Table A18 List of the file, **eqellipse.stiffened.opm4.aftercleanup.ALL6N** .
This file represents the same input data for BIGBOSOR4 (or BOSOR4)
as does the file listed in Tablea17. Here the full annotation for
each input datum is provided because the file listed in Tablea17 (with its name changed to "eqellipse.ALL") was updated via execution of the BIGBOSOR4 processor called "**bigbosorall**" followed by an execution of the BIGOBOSOR4 processor called "**cleanup**".
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 Nonlinear axisymmetric collapse analysis (INDIC=0)
        0      $ INDIC = analysis type indicator
        1      $ NPRT = output options (1=minimum, 2=medium, 3=maximum)
        1      $ ISTRES= output control (0=resultants, 1=sigma, 2=epsilon)
       12      $ NSEG  = number of shell segments (less than 195)
     H         $
     H         $ SEGMENT NUMBER    1    1    1    1    1    1    1    1
     H         $ NODAL POINT DISTRIBUTION FOLLOWS...
       11      $ NMESH = number of node points (5 = min.; 98 = max.)( 1)
        3      $ NTYPEH= control integer (1 or 3) for nodal point spacing
     H         $ REFERENCE SURFACE GEOMETRY FOLLOWS...
        2      $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
  0.000000     $ R1     = radius at beginning of segment (see p. 66)
 -12.37500     $ Z1     = global axial coordinate at beginning of segment
  2.554500     $ R2     = radius at end of segment
 -12.30904     $ Z2     = global axial coordinate at end of segment
  0.000000     $ RC     = radius from axis of rev. to center of curvature
  37.12500     $ ZC     = axial coordinate of center of curvature
 -1.000000     $ SROT=indicator for direction of increasing arc (-1. or +1.)
     H         $ IMPERFECTION SHAPE FOLLOWS...
        1      $ IMP   = indicator for imperfection (0=none, 1=some)
        4      $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
 0.2000000     $ Imperfection multiplier, AMPIMP(IMODE)
        1      $ Starting nodal point number, ISTART(IMODE)
       13      $ Number of values of WSHAPE to be read, NUMB(IMODE)
 -1.000000     $ Imperfection normal displacement (normalized), WSHAPE( 1)
 -0.9998094    $ Imperfection normal displacement (normalized), WSHAPE( 2)
 -0.9974246    $ Imperfection normal displacement (normalized), WSHAPE( 3)
 -0.9900559    $ Imperfection normal displacement (normalized), WSHAPE( 4)
 -0.9778738    $ Imperfection normal displacement (normalized), WSHAPE( 5)
 -0.9611780    $ Imperfection normal displacement (normalized), WSHAPE( 6)
 -0.9402764    $ Imperfection normal displacement (normalized), WSHAPE( 7)
 -0.9155436    $ Imperfection normal displacement (normalized), WSHAPE( 8)
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-0.8874148     $ Imperfection normal displacement (normalized), WSHAPE( 9)
-0.8563773     $ Imperfection normal displacement (normalized), WSHAPE(10)
-0.8233898     $ Imperfection normal displacement (normalized), WSHAPE(11)
-0.7975617     $ Imperfection normal displacement (normalized), WSHAPE(12)
-0.7877210     $ Imperfection normal displacement (normalized), WSHAPE(13)
    N          $ Do you want to provide any more imperfection modes?
    H          $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
      3        $ NTYPEZ= control (1 or 3) for reference surface location
  0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
    Y          $ Do you want to print out r(s), r'(s), etc. for this segment?
    H          $ DISCRETE RING INPUT FOLLOWS...
      0        $ NRINGS= number (max=20) of discrete rings in this segment
      0        $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
    H          $ LINE LOAD INPUT FOLLOWS...
      0        $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
    H          $ DISTRIBUTED LOAD INPUT FOLLOWS...
      1        $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
    H          $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
      1        $ NLTYPE=control (0,1,2,3) for type of surface loading
      2        $ NPSTAT= number of meridional callouts for surface loading
      0        $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
      0        $ NLOAD(2)=indicator for circumferential traction
      1        $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
 -1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
 -1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
      3        $ NTYPE = control for meaning of loading callout (2=z, 3=r)
  0.000000     $ R(I)  = radial coordinate of Ith loading callout, r( 1)
  2.554500     $ R(I)  = radial coordinate of Ith loading callout, r( 2)
    H          $ SHELL WALL CONSTRUCTION FOLLOWS...
     10        $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
      2        $ NWALL2=index (2, 4, 5, 9) for wall construction
 0.1600000E+08 $ E     = Young's modulus for skin
 0.2500000     $ U     = Poisson's ratio for skin
 0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
  0.000000     $ ALPHA = coefficient of thermal expansion
      1        $ NRS  = control (0 or 1) for addition of smeared stiffeners
     -1        $ NSUR   = control for thickness input (0 or 1 or -1)
      1        $ NTYPET= index (1 or 3) for type of input for thickness
      2        $ NTVALU= number of callouts along segment for thickness
      3        $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
```

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 0.000000     $ R(I)  = radial coordinate of Ith thickness callout, r( 1)
 2.554500     $ R(I)  = radial coordinate of Ith thickness callout, r( 2)
0.1245300     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1664100     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
    Y         $ Do you want to print out ref. surf. location and thickness?
    H         $ SMEARED STIFFENER INPUT FOLLOWS...
    Y         $ Are there stringers or isogrid (please answer Y or N)?
      0       $ K1 =control (0 or 1) for internal or external stringers
0.1600000E+08 $ E1     = stringer modulus
0.2500000     $ U1     = stringer Poisson ratio
0.4155000E-03 $ STIFMD= stringer mass density
 2.915400     $ SPACNG= spacing of the isogrid members
    N         $ Is the stringer cross section constant in this segment?
      2       $ NSTATN=number of merid. callouts for cross section props.
      3       $ NTYPE=control for meaning of section callout (2=z, 3=r)
 0.000000     $ R(I)  = radial coordinate of Ith section callout, r( 1)
 2.554500     $ R(I)  = radial coordinate of Ith section callout, r( 2)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
0.6676600     $ H(i) = height of stringer at ith callout, H( 1)
0.6078300     $ H(i) = height of stringer at ith callout, H( 2)
    N         $ Are there rings (please answer Y or N)?
    N         $ Do you want to print out the C(i,j) at meridional stations?
    N         $ Do you want to print out distributed loads along meridian?
    H         $
    H         $ SEGMENT NUMBER    2    2    2    2    2    2    2    2
    H         $ NODAL POINT DISTRIBUTION FOLLOWS...
     11       $ NMESH = number of node points (5 = min.; 98 = max.)( 2)
      3       $ NTYPEH= control integer (1 or 3) for nodal point spacing
    H         $ REFERENCE SURFACE GEOMETRY FOLLOWS...
      2       $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
 2.554500     $ R1      = radius at beginning of segment (see p. 66)
-12.30904     $ Z1      = global axial coordinate at beginning of segment
 5.666450     $ R2      = radius at end of segment
-12.04630     $ Z2      = global axial coordinate at end of segment
0.8364234E-01 $ RC      = radius from axis of rev. to center of curvature
 35.51750     $ ZC      = axial coordinate of center of curvature
-1.000000     $ SROT=indicator for direction of increasing arc (-1. or +1.)
    H         $ IMPERFECTION SHAPE FOLLOWS...
      1       $ IMP   = indicator for imperfection (0=none, 1=some)
```

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     4      $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
 0.2000000     $ Imperfection multiplier, AMPIMP(IMODE)
     1      $ Starting nodal point number, ISTART(IMODE)
    13      $ Number of values of WSHAPE to be read, NUMB(IMODE)
-0.7877214     $ Imperfection normal displacement (normalized), WSHAPE( 1)
-0.7755676     $ Imperfection normal displacement (normalized), WSHAPE( 2)
-0.7424461     $ Imperfection normal displacement (normalized), WSHAPE( 3)
-0.6974480     $ Imperfection normal displacement (normalized), WSHAPE( 4)
-0.6517389     $ Imperfection normal displacement (normalized), WSHAPE( 5)
-0.6063795     $ Imperfection normal displacement (normalized), WSHAPE( 6)
-0.5617062     $ Imperfection normal displacement (normalized), WSHAPE( 7)
-0.5179358     $ Imperfection normal displacement (normalized), WSHAPE( 8)
-0.4751978     $ Imperfection normal displacement (normalized), WSHAPE( 9)
-0.4335580     $ Imperfection normal displacement (normalized), WSHAPE(10)
-0.3935374     $ Imperfection normal displacement (normalized), WSHAPE(11)
-0.3643599     $ Imperfection normal displacement (normalized), WSHAPE(12)
-0.3536206     $ Imperfection normal displacement (normalized), WSHAPE(13)
    N       $ Do you want to provide any more imperfection modes?
    H       $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
     3      $ NTYPEZ= control (1 or 3) for reference surface location
  0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
    Y       $ Do you want to print out r(s), r'(s), etc. for this segment?
    H       $ DISCRETE RING INPUT FOLLOWS...
     0      $ NRINGS= number (max=20) of discrete rings in this segment
     0      $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
    H       $ LINE LOAD INPUT FOLLOWS...
     0      $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
    H       $ DISTRIBUTED LOAD INPUT FOLLOWS...
     1      $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
    H       $ SURFACE LOAD INPUT FOLLOWS FOR LOAD SET "A" FOLLOWS
     1      $ NLTYPE=control (0,1,2,3) for type of surface loading
     2      $ NPSTAT= number of meridional callouts for surface loading
     0      $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
     0      $ NLOAD(2)=indicator for circumferential traction
     1      $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
 -1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
 -1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
     3      $ NTYPE = control for meaning of loading callout (2=z, 3=r)
  2.554500     $ R(I)  = radial coordinate of Ith loading callout, r( 1)
  5.666450     $ R(I)  = radial coordinate of Ith loading callout, r( 2)
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    H         $ SHELL WALL CONSTRUCTION FOLLOWS...
