



Fig. 173 Elastic-plastic analysis of the **optimized unstiffened equivalent ellipsoidal shell with thick apex,  $t(\text{apex})=0.4$  inch;  $W_{\text{imp}}=0.2$  inch; the optimum design is listed in Table 78.** This figure pertains to the same (unloaded) state depicted in Fig. 171. Shown here is the residual meridional **inner fiber** plastic strain, epx, in the unloaded shell. Here the residual dent is produced by the application and removal of pressure on a **single finite element** (like a single normal, inward-directed concentrated load).