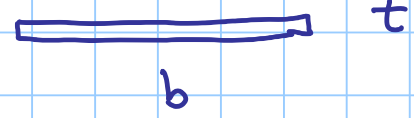


$$N_{cr} = \frac{\pi^2 E I}{l_0^2} \quad [\text{Eulero}]$$

$$A = b\,t$$

$$I = \frac{b\,t^3}{12}$$

$$\sigma_{cr} = \frac{\pi^2 E I}{l_0^2 A} \, [\text{Eulero}] = \frac{\pi^2 E \frac{\cancel{b}\, t^{\cancel{3}\,2}}{12}}{b^2 \, \cancel{b t}} =$$

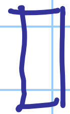
$$= \frac{K \pi^2 E \, t^2}{12 \, b^2 \, (1-\nu^2)} = \frac{k \pi^2 E}{12(1-\nu^2)\left(\frac{b}{t}\right)^2} \quad [\text{lastre}]$$

$$\sigma_{cr} = \frac{k\,\pi^2\,E}{12\,(1-\nu^2)\left(\frac{b}{t}\right)^2}$$

in assenza di instabilità

$$N_y = b\,t\,f_y = 165\ \text{kN}$$

170.8

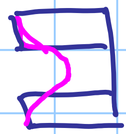


Es. $b = 200$ mm, $t = 3$ mm $\rightarrow$ $\sigma_{cr} = 170.8\ \text{N/mm}^2$

$$N_{cr} = b\,t\,\sigma_{cr} = 102.5\ \text{kN}$$

$$\left(\frac{\overset{b_{eff}}{b}}{t}\right)^2 = \frac{k\,\pi^2\,E}{12\,(1-\nu^2)\,\underset{f_y}{\sigma_{cr}}}$$

275



$$b_{eff} = t\sqrt{\frac{k\,\pi^2\,E}{12\,(1-\nu^2)\,f_y}}$$

nell'es. $b_{eff} = 157.6$ mm

$$N_{max\,(b,Rd)} = b_{eff}\,t\,f_y = 130\ \text{kN}$$

$$\sigma_{cr} = \frac{k \pi^2 E}{12(1-\nu^2)\left(\frac{b}{t}\right)^2}$$

$$\sqrt{\frac{f_y}{\sigma_{cr}}} = \sqrt{\frac{f_y \, 12(1-\nu^2)\left(\frac{b}{t}\right)^2}{k \pi^2 E}} = \frac{b}{t}\sqrt{\frac{12(1-\nu^2) f_y}{k \pi^2 E}}$$