

2c. AREA DEFECTS.

GRAIN BOUNDARIES CREATE AREA DEFECTS IN CRYSTALLINE STRUCTURE. THESE BOUNDARIES IMPEDE DISLOCATIONS AS THEY ARE BETWEEN CRYSTALS IN A MATERIAL, CHANGING THEIR ORIENTATION IN THE STRUCTURE.

d) 3 STAGES OF CREEP:

PRIMARY: MATERIAL DEFORMS ~~TO~~ DUE TO APPLICATION OF LOAD. STRAIN RATE SLOWS DUE TO WORK HARDENING

SECONDARY: THE PREDICTABLE STAGE, DEFORMATION STABILISES TO ACT LINEARLY.

TERTIARY: PRIOR TO FAILURE THE MATERIAL EXPERIENCES RAPID DEFORMATION.