

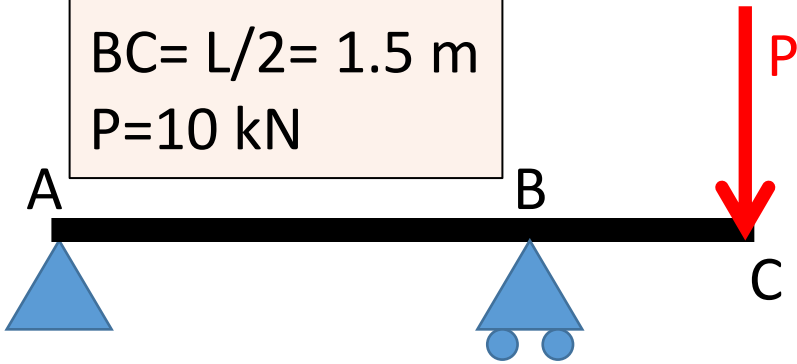


RIEPILOGO ESERCIZI 1A, 1B, 1C

VERIFICA DI RESISTENZA  
DI UNA STRUTTURA ISOSTATICA IN ACCIAIO

# ESERCIZIO

$AB = L = 3 \text{ m}$   
 $BC = L/2 = 1.5 \text{ m}$   
 $P = 10 \text{ kN}$



## DATI ES 1A

$s = 5 \text{ mm}$   
 $H = 125 \text{ mm}$   
 $B = 100 \text{ mm}$

$z_G = 53 \text{ mm}$   
 $J_y = 6 \times 10^6 \text{ mm}^4$

## DATI ES 1B

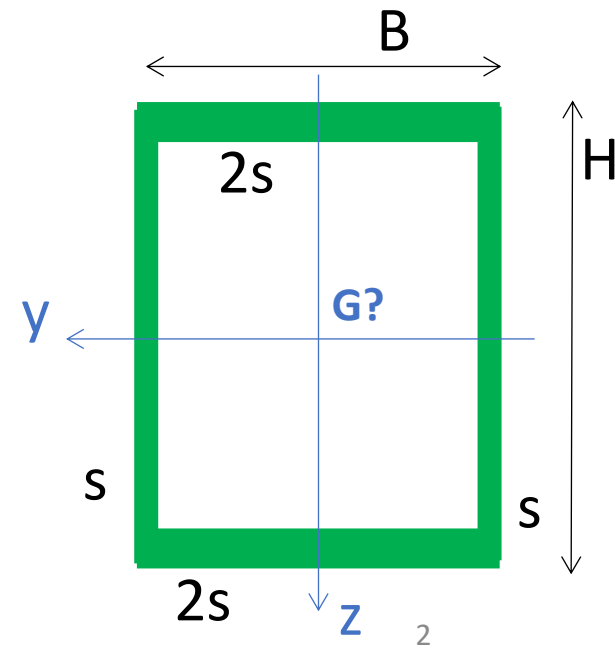
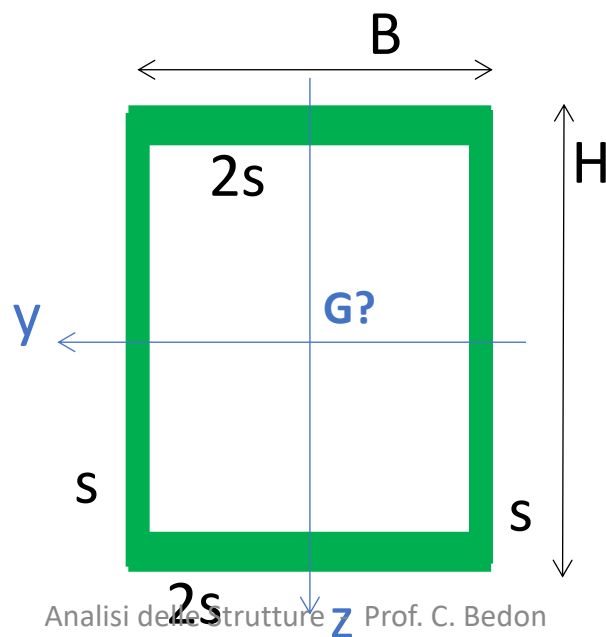
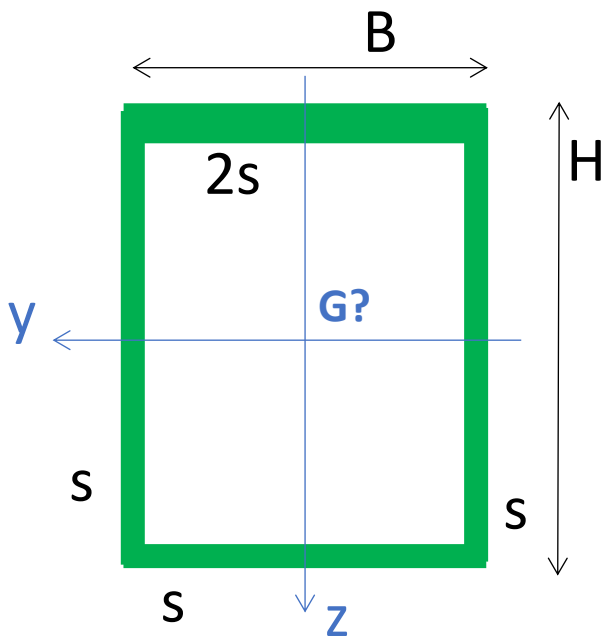
$s = 5 \text{ mm}$   
 $H = 125 \text{ mm}$   
 $B = 100 \text{ mm}$

