Optimized unstiffened shell, t(apex)=0.62 in: mode 2 axisymmetric imperfecti

BIGBOSOR4 model

Axial Station (inches); Compare with Fig. 227

Radius(inches); The shell design is listed in Table 93.

Fig. 230 Axisymmetric **mode 2** linear buckling mode from BIGBOSOR4 for the **optimized unstiffened equivalent ellipsoidal shell with the thick apex of uniform thickness, t(apex) = 0.61996 inch; the optimum design is listed in Table 93.** The shell, with the lower bound tmin(apex) = 0.6 inch, was optimized with plus and minus axisymmetric buckling modal imperfection shapes, mode 1 and mode 2 with amplitude, **Wimp=0.2** inch. With t(apex) = 0.4 inch (Fig. 146) the shell apex is not thick enough to prevent the maximum linear buckling modal displacement from occurring at the pole of the shell. However, with t(apex) increased from 0.4 inch to 0.61996 inch (the optimized value of (t(apex)) the mode 2 axisymmetric linear buckling mode shown here has maximum amplitude in the region away from the apex with smaller normal displacement at and in the immediate neighborhood of the apex. Compare with Fig. 227. Also, compare with Fig. 75, which pertains to the optimized shell with a nonuniform t(apex).