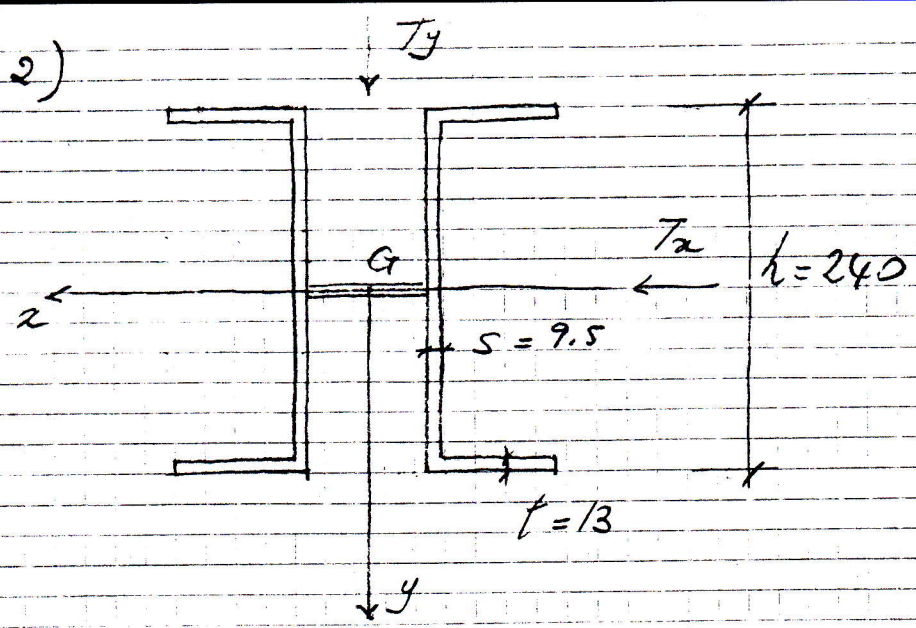


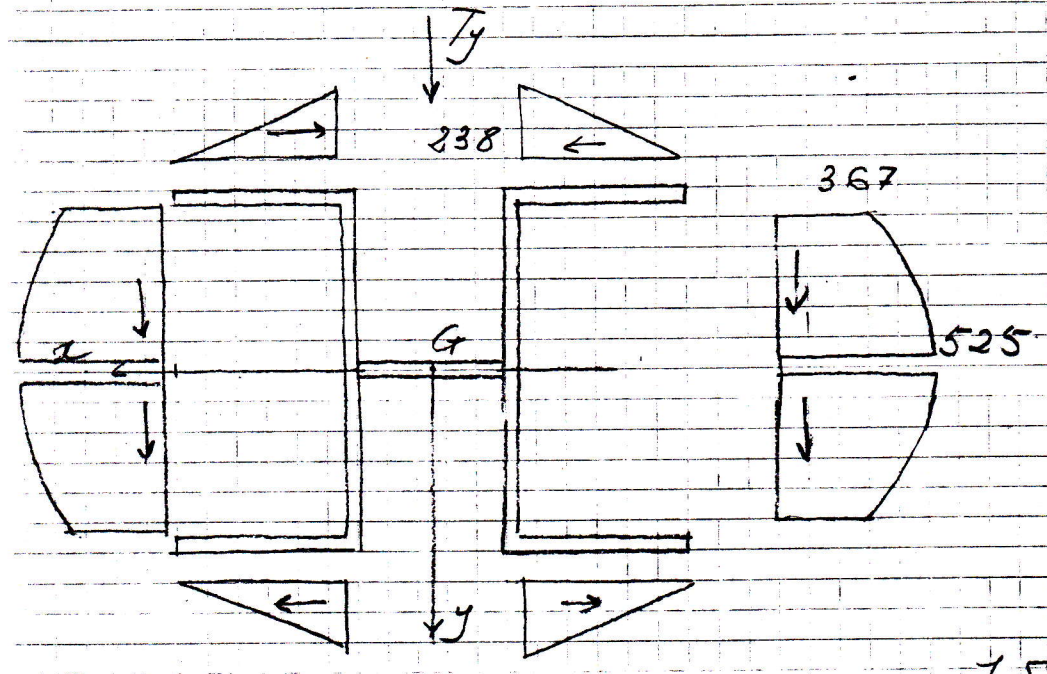
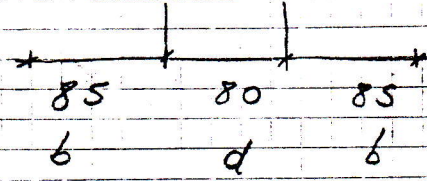


$$I_x = 7198 \text{ cm}^4$$

$$I_y = 3788 \text{ cm}^4$$

$$T_y = 20.000 \text{ kg}$$

$$T_x = 20.000 \text{ kg}$$



$$\sigma_{zx \text{ max}} = \frac{T_y}{I_x} \frac{S_x}{t} = \frac{20.000 (8,5 - 0,95) \cdot 1,3 \cdot (12 - 0,65)}{7198 \cdot 1,3}$$

$$= -238 \text{ kg/cm}^2$$

$$\sigma_{zy \text{ min}} = \frac{T_y}{I_x} \frac{S_x}{s} = \frac{20.000 (8,5 \cdot 1,3 \cdot 11,35)}{7198 \cdot 0,95}$$

$$= -367 \text{ kg/cm}^2$$