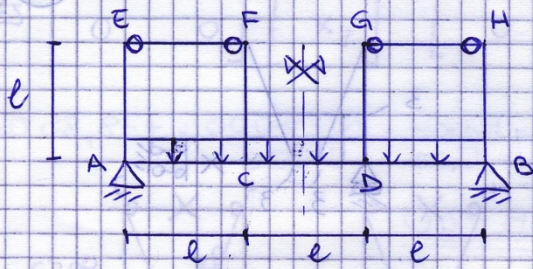


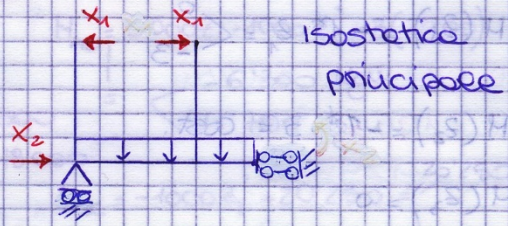
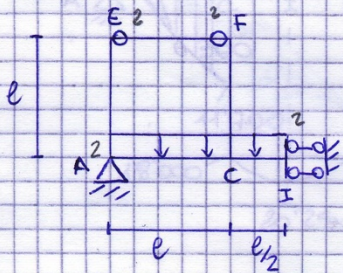
Prova (A)



$l = 3 \text{ m}$
 $q = 20 \text{ kN/m} = 2000 \text{ kg/m}$
 $\sigma_{admis} = 260 \text{ MPa}$
 $= 2600 \text{ kg/cm}^2$

Metodo delle forze

$8/6 \Rightarrow 2$ wete iperstatica



Isostatica principale

Sistema 0:

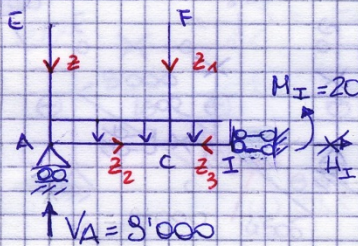
$\uparrow) V_A - \frac{3}{2} q l = 0 \rightarrow V_A = 9000 \text{ kg}$

$M(z) = 0 \quad \uparrow) M_I = 20 \cdot 250 \text{ kg m}$

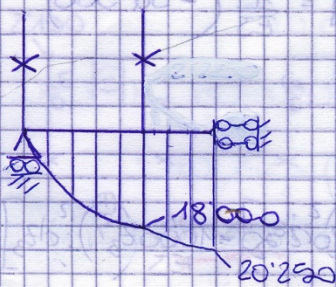
$M(z_1) = 0$

$M(z_2) = 9000 \cdot z_2 - 1000 z_2^2 = \begin{cases} 0 \\ 18000 \end{cases}$

$M(z_3) = -1000 z_3^2 + 20 \cdot 250 = \begin{cases} 20 \cdot 250 \\ 18000 \end{cases}$

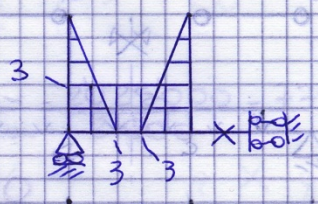
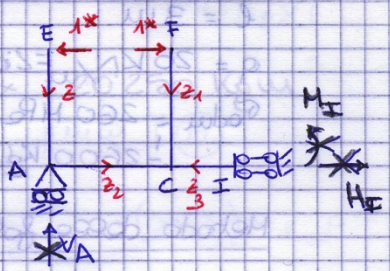


(M₀)



Sistema 1:

(M₁)



$$M(z) = 1 \cdot z = \begin{cases} 0 \\ 3 \end{cases}$$

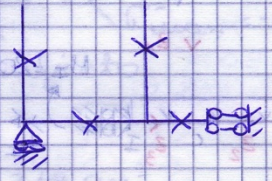
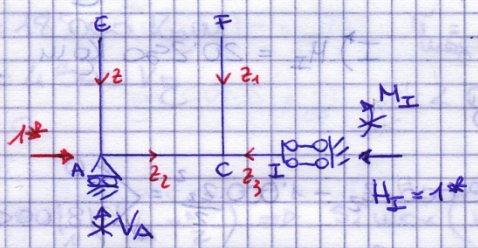
$$M(z_1) = -1 \cdot z_1 = \begin{cases} 0 \\ -3 \end{cases}$$

$$M(z_2) = -1 \cdot 3 = \text{const.}$$

$$M(z_3) = 0$$

Sistema 2:

(M₂)



$$\eta_{10} = \frac{1}{ES} \left[\int_0^3 (5000z_2 - 1000z_2^2)(-3) dz_2 \right] = \frac{1}{ES} (-96'500)$$

$$\eta_{20} = 0$$

$$\eta_{11} = \frac{1}{ES} \left[\int_0^3 (z)^2 dz + \int_0^3 (-z_1)^2 dz_1 + \int_0^3 (-3)^2 dz_2 \right] = \frac{1}{ES} (45)$$

