

eqellipse.stiffened.opm4: meridional stress (psi) in isogrid "layer"; 10-degree STAGS model, Units 9-12

PA= 1.0: applied external pressure = PA x 460 = 460 psi

Step 8, layer 1, sigma1 at inner fiber of the isogrid "layer"

Equivalent isogrid-stiffened ellipsoidal shell with +mode 2 imperfection, Wimp=+0.2 inch

NOTE: Use a factor, 32.2, to get the maximum stress in isogrid member

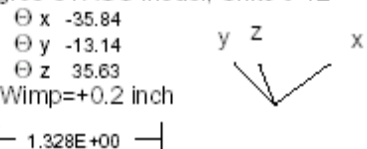


Fig. 42 STAGS prediction of the **inner fiber meridional stress sigma1 (psi) in the isogrid "layer"** of the optimized **+mode 2 imperfect isogrid-stiffened** equivalent ellipsoidal shell subjected to the external design pressure,  $p = 460$  psi. Compare with Fig. 25. To obtain the STAGS prediction of actual stress in a meridionally oriented isogrid member, multiply the "sigma1" values listed in the key by the factor 32.2, which is the ratio of the isogrid spacing to the thickness of an isogrid member in the optimized design.