Table A25 List of the file, **eqellipse.stiffened.bosor5.-mode1.ALL** (**eqellipse.ALL**). This file contains valid input data for **BOSOR5** [25] for the optimized isogrid-stiffened imperfect 12-segment equivalent ellipsoidal shell. The imperfection shape is the axisymmetric -mode 1 linear bifurcation buckling modal shape with amplitude, Wimp = 0.2 inch. **This file is valid input for the BOSOR5 preprocessor, BOSORREAD.**

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 BOSOR5 eqellipse.stiffened.opm4,-mode1 imperf.
      12     $ NSEG  = number of shell segments (less than 95)
    H        $
    H        $ SEGMENT NUMBER    1    1    1    1
    H        $ NODAL POINT DISTRIBUTION FOLLOWS...
      11     $ NMESH=no. of node points (5=min.;98=max.)( 1)
       3     $ NTYPEH= control integer (1 or 2 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. P7)
 -12.37500     $ Z1     = axial coordinate at beginning of segment
  2.554500     $ R2     = radius at end of segment
 -12.30904     $ Z2     = 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)
-0.8874148     $ Imperfection normal displacement (normalized), WSHAPE( 9)
-0.8563773     $ Imperfection normal displacement (normalized), WSHAPE(10)
-0.8233898     $ Imperfection normal displacement (normalized), WSHAPE(11)
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-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
      1      $ NTYPEZ= control (1 or 3) for reference surface location
      2      $ NZVALU= number of meridional callouts for ref. surf.
      3      $ NTYPE = control for meaning of callout (2=z, 3=r)
 0.000000     $ R(I)  = radial coordinate of Ith callout, r( 1)
 2.554500     $ R(I)  = radial coordinate of Ith callout, r( 2)
 0.6676600     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
 0.6078300     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
    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        $ TEMPERATURE INPUT FOLLOWS...
    n        $ Do you want general information on loading?
      0      $ NTSTAT = number of temperature callout points along meridian
    H        $ PRESSURE INPUT FOLLOWS...
      2      $ NPSTAT = number of meridional callouts for pressure
      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)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
      0      $ PT(J)= meridional traction at callout point no.( 1)
      0      $ PT(J)= meridional traction at callout point no.( 2)
      1      $ ISTEP = control integer for time variation of pressure
    n        $ Do you want to print out distributed loads along meridian?
    H        $ LINE LOAD INPUT FOLLOWS...
      0      $ LINTYP=control for line loads or disp.(0=none,1=some)
    H        $ SHELL WALL CONSTRUCTION FOLLOWS...
    n        $ Do you want to include smeared stiffeners?
      2      $ LAYERS = number of layers (max. = 6)
    n        $ Are all the layers of constant thickness?
      1      $ MATL = type of material for shell wall layer no.( 1)
      2      $ MATL = type of material for shell wall layer no.( 2)
 198758.0     $ G(i) = shear modulus of ith layer, G( 1)
 6400000.     $ G(i) = shear modulus of ith layer, G( 2)
 496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
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0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
    y         $ Do you wish to include plasticity in this segment?
    n         $ Do you wish to include creep in this segment?
    y         $ Is this a new shell wall material?
      8       $ NPOINT = number of points in s.s.curve, layer no.( 1)
      5       $ NITEG=no. integration pts. thru thickness, layer no.( 1)
    n         $ Do you want to use power law for stress-strain curve?
 0.000000     $ EPS(i)=strain coordinates of s-s curve, EPS( 1)
0.7500000E-02 $ EPS(i)=strain coordinates of s-s curve, EPS( 2)
0.8800000E-02 $ EPS(i)=strain coordinates of s-s curve, EPS( 3)
0.1020000E-01 $ EPS(i)=strain coordinates of s-s curve, EPS( 4)
0.1220000E-01 $ EPS(i)=strain coordinates of s-s curve, EPS( 5)
0.1560000E-01 $ EPS(i)=strain coordinates of s-s curve, EPS( 6)
0.2000000E-01 $ EPS(i)=strain coordinates of s-s curve, EPS( 7)
0.4000000E-01 $ EPS(i)=strain coordinates of s-s curve, EPS( 8)
      0       $ SIG(i)=stress coordinates of s-s curve, SIG( 1)
 3726.710     $ SIG(i)=stress coordinates of s-s curve, SIG( 2)
 4285.710     $ SIG(i)=stress coordinates of s-s curve, SIG( 3)
 4596.270     $ SIG(i)=stress coordinates of s-s curve, SIG( 4)
 4844.720     $ SIG(i)=stress coordinates of s-s curve, SIG( 5)
 5093.170     $ SIG(i)=stress coordinates of s-s curve, SIG( 6)
 5124.220     $ SIG(i)=stress coordinates of s-s curve, SIG( 7)
 5155.280     $ SIG(i)=stress coordinates of s-s curve, SIG( 8)
    y         $ Is this a new shell wall material?
      8       $ NPOINT = number of points in s.s.curve, layer no.( 2)
      5       $ NITEG=no. integration pts. thru thickness, layer no.( 2)
    n         $ Do you want to use power law for stress-strain curve?
