

Corso di laurea in Ingegneria civile strutturale e geotecnica

# Tecnica delle costruzioni

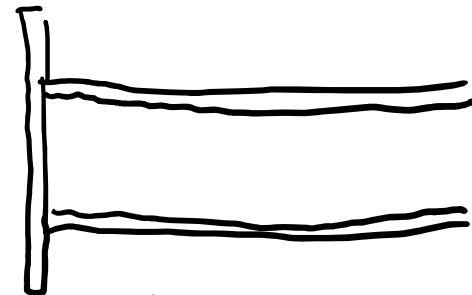
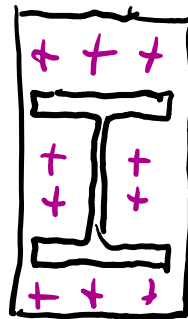
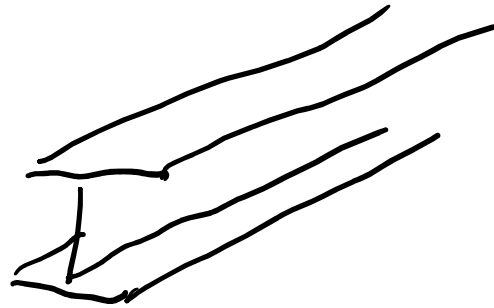
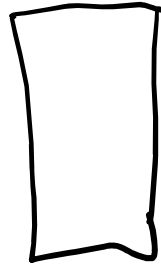
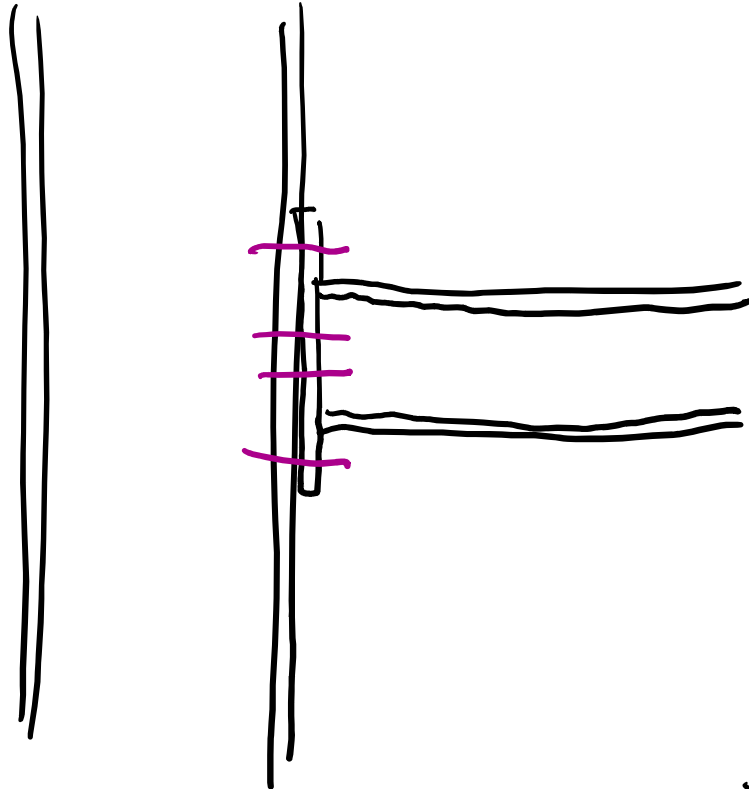
## modulo A

