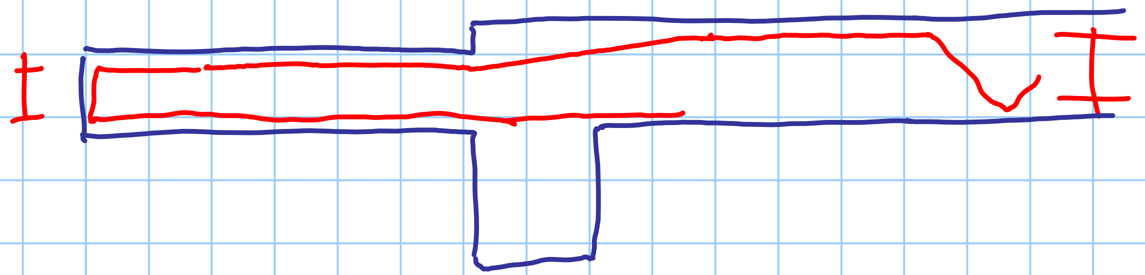
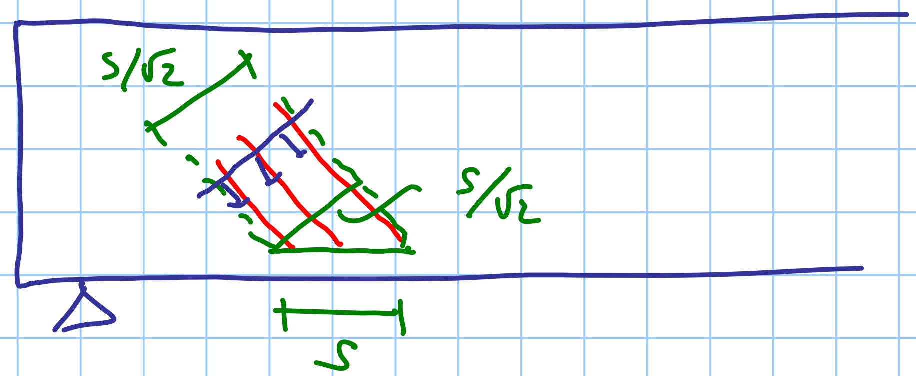
Titolo nota 13/12/2016