 0.000000     $ EPS(i)=strain coordinates of s-s curve, EPS( 1)
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0.7500000E-02 $ EPS(i)=strain coordinates of s-s curve, EPS( 2)
0.8800000E-02 $ EPS(i)=strain coordinates of s-s curve, EPS( 3)
0.1020000E-01 $ EPS(i)=strain coordinates of s-s curve, EPS( 4)
0.1220000E-01 $ EPS(i)=strain coordinates of s-s curve, EPS( 5)
0.1560000E-01 $ EPS(i)=strain coordinates of s-s curve, EPS( 6)
0.2000000E-01 $ EPS(i)=strain coordinates of s-s curve, EPS( 7)
0.4000000E-01 $ EPS(i)=strain coordinates of s-s curve, EPS( 8)
      0      $ SIG(i)=stress coordinates of s-s curve, SIG( 1)
 120000.0     $ SIG(i)=stress coordinates of s-s curve, SIG( 2)
 138000.0     $ SIG(i)=stress coordinates of s-s curve, SIG( 3)
 148000.0     $ SIG(i)=stress coordinates of s-s curve, SIG( 4)
 156000.0     $ SIG(i)=stress coordinates of s-s curve, SIG( 5)
 164000.0     $ SIG(i)=stress coordinates of s-s curve, SIG( 6)
 165000.0     $ SIG(i)=stress coordinates of s-s curve, SIG( 7)
 166000.0     $ SIG(i)=stress coordinates of s-s curve, SIG( 8)
      2      $ NTIN = number of meridional callouts for variable thickness
      3      $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
 0.000000     $ R(I)  = radial coordinate of Ith thickness callout, r( 1)
 2.554500     $ R(I)  = radial coordinate of Ith thickness callout, r( 2)
0.6676600     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.6078300     $ TIN(i) = thickness at Ith callout, TIN( 2)
0.1245300     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.1664100     $ TIN(i) = thickness at Ith callout, TIN( 2)
   n        $ Do you want to have C(i,j) printed for this segment?
   H        $ END OF DATA FOR THIS SEGMENT
   H        $
   H        $ SEGMENT NUMBER    2    2    2    2
   H        $ NODAL POINT DISTRIBUTION FOLLOWS...
     11      $ NMESH=no. of node points (5=min.;98=max.)( 2)
      3      $ NTYPEH= control integer (1 or 2 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. P7)
-12.30904     $ Z1     = axial coordinate at beginning of segment
 5.666450     $ R2     = radius at end of segment
-12.04630     $ Z2     = 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...
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      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)
-0.7877214    $ 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
      1       $ NTYPEZ= control (1 or 3) for reference surface location
      2       $ NZVALU= number of meridional callouts for ref. surf.
      3       $ NTYPE = control for meaning of callout (2=z, 3=r)
  2.554500    $ R(I)  = radial coordinate of Ith callout, r( 1)
  5.666450    $ R(I)  = radial coordinate of Ith callout, r( 2)
 0.6078300    $ TIN(i) = thickness at Ith callout, TIN( 1)
 0.9792800    $ TIN(i) = thickness at Ith callout, TIN( 2)
    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         $ TEMPERATURE INPUT FOLLOWS...
    n         $ Do you want general information on loading?
      0       $ NTSTAT = number of temperature callout points along meridian
    H         $ PRESSURE INPUT FOLLOWS...
      2       $ NPSTAT = number of meridional callouts for pressure
      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)
 -1.000000    $ PN(J)= normal pressure at meridional callout pt. no.( 1)
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-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
      0       $ PT(J)= meridional traction at callout point no.( 1)
      0       $ PT(J)= meridional traction at callout point no.( 2)
      1       $ ISTEP = control integer for time variation of pressure
    n         $ Do you want to print out distributed loads along meridian?
    H         $ LINE LOAD INPUT FOLLOWS...
      0       $ LINTYP=control for line loads or disp.(0=none,1=some)
    H         $ SHELL WALL CONSTRUCTION FOLLOWS...
    n         $ Do you want to include smeared stiffeners?
      2       $ LAYERS = number of layers (max. = 6)
    n         $ Are all the layers of constant thickness?
      1       $ MATL = type of material for shell wall layer no.( 1)
      2       $ MATL = type of material for shell wall layer no.( 2)
 198758.0     $ G(i) = shear modulus of ith layer, G( 1)
 6400000.     $ G(i) = shear modulus of ith layer, G( 2)
 496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
    y         $ Do you wish to include plasticity in this segment?
    n         $ Do you wish to include creep in this segment?
    n         $ Is this a new shell wall material?
    n         $ Is this a new shell wall material?
      2       $ NTIN = number of meridional callouts for variable 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)
0.6078300     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.9792800     $ TIN(i) = thickness at Ith callout, TIN( 2)
0.1664100     $ TIN(i) = thickness at Ith callout, TIN( 1)
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0.1446000     $ TIN(i) = thickness at Ith callout, TIN( 2)
    n         $ Do you want to have C(i,j) printed for this segment?
