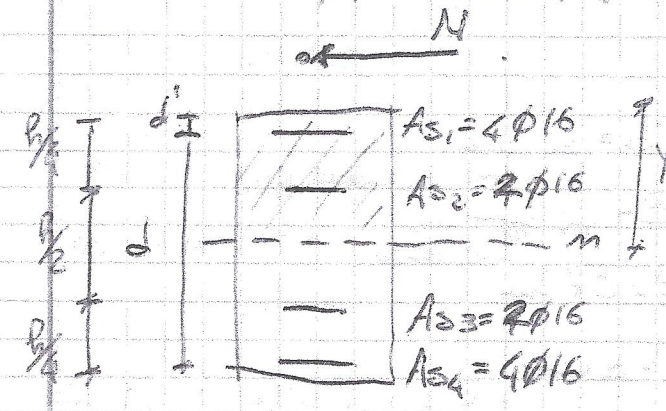
Collaudo

Tensioni Ammissibili - pasco-flessione



$N_{ees} = ?$

$d' = 3{,}5$ cm

$d = 56{,}5$ cm

$b = 35$ cm

$h = 60$ cm

$y_c = h/2 = 30$ cm

$c = 5$ cm

$R_{ck} = 30$ MPa $\Rightarrow \bar{\sigma}_c = 9{,}75$ MPa

$\bar{\sigma}_s = 260$ MPa

$$S_n (y_c + c) - I_n = 0$$

$$S_n = \frac{40 \cdot y_c^2}{2} + 15\left[8{,}04(y - 3{,}5) + 4{,}02(y - 15)\right] - 15\left[4{,}02(45 - y_c) + 8{,}04(56{,}5 - y_c)\right]$$

$$I_n = \frac{40 \cdot y_c^3}{3} + 15\left[8{,}04(y_c - 3{,}5)^2 + 4{,}02(y - 15)^2 + 4{,}02(45 - y_c)^2 + 8{,}04(56{,}5 - y_c)^2\right]$$

$y_c = 27{,}91$ cm

$S_n = 14823{,}2$ cm^3

$$N_{ees_c} = \frac{S_n}{y_c} \cdot \bar{\sigma}_c = 517{,}83 \text{ KN}$$

$$N_{ees_s} = \frac{S_n}{n(d - y_c)} \bar{\sigma}_s = 893{,}68 \text{ KN}$$

N_{ees} = minimo = 517 KN