      10      $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
       2      $ NWALL2=index (2, 4, 5, 9) for wall construction
 0.1600000E+08 $ E     = Young's modulus for skin
 0.2500000     $ U     = Poisson's ratio for skin
 0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
  0.000000     $ ALPHA = coefficient of thermal expansion
       1      $ NRS  = control (0 or 1) for addition of smeared stiffeners
      -1      $ NSUR   = control for thickness input (0 or 1 or -1)
       1      $ NTYPET= index (1 or 3) for type of input for thickness
       2      $ NTVALU= number of callouts along segment for thickness
       3      $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
  2.554500     $ R(I)  = radial coordinate of Ith thickness callout, r( 1)
  5.666450     $ R(I)  = radial coordinate of Ith thickness callout, r( 2)
 0.1664100     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
 0.1446000     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
    Y         $ Do you want to print out ref. surf. location and thickness?
    H         $ SMEARED STIFFENER INPUT FOLLOWS...
    Y         $ Are there stringers or isogrid (please answer Y or N)?
       0      $ K1 =control (0 or 1) for internal or external stringers
 0.1600000E+08 $ E1    = stringer modulus
 0.2500000     $ U1    = stringer Poisson ratio
 0.4155000E-03 $ STIFMD= stringer mass density
  2.915400     $ SPACNG= spacing of the isogrid members
    N         $ Is the stringer cross section constant in this segment?
       2      $ NSTATN=number of merid. callouts for cross section props.
       3      $ NTYPE=control for meaning of section callout (2=z, 3=r)
  2.554500     $ R(I)  = radial coordinate of Ith section callout, r( 1)
  5.666450     $ R(I)  = radial coordinate of Ith section callout, r( 2)
 0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
 0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
 0.6078300     $ H(i) = height of stringer at ith callout, H( 1)
 0.9792800     $ H(i) = height of stringer at ith callout, H( 2)
    N         $ Are there rings (please answer Y or N)?
    N         $ Do you want to print out the C(i,j) at meridional stations?
    N         $ Do you want to print out distributed loads along meridian?
    H         $
    H         $ SEGMENT NUMBER    3    3    3    3    3    3    3    3
    H         $ NODAL POINT DISTRIBUTION FOLLOWS...
      11      $ NMESH = number of node points (5 = min.; 98 = max.)( 3)
```

```
      3      $ NTYPEH= control integer (1 or 3) for nodal point spacing
    H        $ REFERENCE SURFACE GEOMETRY FOLLOWS...
      2      $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
 5.666450    $ R1     = radius at beginning of segment (see p. 66)
-12.04630    $ Z1     = global axial coordinate at beginning of segment
 8.753630    $ R2     = radius at end of segment
-11.57515    $ Z2     = global axial coordinate at end of segment
0.4623073    $ RC     = radius from axis of rev. to center of curvature
 32.40297    $ ZC     = axial coordinate of center of curvature
-1.000000    $ SROT=indicator for direction of increasing arc (-1. or +1.)
    H        $ IMPERFECTION SHAPE FOLLOWS...
      1      $ IMP   = indicator for imperfection (0=none, 1=some)
      4      $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
0.2000000    $ Imperfection multiplier, AMPIMP(IMODE)
      1      $ Starting nodal point number, ISTART(IMODE)
     13      $ Number of values of WSHAPE to be read, NUMB(IMODE)
-0.3536340    $ Imperfection normal displacement (normalized), WSHAPE( 1)
-0.3429709    $ Imperfection normal displacement (normalized), WSHAPE( 2)
-0.3148068    $ Imperfection normal displacement (normalized), WSHAPE( 3)
-0.2780212    $ Imperfection normal displacement (normalized), WSHAPE( 4)
-0.2418488    $ Imperfection normal displacement (normalized), WSHAPE( 5)
-0.2067450    $ Imperfection normal displacement (normalized), WSHAPE( 6)
-0.1726854    $ Imperfection normal displacement (normalized), WSHAPE( 7)
-0.1396409    $ Imperfection normal displacement (normalized), WSHAPE( 8)
-0.1075806    $ Imperfection normal displacement (normalized), WSHAPE( 9)
-0.7647277E-01 $ Imperfection normal displacement (normalized), WSHAPE(10)
-0.4665877E-01 $ Imperfection normal displacement (normalized), WSHAPE(11)
-0.2496399E-01 $ Imperfection normal displacement (normalized), WSHAPE(12)
-0.1699140E-01 $ Imperfection normal displacement (normalized), WSHAPE(13)
    N        $ Do you want to provide any more imperfection modes?
    H        $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
      3      $ NTYPEZ= control (1 or 3) for reference surface location
 0.000000    $ ZVAL  = distance from leftmost surf. to reference surf.
    Y        $ Do you want to print out r(s), r'(s), etc. for this segment?
    H        $ DISCRETE RING INPUT FOLLOWS...
      0      $ NRINGS= number (max=20) of discrete rings in this segment
      0      $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
    H        $ LINE LOAD INPUT FOLLOWS...
      0      $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
    H        $ DISTRIBUTED LOAD INPUT FOLLOWS...
```

```
     1      $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
   H        $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
     1      $ NLTYPE=control (0,1,2,3) for type of surface loading
     2      $ NPSTAT= number of meridional callouts for surface loading
     0      $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
     0      $ NLOAD(2)=indicator for circumferential traction
     1      $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
     3      $ NTYPE = control for meaning of loading callout (2=z, 3=r)
 5.666450     $ R(I)  = radial coordinate of Ith loading callout, r( 1)
 8.753630     $ R(I)  = radial coordinate of Ith loading callout, r( 2)
   H        $ SHELL WALL CONSTRUCTION FOLLOWS...
    10      $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
     2      $ NWALL2=index (2, 4, 5, 9) for wall construction
0.1600000E+08 $ E     = Young's modulus for skin
0.2500000     $ U     = Poisson's ratio for skin
0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
 0.000000     $ ALPHA = coefficient of thermal expansion
     1      $ NRS  = control (0 or 1) for addition of smeared stiffeners
    -1      $ NSUR   = control for thickness input (0 or 1 or -1)
     1      $ NTYPET= index (1 or 3) for type of input for thickness
     2      $ NTVALU= number of callouts along segment for thickness
     3      $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
 5.666450     $ R(I)  = radial coordinate of Ith thickness callout, r( 1)
 8.753630     $ R(I)  = radial coordinate of Ith thickness callout, r( 2)
0.1446000     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1608200     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
   Y        $ Do you want to print out ref. surf. location and thickness?
   H        $ SMEARED STIFFENER INPUT FOLLOWS...
   Y        $ Are there stringers or isogrid (please answer Y or N)?
     0      $ K1 =control (0 or 1) for internal or external stringers
0.1600000E+08 $ E1    = stringer modulus
0.2500000     $ U1    = stringer Poisson ratio
0.4155000E-03 $ STIFMD= stringer mass density
 2.915400     $ SPACNG= spacing of the isogrid members
   N        $ Is the stringer cross section constant in this segment?
     2      $ NSTATN=number of merid. callouts for cross section props.
     3      $ NTYPE=control for meaning of section callout (2=z, 3=r)
 5.666450     $ R(I)  = radial coordinate of Ith section callout, r( 1)
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 8.753630     $ R(I)  = radial coordinate of Ith section callout, r( 2)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
0.9792800     $ H(i) = height of stringer at ith callout, H( 1)
 1.256200     $ H(i) = height of stringer at ith callout, H( 2)
   N        $ Are there rings (please answer Y or N)?
   N        $ Do you want to print out the C(i,j) at meridional stations?
   N        $ Do you want to print out distributed loads along meridian?
   H        $
   H        $ SEGMENT NUMBER    4    4    4    4    4    4    4    4
   H        $ NODAL POINT DISTRIBUTION FOLLOWS...
     11      $ NMESH = number of node points (5 = min.; 98 = max.)( 4)
      3     $ NTYPEH= control integer (1 or 3) for nodal point spacing
   H        $ REFERENCE SURFACE GEOMETRY FOLLOWS...
      2     $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
 8.753630     $ R1     = radius at beginning of segment (see p. 66)
-11.57515     $ Z1     = global axial coordinate at beginning of segment
 11.79770     $ R2     = radius at end of segment
-10.87861     $ Z2     = global axial coordinate at end of segment
 1.338907     $ RC     = radius from axis of rev. to center of curvature
 27.82925     $ ZC     = axial coordinate of center of curvature
-1.000000     $ SROT=indicator for direction of increasing arc (-1. or +1.)
   H        $ IMPERFECTION SHAPE FOLLOWS...
      1     $ IMP   = indicator for imperfection (0=none, 1=some)
      4     $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
0.2000000     $ Imperfection multiplier, AMPIMP(IMODE)
      1     $ Starting nodal point number, ISTART(IMODE)
     13      $ Number of values of WSHAPE to be read, NUMB(IMODE)
-0.1700648E-01 $ Imperfection normal displacement (normalized), WSHAPE( 1)
-0.9090376E-02 $ Imperfection normal displacement (normalized), WSHAPE( 2)
0.1180019E-01 $ Imperfection normal displacement (normalized), WSHAPE( 3)
0.3900916E-01 $ Imperfection normal displacement (normalized), WSHAPE( 4)
0.6563866E-01 $ Imperfection normal displacement (normalized), WSHAPE( 5)
0.9129696E-01 $ Imperfection normal displacement (normalized), WSHAPE( 6)
0.1159352     $ Imperfection normal displacement (normalized), WSHAPE( 7)
0.1394974     $ Imperfection normal displacement (normalized), WSHAPE( 8)
0.1619212     $ Imperfection normal displacement (normalized), WSHAPE( 9)
0.1831373     $ Imperfection normal displacement (normalized), WSHAPE(10)
0.2028300     $ Imperfection normal displacement (normalized), WSHAPE(11)
0.2166747     $ Imperfection normal displacement (normalized), WSHAPE(12)
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0.2216420     $ Imperfection normal displacement (normalized), WSHAPE(13)
    N         $ Do you want to provide any more imperfection modes?
    H         $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
       3      $ NTYPEZ= control (1 or 3) for reference surface location
 0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
    Y         $ Do you want to print out r(s), r'(s), etc. for this segment?
    H         $ DISCRETE RING INPUT FOLLOWS...
       0      $ NRINGS= number (max=20) of discrete rings in this segment
       0      $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
    H         $ LINE LOAD INPUT FOLLOWS...
       0      $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
    H         $ DISTRIBUTED LOAD INPUT FOLLOWS...
