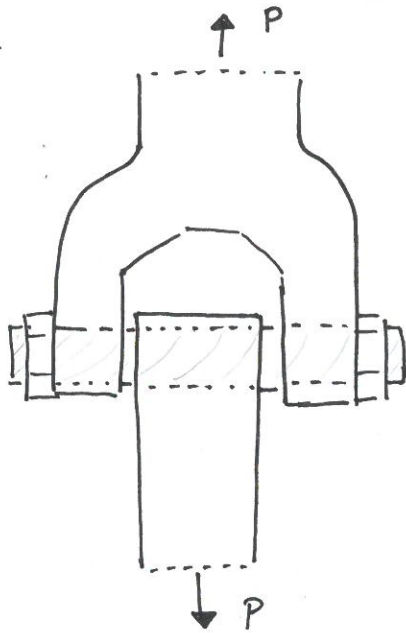


2.3.6

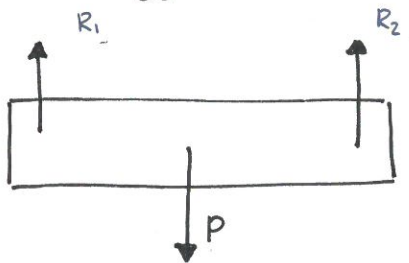
Bult i anordning

Givet

× Bultdiameter 10 mm

× $P = 1000 \text{ N}$ Sökt Medelshjuvspänning i bultLösning

1. Frilägg



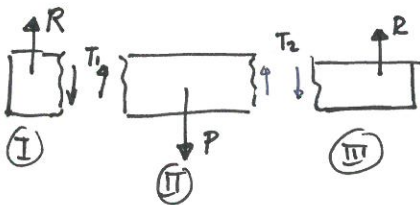
2. Jmv

 $(R_1 = R_2 = R \text{ p.g. symmetri})$

$$\uparrow: R - P + R = 0$$

$$\Rightarrow R = \frac{P}{2}$$

3. Snitta



4. Jmv

$$\uparrow_I: R - T_1 = 0 \Rightarrow T_1 = \frac{P}{2}$$

$$\uparrow_{II}: T_1 - P + T_2 = 0 \Rightarrow T_2 = \frac{P}{2}$$

$$\Leftrightarrow T_1 = T_2 = T = \frac{P}{2}$$

5. Medelshjuvspänning

$$\left[\tau = \frac{T}{A} \right] \Rightarrow$$

$$\tau = \frac{\frac{P}{2}}{A} = \left\{ A = \frac{\pi d^2}{4} \right\} = \frac{P}{2} \cdot \frac{4}{\pi d^2} = \frac{2P}{\pi d^2} =$$

$$= \frac{2 \cdot 1000}{\pi \cdot 10^2} = \underline{\underline{6.4 \text{ MPa}}}$$

$$\frac{\text{N}}{\text{mm}^2} = \text{MPa ok!}$$