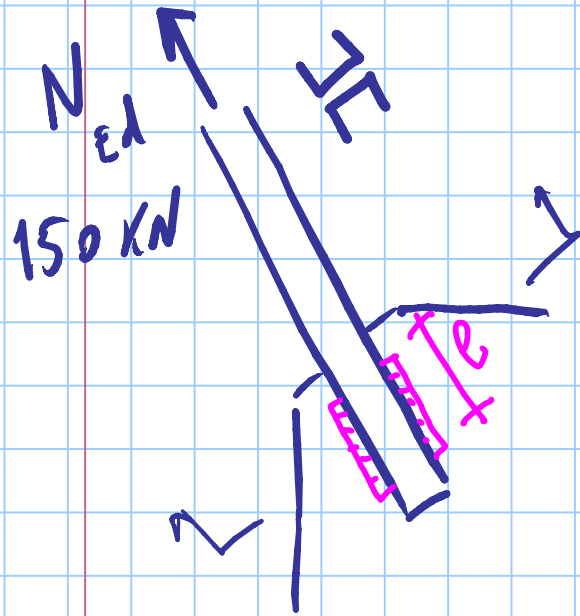


resistenza seldetm

$$f_{wd} = \frac{f_u}{\beta_w \gamma_{M2}}$$

$\beta_w =$	0.80	S235
	0.85	S275
	0.90	S355

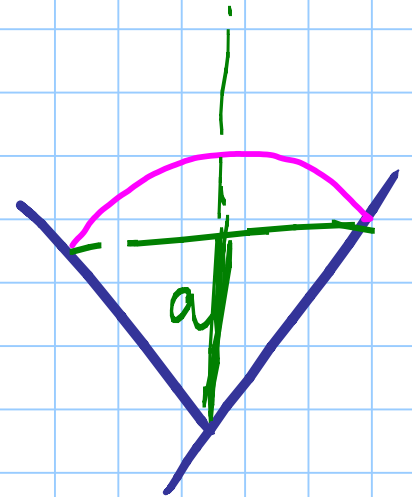
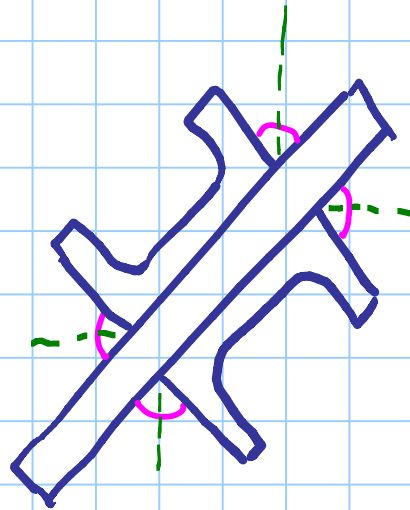
$$f_{vwd} = \frac{f_{wd}}{\sqrt{3}} = \frac{f_u / \sqrt{3}}{\beta_w \gamma_{M2}}$$