       1      $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
    H         $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
       1      $ NLTYPE=control (0,1,2,3) for type of surface loading
       2      $ NPSTAT= number of meridional callouts for surface loading
       0      $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
       0      $ NLOAD(2)=indicator for circumferential traction
       1      $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
       3      $ NTYPE = control for meaning of loading callout (2=z, 3=r)
 8.753630     $ R(I)  = radial coordinate of Ith loading callout, r( 1)
 11.79770     $ R(I)  = radial coordinate of Ith loading callout, r( 2)
    H         $ SHELL WALL CONSTRUCTION FOLLOWS...
      10      $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
       2      $ NWALL2=index (2, 4, 5, 9) for wall construction
0.1600000E+08 $ E     = Young's modulus for skin
0.2500000     $ U     = Poisson's ratio for skin
0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
 0.000000     $ ALPHA = coefficient of thermal expansion
       1      $ NRS  = control (0 or 1) for addition of smeared stiffeners
      -1      $ NSUR   = control for thickness input (0 or 1 or -1)
       1      $ NTYPET= index (1 or 3) for type of input for thickness
       2      $ NTVALU= number of callouts along segment for thickness
       3      $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
 8.753630     $ R(I)  = radial coordinate of Ith thickness callout, r( 1)
 11.79770     $ R(I)  = radial coordinate of Ith thickness callout, r( 2)
0.1608200     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1041200     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
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   Y        $ Do you want to print out ref. surf. location and thickness?
   H        $ SMEARED STIFFENER INPUT FOLLOWS...
   Y        $ Are there stringers or isogrid (please answer Y or N)?
      0     $ K1 =control (0 or 1) for internal or external stringers
0.1600000E+08 $ E1    = stringer modulus
0.2500000    $ U1    = stringer Poisson ratio
0.4155000E-03 $ STIFMD= stringer mass density
 2.915400    $ SPACNG= spacing of the isogrid members
   N        $ Is the stringer cross section constant in this segment?
      2     $ NSTATN=number of merid. callouts for cross section props.
      3     $ NTYPE=control for meaning of section callout (2=z, 3=r)
 8.753630    $ R(I)  = radial coordinate of Ith section callout, r( 1)
 11.79770    $ R(I)  = radial coordinate of Ith section callout, r( 2)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
 1.256200    $ H(i) = height of stringer at ith callout, H( 1)
 1.154000    $ H(i) = height of stringer at ith callout, H( 2)
   N        $ Are there rings (please answer Y or N)?
   N        $ Do you want to print out the C(i,j) at meridional stations?
   N        $ Do you want to print out distributed loads along meridian?
   H        $
   H        $ SEGMENT NUMBER    5    5    5    5    5    5    5    5
   H        $ NODAL POINT DISTRIBUTION FOLLOWS...
     11      $ NMESH = number of node points (5 = min.; 98 = max.)( 5)
      3     $ NTYPEH= control integer (1 or 3) for nodal point spacing
   H        $ REFERENCE SURFACE GEOMETRY FOLLOWS...
      2     $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
 11.79770    $ R1     = radius at beginning of segment (see p. 66)
-10.87861    $ Z1     = global axial coordinate at beginning of segment
 14.77232    $ R2     = radius at end of segment
-9.929011    $ Z2     = global axial coordinate at end of segment
 2.895449    $ RC     = radius from axis of rev. to center of curvature
 22.14145    $ ZC     = axial coordinate of center of curvature
-1.000000    $ SROT=indicator for direction of increasing arc (-1. or +1.)
   H        $ IMPERFECTION SHAPE FOLLOWS...
      1     $ IMP   = indicator for imperfection (0=none, 1=some)
      4     $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
0.2000000    $ Imperfection multiplier, AMPIMP(IMODE)
      1     $ Starting nodal point number, ISTART(IMODE)
     13      $ Number of values of WSHAPE to be read, NUMB(IMODE)
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0.2216282     $ Imperfection normal displacement (normalized), WSHAPE( 1)
0.2264944     $ Imperfection normal displacement (normalized), WSHAPE( 2)
0.2389749     $ Imperfection normal displacement (normalized), WSHAPE( 3)
0.2542894     $ Imperfection normal displacement (normalized), WSHAPE( 4)
0.2680002     $ Imperfection normal displacement (normalized), WSHAPE( 5)
0.2797017     $ Imperfection normal displacement (normalized), WSHAPE( 6)
0.2891760     $ Imperfection normal displacement (normalized), WSHAPE( 7)
0.2961907     $ Imperfection normal displacement (normalized), WSHAPE( 8)
0.3005013     $ Imperfection normal displacement (normalized), WSHAPE( 9)
0.3018569     $ Imperfection normal displacement (normalized), WSHAPE(10)
0.3000518     $ Imperfection normal displacement (normalized), WSHAPE(11)
0.2965291     $ Imperfection normal displacement (normalized), WSHAPE(12)
0.2947125     $ Imperfection normal displacement (normalized), WSHAPE(13)
   N        $ Do you want to provide any more imperfection modes?
   H        $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
     3      $ NTYPEZ= control (1 or 3) for reference surface location
 0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
   Y        $ Do you want to print out r(s), r'(s), etc. for this segment?
   H        $ DISCRETE RING INPUT FOLLOWS...
     0      $ NRINGS= number (max=20) of discrete rings in this segment
     0      $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
   H        $ LINE LOAD INPUT FOLLOWS...
     0      $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
   H        $ DISTRIBUTED LOAD INPUT FOLLOWS...
     1      $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
   H        $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
     1      $ NLTYPE=control (0,1,2,3) for type of surface loading
     2      $ NPSTAT= number of meridional callouts for surface loading
     0      $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
     0      $ NLOAD(2)=indicator for circumferential traction
     1      $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
     3      $ NTYPE = control for meaning of loading callout (2=z, 3=r)
 11.79770     $ R(I)  = radial coordinate of Ith loading callout, r( 1)
 14.77232     $ R(I)  = radial coordinate of Ith loading callout, r( 2)
   H        $ SHELL WALL CONSTRUCTION FOLLOWS...
    10      $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
     2      $ NWALL2=index (2, 4, 5, 9) for wall construction
0.1600000E+08 $ E     = Young's modulus for skin
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0.2500000     $ U     = Poisson's ratio for skin
0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
 0.000000     $ ALPHA = coefficient of thermal expansion
      1       $ NRS  = control (0 or 1) for addition of smeared stiffeners
     -1       $ NSUR   = control for thickness input (0 or 1 or -1)
      1       $ NTYPET= index (1 or 3) for type of input for thickness
      2       $ NTVALU= number of callouts along segment for thickness
      3       $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
 11.79770     $ R(I)  = radial coordinate of Ith thickness callout, r( 1)
 14.77232     $ R(I)  = radial coordinate of Ith thickness callout, r( 2)
0.1041200     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1000000     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
    Y         $ Do you want to print out ref. surf. location and thickness?
    H         $ SMEARED STIFFENER INPUT FOLLOWS...
    Y         $ Are there stringers or isogrid (please answer Y or N)?
      0       $ K1 =control (0 or 1) for internal or external stringers
0.1600000E+08 $ E1    = stringer modulus
0.2500000     $ U1    = stringer Poisson ratio
0.4155000E-03 $ STIFMD= stringer mass density
 2.915400     $ SPACNG= spacing of the isogrid members
    N         $ Is the stringer cross section constant in this segment?
      2       $ NSTATN=number of merid. callouts for cross section props.
      3       $ NTYPE=control for meaning of section callout (2=z, 3=r)
 11.79770     $ R(I)  = radial coordinate of Ith section callout, r( 1)
 14.77232     $ R(I)  = radial coordinate of Ith section callout, r( 2)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
 1.154000     $ H(i) = height of stringer at ith callout, H( 1)
0.8042200     $ H(i) = height of stringer at ith callout, H( 2)
    N         $ Are there rings (please answer Y or N)?
    N         $ Do you want to print out the C(i,j) at meridional stations?
    N         $ Do you want to print out distributed loads along meridian?
    H         $
    H         $ SEGMENT NUMBER    6    6    6    6    6    6    6    6
    H         $ NODAL POINT DISTRIBUTION FOLLOWS...
     11       $ NMESH = number of node points (5 = min.; 98 = max.)( 6)
      3       $ NTYPEH= control integer (1 or 3) for nodal point spacing
    H         $ REFERENCE SURFACE GEOMETRY FOLLOWS...
      2       $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
 14.77232     $ R1     = radius at beginning of segment (see p. 66)
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-9.929011     $ Z1     = global axial coordinate at beginning of segment
 17.63477     $ R2     = radius at end of segment
-8.682992     $ Z2     = global axial coordinate at end of segment
 5.259145     $ RC     = radius from axis of rev. to center of curvature
 15.83630     $ ZC     = axial coordinate of center of curvature
-1.000000     $ SROT=indicator for direction of increasing arc (-1. or +1.)
   H        $ IMPERFECTION SHAPE FOLLOWS...
     1      $ IMP   = indicator for imperfection (0=none, 1=some)
     4      $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
0.2000000     $ Imperfection multiplier, AMPIMP(IMODE)
     1      $ Starting nodal point number, ISTART(IMODE)
    13      $ Number of values of WSHAPE to be read, NUMB(IMODE)
0.2947156     $ Imperfection normal displacement (normalized), WSHAPE( 1)
0.2926285     $ Imperfection normal displacement (normalized), WSHAPE( 2)
0.2857434     $ Imperfection normal displacement (normalized), WSHAPE( 3)
0.2740806     $ Imperfection normal displacement (normalized), WSHAPE( 4)
0.2599517     $ Imperfection normal displacement (normalized), WSHAPE( 5)
0.2439893     $ Imperfection normal displacement (normalized), WSHAPE( 6)
0.2266064     $ Imperfection normal displacement (normalized), WSHAPE( 7)
0.2081387     $ Imperfection normal displacement (normalized), WSHAPE( 8)
0.1888577     $ Imperfection normal displacement (normalized), WSHAPE( 9)
0.1689817     $ Imperfection normal displacement (normalized), WSHAPE(10)
0.1489415     $ Imperfection normal displacement (normalized), WSHAPE(11)
0.1337896     $ Imperfection normal displacement (normalized), WSHAPE(12)
0.1281099     $ Imperfection normal displacement (normalized), WSHAPE(13)
   N        $ Do you want to provide any more imperfection modes?