    H         $ END OF DATA FOR THIS SEGMENT
    H         $
    H         $ SEGMENT NUMBER    3    3    3    3
    H         $ NODAL POINT DISTRIBUTION FOLLOWS...
     11       $ NMESH=no. of node points (5=min.;98=max.)( 3)
      3       $ NTYPEH= control integer (1 or 2 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. P7)
-12.04630     $ Z1     = axial coordinate at beginning of segment
 8.753630     $ R2     = radius at end of segment
-11.57515     $ Z2     = 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
      1       $ NTYPEZ= control (1 or 3) for reference surface location
      2       $ NZVALU= number of meridional callouts for ref. surf.
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      3      $ NTYPE = control for meaning of callout (2=z, 3=r)
 5.666450     $ R(I)  = radial coordinate of Ith callout, r( 1)
 8.753630     $ R(I)  = radial coordinate of Ith callout, r( 2)
0.9792800     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
1.2562000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
    n        $ 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        $ TEMPERATURE INPUT FOLLOWS...
    n        $ Do you want general information on loading?
      0      $ NTSTAT = number of temperature callout points along meridian
    H        $ PRESSURE INPUT FOLLOWS...
      2      $ NPSTAT = number of meridional callouts for pressure
      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)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
      0      $ PT(J)= meridional traction at callout point no.( 1)
      0      $ PT(J)= meridional traction at callout point no.( 2)
      1      $ ISTEP = control integer for time variation of pressure
    n        $ Do you want to print out distributed loads along meridian?
    H        $ LINE LOAD INPUT FOLLOWS...
      0      $ LINTYP=control for line loads or disp.(0=none,1=some)
    H        $ SHELL WALL CONSTRUCTION FOLLOWS...
    n        $ Do you want to include smeared stiffeners?
      2      $ LAYERS = number of layers (max. = 6)
    n        $ Are all the layers of constant thickness?
      1      $ MATL = type of material for shell wall layer no.( 1)
      2      $ MATL = type of material for shell wall layer no.( 2)
 198758.0     $ G(i) = shear modulus of ith layer, G( 1)
 6400000.     $ G(i) = shear modulus of ith layer, G( 2)
 496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
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0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
      0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
      0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
      0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
      0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
    y        $ Do you wish to include plasticity in this segment?
    n        $ Do you wish to include creep in this segment?
    n        $ Is this a new shell wall material?
    n        $ Is this a new shell wall material?
      2      $ NTIN = number of meridional callouts for variable 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)
0.9792800     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
1.2562000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
0.1446000     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.1608200     $ TIN(i) = thickness at Ith callout, TIN( 2)
    n        $ Do you want to have C(i,j) printed for this segment?
    H        $ END OF DATA FOR THIS SEGMENT
    H        $
    H        $ SEGMENT NUMBER    4    4    4    4
    H        $ NODAL POINT DISTRIBUTION FOLLOWS...
     11      $ NMESH=no. of node points (5=min.;98=max.)( 4)
      3      $ NTYPEH= control integer (1 or 2 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. P7)
-11.57515     $ Z1     = axial coordinate at beginning of segment
 11.79770     $ R2     = radius at end of segment
-10.87861     $ Z2     = 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)
```

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     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)
 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
      1      $ NTYPEZ= control (1 or 3) for reference surface location
      2      $ NZVALU= number of meridional callouts for ref. surf.
      3      $ NTYPE = control for meaning of callout (2=z, 3=r)
  8.753630     $ R(I)  = radial coordinate of Ith callout, r( 1)
  11.79770     $ R(I)  = radial coordinate of Ith callout, r( 2)
  1.256200     $ TIN(i) = thickness at Ith callout, TIN( 1)
  1.154000     $ TIN(i) = thickness at Ith callout, TIN( 2)
    n        $ 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        $ TEMPERATURE INPUT FOLLOWS...
    n        $ Do you want general information on loading?
      0      $ NTSTAT = number of temperature callout points along meridian
    H        $ PRESSURE INPUT FOLLOWS...
      2      $ NPSTAT = number of meridional callouts for pressure
      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)
 -1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
 -1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
      0      $ PT(J)= meridional traction at callout point no.( 1)
      0      $ PT(J)= meridional traction at callout point no.( 2)
      1      $ ISTEP = control integer for time variation of pressure
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   n        $ Do you want to print out distributed loads along meridian?
   H        $ LINE LOAD INPUT FOLLOWS...
     0      $ LINTYP=control for line loads or disp.(0=none,1=some)
   H        $ SHELL WALL CONSTRUCTION FOLLOWS...
   n        $ Do you want to include smeared stiffeners?
     2      $ LAYERS = number of layers (max. = 6)
   n        $ Are all the layers of constant thickness?
     1      $ MATL = type of material for shell wall layer no.( 1)
     2      $ MATL = type of material for shell wall layer no.( 2)
 198758.0     $ G(i) = shear modulus of ith layer, G( 1)
 6400000.     $ G(i) = shear modulus of ith layer, G( 2)
 496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
     0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
     0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
     0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
     0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
   y        $ Do you wish to include plasticity in this segment?
   n        $ Do you wish to include creep in this segment?
   n        $ Is this a new shell wall material?
   n        $ Is this a new shell wall material?