single cordone

$$\frac{N_{Ed}}{4} = 37.5 \text{ kN}$$

$$\Rightarrow \tau_{||} = \frac{37.5 \times 10^3}{a l} \leq f_{vwd}$$



$$al \geq \frac{37.5 \times 10^3}{f_{\text{verd}}}$$

S275

$$f_u = 430 \text{ MPa}$$

$$f_{\text{wd}} = \frac{430}{0.85 \times 1.25} = 404.7 \text{ MPa}$$

$$f_{\text{verd}} = \frac{f_{\text{wd}}}{\sqrt{3}} = 233.7 \text{ MPa}$$

$$al \geq \frac{37.5 \times 10^3}{233.7} = 160.5 \text{ mm}^2$$



$$a = 4 \text{ mm}$$

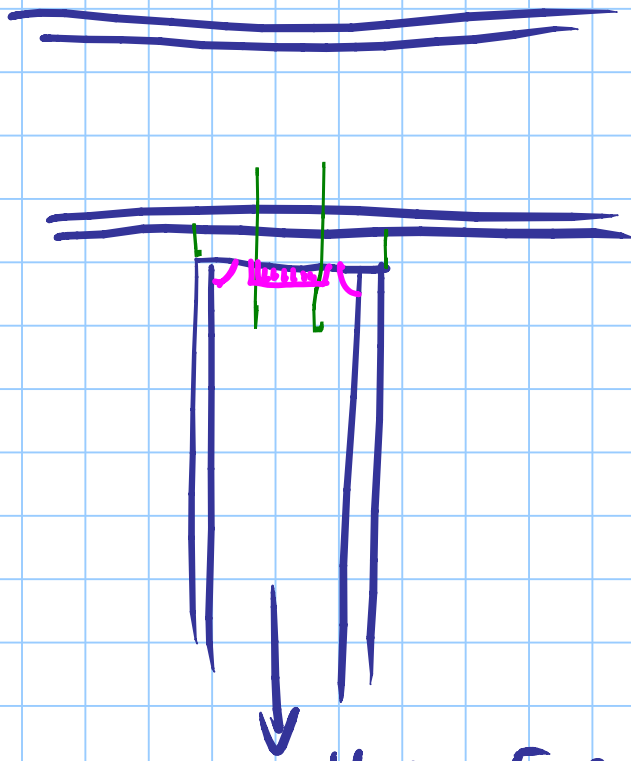
$$l = \frac{50}{4} \text{ mm}$$

norma

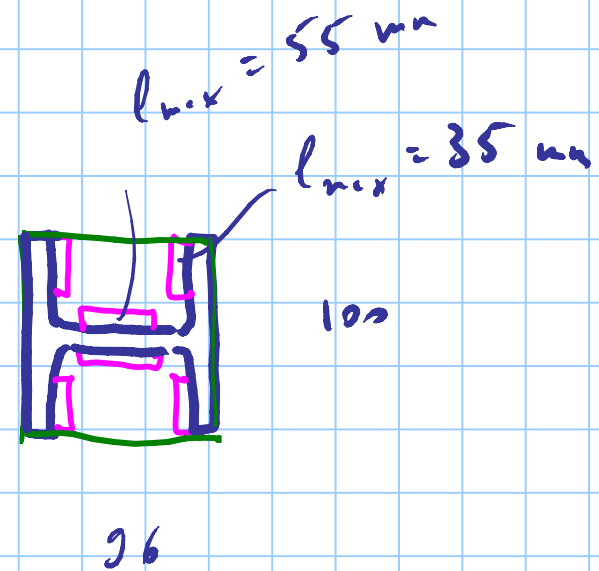
$$a \geq 3 \text{ mm}$$

$$l \geq 30 \text{ mm}$$

$$a \leq t$$



$$N_{Ed} = 500 \text{ kN}$$



$$l_{ex} = 55 \text{ mm}$$

