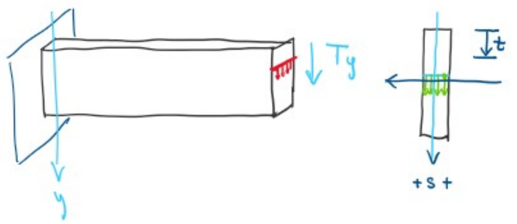
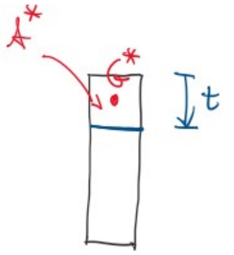


sezione rettangolare sottile

$s \ll h$

$$\tau_m(t) = -\frac{\boxed{T_y}}{I_x}\frac{S_x^*(t)}{s} \qquad I_x = \frac{1}{12} s h^3$$

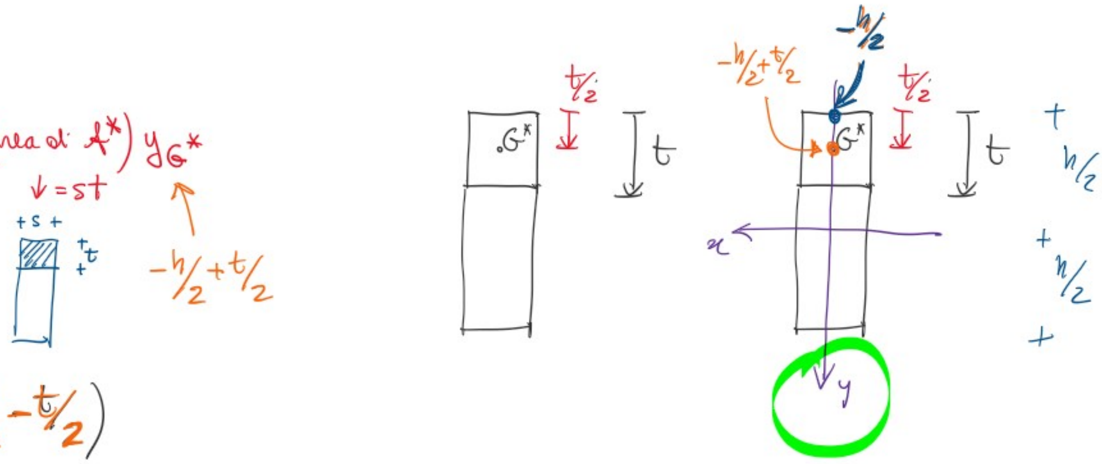


Ricordiamo che (per definizione)

$$y_G^* = \frac{1}{\text{area di } A^*}\int_{A^*} y \, dA$$

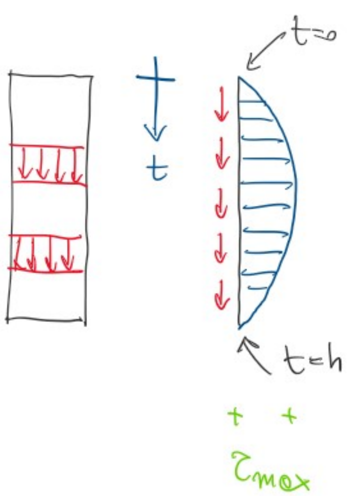
e dunque:

$$S_x^*(t) = \int_{A^*(t)} y \, dA = \underbrace{(\text{area di } A^*)}_{= st} \, \underbrace{y_{G^*}}_{-h/2 + t/2}$$



$$\Rightarrow S_x^*(t) = -st\left(\frac{h}{2} - \frac{t}{2}\right)$$

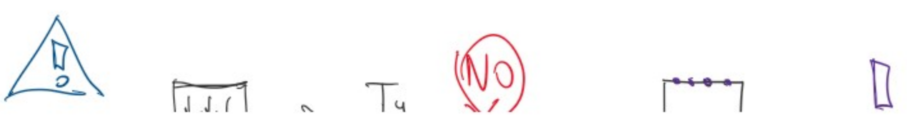
$$\boxed{\tau_m(t) = \frac{T_y}{I_x}\left(t(h-t)/2\right)}$$

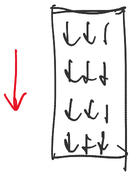


$$\tau_{max} = \tau_m\left(t = h/2\right) = \frac{T_y}{I_x}\frac{h^2}{8}$$

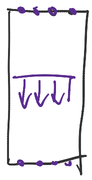
Sostituendo si trova:

$$\boxed{\tau_{max} = \frac{3}{2}\frac{T_y}{A}}$$





$\tau = \frac{T_y}{A}$ NO



τ_{med}

!