### 29 – Esempi di collegamenti

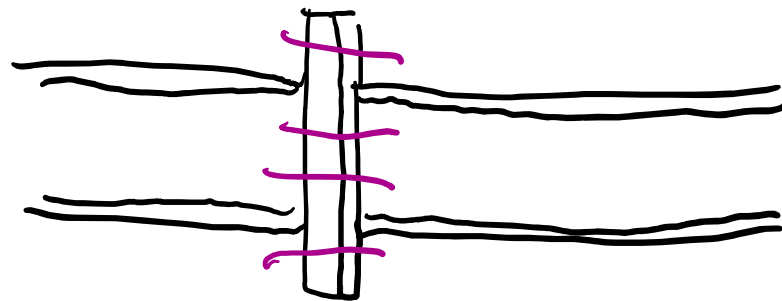
Aurelio Gheresi

21/12/2020

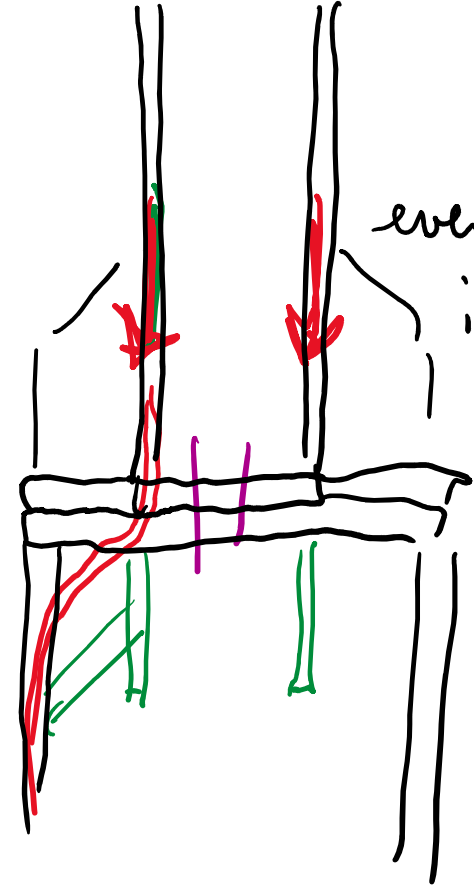
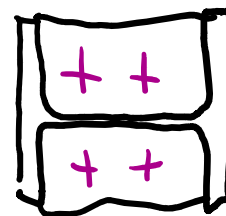
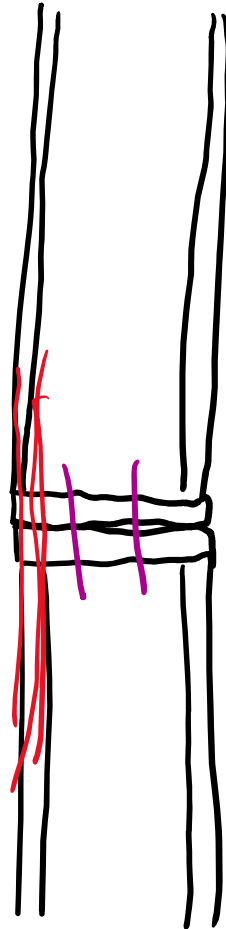
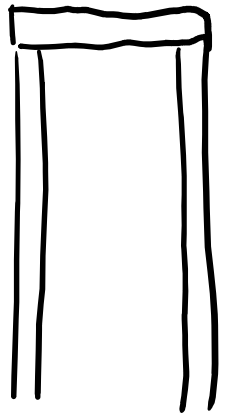
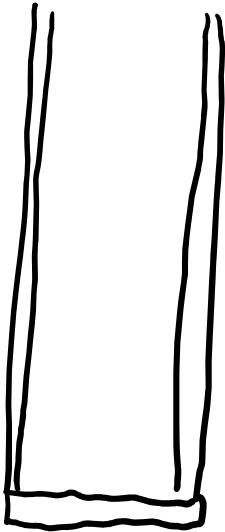
COLONNA - TRAVE