   H        $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
     3      $ NTYPEZ= control (1 or 3) for reference surface location
 0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
   Y        $ Do you want to print out r(s), r'(s), etc. for this segment?
   H        $ DISCRETE RING INPUT FOLLOWS...
     0      $ NRINGS= number (max=20) of discrete rings in this segment
     0      $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
   H        $ LINE LOAD INPUT FOLLOWS...
     0      $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
   H        $ DISTRIBUTED LOAD INPUT FOLLOWS...
     1      $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
   H        $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
     1      $ NLTYPE=control (0,1,2,3) for type of surface loading
     2      $ NPSTAT= number of meridional callouts for surface loading
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       0      $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
       0      $ NLOAD(2)=indicator for circumferential traction
       1      $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
 -1.000000    $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
 -1.000000    $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
       3      $ NTYPE = control for meaning of loading callout (2=z, 3=r)
  14.77232    $ R(I)  = radial coordinate of Ith loading callout, r( 1)
  17.63477    $ R(I)  = radial coordinate of Ith loading callout, r( 2)
     H        $ SHELL WALL CONSTRUCTION FOLLOWS...
      10      $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
       2      $ NWALL2=index (2, 4, 5, 9) for wall construction
0.1600000E+08 $ E     = Young's modulus for skin
0.2500000     $ U     = Poisson's ratio for skin
0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
 0.000000     $ ALPHA = coefficient of thermal expansion
       1      $ NRS  = control (0 or 1) for addition of smeared stiffeners
      -1      $ NSUR   = control for thickness input (0 or 1 or -1)
       1      $ NTYPET= index (1 or 3) for type of input for thickness
       2      $ NTVALU= number of callouts along segment for thickness
       3      $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
  14.77232    $ R(I)  = radial coordinate of Ith thickness callout, r( 1)
  17.63477    $ R(I)  = radial coordinate of Ith thickness callout, r( 2)
0.1000000     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1016200     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
     Y        $ Do you want to print out ref. surf. location and thickness?
     H        $ SMEARED STIFFENER INPUT FOLLOWS...
     Y        $ Are there stringers or isogrid (please answer Y or N)?
       0      $ K1 =control (0 or 1) for internal or external stringers
0.1600000E+08 $ E1    = stringer modulus
0.2500000     $ U1    = stringer Poisson ratio
0.4155000E-03 $ STIFMD= stringer mass density
 2.915400     $ SPACNG= spacing of the isogrid members
     N        $ Is the stringer cross section constant in this segment?
       2      $ NSTATN=number of merid. callouts for cross section props.
       3      $ NTYPE=control for meaning of section callout (2=z, 3=r)
  14.77232    $ R(I)  = radial coordinate of Ith section callout, r( 1)
  17.63477    $ R(I)  = radial coordinate of Ith section callout, r( 2)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
0.8042200     $ H(i) = height of stringer at ith callout, H( 1)
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 1.268600     $ H(i) = height of stringer at ith callout, H( 2)
    N         $ Are there rings (please answer Y or N)?
    N         $ Do you want to print out the C(i,j) at meridional stations?
    N         $ Do you want to print out distributed loads along meridian?
    H         $
    H         $ SEGMENT NUMBER    7    7    7    7    7    7    7    7
    H         $ NODAL POINT DISTRIBUTION FOLLOWS...
      11      $ NMESH = number of node points (5 = min.; 98 = max.)( 7)
       3      $ NTYPEH= control integer (1 or 3) for nodal point spacing
    H         $ REFERENCE SURFACE GEOMETRY FOLLOWS...
       2      $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
 17.63477     $ R1     = radius at beginning of segment (see p. 66)
-8.682992     $ Z1     = global axial coordinate at beginning of segment
 19.63631     $ R2     = radius at end of segment
-7.532891     $ Z2     = global axial coordinate at end of segment
 7.971097     $ RC     = radius from axis of rev. to center of curvature
 10.45158     $ ZC     = axial coordinate of center of curvature
-1.000000     $ SROT=indicator for direction of increasing arc (-1. or +1.)
    H         $ IMPERFECTION SHAPE FOLLOWS...
       1      $ IMP   = indicator for imperfection (0=none, 1=some)
       4      $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
 0.2000000     $ Imperfection multiplier, AMPIMP(IMODE)
       1      $ Starting nodal point number, ISTART(IMODE)
      13      $ Number of values of WSHAPE to be read, NUMB(IMODE)
 0.1281032     $ Imperfection normal displacement (normalized), WSHAPE( 1)
 0.1238767     $ Imperfection normal displacement (normalized), WSHAPE( 2)
 0.1125113     $ Imperfection normal displacement (normalized), WSHAPE( 3)
 0.9723734E-01 $ Imperfection normal displacement (normalized), WSHAPE( 4)
 0.8173395E-01 $ Imperfection normal displacement (normalized), WSHAPE( 5)
 0.6622934E-01 $ Imperfection normal displacement (normalized), WSHAPE( 6)
 0.5076280E-01 $ Imperfection normal displacement (normalized), WSHAPE( 7)
 0.3537831E-01 $ Imperfection normal displacement (normalized), WSHAPE( 8)
 0.2012537E-01 $ Imperfection normal displacement (normalized), WSHAPE( 9)
 0.5059964E-02 $ Imperfection normal displacement (normalized), WSHAPE(10)
-0.9571119E-02 $ Imperfection normal displacement (normalized), WSHAPE(11)
-0.2029704E-01 $ Imperfection normal displacement (normalized), WSHAPE(12)
-0.2424563E-01 $ Imperfection normal displacement (normalized), WSHAPE(13)
    N         $ Do you want to provide any more imperfection modes?
    H         $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
       3      $ NTYPEZ= control (1 or 3) for reference surface location
```

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 0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
    Y         $ Do you want to print out r(s), r'(s), etc. for this segment?
    H         $ DISCRETE RING INPUT FOLLOWS...
      0       $ NRINGS= number (max=20) of discrete rings in this segment
      0       $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
    H         $ LINE LOAD INPUT FOLLOWS...
      0       $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
    H         $ DISTRIBUTED LOAD INPUT FOLLOWS...
      1       $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
    H         $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
      1       $ NLTYPE=control (0,1,2,3) for type of surface loading
      2       $ NPSTAT= number of meridional callouts for surface loading
      0       $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
      0       $ NLOAD(2)=indicator for circumferential traction
      1       $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
      3       $ NTYPE = control for meaning of loading callout (2=z, 3=r)
 17.63477     $ R(I)  = radial coordinate of Ith loading callout, r( 1)
 19.63631     $ R(I)  = radial coordinate of Ith loading callout, r( 2)
    H         $ SHELL WALL CONSTRUCTION FOLLOWS...
     10       $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
      2       $ NWALL2=index (2, 4, 5, 9) for wall construction
0.1600000E+08 $ E     = Young's modulus for skin
0.2500000     $ U     = Poisson's ratio for skin
0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
 0.000000     $ ALPHA = coefficient of thermal expansion
      1       $ NRS  = control (0 or 1) for addition of smeared stiffeners
     -1       $ NSUR   = control for thickness input (0 or 1 or -1)
      1       $ NTYPET= index (1 or 3) for type of input for thickness
      2       $ NTVALU= number of callouts along segment for thickness
      3       $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
 17.63477     $ R(I)  = radial coordinate of Ith thickness callout, r( 1)
 19.63631     $ R(I)  = radial coordinate of Ith thickness callout, r( 2)
0.1016200     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1379500     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
    Y         $ Do you want to print out ref. surf. location and thickness?
    H         $ SMEARED STIFFENER INPUT FOLLOWS...
    Y         $ Are there stringers or isogrid (please answer Y or N)?
      0       $ K1 =control (0 or 1) for internal or external stringers
```

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 0.1600000E+08 $ E1    = stringer modulus
 0.2500000     $ U1    = stringer Poisson ratio
 0.4155000E-03 $ STIFMD= stringer mass density
  2.915400     $ SPACNG= spacing of the isogrid members
    N          $ Is the stringer cross section constant in this segment?
       2       $ NSTATN=number of merid. callouts for cross section props.
       3       $ NTYPE=control for meaning of section callout (2=z, 3=r)
  17.63477     $ R(I)  = radial coordinate of Ith section callout, r( 1)
  19.63631     $ R(I)  = radial coordinate of Ith section callout, r( 2)
 0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
 0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
  1.268600     $ H(i) = height of stringer at ith callout, H( 1)
 0.8833901     $ H(i) = height of stringer at ith callout, H( 2)
    N          $ Are there rings (please answer Y or N)?
    N          $ Do you want to print out the C(i,j) at meridional stations?
    N          $ Do you want to print out distributed loads along meridian?
    H          $
    H          $ SEGMENT NUMBER    8    8    8    8    8    8    8    8
    H          $ NODAL POINT DISTRIBUTION FOLLOWS...
      11       $ NMESH = number of node points (5 = min.; 98 = max.)( 8)
       3       $ NTYPEH= control integer (1 or 3) for nodal point spacing
    H          $ REFERENCE SURFACE GEOMETRY FOLLOWS...
       2       $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
  19.63631     $ R1     = radius at beginning of segment (see p. 66)
 -7.532891     $ Z1     = global axial coordinate at beginning of segment
  21.26065     $ R2     = radius at end of segment
 -6.335362     $ Z2     = global axial coordinate at end of segment
  10.52211     $ RC     = radius from axis of rev. to center of curvature
  6.530096     $ ZC     = axial coordinate of center of curvature
 -1.000000     $ SROT=indicator for direction of increasing arc (-1. or +1.)
    H          $ IMPERFECTION SHAPE FOLLOWS...