     2      $ NTIN = number of meridional callouts for variable 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)
 1.256200     $ TIN(i) = thickness at Ith callout, TIN( 1)
 1.154000     $ TIN(i) = thickness at Ith callout, TIN( 2)
0.1608200     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.1041200     $ TIN(i) = thickness at Ith callout, TIN( 2)
   n        $ Do you want to have C(i,j) printed for this segment?
   H        $ END OF DATA FOR THIS SEGMENT
   H        $
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    H        $ SEGMENT NUMBER    5    5    5    5
    H        $ NODAL POINT DISTRIBUTION FOLLOWS...
      11      $ NMESH=no. of node points (5=min.;98=max.)( 5)
       3     $ NTYPEH= control integer (1 or 2 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. P7)
-10.87861     $ Z1     = axial coordinate at beginning of segment
 14.77232     $ R2     = radius at end of segment
-9.929011     $ Z2     = 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)
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
       1     $ NTYPEZ= control (1 or 3) for reference surface location
       2     $ NZVALU= number of meridional callouts for ref. surf.
       3     $ NTYPE = control for meaning of callout (2=z, 3=r)
 11.79770     $ R(I)  = radial coordinate of Ith callout, r( 1)
 14.77232     $ R(I)  = radial coordinate of Ith callout, r( 2)
 1.154000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
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0.8042200     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
    n         $ 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         $ TEMPERATURE INPUT FOLLOWS...
    n         $ Do you want general information on loading?
      0       $ NTSTAT = number of temperature callout points along meridian
    H         $ PRESSURE INPUT FOLLOWS...
      2       $ NPSTAT = number of meridional callouts for pressure
      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)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
      0       $ PT(J)= meridional traction at callout point no.( 1)
      0       $ PT(J)= meridional traction at callout point no.( 2)
      1       $ ISTEP = control integer for time variation of pressure
    n         $ Do you want to print out distributed loads along meridian?
    H         $ LINE LOAD INPUT FOLLOWS...
      0       $ LINTYP=control for line loads or disp.(0=none,1=some)
    H         $ SHELL WALL CONSTRUCTION FOLLOWS...
    n         $ Do you want to include smeared stiffeners?
      2       $ LAYERS = number of layers (max. = 6)
    n         $ Are all the layers of constant thickness?
      1       $ MATL = type of material for shell wall layer no.( 1)
      2       $ MATL = type of material for shell wall layer no.( 2)
 198758.0     $ G(i) = shear modulus of ith layer, G( 1)
 6400000.     $ G(i) = shear modulus of ith layer, G( 2)
 496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
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     0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
   y        $ Do you wish to include plasticity in this segment?
   n        $ Do you wish to include creep in this segment?
   n        $ Is this a new shell wall material?
   n        $ Is this a new shell wall material?
     2      $ NTIN = number of meridional callouts for variable 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)
 1.154000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
0.8042200     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
0.1041200     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.1000000     $ TIN(i) = thickness at Ith callout, TIN( 2)
   n        $ Do you want to have C(i,j) printed for this segment?
   H        $ END OF DATA FOR THIS SEGMENT
   H        $
   H        $ SEGMENT NUMBER    6    6    6    6
   H        $ NODAL POINT DISTRIBUTION FOLLOWS...
    11      $ NMESH=no. of node points (5=min.;98=max.)( 6)
     3      $ NTYPEH= control integer (1 or 2 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. P7)
-9.929011     $ Z1     = axial coordinate at beginning of segment
 17.63477     $ R2     = radius at end of segment
-8.682992     $ Z2     = 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)
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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
      1       $ NTYPEZ= control (1 or 3) for reference surface location
      2       $ NZVALU= number of meridional callouts for ref. surf.
      3       $ NTYPE = control for meaning of callout (2=z, 3=r)
 14.77232     $ R(I)  = radial coordinate of Ith callout, r( 1)
 17.63477     $ R(I)  = radial coordinate of Ith callout, r( 2)
0.8042200     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
1.2686000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
   n        $ 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        $ TEMPERATURE INPUT FOLLOWS...
   n        $ Do you want general information on loading?
      0       $ NTSTAT = number of temperature callout points along meridian
   H        $ PRESSURE INPUT FOLLOWS...
      2       $ NPSTAT = number of meridional callouts for pressure
      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)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
      0       $ PT(J)= meridional traction at callout point no.( 1)
      0       $ PT(J)= meridional traction at callout point no.( 2)
      1       $ ISTEP = control integer for time variation of pressure
   n        $ Do you want to print out distributed loads along meridian?
   H        $ LINE LOAD INPUT FOLLOWS...
      0       $ LINTYP=control for line loads or disp.(0=none,1=some)
   H        $ SHELL WALL CONSTRUCTION FOLLOWS...
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   n        $ Do you want to include smeared stiffeners?
     2      $ LAYERS = number of layers (max. = 6)
   n        $ Are all the layers of constant thickness?