$$l_{ex} = 35 \text{ mm}$$

100

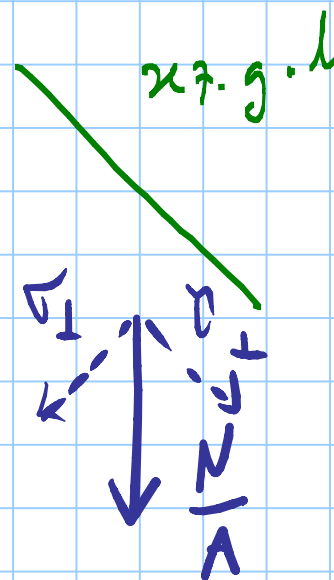
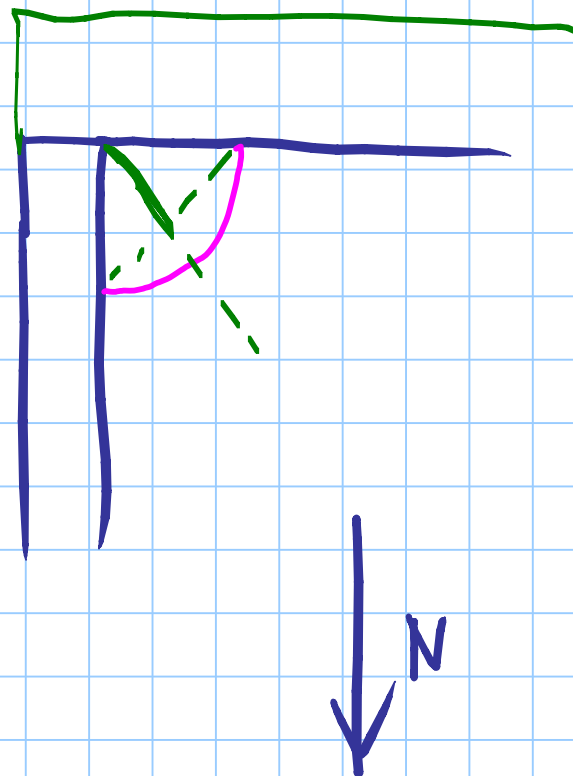
26

$$l_{Tot} = \sum l$$

$$a \cdot l_{Tot} \geq \frac{500 \times 10^3}{f_{vwd}} = 2139.5 \text{ mm}^2$$

$$\checkmark 233.7$$

$$a = 9 \text{ mm} \quad l_{Tot} = 250 \text{ mm}$$



$$\sigma_1 = \tau_1 = \frac{N}{a l \sqrt{2}}$$

$T_{ss}$

$$\sigma_{\perp}^2 + 3 \tau_{\perp}^2 \leq f_{wd}^2$$

$$\left( \frac{N}{a l \sqrt{2}} \right)^2 + 3 \left( \frac{N}{a l \sqrt{2}} \right)^2 \leq f_{wd}^2$$

$$\frac{N^2}{2 a^2 l^2} + 3 \frac{N^2}{2 a^2 l^2} \leq f_{wd}^2$$

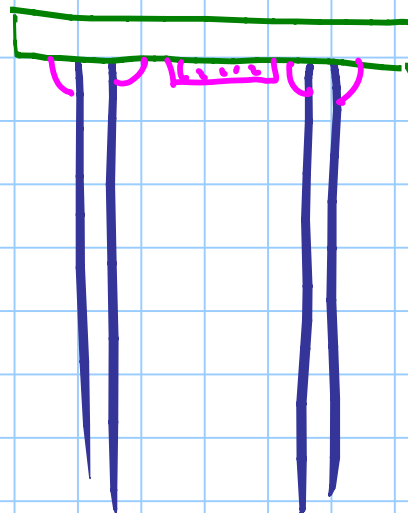
$$\Rightarrow a^2 l^2 \geq \frac{2 N^2}{f_{wd}^2}$$

