156.28	0.0096	0.0159	0.0250
19	1	-0.01	-0.40	-995.48	-0.0013	0.0000	-0.0000
	2	597.91	1.58	-544.23	0.0066	-0.1191	-0.0135
	3	-817.25	-1.75	104.27	-0.0082	0.0098	0.0124
20	1	-0.00	0.00	-995.51	-0.0006	-0.0000	-0.0000
	2	-103.77	-0.35	-544.25	0.0049	-0.1205	0.0014
	3	-885.94	-1.54	104.26	-0.0057	0.0076	0.0041
21	1	-0.01	0.39	-995.49	-0.0013	-0.0000	0.0000
	2	-860.56	-1.78	-544.24	0.0066	-0.1235	0.0148
	3	-991.37	-0.42	104.24	-0.0082	0.0069	0.0059
22	1	-0.01	-0.40	-995.47	-0.0013	0.0000	-0.0000
	2	597.91	-1.59	544.21	-0.0066	-0.1191	-0.0135
	3	-817.25	1.74	-104.82	0.0081	0.0098	0.0124
23	1	-0.00	0.00	-995.50	-0.0005	-0.0000	-0.0000
	2	-103.77	0.35	544.23	-0.0049	-0.1205	0.0014
	3	-885.94	1.54	-104.81	0.0058	0.0076	0.0041
24	1	-0.01	0.39	-995.48	-0.0013	-0.0000	0.0000
	2	-860.56	1.78	544.22	-0.0066	-0.1235	0.0148
	3	-991.37	0.42	-104.80	0.0081	0.0069	0.0059
25	1	-0.01	-0.40	-998.20	-0.0002	0.0000	-0.0000
	2	647.84	1.79	-512.05	0.0049	-0.1186	-0.0090
	3	-857.14	-1.89	67.11	-0.0055	0.0066	0.0061
26	1	0.00	0.00	-998.19	-0.0002	0.0000	-0.0000
	2	-110.13	-0.39	-512.04	0.0034	-0.1198	0.0010
	3	-900.35	-1.59	67.10	-0.0039	0.0038	0.0021
27	1	-0.01	0.40	-998.20	-0.0002	-0.0000	-0.0000
	2	-911.31	-1.96	-512.05	0.0049	-0.1221	0.0084
	3	-1000.00	-0.30	67.09	-0.0055	0.0021	-0.0006
28	1	-0.01	-0.40	-998.21	-0.0002	0.0000	-0.0000
	2	647.84	-1.80	512.05	-0.0049	-0.1186	-0.0090
	3	-857.14	1.89	-66.83	0.0057	0.0066	0.0061
29	1	0.00	0.00	-998.20	-0.0002	0.0000	-0.0000
	2	-110.13	0.39	512.04	-0.0034	-0.1198	0.0010
	3	-900.35	1.59	-66.83	0.0040	0.0038	0.0021
30	1	-0.01	0.40	-998.21	-0.0002	-0.0000	-0.0000
	2	-911.31	1.96	512.05	-0.0049	-0.1221	0.0084
	3	-1000.00	0.31	-66.82	0.0057	0.0021	-0.0006
31	1	0.00	-0.40	-998.79	-0.0001	-0.0000	-0.0000
	2	682.09	1.93	-490.36	0.0032	-0.1184	-0.0064
	3	-877.19	-1.97	41.28	-0.0037	0.0038	0.0033

32	1	0.01	0.00	-998.79	-0.0001	-0.0000	-0.0000
	2	-114.85	-0.41	-490.36	0.0023	-0.1192	0.0008
	3	-908.55	-1.62	41.28	-0.0026	0.0014	0.0014
33	1	0.01	0.40	-998.79	-0.0001	-0.0000	-0.0000
	2	-941.69	-2.08	-490.36	0.0031	-0.1208	0.0054
	3	-992.41	-0.22	41.27	-0.0037	-0.0004	-0.0021
34	1	0.00	-0.40	-998.77	-0.0001	-0.0000	-0.0000
	2	682.09	-1.93	490.49	-0.0032	-0.1184	-0.0064
	3	-877.19	1.97	-40.23	0.0039	0.0038	0.0033
35	1	0.01	0.00	-998.77	-0.0001	-0.0000	-0.0000
	2	-114.85	0.41	490.50	-0.0023	-0.1192	0.0008
	3	-908.55	1.62	-40.23	0.0027	0.0014	0.0014
36	1	0.01	0.40	-998.77	-0.0001	-0.0000	-0.0000