     1      $ MATL = type of material for shell wall layer no.( 1)
     2      $ MATL = type of material for shell wall layer no.( 2)
 198758.0    $ G(i) = shear modulus of ith layer, G( 1)
 6400000.    $ G(i) = shear modulus of ith layer, G( 2)
 496894.4    $ EX(i)= modulus in meridional direction, EX( 1)
0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4    $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
     0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
     0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
     0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
     0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000    $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000    $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
   y        $ Do you wish to include plasticity in this segment?
   n        $ Do you wish to include creep in this segment?
   n        $ Is this a new shell wall material?
   n        $ Is this a new shell wall material?
     2      $ NTIN = number of meridional callouts for variable 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)
0.8042200     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
1.2686000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
0.1000000     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.1016200     $ TIN(i) = thickness at Ith callout, TIN( 2)
   n        $ Do you want to have C(i,j) printed for this segment?
   H        $ END OF DATA FOR THIS SEGMENT
   H        $
   H        $ SEGMENT NUMBER    7    7    7    7
   H        $ NODAL POINT DISTRIBUTION FOLLOWS...
    11      $ NMESH=no. of node points (5=min.;98=max.)( 7)
     3      $ NTYPEH= control integer (1 or 2 or 3) for nodal point spacing
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    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. P7)
-8.682992     $ Z1     = axial coordinate at beginning of segment
 19.63631     $ R2     = radius at end of segment
-7.532891     $ Z2     = 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
      1      $ NTYPEZ= control (1 or 3) for reference surface location
      2      $ NZVALU= number of meridional callouts for ref. surf.
      3      $ NTYPE = control for meaning of callout (2=z, 3=r)
 17.63477     $ R(I)  = radial coordinate of Ith callout, r( 1)
 19.63631     $ R(I)  = radial coordinate of Ith callout, r( 2)
 1.2686000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
 0.8833900     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
    n        $ 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        $ TEMPERATURE INPUT FOLLOWS...
   n        $ Do you want general information on loading?
     0      $ NTSTAT = number of temperature callout points along meridian
   H        $ PRESSURE INPUT FOLLOWS...
     2      $ NPSTAT = number of meridional callouts for pressure
     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)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
     0      $ PT(J)= meridional traction at callout point no.( 1)
     0      $ PT(J)= meridional traction at callout point no.( 2)
     1      $ ISTEP = control integer for time variation of pressure
   n        $ Do you want to print out distributed loads along meridian?
   H        $ LINE LOAD INPUT FOLLOWS...
     0      $ LINTYP=control for line loads or disp.(0=none,1=some)
   H        $ SHELL WALL CONSTRUCTION FOLLOWS...
   n        $ Do you want to include smeared stiffeners?
     2      $ LAYERS = number of layers (max. = 6)
   n        $ Are all the layers of constant thickness?
     1      $ MATL = type of material for shell wall layer no.( 1)
     2      $ MATL = type of material for shell wall layer no.( 2)
 198758.0     $ G(i) = shear modulus of ith layer, G( 1)
 6400000.     $ G(i) = shear modulus of ith layer, G( 2)
 496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
     0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
     0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
     0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
     0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
   y        $ Do you wish to include plasticity in this segment?
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   n        $ Do you wish to include creep in this segment?
   n        $ Is this a new shell wall material?
   n        $ Is this a new shell wall material?
     2      $ NTIN = number of meridional callouts for variable 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)
 1.2686000    $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
 0.8833900    $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
 0.1016200    $ TIN(i) = thickness at Ith callout, TIN( 1)
 0.1379500    $ TIN(i) = thickness at Ith callout, TIN( 2)
   n        $ Do you want to have C(i,j) printed for this segment?
   H        $ END OF DATA FOR THIS SEGMENT
   H        $
   H        $ SEGMENT NUMBER    8    8    8    8
   H        $ NODAL POINT DISTRIBUTION FOLLOWS...
    11      $ NMESH=no. of node points (5=min.;98=max.)( 8)
     3      $ NTYPEH= control integer (1 or 2 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. P7)
-7.532891     $ Z1     = axial coordinate at beginning of segment
 21.26065     $ R2     = radius at end of segment
-6.335362     $ Z2     = 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)
-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)
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-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
      1        $ NTYPEZ= control (1 or 3) for reference surface location
      2        $ NZVALU= number of meridional callouts for ref. surf.
      2        $ NTYPE = control for meaning of callout (2=z, 3=r)
 -7.532891     $ Z(I)  = axial coordinate of Ith callout, z( 1)
 -6.335362     $ Z(I)  = axial coordinate of Ith callout, z( 2)
 0.8833900     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
 0.7056000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
    n          $ 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          $ TEMPERATURE INPUT FOLLOWS...
    n          $ Do you want general information on loading?
      0        $ NTSTAT = number of temperature callout points along meridian
    H          $ PRESSURE INPUT FOLLOWS...
      2        $ NPSTAT = number of meridional callouts for pressure
      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)
 -1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
 -1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
      0        $ PT(J)= meridional traction at callout point no.( 1)
      0        $ PT(J)= meridional traction at callout point no.( 2)
      1        $ ISTEP = control integer for time variation of pressure
    n          $ Do you want to print out distributed loads along meridian?
