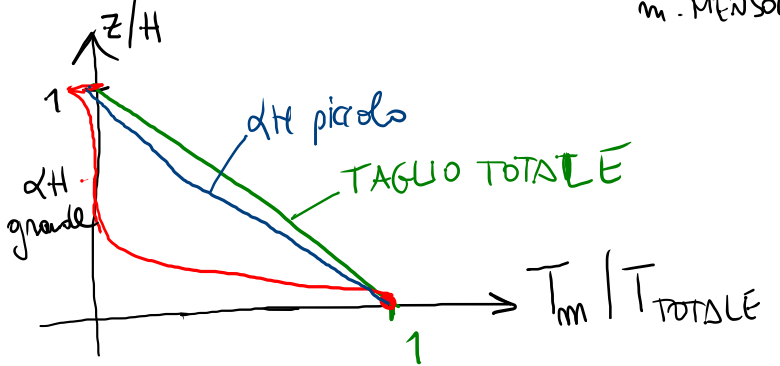
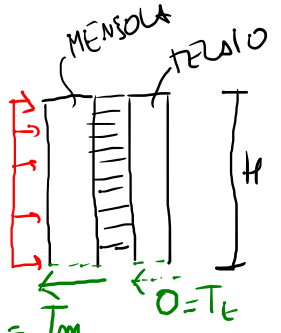
COMMENTO GRAFICI M, T INTERAZIONE MENSOLA – TELAIO 27/04/23

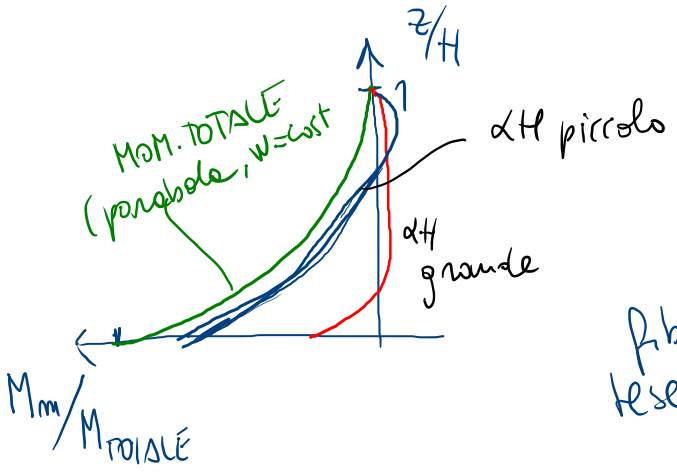
m: MENSOLA EI ; t: TELAIO (MENSOLA GA)

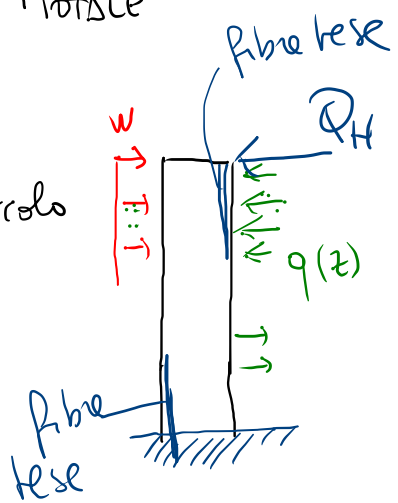


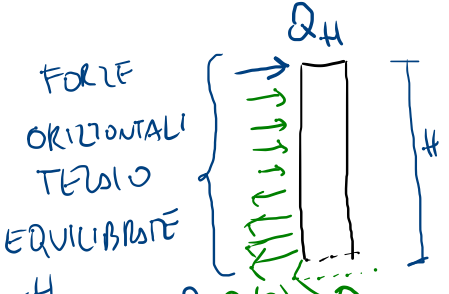
αH grande > 10 : MENSOLA "SOFFICE"

αH piccolo < 1 : " "RIGIDA"









$$Q_H + \int_0^H q(z)\,dz = 0$$

ossevo che: $M_m(z) + M_t(z) = -w\frac{(H-z)^2}{2}$; $T_m(z) + T_t(z) = w(H-z)$

ALCUNE FUNZIONI SOLUZ.

$$M_m^{(z)} = -w\left[\frac{H}{\alpha}\left(\tanh\alpha H\cosh\alpha z - \sinh\alpha z\right) + \frac{1}{\alpha^2}\left(\frac{\cosh\alpha z}{\cosh\alpha H} - 1\right)\right]$$

$$T_m(z) = w\left[H\left(\cosh\alpha z - \tanh\alpha H\sinh\alpha z\right) - \frac{1}{\alpha}\left(\frac{\sinh\alpha z}{\cosh\alpha H}\right)\right]$$

$$y(z) = \frac{wH^4}{EI}\left[\frac{1}{(\alpha H)^4}\left[\frac{\alpha H\sinh\alpha H + 1}{\cosh\alpha H}\left(\cosh\alpha z - 1\right) - \alpha H\sinh\alpha z + (\alpha H)^2\left[\frac{z}{H} - \frac{1}{2}\left(\frac{z}{H}\right)^2\right]\right]\right]$$