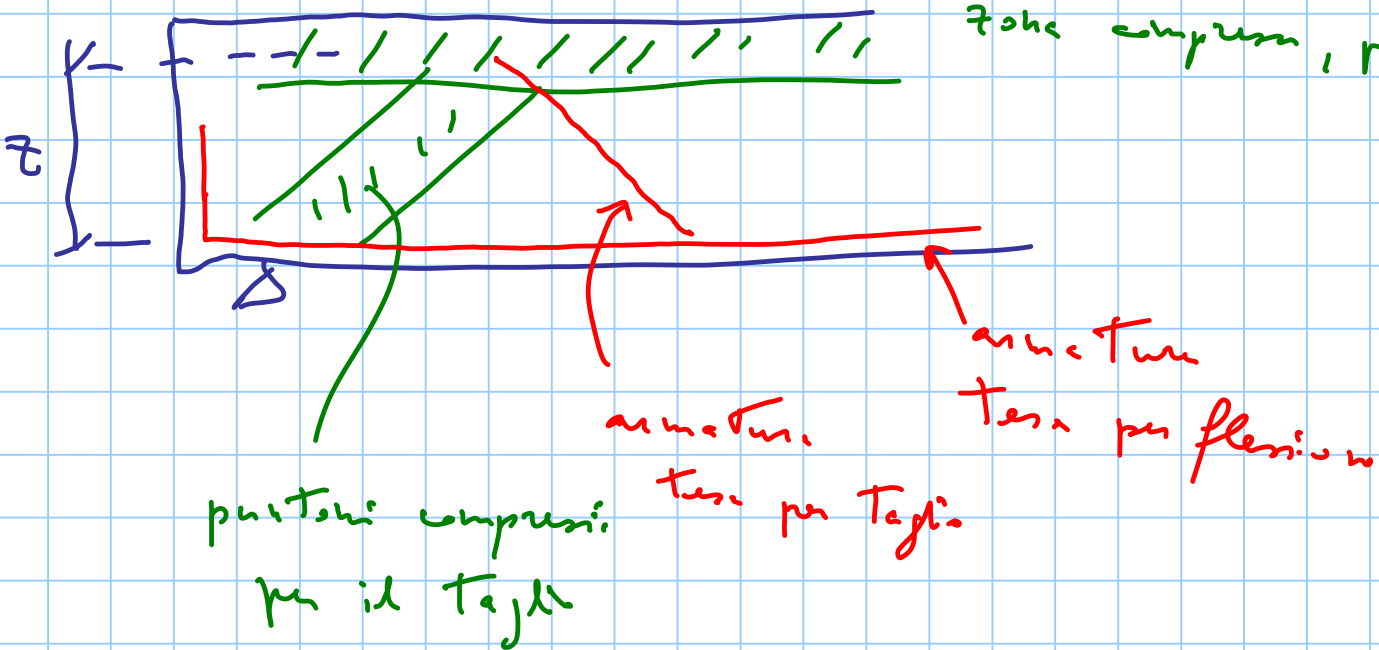


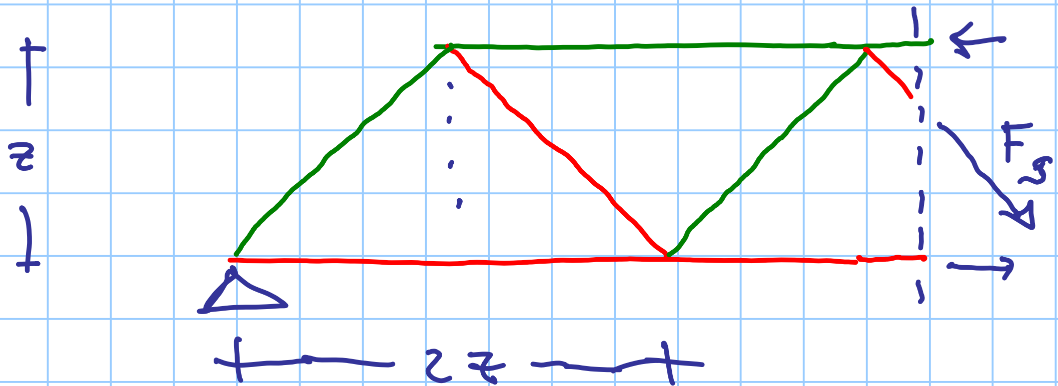
$$\sigma_s = \tau = \frac{V}{0.9\, b\, d} = \frac{V}{b\, z}$$

$$F_s = \tau\, b\, \frac{s}{\sqrt{2}} = \frac{V}{\cancel{b}\, z}\, \cancel{b}\, \frac{s}{\sqrt{2}} = \frac{V\, s}{\sqrt{2}\, z}$$

$$A_{req} = \frac{F_s}{\sigma_{s,max}} = \frac{V\, s}{\sqrt{2}\, z\, \sigma_{s,max}} \qquad V_{max} = \frac{A_{req}}{s}\, \sqrt{2}\, z\, \sigma_{s,max}$$

