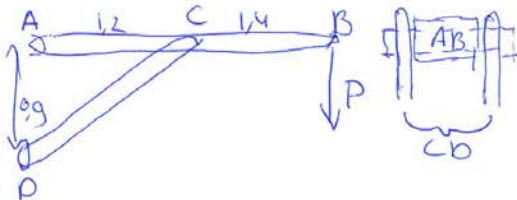


Balk AB wordt ondersteund door dwarsbalk CD

$$P = 12 \text{ kN}$$



Toelaatbare spanning in bevestiging is 90 MPa
 wat is de min. afmeting d in mm?

Oplissing:

$$\sum M_A = 0$$

$$C_y \cdot 1.2 - P \cdot (1.2 + 1.4) = 0$$

$$C_y = 26 \text{ kN}$$

Werklijn van de kracht gaat door C & D

$$C_x = 1.2$$

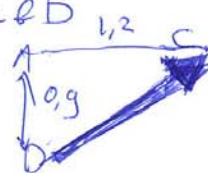
$$C_x = 0.9 C_y$$

$$C_x = 34.67 \text{ kN}$$

$$F_{CD} = \sqrt{C_x^2 + C_y^2}$$

$$= \sqrt{34.67^2 + 26^2}$$

$$= 43.33 \text{ kN}$$



$$\tau_{toelaatbare} = \frac{F_{CD}}{A} = \frac{43.33}{\frac{\pi d^2}{4}} = 0.481 \text{ n}^2$$

$$CD \text{ bestaat uit 2 delen} \rightarrow \frac{0.481}{2} = 0.241 \text{ n}^2$$

$$A = \frac{\pi d^2}{4}$$

$$0.241 = \frac{\pi d^2}{4}$$

$$d = \sqrt{\frac{4A}{\pi}}$$

$$= \sqrt{\frac{4 \cdot 0.241}{\pi}}$$

$$= 17.48 \text{ mm}$$