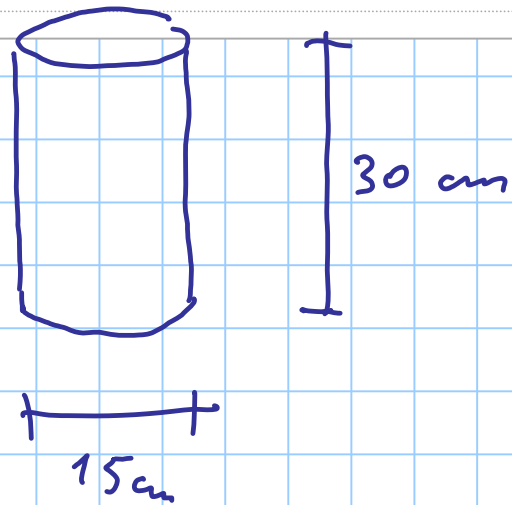
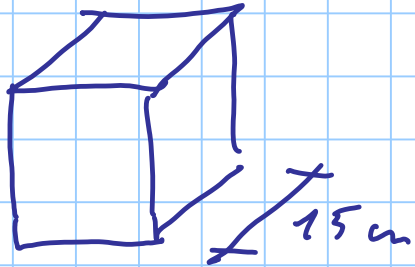


cubo

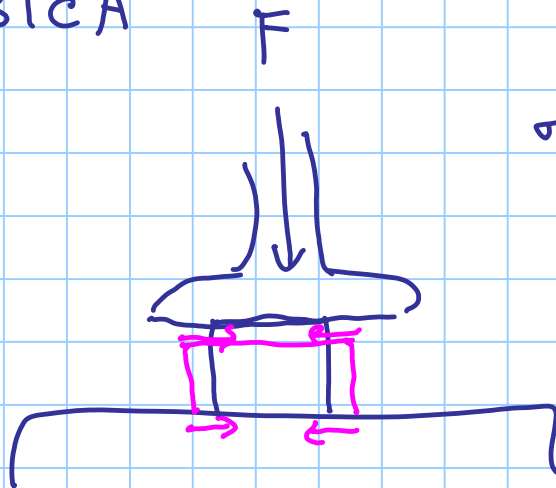
Titolo nota

13/10/2016

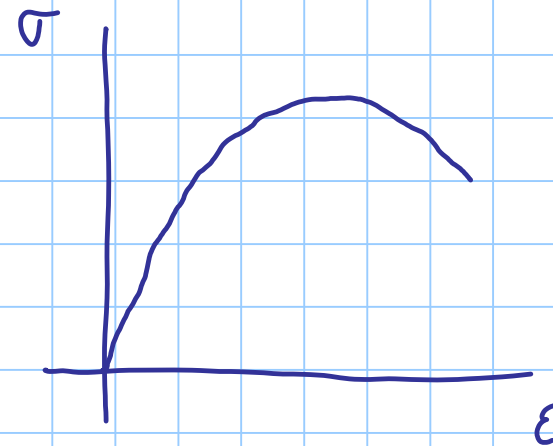


RESISTENZA
CUBICA

R_c



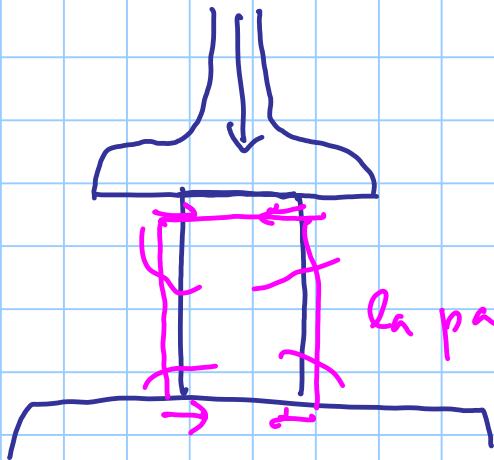
$$\sigma = \frac{F}{A}$$



RESISTENZA CILINDRICA

$$f_c = 0.83 R_c$$

f_c



la parte centrale non risente
della compressione trasversale

f_{ck}

$$f_{cm} = f_{ck} + 8 \text{ MPa}$$

 R_{ck}

$$R_{cm} = R_{ck} + 9.6 \text{ MPa}$$

CLASSI DI CALCESTRUZZO

C xx / xx
resistenza
cilindrica cubica

C 20/25

C 25/30

f_{ck} R_{ck}

ACCETTAZIONE :

1 pullino = 2 cubetti \rightarrow valori medio

3 pullini

$R_1 = \text{minori}$

$R_m = \text{valori medio}$

OK \approx

$$R_1 \geq R_{ch} - 3,5 MP_c$$

$$R_m \geq R_{ch} + 3,5 MP_c$$

$\approx \geq 15$ pr. li. ewi

$$R_1 \geq R_{ch} - 3,5 MP_c$$

$$R_m \geq R_{ch} + 1,4 S$$

\nwarrow ~~scat~~ quadratic modio

valore di calcolo

f_{cd}

$$f_{cd} = \alpha_{cc} \frac{f_{ck}}{\gamma_c}$$

0,85

1,5

[1,4 con specifici controlli]