$$\sigma_s = \frac{V\, s}{\sqrt{2}\, z\, A_{req}} \leq \sigma_{s,max}$$





Traliccio di MÖRSCH

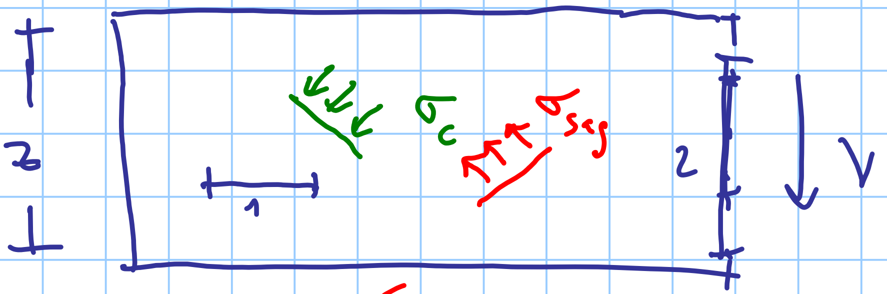
$$F_s = V \cdot \sqrt{2}$$

$$A_s = \frac{F_s}{\sigma_{s,max}} = \frac{\sqrt{2}\ V}{\sigma_{s,max}}$$

$$\frac{A_{req}}{s} \cdot 2z = \frac{\sqrt{2}\ V}{\sigma_{s,max}}$$

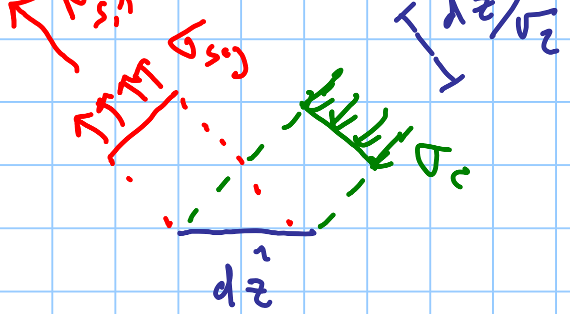
$$A_{req} = \frac{\sqrt{2}\ V}{\sigma_{s,max}} \frac{s}{2z} = \frac{V\ s}{\sqrt{2}\ z\ \sigma_{s,max}}$$

campi di tensione



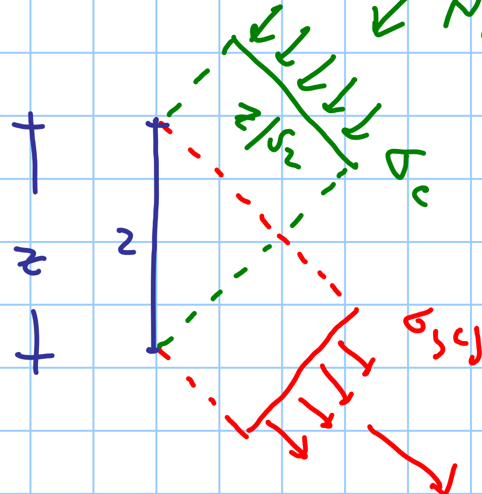
$$N_{s,1} = \frac{A_{sag}\, dz\, \sigma_{sag}}{s}$$

$$N_{c,1} = \sigma_c\, b\, \frac{dz}{\sqrt{2}}$$



$$\frac{A_{sag}}{s}\, dz$$

equilibrio
transl. vert.



$$N_{c,2} = \sigma_c\, b\, \frac{z}{\sqrt{2}}$$

$$N_{s,2} = \frac{A_{sag}}{s} \cdot z\, \sigma_{sag}$$

$$N_{s,1} \cdot \frac{\sqrt{2}}{2} = N_{c1} \cdot \frac{\sqrt{2}}{2}$$

$$\frac{A_{sag}}{s} \cancel{dz}\, \sigma_{sag} = \sigma_c\, b\, \frac{\cancel{dz}}{\sqrt{2}}$$

$$\sigma_c = \frac{A_{sag}}{s} \frac{\sqrt{2}}{b} \sigma_{sag}$$

equilibrio Traslaz. verticale 2

$$N_{c,2} \frac{\sqrt{2}}{2} + N_{s,2} \frac{\sqrt{2}}{2} = V$$

$$\sigma_c \, b \, \frac{z}{\sqrt{2}} \, \frac{\sqrt{2}}{2} + \frac{A_{reg}}{s} \, z \, \sigma_{seg} \, \frac{\sqrt{2}}{2} = V$$

ma ho $\sigma_c = \dfrac{A_{reg}}{s} \, \dfrac{\sqrt{2}}{b} \, \sigma_{seg}$

$$\frac{A_{reg}}{s} \, \frac{\cancel{\sqrt{2}}}{\cancel{b}} \, \sigma_{seg} \, \cancel{b} \, \frac{z}{\cancel{\sqrt{2}}} \, \frac{\sqrt{2}}{2} + \frac{A_{reg}}{s} \, z \, \sigma_{seg} \, \frac{\sqrt{2}}{2} = V$$