$z_G = 62.5 \text{ mm (simm)}$   
 $J_y = 7.6 \times 10^6 \text{ mm}^4$

## DATI ES 1C

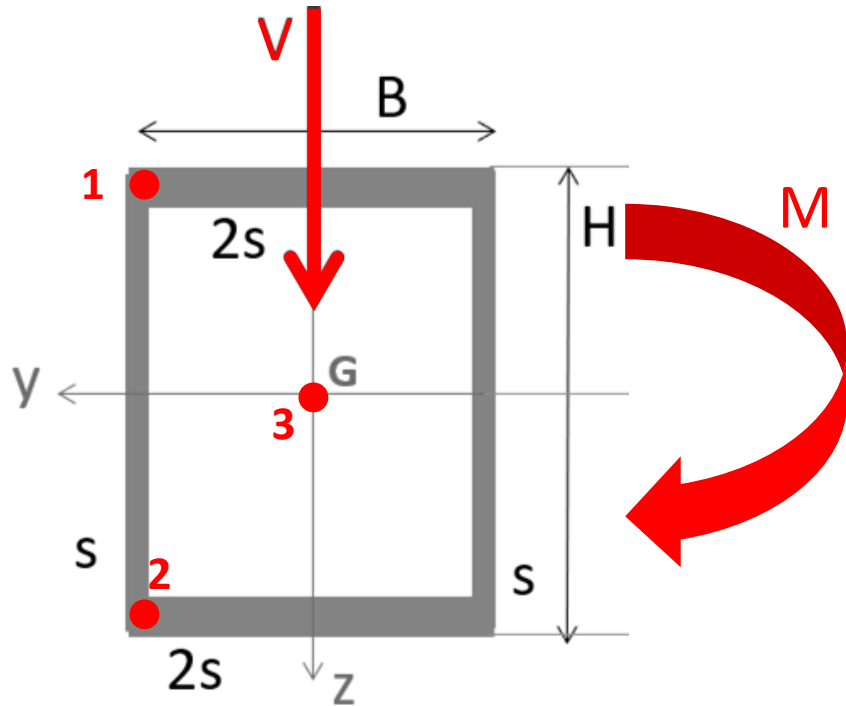
$s = 10 \text{ mm}$   
 $H = 125 \text{ mm}$   
 $B = 100 \text{ mm}$