$$2 \frac{N^2}{a^2 l^2}$$

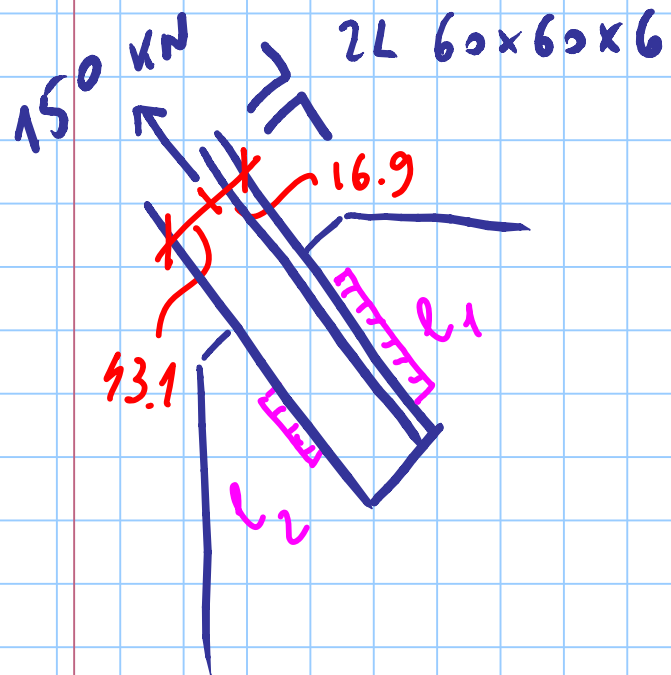
$$a l \geq \frac{\sqrt{2} N}{f_{wd}}$$

$$a l \geq \frac{\sqrt{2} \times 500 \times 10^3}{404.7} = 1747.2 \text{ mm}^2$$

$$\begin{aligned} a &= 7 \text{ mm} \\ l &= 250 \text{ mm} \end{aligned}$$



96



$$a(l_1 + l_2) = 321 \text{ mm}^2$$

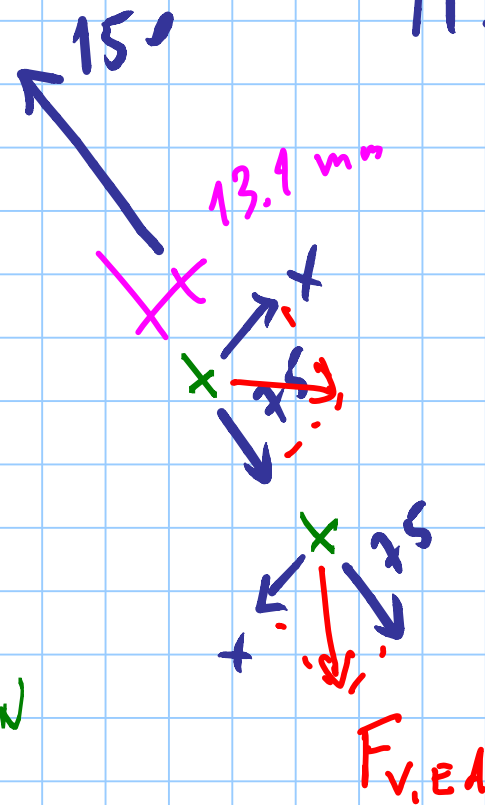