       1       $ IMP   = indicator for imperfection (0=none, 1=some)
       4       $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
 0.2000000     $ Imperfection multiplier, AMPIMP(IMODE)
       1       $ Starting nodal point number, ISTART(IMODE)
      13       $ Number of values of WSHAPE to be read, NUMB(IMODE)
-0.2423393E-01 $ Imperfection normal displacement (normalized), WSHAPE( 1)
-0.2768403E-01 $ Imperfection normal displacement (normalized), WSHAPE( 2)
-0.3681009E-01 $ Imperfection normal displacement (normalized), WSHAPE( 3)
-0.4871560E-01 $ Imperfection normal displacement (normalized), WSHAPE( 4)
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-0.6035533E-01 $ Imperfection normal displacement (normalized), WSHAPE( 5)
-0.7151767E-01 $ Imperfection normal displacement (normalized), WSHAPE( 6)
-0.8213990E-01 $ Imperfection normal displacement (normalized), WSHAPE( 7)
-0.9215508E-01 $ Imperfection normal displacement (normalized), WSHAPE( 8)
-0.1014919     $ Imperfection normal displacement (normalized), WSHAPE( 9)
-0.1100749     $ Imperfection normal displacement (normalized), WSHAPE(10)
-0.1177331     $ Imperfection normal displacement (normalized), WSHAPE(11)
-0.1228745     $ Imperfection normal displacement (normalized), WSHAPE(12)
-0.1246571     $ Imperfection normal displacement (normalized), WSHAPE(13)
    N        $ Do you want to provide any more imperfection modes?
    H        $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
      3      $ NTYPEZ= control (1 or 3) for reference surface location
  0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
    Y        $ Do you want to print out r(s), r'(s), etc. for this segment?
    H        $ DISCRETE RING INPUT FOLLOWS...
      0      $ NRINGS= number (max=20) of discrete rings in this segment
      0      $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
    H        $ LINE LOAD INPUT FOLLOWS...
      0      $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
    H        $ DISTRIBUTED LOAD INPUT FOLLOWS...
      1      $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
    H        $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
      1      $ NLTYPE=control (0,1,2,3) for type of surface loading
      2      $ NPSTAT= number of meridional callouts for surface loading
      0      $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
      0      $ NLOAD(2)=indicator for circumferential traction
      1      $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
 -1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
 -1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
      2      $ NTYPE = control for meaning of loading callout (2=z, 3=r)
 -7.532891     $ Z(I)  = axial coordinate of Ith loading callout, z( 1)
 -6.335362     $ Z(I)  = axial coordinate of Ith loading callout, z( 2)
    H        $ SHELL WALL CONSTRUCTION FOLLOWS...
     10      $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
      2      $ NWALL2=index (2, 4, 5, 9) for wall construction
 0.1600000E+08 $ E     = Young's modulus for skin
 0.2500000     $ U     = Poisson's ratio for skin
 0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
  0.000000     $ ALPHA = coefficient of thermal expansion
      1      $ NRS  = control (0 or 1) for addition of smeared stiffeners
```

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     -1      $ NSUR   = control for thickness input (0 or 1 or -1)
      1      $ NTYPET= index (1 or 3) for type of input for thickness
      2      $ NTVALU= number of callouts along segment for thickness
      2      $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
-7.532891     $ Z(I)  = axial coordinate of Ith thickness callout, z( 1)
-6.335362     $ Z(I)  = axial coordinate of Ith thickness callout, z( 2)
0.1379500     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1020100     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
    Y        $ Do you want to print out ref. surf. location and thickness?
    H        $ SMEARED STIFFENER INPUT FOLLOWS...
    Y        $ Are there stringers or isogrid (please answer Y or N)?
      0      $ K1 =control (0 or 1) for internal or external stringers
0.1600000E+08 $ E1    = stringer modulus
0.2500000     $ U1    = stringer Poisson ratio
0.4155000E-03 $ STIFMD= stringer mass density
 2.915400     $ SPACNG= spacing of the isogrid members
    N        $ Is the stringer cross section constant in this segment?
      2      $ NSTATN=number of merid. callouts for cross section props.
      2      $ NTYPE=control for meaning of section callout (2=z, 3=r)
-7.532891     $ Z(I)  = axial coordinate of Ith section callout, z( 1)
-6.335362     $ Z(I)  = axial coordinate of Ith section callout, z( 2)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
0.8833901     $ H(i) = height of stringer at ith callout, H( 1)
0.7056000     $ H(i) = height of stringer at ith callout, H( 2)
    N        $ Are there rings (please answer Y or N)?
    N        $ Do you want to print out the C(i,j) at meridional stations?
    N        $ Do you want to print out distributed loads along meridian?
    H        $
    H        $ SEGMENT NUMBER    9    9    9    9    9    9    9    9
    H        $ NODAL POINT DISTRIBUTION FOLLOWS...
     11      $ NMESH = number of node points (5 = min.; 98 = max.)( 9)
      3      $ NTYPEH= control integer (1 or 3) for nodal point spacing
    H        $ REFERENCE SURFACE GEOMETRY FOLLOWS...
      2      $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
 21.26065     $ R1     = radius at beginning of segment (see p. 66)
-6.335362     $ Z1     = global axial coordinate at beginning of segment
 22.70426     $ R2     = radius at end of segment
-4.926436     $ Z2     = global axial coordinate at end of segment
 13.07984     $ RC     = radius from axis of rev. to center of curvature
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 3.490870     $ ZC     = axial coordinate of center of curvature
-1.000000     $ SROT=indicator for direction of increasing arc (-1. or +1.)
   H          $ IMPERFECTION SHAPE FOLLOWS...
     1        $ IMP   = indicator for imperfection (0=none, 1=some)
     4        $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
 0.2000000    $ Imperfection multiplier, AMPIMP(IMODE)
     1        $ Starting nodal point number, ISTART(IMODE)
    13        $ Number of values of WSHAPE to be read, NUMB(IMODE)
-0.1246322    $ Imperfection normal displacement (normalized), WSHAPE( 1)
-0.1263595    $ Imperfection normal displacement (normalized), WSHAPE( 2)
-0.1306006    $ Imperfection normal displacement (normalized), WSHAPE( 3)
-0.1353629    $ Imperfection normal displacement (normalized), WSHAPE( 4)
-0.1390724    $ Imperfection normal displacement (normalized), WSHAPE( 5)
-0.1416203    $ Imperfection normal displacement (normalized), WSHAPE( 6)
-0.1429722    $ Imperfection normal displacement (normalized), WSHAPE( 7)
-0.1431027    $ Imperfection normal displacement (normalized), WSHAPE( 8)
-0.1419962    $ Imperfection normal displacement (normalized), WSHAPE( 9)
-0.1396482    $ Imperfection normal displacement (normalized), WSHAPE(10)
-0.1361193    $ Imperfection normal displacement (normalized), WSHAPE(11)
-0.1327112    $ Imperfection normal displacement (normalized), WSHAPE(12)
-0.1312749    $ Imperfection normal displacement (normalized), WSHAPE(13)
   N          $ Do you want to provide any more imperfection modes?
   H          $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
     3        $ NTYPEZ= control (1 or 3) for reference surface location
 0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
   Y          $ Do you want to print out r(s), r'(s), etc. for this segment?
   H          $ DISCRETE RING INPUT FOLLOWS...
     0        $ NRINGS= number (max=20) of discrete rings in this segment
     0        $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
   H          $ LINE LOAD INPUT FOLLOWS...
     0        $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
   H          $ DISTRIBUTED LOAD INPUT FOLLOWS...
     1        $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
   H          $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
     1        $ NLTYPE=control (0,1,2,3) for type of surface loading
     2        $ NPSTAT= number of meridional callouts for surface loading
     0        $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
     0        $ NLOAD(2)=indicator for circumferential traction
     1        $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
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-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
      2      $ NTYPE = control for meaning of loading callout (2=z, 3=r)
-6.335362     $ Z(I)  = axial coordinate of Ith loading callout, z( 1)
-4.926436     $ Z(I)  = axial coordinate of Ith loading callout, z( 2)
    H        $ SHELL WALL CONSTRUCTION FOLLOWS...
     10      $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
      2      $ NWALL2=index (2, 4, 5, 9) for wall construction
0.1600000E+08 $ E     = Young's modulus for skin
0.2500000     $ U     = Poisson's ratio for skin
0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
 0.000000     $ ALPHA = coefficient of thermal expansion
      1      $ NRS  = control (0 or 1) for addition of smeared stiffeners
     -1      $ NSUR   = control for thickness input (0 or 1 or -1)
      1      $ NTYPET= index (1 or 3) for type of input for thickness
      2      $ NTVALU= number of callouts along segment for thickness
      2      $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
-6.335362     $ Z(I)  = axial coordinate of Ith thickness callout, z( 1)
-4.926436     $ Z(I)  = axial coordinate of Ith thickness callout, z( 2)
0.1020100     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1041100     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
    Y        $ Do you want to print out ref. surf. location and thickness?
    H        $ SMEARED STIFFENER INPUT FOLLOWS...
    Y        $ Are there stringers or isogrid (please answer Y or N)?
      0      $ K1 =control (0 or 1) for internal or external stringers
0.1600000E+08 $ E1    = stringer modulus
0.2500000     $ U1    = stringer Poisson ratio
0.4155000E-03 $ STIFMD= stringer mass density
 2.915400     $ SPACNG= spacing of the isogrid members
    N        $ Is the stringer cross section constant in this segment?
      2      $ NSTATN=number of merid. callouts for cross section props.
      2      $ NTYPE=control for meaning of section callout (2=z, 3=r)
-6.335362     $ Z(I)  = axial coordinate of Ith section callout, z( 1)
-4.926436     $ Z(I)  = axial coordinate of Ith section callout, z( 2)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
0.7056000     $ H(i) = height of stringer at ith callout, H( 1)
0.5844500     $ H(i) = height of stringer at ith callout, H( 2)
    N        $ Are there rings (please answer Y or N)?
    N        $ Do you want to print out the C(i,j) at meridional stations?
    N        $ Do you want to print out distributed loads along meridian?
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   H        $
   H        $ SEGMENT NUMBER   10   10   10   10   10   10   10   10
   H        $ NODAL POINT DISTRIBUTION FOLLOWS...
    11       $ NMESH = number of node points (5 = min.; 98 = max.)(10)
     3      $ NTYPEH= control integer (1 or 3) for nodal point spacing
   H        $ REFERENCE SURFACE GEOMETRY FOLLOWS...
     2      $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
 22.70426     $ R1     = radius at beginning of segment (see p. 66)
-4.926436     $ Z1     = global axial coordinate at beginning of segment
 23.86535     $ R2     = radius at end of segment
-3.279007     $ Z2     = global axial coordinate at end of segment
 15.55374     $ RC     = radius from axis of rev. to center of curvature
 1.346049     $ ZC     = axial coordinate of center of curvature
-1.000000     $ SROT=indicator for direction of increasing arc (-1. or +1.)
