Job Information

	Engineer	Checked	Approved
Name:			
Date:	08-Nov-20		

Structure Type	SPACE FRAME

Number of Nodes	145	Highest Node	145
Number of Elements	114	Highest Beam	212
Number of Plates	100	Highest Plate	214

Number of Basic Load Cases	1
Number of Combination Load Cases	0

Included in this printout are data for:

All	The Whole Structure

Included in this printout are results for load cases:

Type	L/C	Name
Primary	1	dead

Node Displacement Summary

	Node	L/C	X (mm)	Y (mm)	Z (mm)	Resultant (mm)	rX (rad)	rY (rad)	rZ (rad)
Max X	19	1:dead	**0.012**	-1.109	-0.153	1.120	0.000	0.000	-0.002
Min X	6	1:dead	**-0.012**	-1.109	0.153	1.120	-0.000	0.000	0.002
Max Y	61	1:dead	-0.000	**1.364**	0.153	1.372	-0.001	-0.000	-0.000
Min Y	39	1:dead	-0.004	**-53.868**	0.211	53.868	-0.001	0.000	0.006
Max Z	3	1:dead	0.004	-0.570	**0.300**	0.644	0.003	0.000	-0.001
Min Z	23	1:dead	0.004	-0.570	**-0.300**	0.644	-0.003	-0.000	-0.001
Max rX	1	1:dead	0.002	-16.546	0.247	16.548	**0.005**	-0.000	0.004
Min rX	21	1:dead	0.002	-16.546	-0.247	16.548	**-0.005**	0.000	0.004
Max rY	52	1:dead	-0.001	-5.171	0.271	5.178	0.005	**0.000**	-0.003
Min rY	40	1:dead	0.001	-5.171	0.271	5.178	0.005	**-0.000**	0.003
Max rZ	5	1:dead	-0.010	-28.976	0.154	28.976	-0.001	0.000	**0.007**
Min rZ	8	1:dead	0.010	-28.976	0.154	28.976	-0.001	-0.000	**-0.007**
Max Rst	39	1:dead	-0.004	-53.868	0.211	**53.868**	-0.001	0.000	0.006

Beam End Force Summary

The signs of the forces at end B of each beam have been reversed. For example: this means that the Min Fx entry gives the largest tension value for an beam.

				Axial	Shear		Torsion	Bending	
	Beam	Node	L/C	Fx (kN)	Fy (kN)	Fz (kN)	Mx (kNm)	My (kNm)	Mz (kNm)
Max Fx	41	27	1:dead	**3.8E+3**	238.282	52.074	-0.000	-0.000	0.000
Min Fx	23	14	1:dead	**-114.312**	318.670	0.616	18.475	1.363	1.83E+3
Max Fy	31	19	1:dead	126.562	**2.21E+3**	5.817	-300.740	-1.415	4.78E+3
Min Fy	76	6	1:dead	126.562	**-2.21E+3**	5.817	-300.741	1.415	4.78E+3
Max Fz	50	23	1:dead	1.57E+3	-128.984	**362.947**	0.000	-4.36E+3	-1.55E+3
Min Fz	40	3	1:dead	1.57E+3	-128.984	**-362.947**	0.000	4.36E+3	-1.55E+3
Max Mx	38	23	1:dead	103.938	1E+3	-188.232	**2.26E+3**	48.573	2.58E+3
Min Mx	3	3	1:dead	103.938	1E+3	188.232	**-2.26E+3**	-48.573	2.58E+3
Max My	40	3	1:dead	1.57E+3	-128.984	-362.947	0.000	**4.36E+3**	-1.55E+3
Min My	50	23	1:dead	1.57E+3	-128.984	362.947	0.000	**-4.36E+3**	-1.55E+3
Max Mz	169	18	1:dead	126.562	-2.21E+3	-5.817	300.740	-1.415	**4.78E+3**
Min Mz	42	7	1:dead	3.3E+3	-238.282	52.074	0.000	-624.891	**-2.86E+3**

Plate Centre Principal Stress Summary

			Principal		Von Mis		Tresca	
	Plate	L/C	Top (N/mm^2)	Bottom (N/mm^2)	Top (N/mm^2)	Bottom (N/mm^2)	Top (N/mm^2)	Bottom (N/mm^2)
Max (t)	53	1:dead	**1.364**	0.419	1.630	1.712	1.805	1.882
Max (b)	85	1:dead	-1.070	**4.271**	3.822	3.894	4.243	4.271
Max VM (t)	79	1:dead	-1.070	4.271	**3.822**	3.894	4.243	4.271
Max VM (b)	85	1:dead	-1.070	4.271	3.822	**3.894**	4.243	4.271
Tresca (t)	79	1:dead	-1.070	4.271	3.822	3.894	**4.243**	4.271
Tresca (b)	79	1:dead	-1.070	4.271	3.822	3.894	4.243	**4.271**

Reaction Summary

			Horizontal	Vertical	Horizontal	Moment		
	Node	L/C	FX (kN)	FY (kN)	FZ (kN)	MX (kNm)	MY (kNm)	MZ (kNm)
Max FX	28	1:dead	**238.282**	3.8E+3	-52.074	0.000	0.000	0.000
Min FX	27	1:dead	**-238.282**	3.8E+3	-52.074	0.000	0.000	0.000
Max FY	27	1:dead	-238.282	**3.8E+3**	-52.074	0.000	0.000	0.000
Min FY	36	1:dead	128.984	**2.07E+3**	-362.947	0.000	0.000	0.000
Max FZ	26	1:dead	128.984	2.07E+3	**362.947**	0.000	0.000	0.000
Min FZ	36	1:dead	128.984	2.07E+3	**-362.947**	0.000	0.000	0.000
Max MX	25	1:dead	-128.984	2.07E+3	362.947	**0.000**	0.000	0.000
Min MX	25	1:dead	-128.984	2.07E+3	362.947	**0.000**	0.000	0.000
Max MY	25	1:dead	-128.984	2.07E+3	362.947	0.000	**0.000**	0.000
Min MY	25	1:dead	-128.984	2.07E+3	362.947	0.000	**0.000**	0.000
Max MZ	25	1:dead	-128.984	2.07E+3	362.947	0.000	0.000	**0.000**

Reaction Summary Cont...

			Horizontal	Vertical	Horizontal	Moment		
	Node	L/C	FX (kN)	FY (kN)	FZ (kN)	MX (kNm)	MY (kNm)	MZ (kNm)
Min MZ	25	1:dead	-128.984	2.07E+3	362.947	0.000	0.000	**0.000**