Shell segment 2

STAGS 360-degree model

1.117E+05	
1.050E+05	
9.835E+04	
9.168E+04	
8.501E+04	
7.834E+04	
7.167E+04	
6.500E+04	
5.833E+04	
5.166E+04	
4.499E+04	
3.832E+04	
3.165E+04	
2.498E+04	
1.831E+04	
1.164E+04	

Optimized unstiffened equivalent ellipsoidal shell
PA= 1.0: applied external pressure = PA x 460 = 460 psi
step 9 fabrication system, seff, layer 2, outer fiber
nonlinear effective stress (psi) in shell skin - layer 2 outer fiber
eqellipse.unstiffened.opm4 with a -mode 2 imperfection with Wimp = -0.2 inch

Θ x -35.84
Θ y -13.14
Θ z   35.63

8.716E+00

Fig. 93 STAGS model predicting **outer fiber effective stress, seff (psi),** in the externally pressurized, optimized **imperfect unstiffened** equivalent ellipsoidal shell with a **–mode 2** axisymmetric buckling modal imperfection (BIGBOSOR4 model in Fig. 75 and STAGS model in Fig. 78) with amplitude, Wimp=-0.2 inch. BIGBOSOR4 predicts the maximum effective stress near the pole (Region 1) occurs in Segment 2 and equals 111300 psi. (See part 4 of Table 61).