   H        $ IMPERFECTION SHAPE FOLLOWS...
     1      $ IMP   = indicator for imperfection (0=none, 1=some)
     4      $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
 0.2000000     $ Imperfection multiplier, AMPIMP(IMODE)
     1      $ Starting nodal point number, ISTART(IMODE)
    13       $ Number of values of WSHAPE to be read, NUMB(IMODE)
-0.1312809     $ Imperfection normal displacement (normalized), WSHAPE( 1)
-0.1297502     $ Imperfection normal displacement (normalized), WSHAPE( 2)
-0.1252087     $ Imperfection normal displacement (normalized), WSHAPE( 3)
-0.1182174     $ Imperfection normal displacement (normalized), WSHAPE( 4)
-0.1101879     $ Imperfection normal displacement (normalized), WSHAPE( 5)
-0.1013301     $ Imperfection normal displacement (normalized), WSHAPE( 6)
-0.9177209E-01 $ Imperfection normal displacement (normalized), WSHAPE( 7)
-0.8163905E-01 $ Imperfection normal displacement (normalized), WSHAPE( 8)
-0.7105113E-01 $ Imperfection normal displacement (normalized), WSHAPE( 9)
-0.6012135E-01 $ Imperfection normal displacement (normalized), WSHAPE(10)
-0.4909472E-01 $ Imperfection normal displacement (normalized), WSHAPE(11)
-0.4076409E-01 $ Imperfection normal displacement (normalized), WSHAPE(12)
-0.3764388E-01 $ Imperfection normal displacement (normalized), WSHAPE(13)
   N        $ Do you want to provide any more imperfection modes?
   H        $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
     3      $ NTYPEZ= control (1 or 3) for reference surface location
 0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
   Y        $ Do you want to print out r(s), r'(s), etc. for this segment?
   H        $ DISCRETE RING INPUT FOLLOWS...
     0      $ NRINGS= number (max=20) of discrete rings in this segment
```

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     0      $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
   H        $ LINE LOAD INPUT FOLLOWS...
     0      $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
   H        $ DISTRIBUTED LOAD INPUT FOLLOWS...
     1      $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
   H        $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
     1      $ NLTYPE=control (0,1,2,3) for type of surface loading
     2      $ NPSTAT= number of meridional callouts for surface loading
     0      $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
     0      $ NLOAD(2)=indicator for circumferential traction
     1      $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
     2      $ NTYPE = control for meaning of loading callout (2=z, 3=r)
-4.926436     $ Z(I)  = axial coordinate of Ith loading callout, z( 1)
-3.279006     $ Z(I)  = axial coordinate of Ith loading callout, z( 2)
   H        $ SHELL WALL CONSTRUCTION FOLLOWS...
    10      $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
     2      $ NWALL2=index (2, 4, 5, 9) for wall construction
0.1600000E+08 $ E     = Young's modulus for skin
0.2500000     $ U     = Poisson's ratio for skin
0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
 0.000000     $ ALPHA = coefficient of thermal expansion
     1      $ NRS  = control (0 or 1) for addition of smeared stiffeners
    -1      $ NSUR   = control for thickness input (0 or 1 or -1)
     1      $ NTYPET= index (1 or 3) for type of input for thickness
     2      $ NTVALU= number of callouts along segment for thickness
     2      $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
-4.926436     $ Z(I)  = axial coordinate of Ith thickness callout, z( 1)
-3.279006     $ Z(I)  = axial coordinate of Ith thickness callout, z( 2)
0.1041100     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1986900     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
   Y        $ Do you want to print out ref. surf. location and thickness?
   H        $ SMEARED STIFFENER INPUT FOLLOWS...
   Y        $ Are there stringers or isogrid (please answer Y or N)?
     0      $ K1 =control (0 or 1) for internal or external stringers
0.1600000E+08 $ E1    = stringer modulus
0.2500000     $ U1    = stringer Poisson ratio
0.4155000E-03 $ STIFMD= stringer mass density
 2.915400     $ SPACNG= spacing of the isogrid members
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    N        $ Is the stringer cross section constant in this segment?
      2      $ NSTATN=number of merid. callouts for cross section props.
      2      $ NTYPE=control for meaning of section callout (2=z, 3=r)
 -4.926436     $ Z(I)  = axial coordinate of Ith section callout, z( 1)
 -3.279006     $ Z(I)  = axial coordinate of Ith section callout, z( 2)
 0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
 0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
 0.5844500     $ H(i) = height of stringer at ith callout, H( 1)
 0.5158100     $ H(i) = height of stringer at ith callout, H( 2)
    N        $ Are there rings (please answer Y or N)?
    N        $ Do you want to print out the C(i,j) at meridional stations?
    N        $ Do you want to print out distributed loads along meridian?
    H        $
    H        $ SEGMENT NUMBER   11   11   11   11   11   11   11   11
    H        $ NODAL POINT DISTRIBUTION FOLLOWS...
     11      $ NMESH = number of node points (5 = min.; 98 = max.)(11)
      3      $ NTYPEH= control integer (1 or 3) for nodal point spacing
    H        $ REFERENCE SURFACE GEOMETRY FOLLOWS...
      2      $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
  23.86535     $ R1     = radius at beginning of segment (see p. 66)
 -3.279007     $ Z1     = global axial coordinate at beginning of segment
  24.54286     $ R2     = radius at end of segment
 -1.597695     $ Z2     = global axial coordinate at end of segment
  17.45365     $ RC     = radius from axis of rev. to center of curvature
 0.2818448     $ ZC     = axial coordinate of center of curvature
 -1.000000     $ SROT=indicator for direction of increasing arc (-1. or +1.)
    H        $ IMPERFECTION SHAPE FOLLOWS...
      1      $ IMP   = indicator for imperfection (0=none, 1=some)
      4      $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
 0.2000000     $ Imperfection multiplier, AMPIMP(IMODE)
      1      $ Starting nodal point number, ISTART(IMODE)
     13      $ Number of values of WSHAPE to be read, NUMB(IMODE)
-0.3762304E-01 $ Imperfection normal displacement (normalized), WSHAPE( 1)
-0.3477132E-01 $ Imperfection normal displacement (normalized), WSHAPE( 2)
-0.2711416E-01 $ Imperfection normal displacement (normalized), WSHAPE( 3)
-0.1686821E-01 $ Imperfection normal displacement (normalized), WSHAPE( 4)
-0.6562246E-02 $ Imperfection normal displacement (normalized), WSHAPE( 5)
 0.3595316E-02 $ Imperfection normal displacement (normalized), WSHAPE( 6)
 0.1351144E-01 $ Imperfection normal displacement (normalized), WSHAPE( 7)
 0.2307542E-01 $ Imperfection normal displacement (normalized), WSHAPE( 8)
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0.3215520E-01 $ Imperfection normal displacement (normalized), WSHAPE( 9)
0.4059378E-01 $ Imperfection normal displacement (normalized), WSHAPE(10)
0.4811750E-01 $ Imperfection normal displacement (normalized), WSHAPE(11)
0.5308898E-01 $ Imperfection normal displacement (normalized), WSHAPE(12)
0.5478073E-01 $ Imperfection normal displacement (normalized), WSHAPE(13)
   N        $ Do you want to provide any more imperfection modes?
   H        $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
     3      $ NTYPEZ= control (1 or 3) for reference surface location
 0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
   Y        $ Do you want to print out r(s), r'(s), etc. for this segment?
   H        $ DISCRETE RING INPUT FOLLOWS...
     0      $ NRINGS= number (max=20) of discrete rings in this segment
     0      $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
   H        $ LINE LOAD INPUT FOLLOWS...
     0      $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
   H        $ DISTRIBUTED LOAD INPUT FOLLOWS...
     1      $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
   H        $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
     1      $ NLTYPE=control (0,1,2,3) for type of surface loading
     2      $ NPSTAT= number of meridional callouts for surface loading
     0      $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
     0      $ NLOAD(2)=indicator for circumferential traction
     1      $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
     2      $ NTYPE = control for meaning of loading callout (2=z, 3=r)
-3.279006     $ Z(I)  = axial coordinate of Ith loading callout, z( 1)
-1.597695     $ Z(I)  = axial coordinate of Ith loading callout, z( 2)
   H        $ SHELL WALL CONSTRUCTION FOLLOWS...
    10      $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
     2      $ NWALL2=index (2, 4, 5, 9) for wall construction
0.1600000E+08 $ E     = Young's modulus for skin
0.2500000     $ U     = Poisson's ratio for skin
0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
 0.000000     $ ALPHA = coefficient of thermal expansion
     1      $ NRS  = control (0 or 1) for addition of smeared stiffeners
    -1      $ NSUR   = control for thickness input (0 or 1 or -1)
     1      $ NTYPET= index (1 or 3) for type of input for thickness
     2      $ NTVALU= number of callouts along segment for thickness
     2      $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
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-3.279006     $ Z(I)  = axial coordinate of Ith thickness callout, z( 1)
-1.597695     $ Z(I)  = axial coordinate of Ith thickness callout, z( 2)
0.1986900     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1000000     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
   Y         $ Do you want to print out ref. surf. location and thickness?
   H         $ SMEARED STIFFENER INPUT FOLLOWS...
   Y         $ Are there stringers or isogrid (please answer Y or N)?
      0      $ K1 =control (0 or 1) for internal or external stringers
0.1600000E+08 $ E1    = stringer modulus
0.2500000     $ U1    = stringer Poisson ratio
0.4155000E-03 $ STIFMD= stringer mass density
 2.915400     $ SPACNG= spacing of the isogrid members
   N         $ Is the stringer cross section constant in this segment?
      2      $ NSTATN=number of merid. callouts for cross section props.
      2      $ NTYPE=control for meaning of section callout (2=z, 3=r)
-3.279006     $ Z(I)  = axial coordinate of Ith section callout, z( 1)
-1.597695     $ Z(I)  = axial coordinate of Ith section callout, z( 2)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
0.5158100     $ H(i) = height of stringer at ith callout, H( 1)
0.3441700     $ H(i) = height of stringer at ith callout, H( 2)
   N         $ Are there rings (please answer Y or N)?