$z_G = 62.5 \text{ mm (simm)}$   
 $J_y = 1.22 \times 10^7 \text{ mm}^4$



# Verifiche di resistenza (Von Mises)

## Riepilogo:



1A  $\sigma_1 = 132.54 \text{ MPa}$

$\tau_1 = 8 \text{ MPa}$

1B  $\sigma_1 = 123.35 \text{ MPa}$

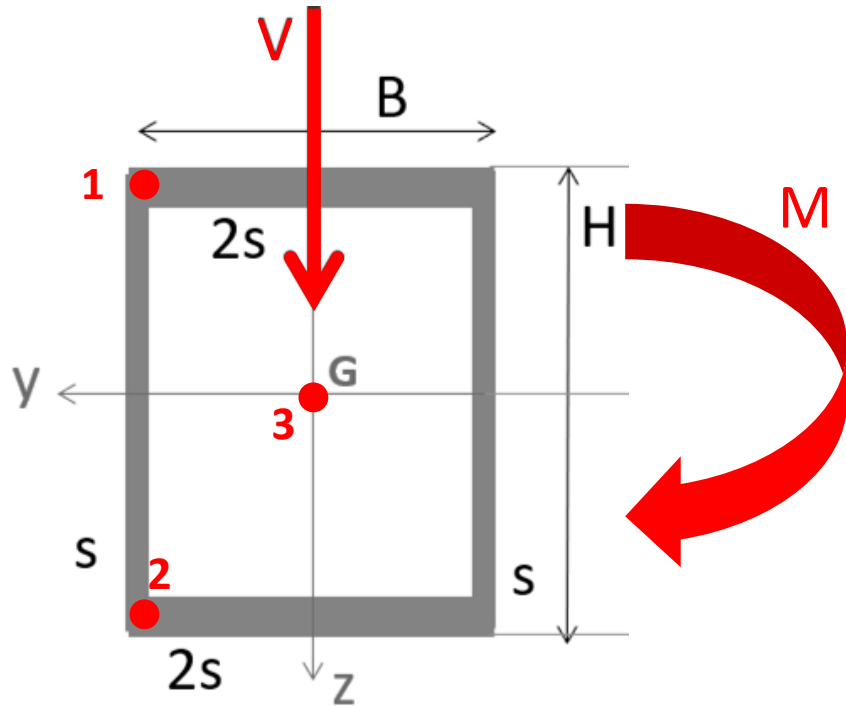
$\tau_1 = 7.56 \text{ MPa}$

1C  $\sigma_1 = 76.85 \text{ MPa}$

$\tau_1 = 4.31 \text{ MPa}$

# Verifiche di resistenza (Von Mises)

## Riepilogo:



1A  $\sigma_2 = -180.17 \text{ MPa}$

$\tau_2 = 5.8 \text{ MPa}$

1B  $\sigma_2 = -123.35 \text{ MPa}$

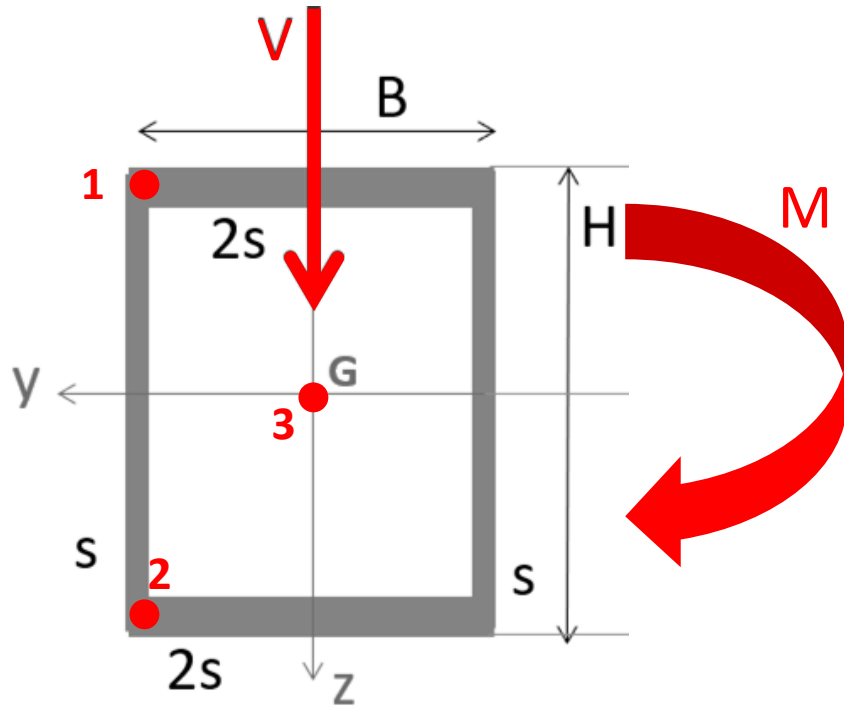
$\tau_2 = 7.56 \text{ MPa}$

1C  $\sigma_2 = -76.85 \text{ MPa}$

$\tau_2 = 4.31 \text{ MPa}$

# Verifiche di resistenza (Von Mises)

## Riepilogo:



1A  $\sigma_{id,2} = 180.49 \text{ MPa}$



1B  $\sigma_{id,2} = 124 \text{ MPa}$



1C  $\sigma_{id,2} = 77.2 \text{ MPa}$



**FIBRE INFERIORI COMPRESSE**