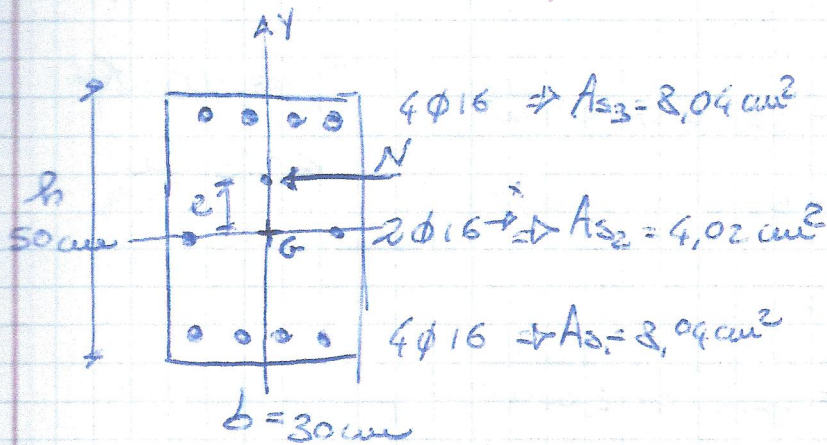


Verifica a passo flessionale (Tens. ammissibili)



$$N = 200 \text{ kN}$$

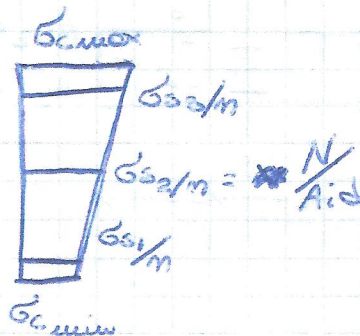
$$\bar{\sigma}_c = 8,5 \text{ MPa}$$

$$\bar{\sigma}_s = 220 \text{ MPa}$$

$$e = 7 \text{ cm}$$

$$y_G = \frac{b}{2} = 25 \text{ cm}$$

$$f_{m,y} = \frac{f_y^3}{\frac{b}{2}}$$



$$f_y^2 = \frac{I_{id,x}}{A_{id}}$$

$$A_{id} = b \cdot h + m(A_{s1} + A_{s2} + A_{s3}) = 1801 \text{ cm}^2$$

$$I_{id,x} = \frac{b h^3}{12} + m A_{s1} (h/2 - d')^2 + m (A_{s3}) (h/2 - d')^2 = 423995 \text{ cm}^4$$

$$f_y^2 = 235,42 \text{ cm}^2$$

$$f_{m,y} = 9,42 \text{ cm} > e \quad \rightarrow \text{piccola eccentricità}$$

$$\sigma_{c,max} = \frac{N}{A_{id}} + \frac{N \cdot e}{I_{id,x}} \cdot y_G = 7,74 \text{ MPa} < \bar{\sigma}_c$$

$$\sigma_{s3} = \sigma_{s,max} = m \left[\frac{N}{A_{id}} + \frac{N \cdot e \cdot (y_G - d')}{I_{id,x}} \right] = 70,9 \text{ MPa} < \bar{\sigma}_s$$

$$\sigma_{s1} = \sigma_{c,max} = m \left[\frac{N}{A_{id}} - \frac{N \cdot e \cdot (y_G - d')}{I_{id,x}} \right] = 23,04 \text{ MPa} < \bar{\sigma}_s$$

$$\sigma_{s2} = m \frac{N}{A_{id}} = 66,634 \text{ MPa} < \bar{\sigma}_s$$