	2	-941.69	2.08	490.50	-0.0032	-0.1208	0.0054
	3	-992.41	0.22	-40.22	0.0040	-0.0004	-0.0021
37	1	0.01	-0.40	-999.08	-0.0001	0.0000	-0.0000
	2	706.78	2.01	-476.80	0.0020	-0.1185	-0.0047
	3	-888.55	-2.02	25.77	-0.0021	0.0019	0.0020
38	1	0.01	0.00	-999.08	-0.0001	0.0000	0.0000
	2	-118.52	-0.43	-476.80	0.0015	-0.1190	0.0006
	3	-914.13	-1.64	25.77	-0.0016	-0.0000	0.0010
39	1	0.02	0.40	-999.08	-0.0001	0.0000	-0.0000
	2	-961.86	-2.14	-476.80	0.0020	-0.1200	0.0037
	3	-983.25	-0.17	25.76	-0.0022	-0.0016	-0.0018
40	1	0.01	-0.40	-999.10	-0.0001	0.0000	-0.0000
	2	706.78	-2.01	476.60	-0.0021	-0.1185	-0.0047
	3	-888.55	2.01	-23.27	0.0022	0.0019	0.0020
41	1	0.01	0.00	-999.10	-0.0001	0.0000	0.0000
	2	-118.52	0.43	476.60	-0.0015	-0.1190	0.0006
	3	-914.13	1.63	-23.26	0.0016	-0.0000	0.0010
42	1	0.02	0.40	-999.10	-0.0001	0.0000	-0.0000
	2	-961.86	2.15	476.60	-0.0020	-0.1200	0.0037
	3	-983.25	0.17	-23.25	0.0022	-0.0016	-0.0018
43	1	0.01	-0.40	-999.30	-0.0001	0.0000	-0.0000
	2	724.85	2.06	-468.49	0.0012	-0.1188	-0.0034
	3	-895.90	-2.05	16.33	-0.0014	0.0009	0.0014
44	1	0.01	0.00	-999.30	-0.0001	0.0000	-0.0000
	2	-121.33	-0.44	-468.49	0.0009	-0.1190	0.0005
	3	-918.43	-1.64	16.33	-0.0010	-0.0007	0.0008
45	1	0.03	0.40	-999.30	-0.0001	0.0000	-0.0000
	2	-976.15	-2.18	-468.49	0.0012	-0.1195	0.0027
	3	-976.20	-0.14	16.33	-0.0015	-0.0020	-0.0013
46	1	0.01	-0.40	-999.33	-0.0001	0.0000	-0.0000
	2	724.85	-2.06	468.01	-0.0013	-0.1188	-0.0034
	3	-895.90	2.04	-15.03	0.0011	0.0009	0.0014
47	1	0.01	0.00	-999.33	-0.0001	0.0000	-0.0000
	2	-121.33	0.44	468.01	-0.0010	-0.1190	0.0005
	3	-918.43	1.64	-15.03	0.0009	-0.0007	0.0008
48	1	0.03	0.40	-999.33	-0.0001	0.0000	-0.0000
	2	-976.15	2.19	468.01	-0.0012	-0.1195	0.0027
	3	-976.20	0.15	-15.03	0.0011	-0.0020	-0.0013
49	1	0.01	-0.40	-999.52	-0.0001	0.0000	0.0000
	2	738.04	2.08	-463.77	0.0007	-0.1193	-0.0025
	3	-901.07	-2.06	9.86	-0.0009	0.0002	0.0010
50	1	0.01	0.00	-999.52	-0.0001	0.0000	-0.0000
	2	-123.40	-0.44	-463.77	0.0006	-0.1192	0.0004
	3	-921.82	-1.65	9.86	-0.0007	-0.0011	0.0007
51	1	0.03	0.40	-999.52	-0.0001	0.0000	-0.0000
	2	-986.59	-2.20	-463.77	0.0007	-0.1194	0.0020
	3	-971.45	-0.12	9.86	-0.0010	-0.0021	-0.0008
52	1	0.01	-0.40	-999.56	-0.0001	0.0000	0.0000
	2	738.04	-2.09	463.24	-0.0007	-0.1193	-0.0025
	3	-901.07	2.05	-10.10	0.0008	0.0002	0.0010
53	1	0.01	0.00	-999.56	-0.0001	0.0000	-0.0000
	2	-123.40	0.44	463.24	-0.0006	-0.1192	0.0004
	3	-921.82	1.65	-10.10	0.0006	-0.0011	0.0007
54	1	0.03	0.40	-999.56	-0.0001	0.0000	-0.0000