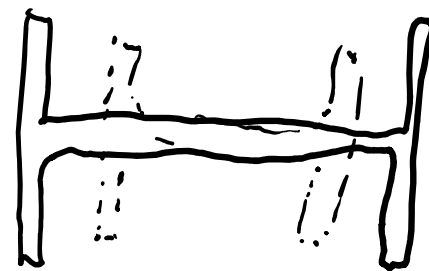
collegamenti  
flangiate

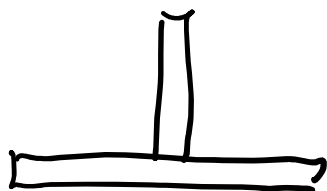
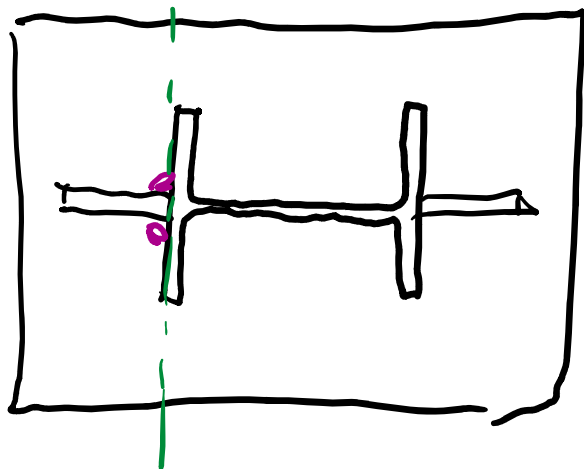
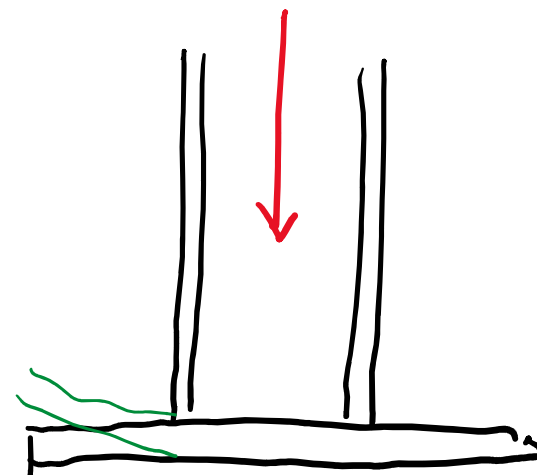


