



Fig. 223 Elastic-plastic analysis of the **optimized unstiffened equivalent ellipsoidal shell with the thick apex with  $t(\text{apex}) = 0.47183$  inch;  $W_{\text{imp}}=0.1$  inch**, half the amplitude,  $W_{\text{imp}} = 0.2$  inch, that pertains to the results in Figs. 145 – 200 and Tables 78 – 88; **the optimum design is listed in Table 89**. State of the shell at load set B (PB) step no. 24 of Run 1. (See Fig. 216). Load set B consists of a number of concentrated inward-directed normal **loads** applied along Row 2 of Shell Segment 5 (Figs. 2, 169, 205) distributed as  $\cos(\theta)$  from  $\theta = 0$  to 90 degrees in the circumferential coordinate. This load distribution is used because it generates a dent that **locally** resembles the negative of the deformation in Fig. 205, that is, the negative of the linear buckling modal imperfection with  $n = 1$  circumferential wave. Compare with Fig. 218, also with Fig. 181, which applies to a different optimum design: that listed in Table 78, for which  $W_{\text{imp}}=0.2$  inch.