    H          $ LINE LOAD INPUT FOLLOWS...
      0        $ LINTYP=control for line loads or disp.(0=none,1=some)
    H          $ SHELL WALL CONSTRUCTION FOLLOWS...
    n          $ Do you want to include smeared stiffeners?
      2        $ LAYERS = number of layers (max. = 6)
    n          $ Are all the layers of constant thickness?
      1        $ MATL = type of material for shell wall layer no.( 1)
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      2      $ MATL = type of material for shell wall layer no.( 2)
 198758.0     $ G(i) = shear modulus of ith layer, G( 1)
 6400000.     $ G(i) = shear modulus of ith layer, G( 2)
 496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
      0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
      0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
      0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
      0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
    y        $ Do you wish to include plasticity in this segment?
    n        $ Do you wish to include creep in this segment?
    n        $ Is this a new shell wall material?
    n        $ Is this a new shell wall material?
      2      $ NTIN = number of meridional callouts for variable 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)
0.8833900     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
0.7056000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
0.1379500     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.1020100     $ TIN(i) = thickness at Ith callout, TIN( 2)
    n        $ Do you want to have C(i,j) printed for this segment?
    H        $ END OF DATA FOR THIS SEGMENT
    H        $
    H        $ SEGMENT NUMBER    9    9    9    9
    H        $ NODAL POINT DISTRIBUTION FOLLOWS...
     11       $ NMESH=no. of node points (5=min.;98=max.)( 9)
      3      $ NTYPEH= control integer (1 or 2 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. P7)
-6.335362     $ Z1     = axial coordinate at beginning of segment
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 22.70426     $ R2     = radius at end of segment
-4.926436     $ Z2     = axial coordinate at end of segment
 13.07984     $ RC     = radius from axis of rev. to center of curvature
 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
      1       $ NTYPEZ= control (1 or 3) for reference surface location
      2       $ NZVALU= number of meridional callouts for ref. surf.
      2       $ NTYPE = control for meaning of callout (2=z, 3=r)
-6.335362     $ Z(I)  = axial coordinate of Ith callout, z( 1)
-4.926436     $ Z(I)  = axial coordinate of Ith callout, z( 2)
 0.7056000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
 0.5844500     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
    n         $ 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         $ TEMPERATURE INPUT FOLLOWS...
    n         $ Do you want general information on loading?
      0       $ NTSTAT = number of temperature callout points along meridian
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   H        $ PRESSURE INPUT FOLLOWS...
     2      $ NPSTAT = number of meridional callouts for pressure
     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)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
     0      $ PT(J)= meridional traction at callout point no.( 1)
     0      $ PT(J)= meridional traction at callout point no.( 2)
     1      $ ISTEP = control integer for time variation of pressure
   n        $ Do you want to print out distributed loads along meridian?
   H        $ LINE LOAD INPUT FOLLOWS...
     0      $ LINTYP=control for line loads or disp.(0=none,1=some)
   H        $ SHELL WALL CONSTRUCTION FOLLOWS...
   n        $ Do you want to include smeared stiffeners?
     2      $ LAYERS = number of layers (max. = 6)
   n        $ Are all the layers of constant thickness?
     1      $ MATL = type of material for shell wall layer no.( 1)
     2      $ MATL = type of material for shell wall layer no.( 2)
 198758.0     $ G(i) = shear modulus of ith layer, G( 1)
 6400000.     $ G(i) = shear modulus of ith layer, G( 2)
 496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
     0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
     0      $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
     0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
     0      $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
   y        $ Do you wish to include plasticity in this segment?
   n        $ Do you wish to include creep in this segment?
   n        $ Is this a new shell wall material?
   n        $ Is this a new shell wall material?
     2      $ NTIN = number of meridional callouts for variable thickness
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      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)
 0.7056000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
 0.5844500     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
 0.1020100     $ TIN(i) = thickness at Ith callout, TIN( 1)
 0.1041100     $ TIN(i) = thickness at Ith callout, TIN( 2)
    n        $ Do you want to have C(i,j) printed for this segment?
    H        $ END OF DATA FOR THIS SEGMENT
    H        $
    H        $ SEGMENT NUMBER   10   10   10   10
    H        $ NODAL POINT DISTRIBUTION FOLLOWS...
     11      $ NMESH=no. of node points (5=min.;98=max.)(10)
      3      $ NTYPEH= control integer (1 or 2 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. P7)
 -4.926436     $ Z1     = axial coordinate at beginning of segment
  23.86535     $ R2     = radius at end of segment
 -3.279007     $ Z2     = 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)
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-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
      1       $ NTYPEZ= control (1 or 3) for reference surface location
      2       $ NZVALU= number of meridional callouts for ref. surf.
      2       $ NTYPE = control for meaning of callout (2=z, 3=r)
 -4.926436     $ Z(I)  = axial coordinate of Ith callout, z( 1)
 -3.279006     $ Z(I)  = axial coordinate of Ith callout, z( 2)
 0.5844500     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
 0.5158100     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
    n         $ 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         $ TEMPERATURE INPUT FOLLOWS...
    n         $ Do you want general information on loading?
