Design2Stiffness

Column1
****
GEOMETRY
****

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

NODES =
1.00000   0.00000   0.00000
2.00000   0.00000 12.00000
3.00000   0.00000 27.00000
4.00000   0.00000 42.00000
5.00000   0.00000 54.00000
6.00000 84.46000 19.68920
7.00000 84.46000 43.68920

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 =

  -8.4460 92.9060 -23.6760 77.6760

****

ANALYSIS
****

kff =

Columns 1 through 5:

201388687.50000	-1208332125.00000	-201388687.50000	0.00000	-1208332125.00000
-1208332125.00000	9666657000.00000	1208332125.00000	0.00000	4833328500.00000
-201388687.50000	1208332125.00000	304500259.15062	211.35370	434999565.00000
0.00000	0.00000	211.35370	43495729.63719	0.00000
-1208332125.00000	4833328500.00000	434999565.00000	0.00000	17399982600.00000
0.00000	0.00000	-103111008.00000	0.00000	773332560.00000
0.00000	0.00000	0.00000	-19331400.00000	0.00000
0.00000	0.00000	-773332560.00000	0.00000	3866662800.00000
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
-103111008.00000	0.00000	-773332560.00000	0.00000	0.00000
0.00000	-19331400.00000	0.00000	0.00000	0.00000
773332560.00000	0.00000	3866662800.00000	0.00000	0.00000
206222016.00000	0.00000	0.00000	-103111008.00000	0.00000
0.00000	38662800.00000	0.00000	0.00000	-19331400.00000
0.00000	0.00000	15466651200.00000	773332560.00000	0.00000
-103111008.00000	0.00000	773332560.00000	304501002.46209	-150.13582
0.00000	-19331400.00000	0.00000	-150.13582	43495694.34088
-773332560.00000	0.00000	3866662800.00000	-434999565.00000	0.00000
0.00000	0.00000	0.00000	-201388687.50000	0.00000
0.00000	0.00000	0.00000	0.00000	-24164250.00000
0.00000	0.00000	0.00000	-1208332125.00000	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
-773332560.00000	0.00000	0.00000	0.00000

0.00000	0.00000	0.00000	0.00000	
3866662800.00000	0.00000	0.00000	0.00000	
-434999565.00000	-201388687.50000	0.00000	-1208332125.00000	
0.00000	0.00000	-24164250.00000	0.00000	
17399982600.00000	1208332125.00000	0.00000	4833328500.00000	
1208332125.00000	201388687.50000	0.00000	1208332125.00000	
0.00000	0.00000	24164250.00000	0.00000	
4833328500.00000	1208332125.00000	0.00000	9666657000.00000	

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 =

  0.09300240413
  0.00282219539
  0.05913854219
 -0.00000067572
  0.00282178160
  0.01681505098
 -0.00000087379
  0.00282139367
 -0.02550456093
 -0.00000107187
  0.00282126436

-0.05935973321

-0.00000107187

0.00282126436

****

Post Process

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Nodal Displacements:

(Node No. - Tx - Ty - Rz)

NodalDisp =

1.00000	0.09300	0.00000	0.00282
2.00000	0.05914	-0.00000	0.00282
3.00000	0.01682	-0.00000	0.00282
4.00000	-0.02550	-0.00000	0.00282
5.00000	-0.05936	-0.00000	0.00282
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	16.32820	1000.00000	0.00000	-16.32820	-1000.00000
2.00000	-33.33333	3.82910	1000.00000	33.33333	-3.82910	-500.00000
3.00000	-33.33333	3.82910	500.00000	33.33333	-3.82910	0.00000
4.00000	0.00000	0.00000	-0.00000	-0.00000	0.00000	-0.00000
5.00000	-17.50390	-0.34987	0.00000	17.50390	0.34987	0.01768
6.00000	-15.82944	4.17897	0.00000	15.82944	-4.17897	-0.21168
7.00000	33.33333	12.49910	0.00000	-33.33333	-12.49910	-0.63300

Local Member Forces:

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

LocalForces =

1.00000	16.32820	0.00000	1000.00000	-16.32820	-0.00000	-1000.00000
2.00000	3.82910	33.33333	1000.00000	-3.82910	-33.33333	-500.00000
3.00000	3.82910	33.33333	500.00000	-3.82910	-33.33333	0.00000
4.00000	0.00000	-0.00000	-0.00000	0.00000	0.00000	-0.00000
5.00000	-17.50739	0.00021	0.00000	17.50739	-0.00021	0.01768
6.00000	-16.37177	-0.00242	0.00000	16.37177	0.00242	-0.21168
7.00000	35.59970	-0.00702	0.00000	-35.59970	0.00702	-0.63300

Nodal Support Reactions:

(Node No. - Fx - Fy - Mz)

Support =

1.00000	0.00000	16.32820	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	15.82944	-4.17897	-0.21168
7.00000	-15.82944	-12.14923	-0.61532

sumFx = 0.0000000052977

sumFy = 0

sumMz = -0.82700