

Problem 7.32

Recovery and recrystallization are the first two after effects following the cold-working of a metal.

- In recovery dislocations will tend to move in a way that relieves residual stress built up by the cold-working process. Dislocations can also cancel out, diminishing dislocation density. Electrical and thermal properties recover. Mechanical properties change slightly in that strength diminishes some, and ductility increases a little.
- In recrystallization a new grain structure is initiated and grows. As this happens major decreases in strength and increases in ductility ensue. The long distorted grains present after CW are replaced by new small equiaxed grains.