$$a = 4 \text{ mm}$$

$$l_1 + l_2 = \frac{321}{4} = 80.3 \text{ mm}$$

$$\frac{l_1}{l_2} = \frac{43.1}{16.9}$$

$$l_1 = \frac{43.1}{60} \times (l_1 + l_2) = 57.7 \text{ mm}$$

$$l_2 = 22.6 \text{ mm}$$

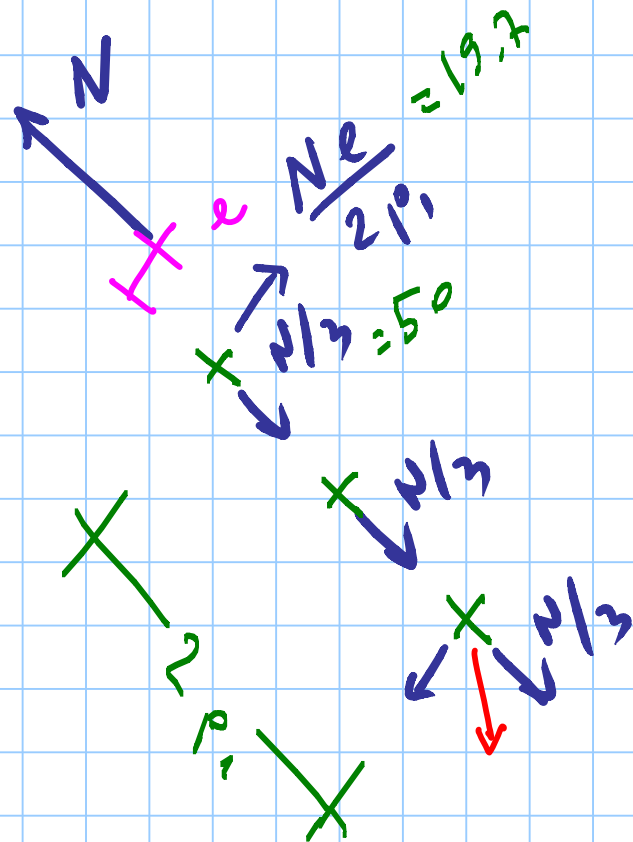


$$X = \frac{N_e}{P_1}$$

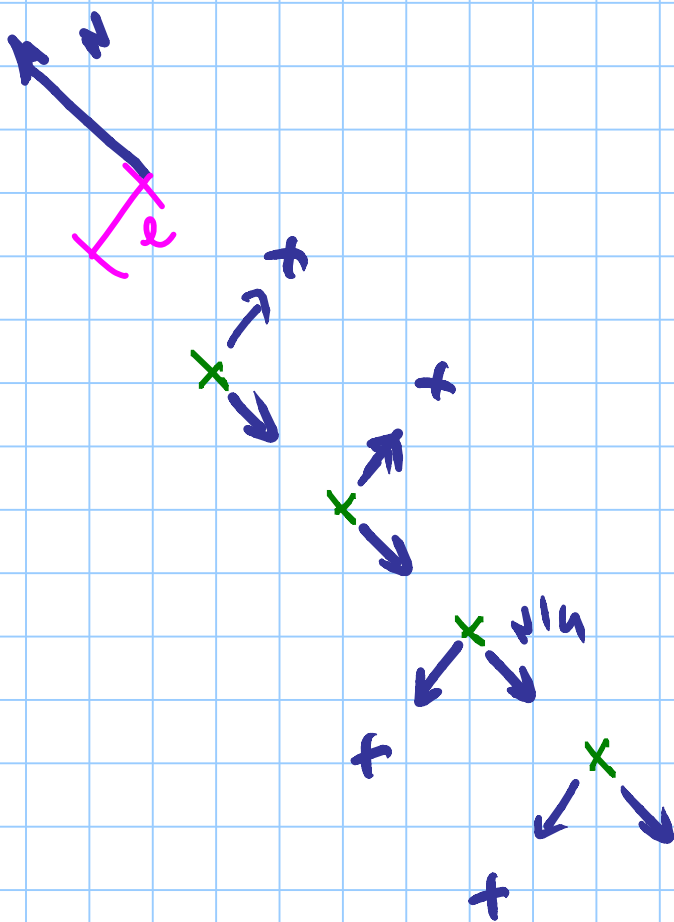
$$X = \frac{150 \times 13.1}{50} = 39.3 \text{ kN}$$

