Design2Stiffness

Column1
****
GEOMETRY
****

Nodal Coordinates:
(Node No. - X - Y - Z)

NODES =
1.00000   0.00000   0.00000
2.00000   0.00000   25.56000
3.00000   0.00000   39.00000
4.00000   0.00000   65.04000
5.00000   0.00000   78.00000
6.00000 125.14000   49.56000
7.00000 125.14000   65.04000

Boundary Conditions: 1 = Restrained, 0 = Free
(Node No. - Tx - Ty - Rz)

BOUNDS =

  1 0 1 0
  6 1 1 1
  7 1 1 1

Element Information:
(Ele No. - iNode - jNode - Member Type - E - A - I)

ELES =

1.00000	1.00000	2.00000	0.00000	29000.00000	9999.00000	999999.00000
2.00000	2.00000	3.00000	0.00000	29000.00000	9999.00000	999999.00000
3.00000	3.00000	4.00000	0.00000	29000.00000	9999.00000	999999.00000
4.00000	4.00000	5.00000	0.00000	29000.00000	9999.00000	999999.00000
5.00000	4.00000	7.00000	1.00000	29000.00000	2.00000	2.85000
6.00000	4.00000	6.00000	1.00000	29000.00000	2.00000	2.85000
7.00000	2.00000	7.00000	1.00000	29000.00000	2.00000	2.85000

Load Information:
(Node No. - Fx - Fy - Mz)

LOADS =

  1   0   0 1000

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plotFile = ../../1. OUTPUT/Design2Stiffness.png
ans =

  -12.514 137.654 -36.084 114.084

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ANALYSIS

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kff =

Columns 1 through 5:

20839930.25578	-266334308.66891	-20839930.25578	0.00000	-266334308.66891
-266334308.66891	4538336619.71831	266334308.66891	0.00000	2269168309.85916
-20839930.25578	266334308.66891	164184822.15581	126.79242	-696940663.42930
0.00000	0.00000	126.79242	32919981.63520	0.00000
-266334308.66891	2269168309.85916	-696940663.42930	0.00000	13169280369.71831
0.00000	0.00000	-143344489.89557	0.00000	963274972.09821
0.00000	0.00000	0.00000	-21575223.21429	0.00000
0.00000	0.00000	-963274972.09821	0.00000	4315471875.00000
0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000

Columns 6 through 10:

0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000
-143344489.89557	0.00000	-963274972.09821	0.00000	0.00000
0.00000	-21575223.21429	0.00000	0.00000	0.00000
963274972.09821	0.00000	4315471875.00000	0.00000	0.00000
163053094.19258	0.00000	706668944.15114	-19708604.29701	0.00000
0.00000	32710822.29263	0.00000	0.00000	-11135599.07834
706668944.15114	0.00000	13085624395.16129	256606027.94708	0.00000
-19708604.29701	0.00000	256606027.94708	179578353.93652	-56.02695
0.00000	-11135599.07834	0.00000	-56.02695	33509911.81471
-256606027.94708	0.00000	2227340322.58064	-779344010.63317	0.00000
0.00000	0.00000	0.00000	-159868833.11424	0.00000
0.00000	0.00000	0.00000	0.00000	-22374305.55556
0.00000	0.00000	0.00000	-1035950038.58025	0.00000

Columns 11 through 14:

0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000
-256606027.94708	0.00000	0.00000	0.00000

0.00000	0.00000	0.00000	0.00000
2227340322.58064	0.00000	0.00000	0.00000
-779344010.63317	-159868833.11424	0.00000	-1035950038.58025
0.00000	0.00000	-22374305.55556	0.00000
13405288978.49463	1035950038.58025	0.00000	4475304166.66667
1035950038.58025	159868833.11424	0.00000	1035950038.58025
0.00000	0.00000	22374305.55556	0.00000
4475304166.66667	1035950038.58025	0.00000	8950608333.33334

Number of dof: 14

Number of loads: 1

LOADS =

 1   0   0 1000

deg = 1

deg = 2

P =

 0
 1000
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0

uf =

 0.12171500245
 0.00229728242
 0.06300772771
-0.00000084068
 0.00229640104
 0.03214685865
-0.00000091244
 0.00229601648
-0.02763626975
-0.00000105149
 0.00229572035

-0.05738880554

-0.00000105149

0.00229572035

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Post Process

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Nodal Displacements:

(Node No. - Tx - Ty - Rz)

NodalDisp =

1.00000	0.12172	0.00000	0.00230
2.00000	0.06301	-0.00000	0.00230
3.00000	0.03215	-0.00000	0.00230
4.00000	-0.02764	-0.00000	0.00230
5.00000	-0.05739	-0.00000	0.00230
6.00000	0.00000	0.00000	0.00000
7.00000	0.00000	0.00000	0.00000

Global Member Forces:

(Element No. - iFx - iFy - iMz - jFx - jFy - jMz)

GlobalForces =

1.00000	0.00000	9.53724	1000.00000	-0.00000	-9.53724	-1000.00000
2.00000	-25.32928	1.54837	1000.00000	25.32928	-1.54837	-659.57447
3.00000	-25.32928	1.54837	659.57447	25.32928	-1.54837	0.00000
4.00000	-0.00000	0.00000	0.00000	0.00000	-0.00000	0.00000
5.00000	-12.80888	-0.00000	0.00000	12.80888	0.00000	-0.00002
6.00000	-12.52040	1.54837	0.00000	12.52040	-1.54837	-0.05293
7.00000	25.32928	7.98887	0.00000	-25.32928	-7.98887	-0.27299

Local Member Forces:

(Element No. - iFx - iFy - iMz - jFx - jFy - jMz)

LocalForces =

1.00000	9.53724	-0.00000	1000.00000	-9.53724	0.00000	-1000.00000
2.00000	1.54837	25.32928	1000.00000	-1.54837	-25.32928	-659.57447
3.00000	1.54837	25.32928	659.57447	-1.54837	-25.32928	0.00000
4.00000	0.00000	0.00000	0.00000	-0.00000	-0.00000	0.00000
5.00000	-12.80888	-0.00000	0.00000	12.80888	0.00000	-0.00002
6.00000	-12.61578	-0.00042	0.00000	12.61578	0.00042	-0.05293
7.00000	26.55926	-0.00208	0.00000	-26.55926	0.00208	-0.27299

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Nodal Support Reactions:

(Node No. - Fx - Fy - Mz)

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Support =

1.00000	0.00000	9.53724	0.00000
2.00000	0.00000	0.00000	0.00000
3.00000	0.00000	0.00000	0.00000
4.00000	0.00000	0.00000	0.00000
5.00000	0.00000	0.00000	0.00000
6.00000	12.52040	-1.54837	-0.05293
7.00000	-12.52040	-7.98887	-0.27301

sumFx = -0.0000000019875

sumFy =   -4.4409e-15

sumMz = -0.32594

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