      0       $ NTSTAT = number of temperature callout points along meridian
    H         $ PRESSURE INPUT FOLLOWS...
      2       $ NPSTAT = number of meridional callouts for pressure
      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)
 -1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
 -1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
      0       $ PT(J)= meridional traction at callout point no.( 1)
      0       $ PT(J)= meridional traction at callout point no.( 2)
      1       $ ISTEP = control integer for time variation of pressure
    n         $ Do you want to print out distributed loads along meridian?
    H         $ LINE LOAD INPUT FOLLOWS...
      0       $ LINTYP=control for line loads or disp.(0=none,1=some)
    H         $ SHELL WALL CONSTRUCTION FOLLOWS...
    n         $ Do you want to include smeared stiffeners?
      2       $ LAYERS = number of layers (max. = 6)
    n         $ Are all the layers of constant thickness?
      1       $ MATL = type of material for shell wall layer no.( 1)
      2       $ MATL = type of material for shell wall layer no.( 2)
  198758.0     $ G(i) = shear modulus of ith layer, G( 1)
  6400000.     $ G(i) = shear modulus of ith layer, G( 2)
  496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
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0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
    y         $ Do you wish to include plasticity in this segment?
    n         $ Do you wish to include creep in this segment?
    n         $ Is this a new shell wall material?
    n         $ Is this a new shell wall material?
      2       $ NTIN = number of meridional callouts for variable 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)
0.5844500     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
0.5158100     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
0.1041100     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.1986900     $ TIN(i) = thickness at Ith callout, TIN( 2)
    n         $ Do you want to have C(i,j) printed for this segment?
    H         $ END OF DATA FOR THIS SEGMENT
    H         $
    H         $ SEGMENT NUMBER   11   11   11   11
    H         $ NODAL POINT DISTRIBUTION FOLLOWS...
     11       $ NMESH=no. of node points (5=min.;98=max.)(11)
      3       $ NTYPEH= control integer (1 or 2 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. P7)
-3.279007     $ Z1     = axial coordinate at beginning of segment
 24.54286     $ R2     = radius at end of segment
-1.597695     $ Z2     = 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
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 -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)
 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
       1       $ NTYPEZ= control (1 or 3) for reference surface location
       2       $ NZVALU= number of meridional callouts for ref. surf.
       2       $ NTYPE = control for meaning of callout (2=z, 3=r)
 -3.279006     $ Z(I)  = axial coordinate of Ith callout, z( 1)
 -1.597695     $ Z(I)  = axial coordinate of Ith callout, z( 2)
 0.5158100     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
 0.3441700     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
    n          $ 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          $ TEMPERATURE INPUT FOLLOWS...
    n          $ Do you want general information on loading?
       0       $ NTSTAT = number of temperature callout points along meridian
    H          $ PRESSURE INPUT FOLLOWS...
       2       $ NPSTAT = number of meridional callouts for pressure
       2       $ NTYPE = control for meaning of loading callout (2=z, 3=r)
 -3.279006     $ Z(I)  = axial coordinate of Ith loading callout, z( 1)
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-1.597695     $ Z(I)  = axial coordinate of Ith loading callout, z( 2)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
      0       $ PT(J)= meridional traction at callout point no.( 1)
      0       $ PT(J)= meridional traction at callout point no.( 2)
      1       $ ISTEP = control integer for time variation of pressure
   n          $ Do you want to print out distributed loads along meridian?
   H          $ LINE LOAD INPUT FOLLOWS...
      0       $ LINTYP=control for line loads or disp.(0=none,1=some)
   H          $ SHELL WALL CONSTRUCTION FOLLOWS...
   n          $ Do you want to include smeared stiffeners?
      2       $ LAYERS = number of layers (max. = 6)
   n          $ Are all the layers of constant thickness?
      1       $ MATL = type of material for shell wall layer no.( 1)
      2       $ MATL = type of material for shell wall layer no.( 2)
 198758.0     $ G(i) = shear modulus of ith layer, G( 1)
 6400000.     $ G(i) = shear modulus of ith layer, G( 2)
 496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
   y          $ Do you wish to include plasticity in this segment?
   n          $ Do you wish to include creep in this segment?
   n          $ Is this a new shell wall material?
   n          $ Is this a new shell wall material?
      2       $ NTIN = number of meridional callouts for variable thickness
      2       $ NTYPE = control for meaning of thickness callout (2=z, 3=r)
-3.279006     $ Z(I)  = axial coordinate of Ith thickness callout, z( 1)
-1.597695     $ Z(I)  = axial coordinate of Ith thickness callout, z( 2)
0.5158100     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
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0.3441700     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
0.1986900     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.1000000     $ TIN(i) = thickness at Ith callout, TIN( 2)
   n        $ Do you want to have C(i,j) printed for this segment?
   H        $ END OF DATA FOR THIS SEGMENT
   H        $
   H        $ SEGMENT NUMBER   12   12   12   12
   H        $ NODAL POINT DISTRIBUTION FOLLOWS...
