

Table 12 Input data for the PANDA2 processor STAGSUNIT (allenrngs.STG) for generating the STAGS input files, allenrngs34803.bin and allenrngs34803.inp. This file, called allenrngs.STG when STAGSUNIT is executed, is stored as allenrngs.superopt1.5bay.yvariablesspacing3.480.stg.table12 . This is the best *.STG file for producing a STAGS model with enough finite element mesh density in the neighborhood of one of the central stringers to capture the local concentration of effective stress in the panel skin near the skin/stringer intersection. See Fig. 30.

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n          $ Do you want a tutorial session and tutorial output?
1          $ Choose type of STAGS analysis (1,3,4,5,6),INDIC
0          $ Restart from ISTARTth load step (0=1st nonlinear soln), ISTART
1.000000   $ Local buckling load factor from PANDA2, EIGLOC
y          $ Are the dimensions in this case in inches?
0          $ Nonlinear (0) or linear (1) kinematic relations?, ILIN
0          $ Type 1 for closed (360-deg) cyl. shell, 0 otherwise, ITOTAL
9.779300   $ X-direction length of the STAGS model of the panel: XSTAGS
12.35250   $ Panel length in the plane of the screen, L2
y          $ Is the nodal point spacing uniform along the stringer axis?
61         $ Number of nodes in the X-direction: NODEX
-100.0000  $ Resultant (e.g. lb/in) normal to the plane of screen, Nx
0          $ Resultant (e.g. lb/in) in the plane of the screen,   Ny
0          $ In-plane shear in load set A,                        Nxy
0          $ Normal pressure in STAGS model in Load Set A, p
0          $ Resultant (e.g. lb/in) normal to the plane of screen, Nx0
0          $ Resultant (e.g. lb/in) in the plane of the screen,   Ny0
0          $ Normal pressure in STAGS model in Load Set B, p0
1.000000   $ Starting load factor for Load System A, STLD(1)
0          $ Load factor increment for Load System A, STEP(1)
1.000000   $ Maximum load factor for Load System A, FACM(1)
0          $ Starting load factor for Load System B, STLD(2)
0          $ Load factor increment for Load System B, STEP(2)
0          $ Maximum load factor for Load System B, FACM(2)
1          $ How many eigenvalues do you want? NEIGS
480        $ Choose element type: 480 or 410 or 940
n          $ Have you obtained buckling modes from STAGS for this case?
132        $ Number of stringers in STAGS model of 360-deg. cylinder
2          $ Number of rings in the STAGS model of the panel
y          $ Are there rings at the ends of the panel?
0          $ Number of finite elements between adjacent stringers
50         $ Number of finite elements over circumference, NELCIR
30         $ Number of finite elements between adjacent rings
3          $ Stringer model: 1 or 2 or 3 or 4 or 5 (Type H(elp))
3          $ Ring model: 1 or 2 or 3 or 4 or 5 (Type H(elp))
0          $ Reference surface of cyl: 1=outer, 0=middle, -1=inner
n          $ Do you want to use fasteners (they are like rigid links)?
n          $ Are the stringers to be "smeared out"?
n          $ Is the nodal point spacing uniform around the circumference?
5.095772   $ Circ. callout Y(i) where the nodal point spacing changes, Y( 1)
19         $ Number of nodes n(i) from Y(i-1) to Y(i) (n=odd!), n( 1)
y          $ Are there any more interior axial stations y where dy changes?
5.378870   $ Circ. callout Y(i) where the nodal point spacing changes, Y( 2)
3          $ Number of nodes n(i) from Y(i-1) to Y(i) (n=odd!), n( 2)
y          $ Are there any more interior axial stations y where dy changes?
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5.945067    $ Circ. callout Y(i) where the nodal point spacing changes, Y( 3)
           17    $ Number of nodes n(i) from Y(i-1) to Y(i) (n=odd!), n( 3)
           y     $ Are there any more interior axial stations y where dy changes?
6.228166    $ Circ. callout Y(i) where the nodal point spacing changes, Y( 4)
           3     $ Number of nodes n(i) from Y(i-1) to Y(i) (n=odd!), n( 4)
           y     $ Are there any more interior axial stations y where dy changes?
7.926756    $ Circ. callout Y(i) where the nodal point spacing changes, Y( 5)
           7     $ Number of nodes n(i) from Y(i-1) to Y(i) (n=odd!), n( 5)
           y     $ Are there any more interior axial stations y where dy changes?
9.059150    $ Circ. callout Y(i) where the nodal point spacing changes, Y( 6)
           9     $ Number of nodes n(i) from Y(i-1) to Y(i) (n=odd!), n( 6)
           n     $ Are there any more interior axial stations y where dy changes?
           19    $ Number of nodes n(i) from last Y to y = YSTAGS, n( 7)
           n     $ Are the rings to be "smeared out"?
           5     $ Number of nodes over height of stiffener webs, NODWEB
           5     $ Number of nodes over width of stringer flange, NDFLGS
           5     $ Number of nodes over width of ring flange, NDFLGR
           n     $ Do you want stringer(s) with a high nodal point density?
           n     $ Do you want ring(s) with a high nodal point density?
           n     $ Is there plasticity in this STAGS model?
           n     $ Do you want to use the "least-squares" model for torque?
           n     $ Is stiffener sidesway permitted at the panel edges?
           n     $ Do you want symmetry conditions along the straight edges?
           1     $ Edges normal to screen (0) in-plane deformable; (1) rigid
           1     $ Edges parallel to screen (0) in-plane deformable; (1) rigid
           1     $ Stringer web axial displacement index, IBCX0XL=0 or 1

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