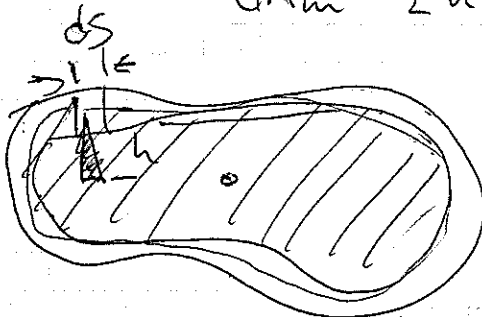


$$dA_m = \frac{1}{2} h ds$$

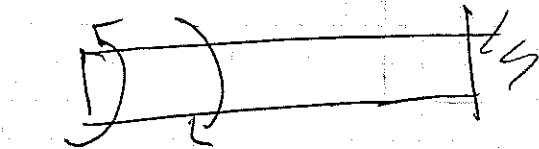


$$dA_m = \frac{1}{2} h ds$$

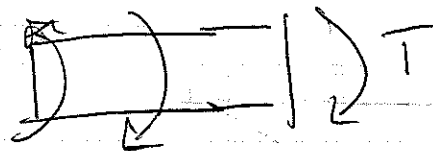
$$2A_m = \oint h ds$$

$$T = \oint h \tau_{avg} t ds$$

$$T = 2q A_m$$

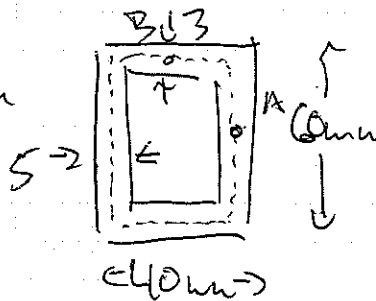


$$60 \text{ mm} \quad 25 \text{ mm}$$



$$T = 60 - 25$$

$$T = 2q A_m$$



$$A_m = (35 \text{ mm}) (5 \text{ mm})$$

$$= 1995 \text{ mm}^2$$

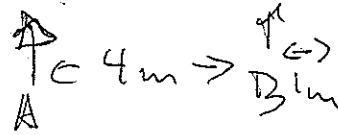
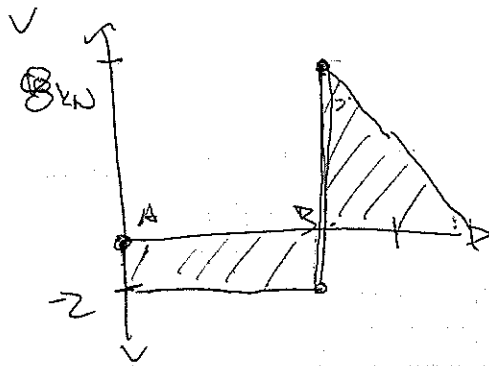
$$q = \frac{T}{2A_m} = \frac{35 \text{ N}\cdot\text{m}}{2(1995) \text{ mm}^2} \cdot \frac{10^6 \text{ mm}^2}{1 \text{ m}^2}$$

$$= \tau_{avg} t = 8772 \text{ Pa}\cdot\text{m}$$

$$\tau_A (5 \text{ mm}) \geq 1.75 \text{ MPa}$$

$$\tau_B (3 \text{ mm}) \geq 2.92 \text{ MPa}$$

# EXAMPLE 7.9



$$A + B = 8$$

$$4B - 5(8) = 0$$

$$B = 10 \text{ kN}$$

$$A = -2 \text{ kN}$$