     11      $ NMESH=no. of node points (5=min.;98=max.)(12)
      3      $ NTYPEH= control integer (1 or 2 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. P7)
-1.597695     $ Z1     = axial coordinate at beginning of segment
 24.75000     $ R2     = radius at end of segment
 0.000000     $ Z2     = 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)
      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
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      1       $ NTYPEZ= control (1 or 3) for reference surface location
      2       $ NZVALU= number of meridional callouts for ref. surf.
      2       $ NTYPE = control for meaning of callout (2=z, 3=r)
-1.597695     $ Z(I)  = axial coordinate of Ith callout, z( 1)
 0.000000     $ Z(I)  = axial coordinate of Ith callout, z( 2)
0.3441700     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
0.4666000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
    n         $ 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         $ TEMPERATURE INPUT FOLLOWS...
    n         $ Do you want general information on loading?
      0       $ NTSTAT = number of temperature callout points along meridian
    H         $ PRESSURE INPUT FOLLOWS...
      2       $ NPSTAT = number of meridional callouts for pressure
      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)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 1)
-1.000000     $ PN(J)= normal pressure at meridional callout pt. no.( 2)
      0       $ PT(J)= meridional traction at callout point no.( 1)
      0       $ PT(J)= meridional traction at callout point no.( 2)
      1       $ ISTEP = control integer for time variation of pressure
    n         $ Do you want to print out distributed loads along meridian?
    H         $ LINE LOAD INPUT FOLLOWS...
      0       $ LINTYP=control for line loads or disp.(0=none,1=some)
    H         $ SHELL WALL CONSTRUCTION FOLLOWS...
    n         $ Do you want to include smeared stiffeners?
      2       $ LAYERS = number of layers (max. = 6)
    n         $ Are all the layers of constant thickness?
      1       $ MATL = type of material for shell wall layer no.( 1)
      2       $ MATL = type of material for shell wall layer no.( 2)
 198758.0     $ G(i) = shear modulus of ith layer, G( 1)
 6400000.     $ G(i) = shear modulus of ith layer, G( 2)
 496894.4     $ EX(i)= modulus in meridional direction, EX( 1)
0.1600000E+08 $ EX(i)= modulus in meridional direction, EX( 2)
 496894.4     $ EY(i)= modulus in circumferential direction, EY( 1)
0.1600000E+08 $ EY(i)= modulus in circumferential direction, EY( 2)
0.3333300     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 1)
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0.2500000     $ UXY(i)= Poisson's ratio (EY*UXY = EX*UYX).   UXY( 2)
0.3861000E-04 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 1)
0.4144000E-03 $ SM(i)=mass density (e.g. alum.=.00025 lb-sec**2/in**4),SM( 2)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 1)
      0       $ ALPHA1(i)=coef. thermal exp. in merid. direction, ALPHA1( 2)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 1)
      0       $ ALPHA2(i)=coef. thermal exp. in circ. direction, ALPHA2( 2)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 1)
 1.600000     $ EPSALW(i)=maximum allowable effective strain (in %), EPSALW( 2)
    y         $ Do you wish to include plasticity in this segment?
    n         $ Do you wish to include creep in this segment?
    n         $ Is this a new shell wall material?
    n         $ Is this a new shell wall material?
      2       $ NTIN = number of meridional callouts for variable 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)
0.3441700     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 1)
0.4666000     $ ZVAL  = distance from leftmost surf. to ref. surf.,ZVAL( 2)
0.1000000     $ TIN(i) = thickness at Ith callout, TIN( 1)
0.1977900     $ TIN(i) = thickness at Ith callout, TIN( 2)
    n         $ Do you want to have C(i,j) printed for this segment?
    H         $ END OF DATA FOR THIS SEGMENT
    H         $
    H         $ GLOBAL DATA BEGINS...
    H         $ LOADING TIME FUNCTIONS FOLLOW
    n         $ Do you want information on time functions for loading?
      1       $ IUTIME = control for time increment (0 or 1). IUTIME
 100.0000     $ DTIME = time increment
 10000.00     $ TMAX = maximum time to be encountered during this case
      1       $ NFTIME= number of different functions of time
      2       $ NPOINT=no. of points j for ith load factor F(i,j). i=( 1)
      0       $ T(i,j)=jth time callout for ith time function, j =( 1)
 1000000.     $ T(i,j)=jth time callout for ith time function, j =( 2)
      0       $ F(i,j)=jth value for ith load factor. j =( 1)
 1000000.     $ F(i,j)=jth value for ith load factor. j =( 2)
    H         $ CONSTRAINT CONDITIONS FOLLOW....
     12       $ How many segments are there in the structure?
    H         $
    H         $ CONSTRAINT CONDITIONS FOR SEGMENT NO.    1    1    1    1
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  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 segment (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 segment (JSEG) of junction
    1      $ IUSTAR= axial displacement (0=not slaved, 1=slaved)
    1      $ IVSTAR= circumferential displacement (0=not slaved, 1=slaved)
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     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 segment (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 segment (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)
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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 segment (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 segment (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
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   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 segment (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 segment (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         $
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  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 segment (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 segment (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...
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   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=constrained)
   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 segment (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?
 0.7000000    $ WPRALL= maximum allowable displacement, WPRALL
=================================================================
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