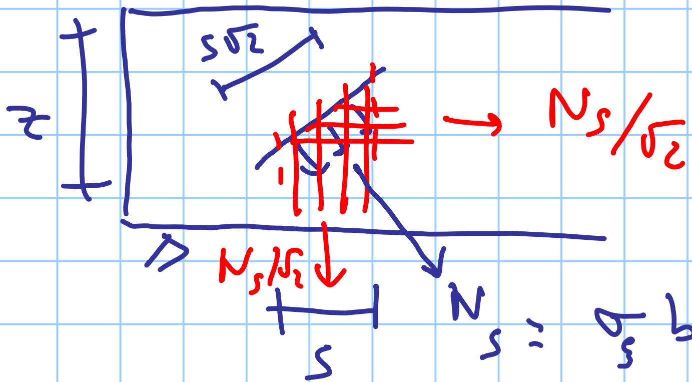
$$\frac{A_{reg}}{s} \, z \, \sigma_{seg} \, \frac{\sqrt{2}}{2} + \frac{A_{reg}}{s} \, z \, \sigma_{seg} \, \frac{\sqrt{2}}{2} = V$$

$$\frac{A_{i,j}}{s} z\, \sigma_{s,i,j} \sqrt{2} = V$$

$$A_{i,j} = \frac{V\, s}{\sqrt{2}\, z\, \sigma_{i,j}}$$

STAFFE

e ferri di parete ?



$$\sigma_s = \frac{V}{b z}$$

$$N_s = \sigma_s \, b \, s \sqrt{2}$$

$$\frac{N_s}{\sqrt{2}} = \frac{\sigma_s \, b \, s \cancel{\sqrt{2}}}{\cancel{\sqrt{2}}} = \frac{V}{\cancel{b} z} \cancel{b} \, s = \frac{V s}{z}$$

$$\sigma_{st} = \frac{V s}{A_{st} \, z} \leq \sigma_{st,max}$$

$$A_{st} = \frac{N_s/\sqrt{2}}{\sigma_{st,max}} = \frac{V s}{z \, \sigma_{st,max}}$$

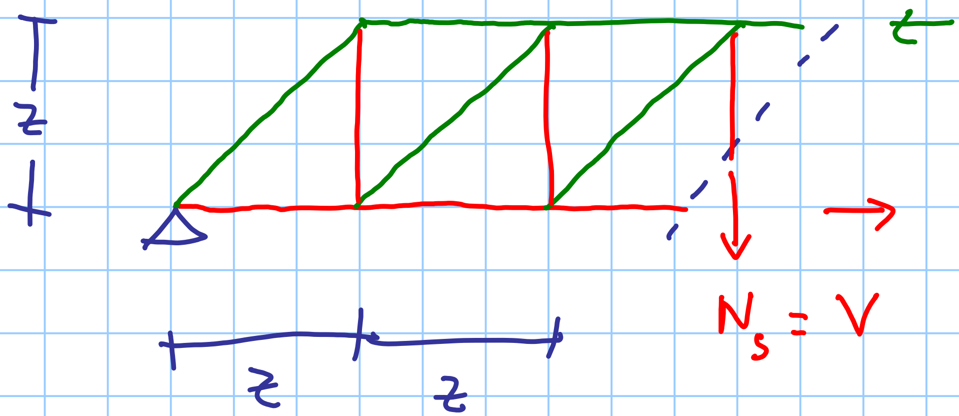
$$V_{max} = \frac{A_{st}}{s} z \, \sigma_{st,max}$$

$$A_{per} = \frac{V \cancel{z}}{\cancel{z}\ \sigma_{per,max}} = \frac{V}{\sigma_{per,max}}$$

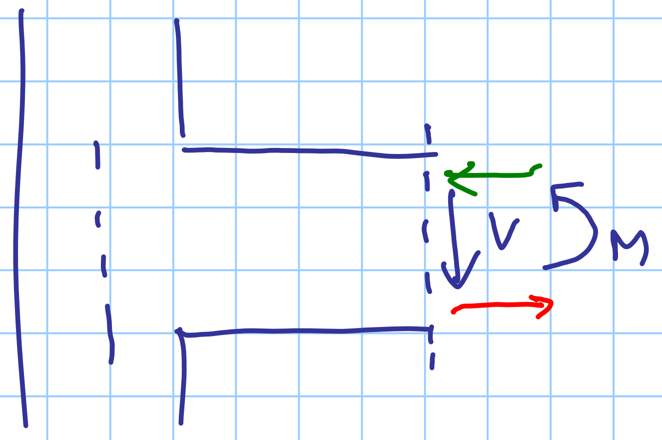
$$\sigma_{per} = \frac{V}{A_{per}} \leq \sigma_{per,max}$$

