```
! Harbour crane

! NODES LIST:
! ( node nr. \ boundary conditions codes: x,y,theta - x - y )
*NODES
1       1 1 0    15.0   0.0
2       1 1 0    30.0   0.0
3       0 0 0    15.0   10.0
4       0 0 0    22.5   10.0
5       0 0 0    30.0   10.0
6       0 0 0    15.0   17.5
7       0 0 0    22.5   17.5
8       0 0 0    30.0   17.5
9       0 0 0    0.0    25.0
10      0 0 0    7.5    25.0
11      0 0 0    15.0   25.0
12      0 0 0    22.5   25.0
13      0 0 0    30.0   25.0
14      0 0 0    37.5   25.0
15      0 0 0    45.0   25.0
16      0 0 0    57.0   25.0
17      0 0 0    69.0   25.0
18      0 0 0    30.0   37.0
19      0 0 0    10.0   29.0
20      0 0 0    20.0   33.0
21      0 0 0    22.5   31.0
22      0 0 0    30.0   31.0
23      0 0 0    37.5   31.0
24      0 0 0    39.75  34.0
25      0 0 0    49.5   31.0
26      0 0 0    59.25  28.0
*ENDNODES

! BEAMS LIST:
! ( beam nr. \ i-th node nr. - j-th node nr. - mass[kg/m] - EA[N] - EJ[Nm^2] )
*BEAMS
! Green beams
1       1     3     200     5.4e9     4.5e8
2       3     4     200     5.4e9     4.5e8
3       4     5     200     5.4e9     4.5e8
4       2     5     200     5.4e9     4.5e8
5       3     6     200     5.4e9     4.5e8
6       5     7     200     5.4e9     4.5e8
7       5     8     200     5.4e9     4.5e8
8       6     11    200     5.4e9     4.5e8
9       7     11    200     5.4e9     4.5e8
10      8     13    200     5.4e9     4.5e8
! Red beams
11      9     10    312     8.2e9     1.40e9
12      10    11    312     8.2e9     1.40e9
13      11    12    312     8.2e9     1.40e9
14      12    13    312     8.2e9     1.40e9
15      13    14    312     8.2e9     1.40e9
16      14    15    312     8.2e9     1.40e9
17      15    16    312     8.2e9     1.40e9
18      16    17    312     8.2e9     1.40e9
! Blue beams
19      9     19    90      2.4e9     2.0e8
20      19    20    90      2.4e9     2.0e8
21      20    18    90      2.4e9     2.0e8
22      11    21    90      2.4e9     2.0e8
23      21    18    90      2.4e9     2.0e8
24      18    23    90      2.4e9     2.0e8
25      23    15    90      2.4e9     2.0e8
26      18    24    90      2.4e9     2.0e8
27      24    25    90      2.4e9     2.0e8
28      25    26    90      2.4e9     2.0e8
29      26    17    90      2.4e9     2.0e8
30      13    22    90      2.4e9     2.0e8
31      22    18    90      2.4e9     2.0e8
*ENDBEAMS

! ALPHA AND BETA VALUES (DAMPING MATRIX):
```

```
! ( alpha - beta )
*DAMPING
0.1    2.0e-4

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

! RIGID BODY DATA: ATTACHED RIGID MASS AT NODE NR. 9
! ( mass nr. \ node nr. - mass[kg] - J[kgm^2] )
*MASSES
1      9    2000    320
*ENDMASSES
```