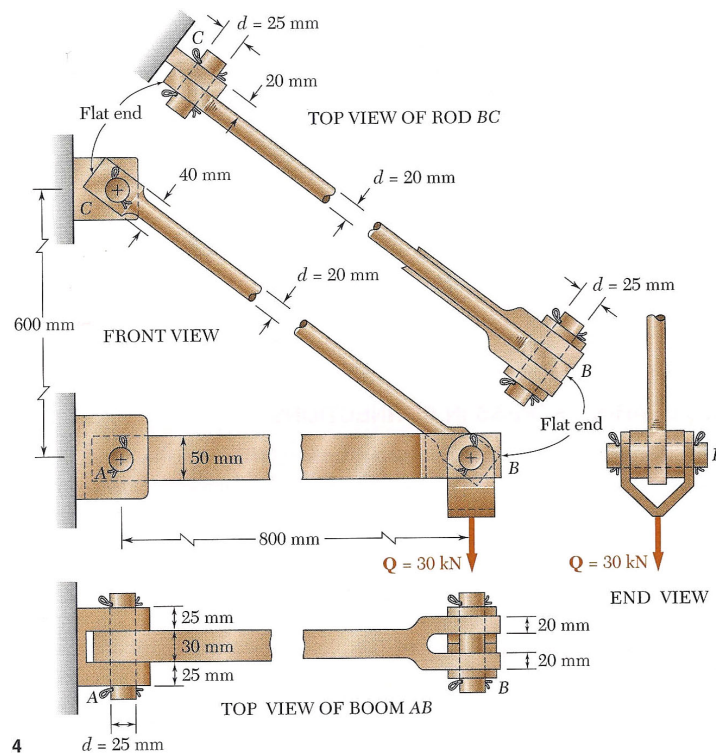


Stress Calculations – Example 1



From statics we can determine:

$$F_{BC} = 50 \text{ kN} = 11,240 \text{ lb}_f \text{ (Tension)}$$

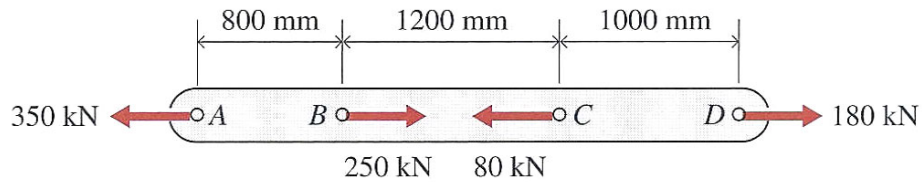
$$F_{AB} = 40 \text{ kN} = 8992 \text{ lb}_f \text{ (Compression)}$$

Specifications:

- Joints are single and double shear connections (frictionless)
- The distance from the center of the hole of joint C to the end of the member is 25mm

Determine:

- The average normal stress in member BC
- The maximum normal stress in member BC at joint C
- The bearing stress in member BC at joint C
- The bearing stress in the wall bracket at joint A
- The shear tear out stress in member BC at joint C
- The shear stress in pin C
- The shear stress in pin B

Stress Calculations – Example 2**Specifications:**

- Width = 100 mm
- Thickness = 25 mm
- Load applied at pins at points A, B, C and D
- All pins are 40 mm diameter
- All pin joints are double shear

Assumptions:

- Disregard stress concentration at hole

Determine:

- Axial stress in the bar on the cross section at pin B
- The average bearing stress on the bar at pin B
- The shear stress on the pin at A