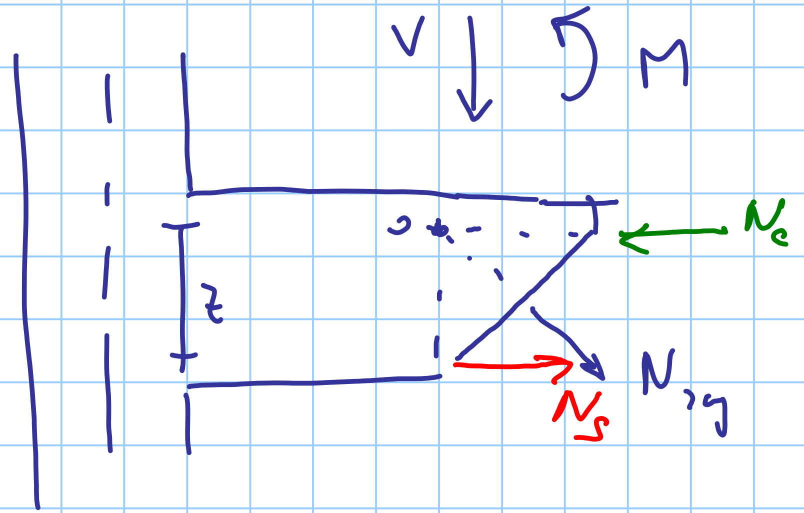
$$V_{max} = A_{per} \cdot \sigma_{per,max}$$

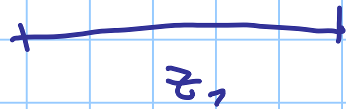
Traliccio di Mörsch



$$\frac{A_{st}}{s} z = \frac{N_s}{\sigma_{st,max}} \Rightarrow A_{st} = \frac{V\ s}{z\ \sigma_{st,max}}$$



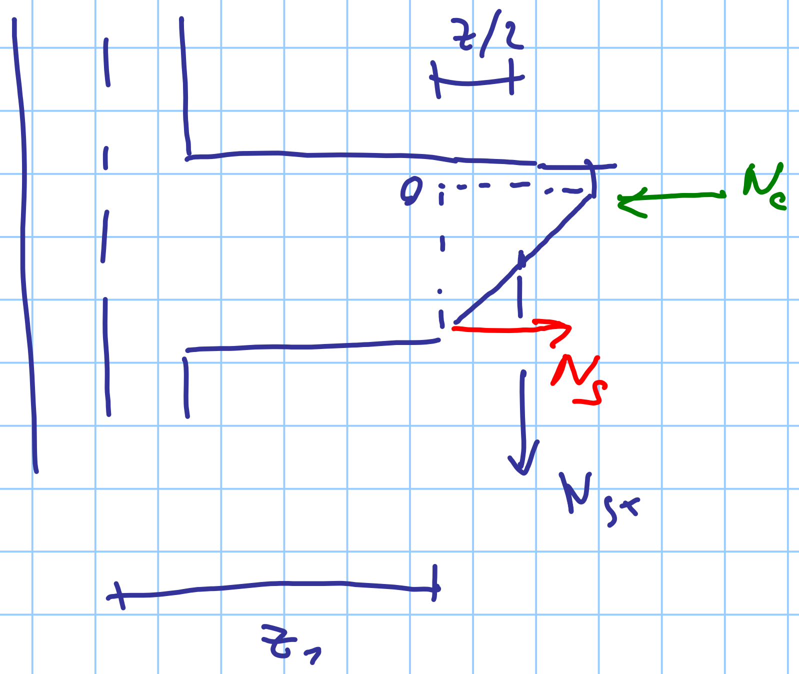




$$N_s \cdot z = M$$

$$N_s = \frac{M(z_1)}{z}$$

$$N_s = \frac{M(z_1)}{z}$$



$$N_s \cdot z - N_{st} \frac{z}{2} = M$$

$$N_s \, z = M + N_{st} \frac{z}{2} = M + V \frac{z}{2}$$

$$N_s = \frac{M + V \frac{z}{2}}{z}$$

$$M(z_1) + V \frac{z}{2} = M\left(z_1 + \frac{z}{2}\right)$$

$$N_s = \frac{M\left(z_1 + \frac{z}{2}\right)}{z}$$