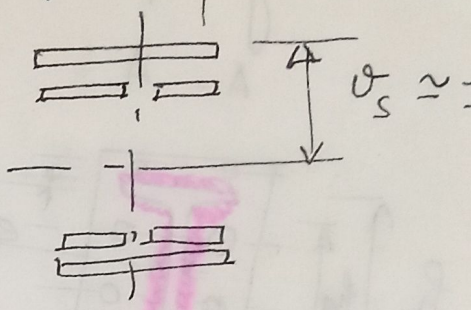
$$\sigma_M = \frac{M}{I_s}\vartheta_s = \frac{M}{W_s}.$$

W_s = moment d'Inertie des Soudures qui reprenent le ① et ②.

$$W_s = \frac{I_s}{\vartheta_s}$$



$$I_s = 2 l_1 a_1 \alpha_1 \cdot \frac{h^2}{4} + 4 l_2 a_2 \alpha_2 \left(\frac{h}{2} - e\right)^2$$

$$I_s = l_1 \alpha_1 a_1 \frac{h^2}{2} + l_2 a_2 \alpha_2 (h-2e)^2$$

$$W_s = \frac{l_1 a_1 \alpha_1 h^2 + 2 l_2 a_2 \alpha_2 (h-2e)^2}{h}.$$

$$\sigma_M = \frac{M \cdot h}{l_1 a_1 \alpha_1 h^2 + 2 l_2 a_2 \alpha_2 (h-2e)^2}$$

σ_M / σ_M → ε_{1M}

$$\sigma_M = \varepsilon_{1M} = \frac{\sigma_M \sqrt{2}}{2}.$$

$$\sigma_M = \varepsilon_{1M} = \frac{M h \sqrt{2}}{2 l_1 a_1 h^2 + 4 a_2 \alpha_2 l_2 (h-2e)^2}$$

tme sur la fibre la plus éloignée sera.

$$\sigma = \sigma_N + \sigma_M.$$

$$\varepsilon_\perp = \varepsilon_{1N} + \varepsilon_{1M}.$$

$$\sigma^2 + 1{,}8\,\varepsilon_1^2 \leq \sigma_{en}^2 \quad \text{et on a} \quad \sigma = \varepsilon_\perp$$

$$\rightarrow 2{,}8\,\sigma^2 \left(\frac{\sqrt{2}}{2}\right)^2 \left[\frac{N}{2 l_1 a_1 \alpha_1} + \frac{M h}{2 l_1 a_1 \alpha_1 h^2 + 4 l_2 a_2 \alpha_2 (h-2e)^2}\right]^2 \leq$$