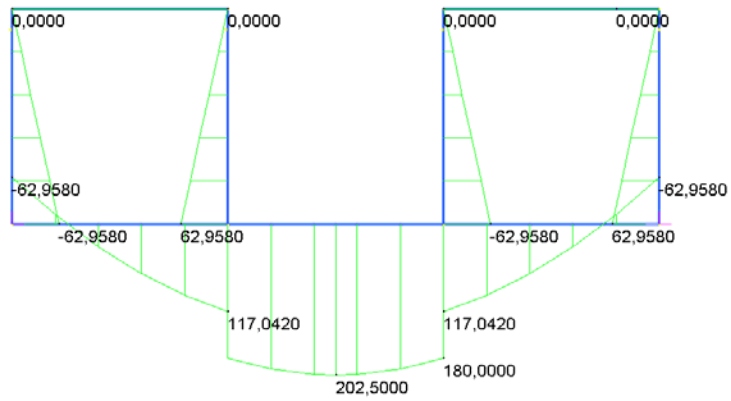
$$\eta_{12} = 0$$

$$\eta_{22} = 0$$

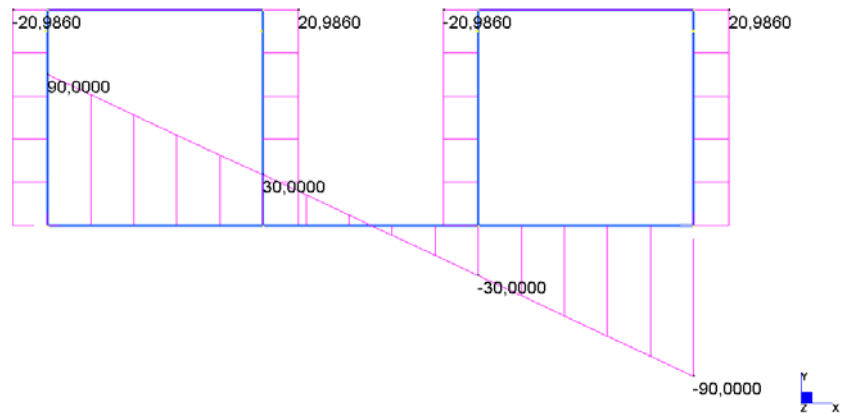
$$\frac{1}{ES} \begin{bmatrix} 45 & 0 \\ 0 & 0 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} = \begin{bmatrix} 96'500 \\ 0 \end{bmatrix} \frac{1}{ES} \quad \begin{cases} x_1 = 2'100 \text{ Kg} \\ x_2 = 0 \end{cases}$$

FILA -A-

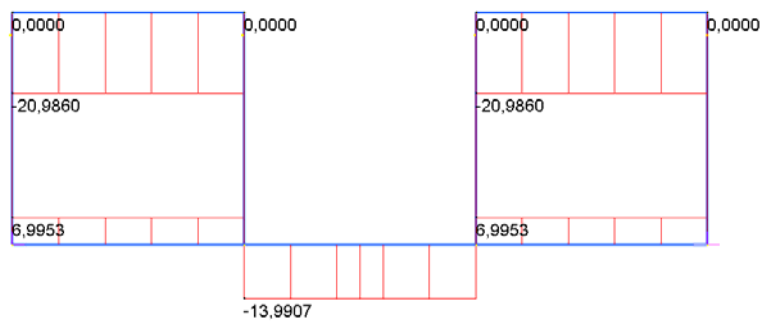
Momento Flettente



Taglio

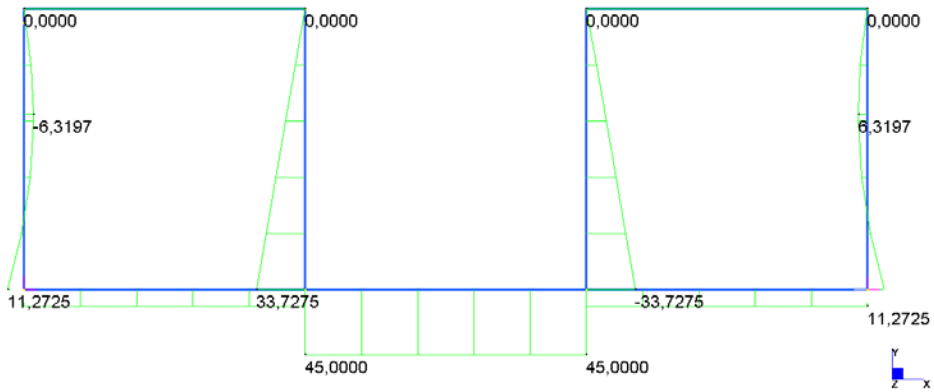


Sforzo Normale

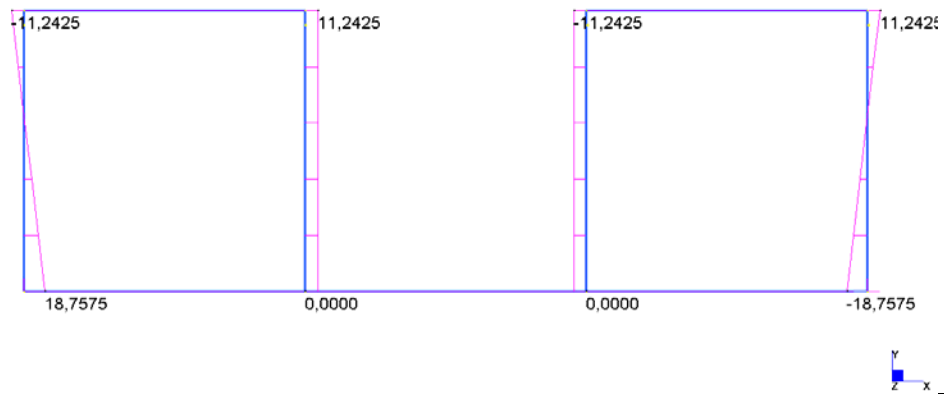


FILA - B -

Momento Flettente



Taglio



Sforzo Normale

