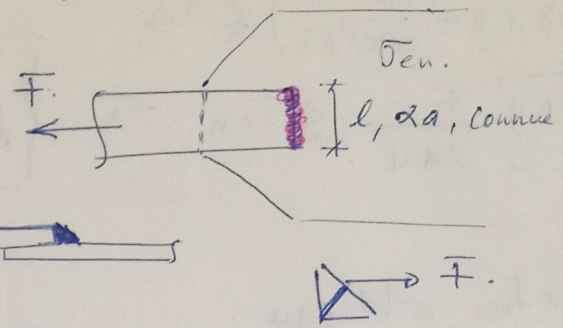


④ - Corton frontal :

pour le calcul des contraintes
les Corton sont considérés comme
triangle rectangle isocèle



On calcul la contrainte globale \bar{C}

$\bar{C} = \frac{F}{l \times a}$, et d'après le schéma statique.

On le décompose \bar{C}

$$\begin{aligned} \sigma &= C \sin 45 = \frac{F\sqrt{2}}{2 \times a \times l} \\ \sigma_{\perp} &= C \cos 45 = \frac{F\sqrt{2}}{2 \times a \times l} \\ \epsilon_{\parallel} &= 0 \end{aligned}$$

alors $\sigma^2 + 1.8 (\epsilon_{\perp}^2 + \epsilon_{\parallel}^2) \leq \sigma_{perm}^2$

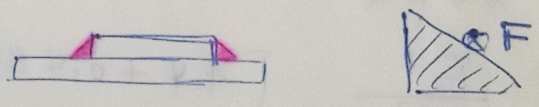
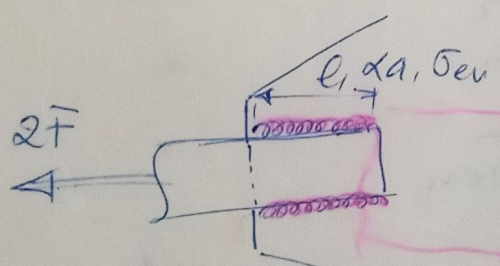
$$\frac{F^2}{2 \times a^2 \times l^2} + 1.8 \left(\frac{F^2}{2 \times a^2 \times l^2} + 0 \right) \leq \sigma_{perm}^2$$

$$\rightarrow \left(\frac{1}{2} + \frac{1.8}{2} \right) \left(\frac{F^2}{a^2 \times l^2} \right) \leq \sigma_{perm}^2 \Rightarrow 1.4 \frac{F^2}{a^2 \times l^2} \leq \sigma_{perm}^2$$

$$\rightarrow \sqrt{1.4} \frac{F}{a \times l} \leq \sigma_{perm} \Rightarrow \boxed{\frac{F}{0.85 \times a \times l} \leq \sigma_{perm}}$$

à vérifier pour le Corton frontale.

⑤ - Corton latéral :



On calcul $\bar{C} = \frac{F}{l \times a}$

$$\begin{aligned} \sigma &= 0 \\ \epsilon_{\perp} &= 0 \\ \epsilon_{\parallel} &= \frac{F}{a \times l} \end{aligned}$$

$$\sigma^2 + 1.8 (\epsilon_{\perp}^2 + \epsilon_{\parallel}^2) \leq \sigma_{perm}^2$$