

Review--Exam II

Fatigue

- Marin factors
- Endurance Limit
- S-N curves
- Goodman failure Criteria
- von Mises stresses
- notch sensitivities
- fatigue stress concentrations
- alternating and mean stresses

Shafts

- specifying a shaft diameter
- ASME elliptic--when is it appropriate
- derivation of formulas for diameters using MSST and DET + Goodman

Bearings

- bearing types
- calculating dynamic load rating
- how to pick a bearing from a vendor catalog
- how to handle combined radial and thrust loads
- what kinds of bearings are best for radial loads, thrust loads, combined loads

Gears

- Gear nomenclature
- calculating gear parameters and geometry
- what is an involute profile--why is this geometry significant
- bending stresses
- surface stresses
- strengths
- factors of safety