



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 OUTER fiber of the skin (skin = layer 2 in the STAGS model)

-mode 2 axisymmetric imperfection shape; amplitude, Wimp=0.2 inch

Θx -35.84

Θy -13.14

Θz 35.63

8.097E+00

y z x

Fig. 160 STAGS prediction of **outer 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 2 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 2”. Also, compare with Fig. 93, which pertains to the unstiffened optimum design listed in Table 33 with a -mode 2 axisymmetric imperfection.