1 Chapter 8 - Powers Screws and Non-Permanent connections

Sections covered: 8.1 – 8.11

Topics covered:

1. Power screw and threaded fastener terminology and geometry. Make sure to know the difference between Acme, Square, UNS, ISO and how to compute mean and root diameters.
2. Torque to raise, lower, efficiency and self-locking, collar friction.
3. Stress is screws and fasteners (axial and torsional).
4. Stresses in threads (bearing, bending, shear)
5. Buckling of screws and fasteners using the J.B. Johnson formula
6. Tension joints fastened with bolts
7. Stiffness of bolts and parts
8. Forces in bolts and parts
9. Static load factors of safety against axial stress failure in bolts and separation
10. Fatigue loading on tension joints
11. Factor of safety against bolt failure due to fatigue loading