   N         $ Do you want to print out the C(i,j) at meridional stations?
   N         $ Do you want to print out distributed loads along meridian?
   H         $
   H         $ SEGMENT NUMBER   12   12   12   12   12   12   12   12
   H         $ NODAL POINT DISTRIBUTION FOLLOWS...
     11      $ NMESH = number of node points (5 = min.; 98 = max.)(12)
      3      $ NTYPEH= control integer (1 or 3) for nodal point spacing
   H         $ REFERENCE SURFACE GEOMETRY FOLLOWS...
      2      $ NSHAPE= indicator (1,2 or 4) for geometry of meridian
 24.54286     $ R1     = radius at beginning of segment (see p. 66)
-1.597695     $ Z1     = global axial coordinate at beginning of segment
 24.75000     $ R2     = radius at end of segment
 0.000000     $ Z2     = global axial coordinate at end of segment
 18.40842     $ RC     = radius from axis of rev. to center of curvature
0.9905365E-02 $ ZC     = axial coordinate of center of curvature
-1.000000     $ SROT=indicator for direction of increasing arc (-1. or +1.)
   H         $ IMPERFECTION SHAPE FOLLOWS...
      1      $ IMP   = indicator for imperfection (0=none, 1=some)
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     4      $ ITYPE = index (1 or 2 or 3 or 4) for imperfection type
0.2000000     $ Imperfection multiplier, AMPIMP(IMODE)
     1      $ Starting nodal point number, ISTART(IMODE)
    13      $ Number of values of WSHAPE to be read, NUMB(IMODE)
0.5483954E-01 $ Imperfection normal displacement (normalized), WSHAPE( 1)
0.5628299E-01 $ Imperfection normal displacement (normalized), WSHAPE( 2)
0.5977136E-01 $ Imperfection normal displacement (normalized), WSHAPE( 3)
0.6369364E-01 $ Imperfection normal displacement (normalized), WSHAPE( 4)
0.6689849E-01 $ Imperfection normal displacement (normalized), WSHAPE( 5)
0.6944232E-01 $ Imperfection normal displacement (normalized), WSHAPE( 6)
0.7142271E-01 $ Imperfection normal displacement (normalized), WSHAPE( 7)
0.7292235E-01 $ Imperfection normal displacement (normalized), WSHAPE( 8)
0.7400951E-01 $ Imperfection normal displacement (normalized), WSHAPE( 9)
0.7473919E-01 $ Imperfection normal displacement (normalized), WSHAPE(10)
0.7515118E-01 $ Imperfection normal displacement (normalized), WSHAPE(11)
0.7527828E-01 $ Imperfection normal displacement (normalized), WSHAPE(12)
0.7528902E-01 $ Imperfection normal displacement (normalized), WSHAPE(13)
   N        $ Do you want to provide any more imperfection modes?
   H        $ REFERENCE SURFACE LOCATION RELATIVE TO WALL
     3      $ NTYPEZ= control (1 or 3) for reference surface location
 0.000000     $ ZVAL  = distance from leftmost surf. to reference surf.
   Y        $ Do you want to print out r(s), r'(s), etc. for this segment?
   H        $ DISCRETE RING INPUT FOLLOWS...
     0      $ NRINGS= number (max=20) of discrete rings in this segment
     0      $ K=elastic foundation modulus (e.g. lb/in**3)in this seg.
   H        $ LINE LOAD INPUT FOLLOWS...
     0      $ LINTYP= indicator (0, 1, 2 or 3) for type of line loads
   H        $ DISTRIBUTED LOAD INPUT FOLLOWS...
     1      $ IDISAB= indicator (0, 1, 2 or 3) for load set A and B
   H        $ SURFACE LOAD INPUT FOR LOAD SET "A" FOLLOWS
     1      $ NLTYPE=control (0,1,2,3) for type of surface loading
     2      $ NPSTAT= number of meridional callouts for surface loading
     0      $ NLOAD(1)=indicator for meridional traction (0=none, 1=some)
     0      $ NLOAD(2)=indicator for circumferential traction
     1      $ NLOAD(3)=indicator for normal pressure     (0=none, 1=some)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 1)
-1.000000     $ PN(i)   = normal pressure (p.74) at ith callout, PN( 2)
     2      $ NTYPE = control for meaning of loading callout (2=z, 3=r)
-1.597695     $ Z(I)  = axial coordinate of Ith loading callout, z( 1)
 0.000000     $ Z(I)  = axial coordinate of Ith loading callout, z( 2)
```

```
    H        $ SHELL WALL CONSTRUCTION FOLLOWS...
      10      $ NWALL=index (1, 2, 4, 5, 6, 7, 8, 9, 10) for wall construction
       2      $ NWALL2=index (2, 4, 5, 9) for wall construction
0.1600000E+08 $ E     = Young's modulus for skin
0.2500000     $ U     = Poisson's ratio for skin
0.4155000E-03 $ SM =mass density of skin (e.g. alum.=.00025 lb-sec**2/in**4)
 0.000000     $ ALPHA = coefficient of thermal expansion
       1      $ NRS  = control (0 or 1) for addition of smeared stiffeners
      -1      $ NSUR   = control for thickness input (0 or 1 or -1)
       1      $ NTYPET= index (1 or 3) for type of input for thickness
       2      $ NTVALU= number of callouts along segment for thickness
       2      $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
-1.597695     $ Z(I)  = axial coordinate of Ith thickness callout, z( 1)
 0.000000     $ Z(I)  = axial coordinate of Ith thickness callout, z( 2)
0.1000000     $ TVAL(i) = thickness at Ith callout, TVAL( 1)
0.1977900     $ TVAL(i) = thickness at Ith callout, TVAL( 2)
    Y        $ Do you want to print out ref. surf. location and thickness?
    H        $ SMEARED STIFFENER INPUT FOLLOWS...
    Y        $ Are there stringers or isogrid (please answer Y or N)?
       0      $ K1 =control (0 or 1) for internal or external stringers
0.1600000E+08 $ E1    = stringer modulus
0.2500000     $ U1    = stringer Poisson ratio
0.4155000E-03 $ STIFMD= stringer mass density
 2.915400     $ SPACNG= spacing of the isogrid members
    N        $ Is the stringer cross section constant in this segment?
       2      $ NSTATN=number of merid. callouts for cross section props.
       2      $ NTYPE=control for meaning of section callout (2=z, 3=r)
-1.597695     $ Z(I)  = axial coordinate of Ith section callout, z( 1)
 0.000000     $ Z(I)  = axial coordinate of Ith section callout, z( 2)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 1)
0.9053100E-01 $ T(i) = thickness of stringer at ith callout, T( 2)
0.3441700     $ H(i) = height of stringer at ith callout, H( 1)
0.4666000     $ H(i) = height of stringer at ith callout, H( 2)
    N        $ Are there rings (please answer Y or N)?
    N        $ Do you want to print out the C(i,j) at meridional stations?
    N        $ Do you want to print out distributed loads along meridian?
    H        $
    H        $ GLOBAL DATA BEGINS...
       1      $ NLAST = plot options  (-1=none, 0=geometry, 1=u,v,w)
    N        $ Are there any regions for which you want expanded plots?
```

```
46.00000     $ P      = pressure or surface traction multiplier
46.00000     $ DP     = pressure or surface traction multiplier increment
0.000000     $ TEMP   = temperature rise multiplier
0.000000     $ DTEMP  = temperature rise multiplier increment
    20       $ Number of load steps
0.000000     $ OMEGA  = angular vel. about axis of revolution (rad/sec)
0.000000     $ DOMEGA = angular velocity increment (rad/sec)
   H         $ CONSTRAINT CONDITIONS FOLLOW....
    12       $ How many segments in the structure?
   H         $
   H         $ CONSTRAINT CONDITIONS FOR SEGMENT NO.    1    1    1    1
   H         $ POLES INPUT FOLLOWS...
     1       $ Number of poles (places where r=0) in SEGMENT( 1)
     1       $ IPOLE = nodal point number of pole, IPOLE( 1)
   H         $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
     0       $ At how many stations is this segment constrained to ground?
   H         $ JUNCTION CONDITION INPUT FOLLOWS...
   N         $ Is this segment joined to any lower-numbered segments?
   H         $
   H         $ CONSTRAINT CONDITIONS FOR SEGMENT NO.    2    2    2    2
   H         $ POLES INPUT FOLLOWS...
     0       $ Number of poles (places where r=0) in SEGMENT( 2)
   H         $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
     0       $ At how many stations is this segment constrained to ground?
   H         $ JUNCTION CONDITION INPUT FOLLOWS...
   Y         $ Is this segment joined to any lower-numbered segments?
     1       $ At how may stations is this segment joined to previous segs.?
     1       $ INODE = node in current segment (ISEG) of junction, INODE( 1)
     1       $ JSEG  = segment no. of lowest segment involved in junction
    11       $ JNODE = node in lowest segmnt (JSEG) of junction
     1       $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
     1       $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
     1       $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
     1       $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000     $ D1     = radial component of juncture gap
0.000000     $ D2     = axial component of juncture gap
   Y         $ Is this constraint the same for both prebuckling and buckling?
   H         $
   H         $ CONSTRAINT CONDITIONS FOR SEGMENT NO.    3    3    3    3
   H         $ POLES INPUT FOLLOWS...
```

```
    0      $ Number of poles (places where r=0) in SEGMENT( 3)
  H        $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
    0      $ At how many stations is this segment constrained to ground?
  H        $ JUNCTION CONDITION INPUT FOLLOWS...
  Y        $ Is this segment joined to any lower-numbered segments?
    1      $ At how may stations is this segment joined to previous segs.?
    1      $ INODE = node in current segment (ISEG) of junction, INODE( 1)
    2      $ JSEG  = segment no. of lowest segment involved in junction
   11      $ JNODE = node in lowest segmnt (JSEG) of junction
    1      $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
    1      $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
    1      $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
    1      $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000     $ D1     = radial component of juncture gap
0.000000     $ D2     = axial component of juncture gap
  Y        $ Is this constraint the same for both prebuckling and buckling?
  H        $
  H        $ CONSTRAINT CONDITIONS FOR SEGMENT NO.    4    4    4    4
  H        $ POLES INPUT FOLLOWS...
