



Fig. 198 Elastic-plastic analysis of 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.** State of the shell at load set B (PB) step no. 76 at the end of Run 6. (See Fig. 193). This is the **inner fiber** meridional plastic strain, epx, associated with the residual dent shown in the previous figure. Load set B consists of a number of concentrated normal inward-directed imposed **displacements** applied along the junction of Shell segments 3 and 4 (Figs. 2, 169, 181, 190, 191) distributed as  $\cos(\theta)$  from  $\theta = 0$  to  $90$  degrees in the circumferential coordinate along Row no. 5 in Shell Units 11 and 12. (See Table a40). This imposed normal displacement distribution is used because it generates a dent that **locally** resembles the deformation in Figs. 190 and 191, that is, the linear buckling modal imperfection with  $n = 1$  circumferential wave.