



FIG. 9.4 Critical  $J$ - $B$ - $\varepsilon$  surface for commercial Nb<sub>3</sub>Sn superconductors at 4.2 K, showing the relative dependence of critical current on magnetic field  $B$  and axial strain  $\varepsilon$  (from Ekin 1983b). The conductor is superconducting below this surface, but transforms *reversibly* into the resistive state above the surface. Line A-B represents the maximum (nearly strain-free) critical current as a function of magnetic field. Line D-E represents a typical  $J_c$ -vs.- $\varepsilon$  curve at a given magnetic field.