	2	-986.59	2.21	463.24	-0.0007	-0.1194	0.0020
	3	-971.45	0.13	-10.10	0.0008	-0.0021	-0.0008
55	1	0.01	-0.40	-999.75	-0.0001	0.0000	0.0000
	2	747.52	2.09	-461.44	0.0004	-0.1197	-0.0018
	3	-904.91	-2.07	5.96	-0.0005	-0.0003	0.0008
56	1	0.01	0.00	-999.75	-0.0001	0.0000	-0.0000
	2	-124.87	-0.44	-461.44	0.0003	-0.1195	0.0003
	3	-924.54	-1.65	5.95	-0.0004	-0.0014	0.0006
57	1	0.04	0.40	-999.75	-0.0001	0.0000	-0.0000
	2	-994.28	-2.21	-461.43	0.0003	-0.1195	0.0015
	3	-968.61	-0.11	5.95	-0.0006	-0.0022	-0.0004

58	1	0.01	-0.40	-999.78	-0.0001	0.0000	0.0000
	2	747.52	-2.10	460.91	-0.0004	-0.1197	-0.0018
	3	-904.91	2.06	-6.63	0.0005	-0.0003	0.0008
59	1	0.01	0.00	-999.78	-0.0001	0.0000	-0.0000
	2	-124.87	0.44	460.91	-0.0003	-0.1195	0.0003
	3	-924.54	1.65	-6.63	0.0004	-0.0014	0.0006
60	1	0.04	0.40	-999.78	-0.0001	0.0000	-0.0000
	2	-994.28	2.22	460.91	-0.0003	-0.1195	0.0015
	3	-968.61	0.13	-6.63	0.0005	-0.0022	-0.0004
61	1	0.01	-0.40	-999.97	-0.0001	0.0000	0.0000
	2	754.23	2.10	-460.54	0.0003	-0.1201	-0.0013
	3	-907.94	-2.07	3.97	-0.0002	-0.0005	0.0007
62	1	0.01	0.00	-999.97	-0.0001	0.0000	-0.0000
	2	-125.86	-0.44	-460.54	0.0003	-0.1198	0.0002
	3	-926.76	-1.65	3.96	-0.0002	-0.0014	0.0005
63	1	0.04	0.40	-999.97	-0.0001	0.0000	-0.0000
	2	-1000.00	-2.22	-460.54	0.0002	-0.1196	0.0011
	3	-967.15	-0.11	3.96	-0.0003	-0.0023	-0.0002
64	1	0.01	-0.40	-1000.00	-0.0001	0.0000	0.0000
	2	754.23	-2.10	460.01	-0.0003	-0.1201	-0.0013
	3	-907.94	2.06	-4.71	0.0002	-0.0005	0.0007
65	1	0.01	0.00	-1000.00	-0.0001	0.0000	-0.0000
	2	-125.86	0.44	460.01	-0.0003	-0.1198	0.0002
	3	-926.76	1.65	-4.71	0.0002	-0.0015	0.0005
66	1	0.04	0.40	-1000.00	-0.0001	0.0000	-0.0000
	2	-1000.00	2.22	460.02	-0.0002	-0.1196	0.0011
	3	-967.15	0.12	-4.70	0.0003	-0.0022	-0.0002

```
============================== STATISTICAL DATA ==============================

Own weight of structure = 570.77

No. of real numbers in Stiffness/mass matrix = 15462  (154620 bytes)
Time used to analyse = 0: 0:44.103 seconds
Total number of : Nodes              = 66
                  Beam Elements      = 130
                  Cable Elements     = 0
                  Shell Elements     = 0
                   Supports           = 6
                  Section properties = 3
                  Load cases         = 1
                  Load combinations  = 0
                  Mode shapes        = 3
    No of subspace iterations        = 4

============================== END OF OUTPUT ==============================
```