TRAVE - TRAVE

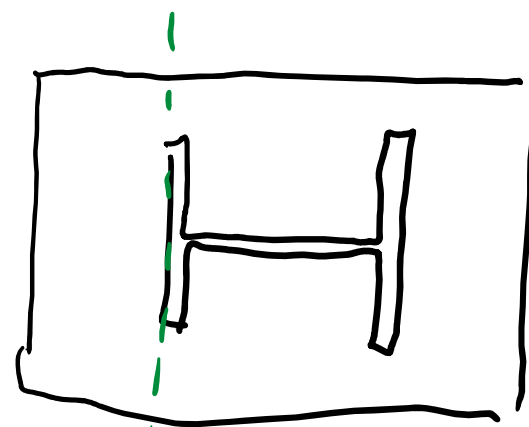


even to do  
ingrid,





B

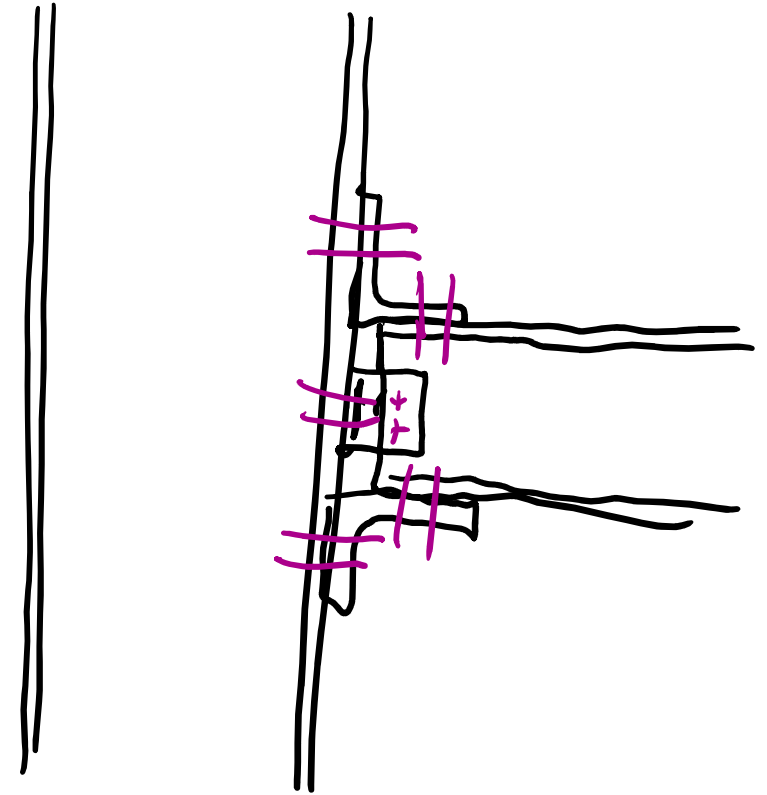
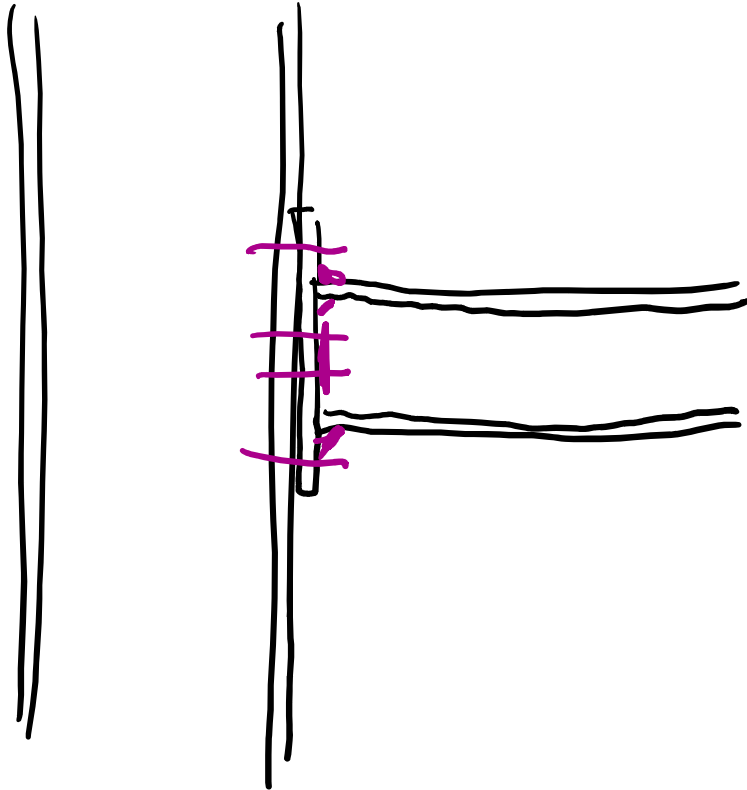


M

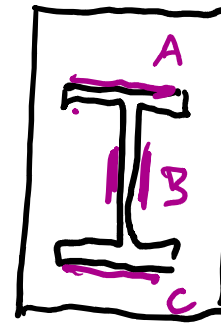
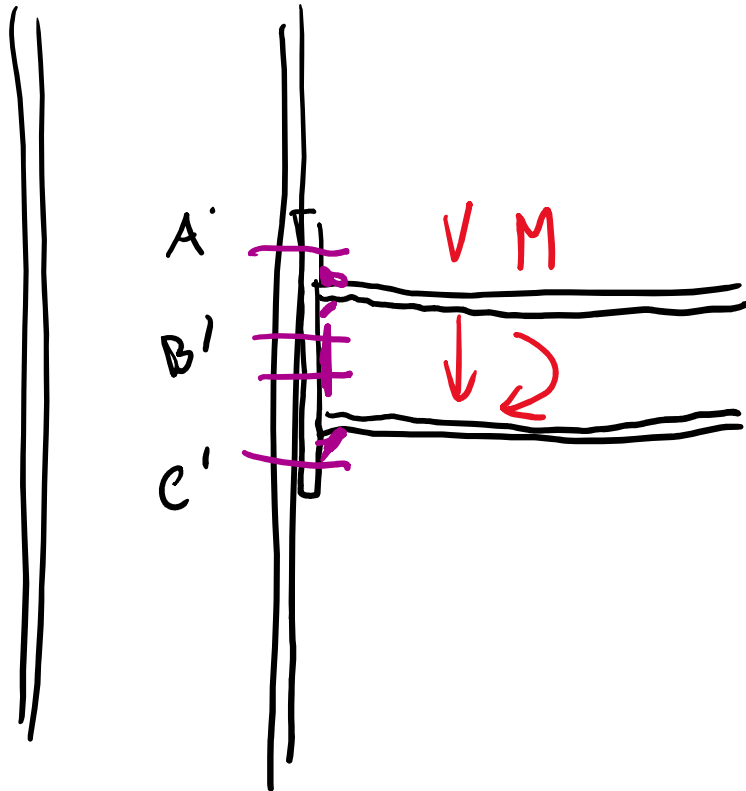
verificare per M



