



Optimized imperfect unstiffened equivalent ellipsoidal shell with thick apex (Segment 1 in Fig. 2)

PA=1.0, PB = 0.0

External pressure = design pressure = 460 psi

nonlinear effective stress (psi) at the INNER fiber of the skin (skin = layer 2 in the STAGS model)

-mode 1 axisymmetric imperfection shape; amplitude, Wimp=0.2 inch

$\Theta$  x -35.84  
 $\Theta$  y -13.14  
 $\Theta$  z 35.63  
 y z x  
 8.131E+00

Fig. 157 STAGS prediction of **inner fiber** effective stress in the shell skin for the **optimized unstiffened equivalent ellipsoidal shell with the thick apex with  $t(\text{apex}) = 0.4$  inch;  $W_{\text{imp}}=0.2$  inch; the optimum design is listed in Table 78. There is an axisymmetric -mode 1 imperfection with amplitude,  $W_{\text{imp}} = 0.2$  inch.** Compare the maximum effective stress here with that from BIGBOSOR4 listed in the section of Table 81 headed “-mode 1”. Also, compare with Fig. 90, which pertains to the unstiffened optimum design listed in Table 33 with a -mode 1 axisymmetric imperfection.