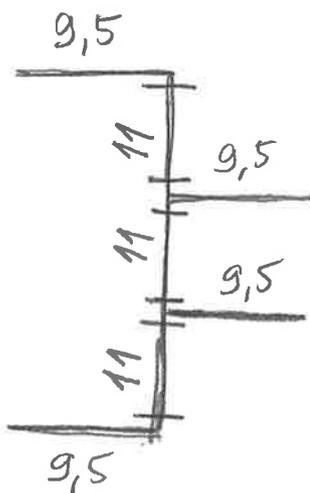


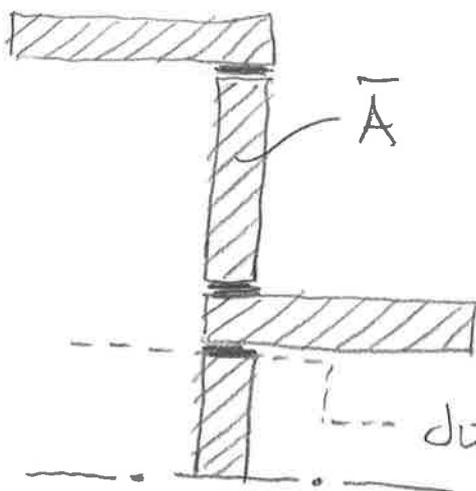
5) Determinar resistência da cola e C da ST abaixo ($V = 25 \text{ kN}$)



$$A = 4 \times 9,5 + 3 \times 11 = 71 \text{ cm}^2$$

$$I = \frac{1 \times 33^3}{12} + 2 \times 9,5 \times 16,5^2 + 2 \times 9,5 \times 5,5^2$$

$$I = 8742,25 \text{ cm}^4$$

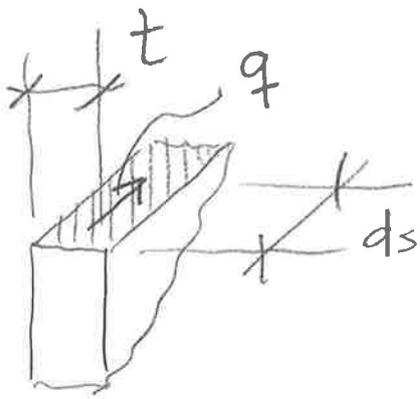


a) $q = \frac{25 \times \bar{S}}{I}$

$$\bar{S} = 9,5 \times 16,5 + 11 \times 11 + 9,5 \times 5,5$$

$$\bar{S} = 330 \text{ cm}^3$$

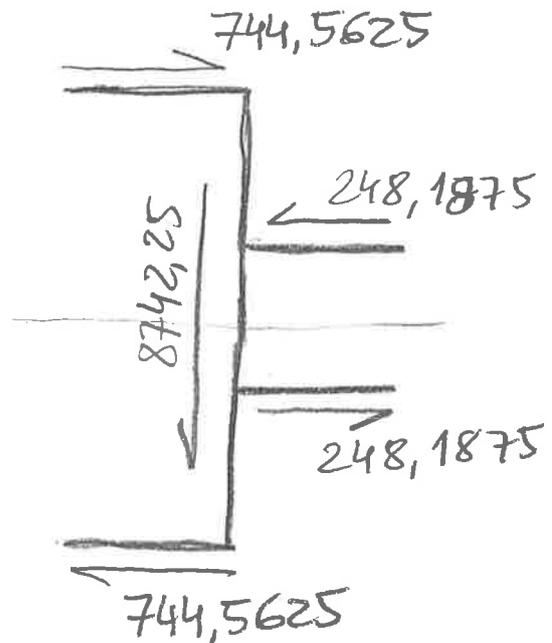
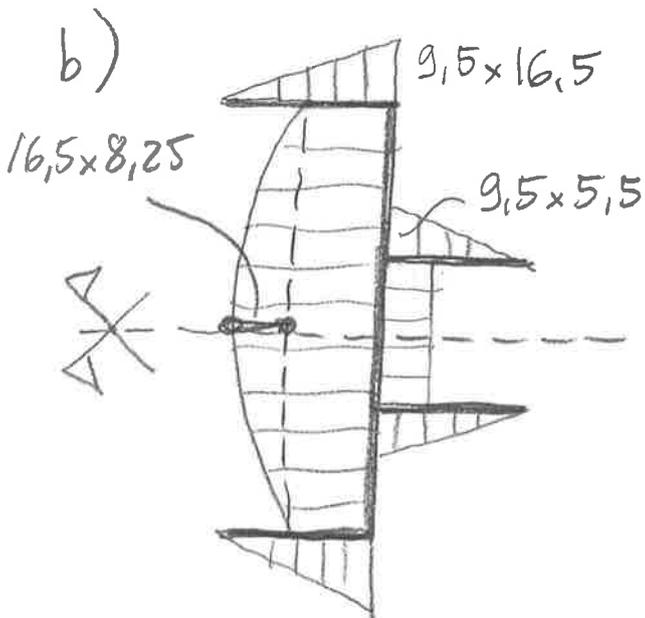
$$q = \frac{25 \times 330}{8742,25} = 0,9437 \frac{\text{kN}}{\text{cm}}$$



$$1,6 q ds = \bar{\sigma} \times t \times ds$$

$$\bar{\sigma} = 1,6 \times 0,9437$$

$$\bar{\sigma} = 1,51 \text{ KN/cm}^2$$



Equilibrio

$$\left. \begin{array}{l} 744,5625 \times 33 = 24571 \quad \curvearrowright \\ - 248,1875 \times 11 = 2730 \quad \curvearrowleft \end{array} \right\} 21841 \quad \curvearrowright$$

$$\curvearrowleft 8742,25 \times d = 21841$$

$$d = 2,50 \text{ cm}$$