C 25/30

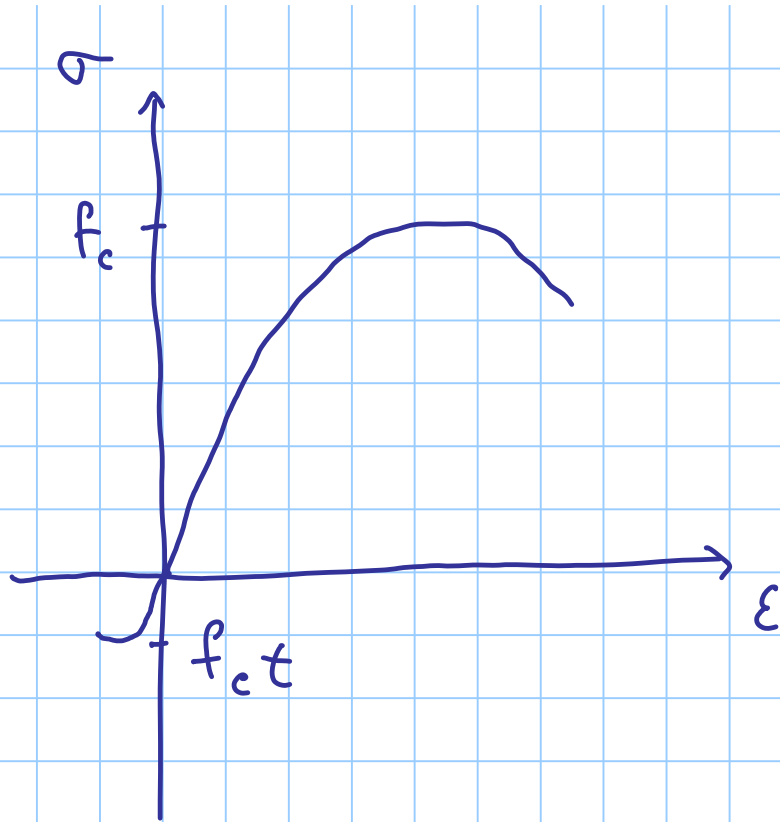
$$f_{cd} = 0,85 \frac{25}{1,5} = 14,17 \text{ MPa}$$

modul. elastic

$$E_c = 22000 \left(\frac{f_{cm}}{10} \right)^{0.3}$$

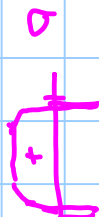
c 25/30

$$E_c = 22000 \left(\frac{25+8}{10} \right)^{0.3} \approx 31500 \text{ MPa}$$

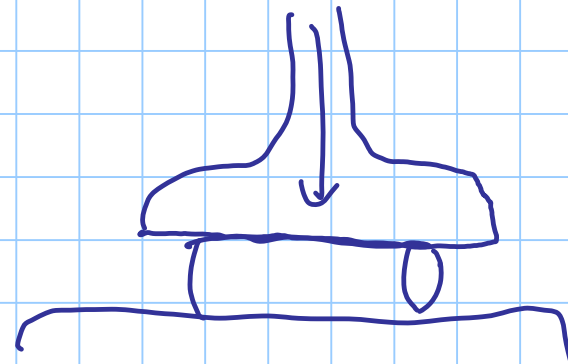


prove a traction directa
 $f_{ct, ax}$

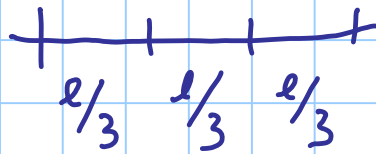
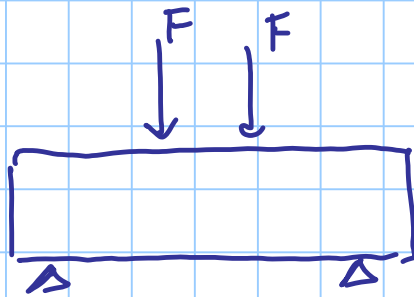
prove brasileira - splitting test

$$f_{ct, rp} = \frac{F}{\pi r l}$$


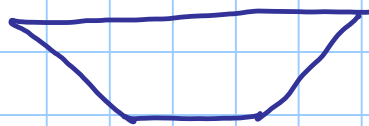
A small hand-drawn diagram in pink showing a rectangular cross-section of a concrete specimen. It has a central vertical line with a '+' sign, representing the axis of tension.



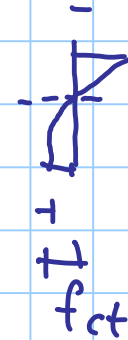
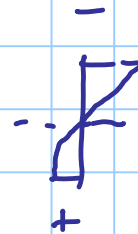
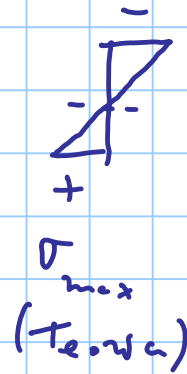
prove a flexion



M



$$\frac{F l}{3}$$



$$\sigma_{max} = \frac{6 M}{b h^2}$$

$$f_{ct} <$$

$$\sigma_{max} \text{ (tension)}$$

$$f_{ctm} = 0,30 \sqrt[3]{f_{ck}^2}$$

C25/30

$$f_{ctm} = 0,30 \sqrt[3]{25^2} = 2,56 \text{ MPa}$$

$$f_{ctk} = 0,7 f_{ctm} = 0,7 \times 2,56 = 1,80 \text{ MPa}$$

0,05

$$f_{cfk} = 1,2 f_{ctk}$$

resistenza a trazione
per flessione