$$F_{V,EA} = \sqrt{75^2 + 39.3^2} = 84.7 \text{ kN}$$

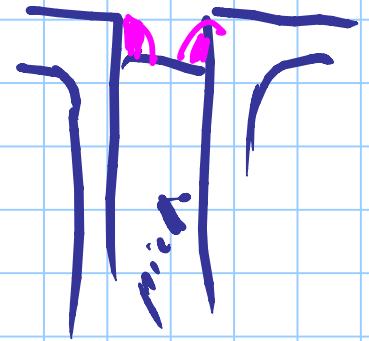
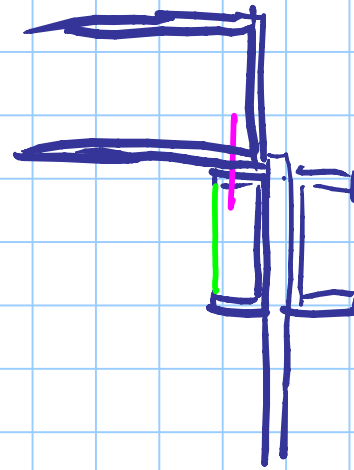
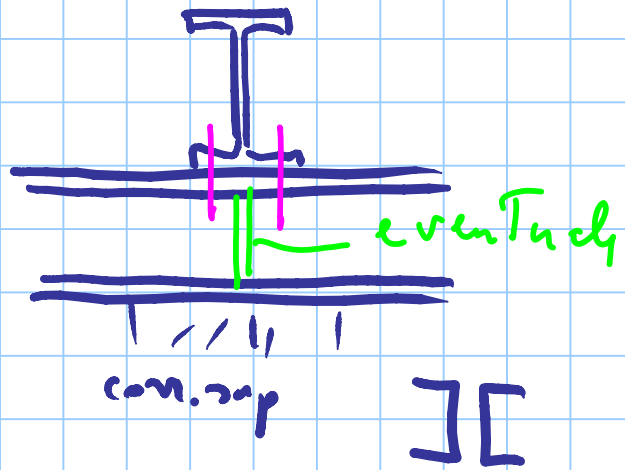
ball. nr  
(2 actions)

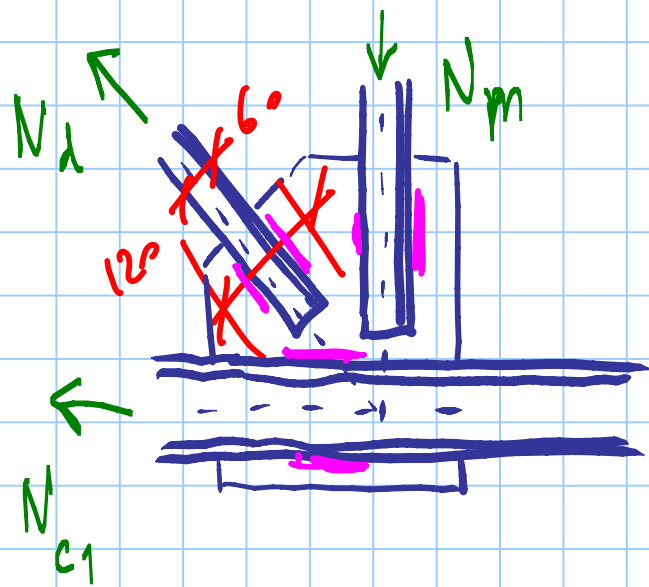
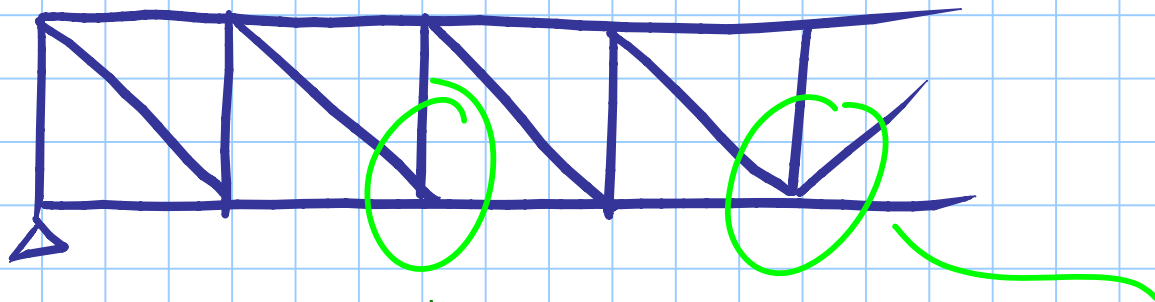


$$\sqrt{50^2 + 19.7^2} = 53.7 \text{ kN}$$



PROGETT.





$$N_{c2} - N_{c1}$$

$$N_{c2}$$

$$N_c$$

$$N_c$$

