



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

Θ x -35.84
 Θ y -13.14
 Θ z 35.63
 8.103E+00

Fig. 153 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. 86, which pertains to the unstiffened optimum design listed in Table 33 with a +mode 1 axisymmetric imperfection.