    0      $ Number of poles (places where r=0) in SEGMENT( 4)
  H        $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
    0      $ At how many stations is this segment constrained to ground?
  H        $ JUNCTION CONDITION INPUT FOLLOWS...
  Y        $ Is this segment joined to any lower-numbered segments?
    1      $ At how may stations is this segment joined to previous segs.?
    1      $ INODE = node in current segment (ISEG) of junction, INODE( 1)
    3      $ JSEG  = segment no. of lowest segment involved in junction
   11      $ JNODE = node in lowest segmnt (JSEG) of junction
    1      $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
    1      $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
    1      $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
    1      $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000     $ D1     = radial component of juncture gap
0.000000     $ D2     = axial component of juncture gap
  Y        $ Is this constraint the same for both prebuckling and buckling?
  H        $
  H        $ CONSTRAINT CONDITIONS FOR SEGMENT NO.    5    5    5    5
  H        $ POLES INPUT FOLLOWS...
    0      $ Number of poles (places where r=0) in SEGMENT( 5)
  H        $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
```

```
    0      $ At how many stations is this segment constrained to ground?
  H        $ JUNCTION CONDITION INPUT FOLLOWS...
  Y        $ Is this segment joined to any lower-numbered segments?
    1      $ At how may stations is this segment joined to previous segs.?
    1      $ INODE = node in current segment (ISEG) of junction, INODE( 1)
    4      $ JSEG  = segment no. of lowest segment involved in junction
   11      $ JNODE = node in lowest segmnt (JSEG) of junction
    1      $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
    1      $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
    1      $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
    1      $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000    $ D1    = radial component of juncture gap
0.000000    $ D2    = axial component of juncture gap
  Y        $ Is this constraint the same for both prebuckling and buckling?
  H        $
  H        $ CONSTRAINT CONDITIONS FOR SEGMENT NO.    6    6    6    6
  H        $ POLES INPUT FOLLOWS...
    0      $ Number of poles (places where r=0) in SEGMENT( 6)
  H        $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
    0      $ At how many stations is this segment constrained to ground?
  H        $ JUNCTION CONDITION INPUT FOLLOWS...
  Y        $ Is this segment joined to any lower-numbered segments?
    1      $ At how may stations is this segment joined to previous segs.?
    1      $ INODE = node in current segment (ISEG) of junction, INODE( 1)
    5      $ JSEG  = segment no. of lowest segment involved in junction
   11      $ JNODE = node in lowest segmnt (JSEG) of junction
    1      $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
    1      $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
    1      $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
    1      $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000    $ D1    = radial component of juncture gap
0.000000    $ D2    = axial component of juncture gap
  Y        $ Is this constraint the same for both prebuckling and buckling?
  H        $
  H        $ CONSTRAINT CONDITIONS FOR SEGMENT NO.    7    7    7    7
  H        $ POLES INPUT FOLLOWS...
    0      $ Number of poles (places where r=0) in SEGMENT( 7)
  H        $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
    0      $ At how many stations is this segment constrained to ground?
  H        $ JUNCTION CONDITION INPUT FOLLOWS...
```

```
  Y        $ Is this segment joined to any lower-numbered segments?
    1      $ At how may stations is this segment joined to previous segs.?
    1      $ INODE = node in current segment (ISEG) of junction, INODE( 1)
    6      $ JSEG  = segment no. of lowest segment involved in junction
   11      $ JNODE = node in lowest segmnt (JSEG) of junction
    1      $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
    1      $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
    1      $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
    1      $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000     $ D1     = radial component of juncture gap
0.000000     $ D2     = axial component of juncture gap
  Y        $ Is this constraint the same for both prebuckling and buckling?
  H        $
  H        $ CONSTRAINT CONDITIONS FOR SEGMENT NO.    8    8    8    8
  H        $ POLES INPUT FOLLOWS...
    0      $ Number of poles (places where r=0) in SEGMENT( 8)
  H        $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
    0      $ At how many stations is this segment constrained to ground?
  H        $ JUNCTION CONDITION INPUT FOLLOWS...
  Y        $ Is this segment joined to any lower-numbered segments?
    1      $ At how may stations is this segment joined to previous segs.?
    1      $ INODE = node in current segment (ISEG) of junction, INODE( 1)
    7      $ JSEG  = segment no. of lowest segment involved in junction
   11      $ JNODE = node in lowest segmnt (JSEG) of junction
    1      $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
    1      $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
    1      $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
    1      $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000     $ D1     = radial component of juncture gap
0.000000     $ D2     = axial component of juncture gap
  Y        $ Is this constraint the same for both prebuckling and buckling?
  H        $
  H        $ CONSTRAINT CONDITIONS FOR SEGMENT NO.    9    9    9    9
  H        $ POLES INPUT FOLLOWS...
    0      $ Number of poles (places where r=0) in SEGMENT( 9)
  H        $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
    0      $ At how many stations is this segment constrained to ground?
  H        $ JUNCTION CONDITION INPUT FOLLOWS...
  Y        $ Is this segment joined to any lower-numbered segments?
    1      $ At how may stations is this segment joined to previous segs.?
```

```
     1       $ INODE = node in current segment (ISEG) of junction, INODE( 1)
     8       $ JSEG  = segment no. of lowest segment involved in junction
    11       $ JNODE = node in lowest segmnt (JSEG) of junction
     1       $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
     1       $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
     1       $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
     1       $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000     $ D1    = radial component of juncture gap
0.000000     $ D2    = axial component of juncture gap
   Y         $ Is this constraint the same for both prebuckling and buckling?
   H         $
   H         $ CONSTRAINT CONDITIONS FOR SEGMENT NO.   10   10   10   10
   H         $ POLES INPUT FOLLOWS...
     0       $ Number of poles (places where r=0) in SEGMENT(10)
   H         $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
     0       $ At how many stations is this segment constrained to ground?
   H         $ JUNCTION CONDITION INPUT FOLLOWS...
   Y         $ Is this segment joined to any lower-numbered segments?
     1       $ At how may stations is this segment joined to previous segs.?
     1       $ INODE = node in current segment (ISEG) of junction, INODE( 1)
     9       $ JSEG  = segment no. of lowest segment involved in junction
    11       $ JNODE = node in lowest segmnt (JSEG) of junction
     1       $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
     1       $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
     1       $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
     1       $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000     $ D1    = radial component of juncture gap
0.000000     $ D2    = axial component of juncture gap
   Y         $ Is this constraint the same for both prebuckling and buckling?
   H         $
   H         $ CONSTRAINT CONDITIONS FOR SEGMENT NO.   11   11   11   11
   H         $ POLES INPUT FOLLOWS...
     0       $ Number of poles (places where r=0) in SEGMENT(11)
   H         $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
     0       $ At how many stations is this segment constrained to ground?
   H         $ JUNCTION CONDITION INPUT FOLLOWS...
   Y         $ Is this segment joined to any lower-numbered segments?
     1       $ At how may stations is this segment joined to previous segs.?
     1       $ INODE = node in current segment (ISEG) of junction, INODE( 1)
    10       $ JSEG  = segment no. of lowest segment involved in junction
```

```
   11      $ JNODE = node in lowest segmnt (JSEG) of junction
    1      $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
    1      $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
    1      $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
    1      $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000   $ D1    = radial component of juncture gap
0.000000   $ D2    = axial component of juncture gap
  Y        $ Is this constraint the same for both prebuckling and buckling?
  H        $
  H        $ CONSTRAINT CONDITIONS FOR SEGMENT NO.   12   12   12   12
  H        $ POLES INPUT FOLLOWS...
    0      $ Number of poles (places where r=0) in SEGMENT(12)
  H        $ INPUT FOR CONSTRAINTS TO GROUND FOLLOWS...
    1      $ At how many stations is this segment constrained to ground?
   11      $ INODE = nodal point number of constraint to ground, INODE( 1)
    1      $ IUSTAR=axial displacement constraint (0 or 1 or 2)
    1      $ IVSTAR=circumferential displacement(0=free,1=0,2=imposed)
    0      $ IWSTAR=radial displacement(0=free,1=constrained,2=imposed)
    1      $ ICHI=meridional rotation (0=free,1=constrained,2=imposed)
0.000000   $ D1    = radial component of offset of ground support
0.000000   $ D2    = axial component of offset of ground support
  N        $ Is this constraint the same for both prebuckling and buckling?
    1      $ IUSTARB= axial displacement for buckling or vibration phase
    1      $ IVSTARB= circ. displacement for buckling or vibration phase
    0      $ IWSTARB= radial displacement for buckling or vibration
    1      $ ICHIB  = meridional rotation for buckling or vibration
  H        $ JUNCTION CONDITION INPUT FOLLOWS...
  Y        $ Is this segment joined to any lower-numbered segments?
    1      $ At how may stations is this segment joined to previous segs.?
    1      $ INODE = node in current segment (ISEG) of junction, INODE( 1)
   11      $ JSEG  = segment no. of lowest segment involved in junction
   11      $ JNODE = node in lowest segmnt (JSEG) of junction
    1      $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
    1      $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
    1      $ IWSTAR= radial displacement (0=not slaved, 1=slaved)
    1      $ ICHI  = meridional rotation (0=not slaved, 1=slaved)
0.000000   $ D1    = radial component of juncture gap
0.000000   $ D2    = axial component of juncture gap
  Y        $ Is this constraint the same for both prebuckling and buckling?
  H        $ RIGID BODY CONSTRAINT INPUT FOLLOWS...
```

N $ Given existing constraints, are rigid body modes possible?
H $ "GLOBAL3" QUESTIONS (AT END OF CASE)...
Y $ Do you want to list output for segment(1)
Y $ Do you want to list output for segment(2)
Y $ Do you want to list output for segment(3)
Y $ Do you want to list output for segment(4)
Y $ Do you want to list output for segment(5)
Y $ Do you want to list output for segment(6)
Y $ Do you want to list output for segment(7)
Y $ Do you want to list output for segment(8)
Y $ Do you want to list output for segment(9)
Y $ Do you want to list output for segment(10)
Y $ Do you want to list output for segment(11)
Y $ Do you want to list output for segment(12)
Y $ Do you want to list forces in the discrete rings, if any?
==