COLONNA - TRAVE



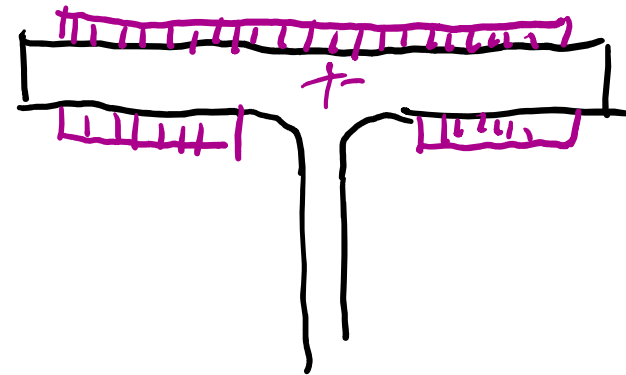
# COLONNA - TRAVE



pos.  $M/h$

pos.  $V$

pos.  $M/h$



## COLLEGAMENTI

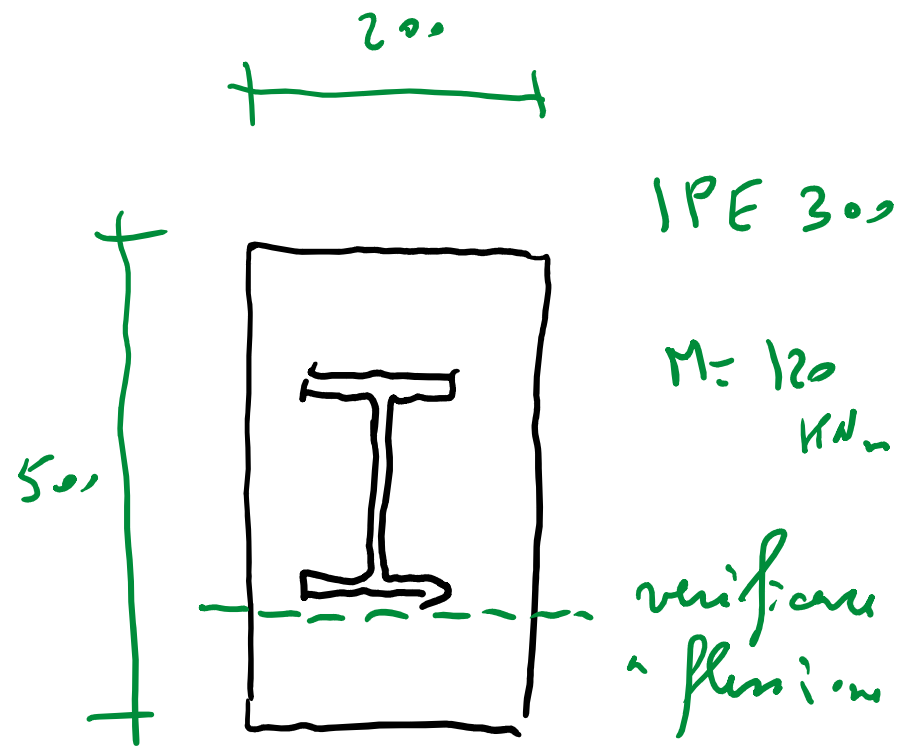
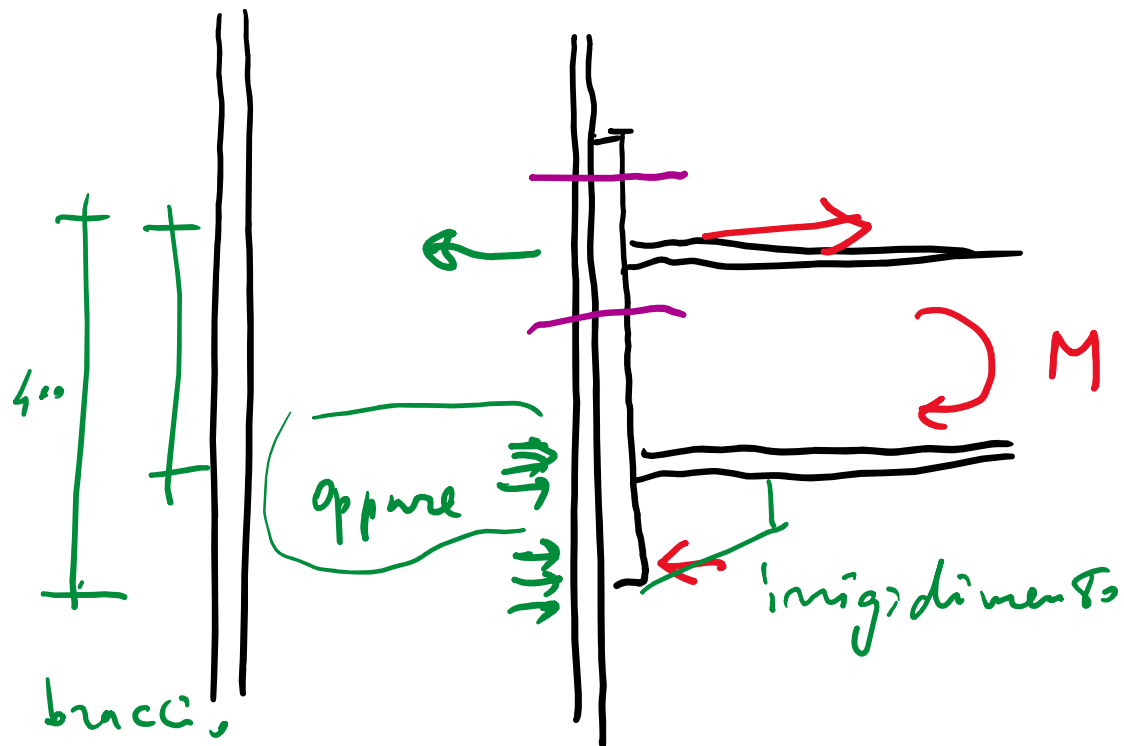
— azione sollecitante dalle travi

momento flettente  $M_{Ed} \approx M_{Rd, travi}$

Il collegamento progettato per portare  $M_{Ed}$  va bene  
però diventa il punto debole

il collegamento è "a parziale ripristino delle resistenze"

collegamento "a completo ripristino di resistenza"  
progettato per portare  $M_{Rd}$



$$\text{bracci.} = 400 \text{ mm}$$

$$F = 300 \text{ kN}$$

Diagram showing a beam section with a height of 100 mm. A horizontal force  $F$  is applied to the right part, and a moment  $M$  is applied. The force  $F$  is labeled "F". The moment  $M$  is labeled "M = Fd = 300 \times 0.1 = 30 kNm".

$$M = Fd = 300 \times 0.1 = 30 \text{ kNm}$$



$$M_{ed} = W_{pl} \frac{f_y}{\gamma_{m0}} = \frac{b h^2}{4} \frac{f_y}{\gamma_{m0}} \geq 30 \text{ kNm}$$

$$b h^2 \geq \frac{30 \times 4 \gamma_{m0}}{f_y} \times 10^6$$

$\swarrow \quad \searrow$   
 $300 \text{ mm} \quad \gamma_{m0} = 1.05$

$$t^2 \geq \frac{30 \times 4 \times 1.05}{275 \times 300} \times 10^6 = 1527 \text{ mm}^2$$

$$t \geq 39 \text{ mm}$$

$$t = 40 \text{ mm}$$