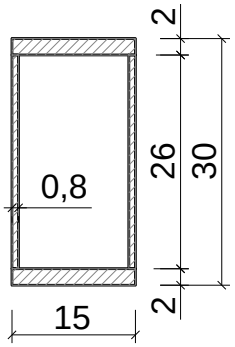
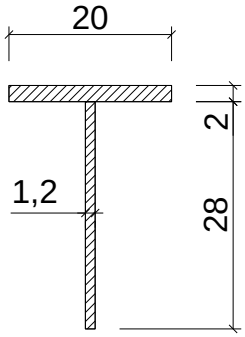
Wyznaczyć położenie osi głównych centralnych
oraz wartości momentów bezwładności względem tych osi.

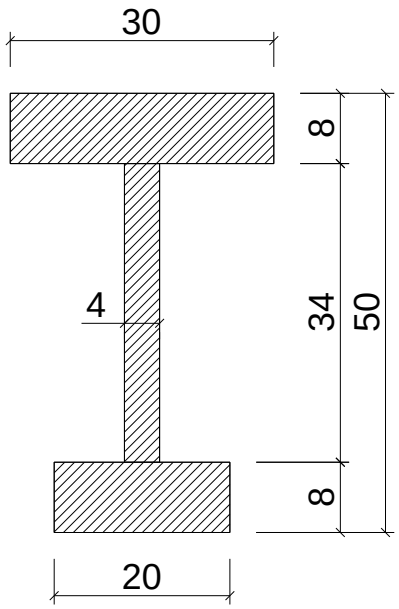
Zadanie 1



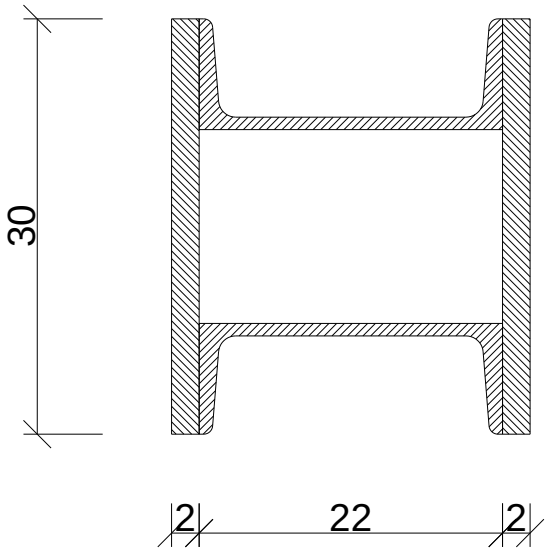
Zadanie 2



Zadanie 3



Zadanie 4



$C220$

$J_x = 2690\,cm^4$

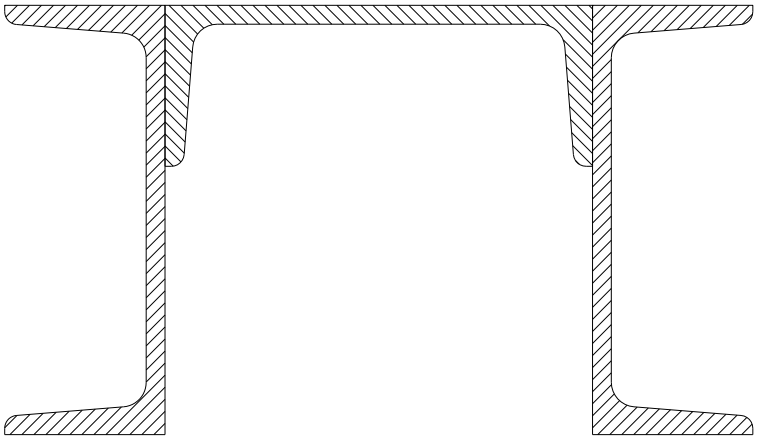
$J_y = 197\,cm^4$

$e = 2{,}15\,cm$

$b_f = 80\,mm$

$A = 37{,}4\,cm^2$

Zadanie 5



$C200$

$J_x = 1910\,cm^4$

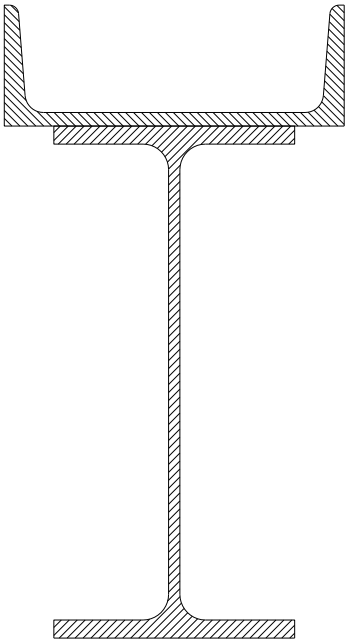
$J_y = 148\,cm^4$

$e = 2{,}01\,cm$

$b_f = 75\,mm$

$A = 32{,}2\,cm^2$

Zadanie 6



$C240$

$J_x = 3600\,cm^4$

$J_y = 248\,cm^4$

$e = 2{,}23cm$

$b_f = 85mm$

$A = 42{,}3cm^2$

$IPE360$

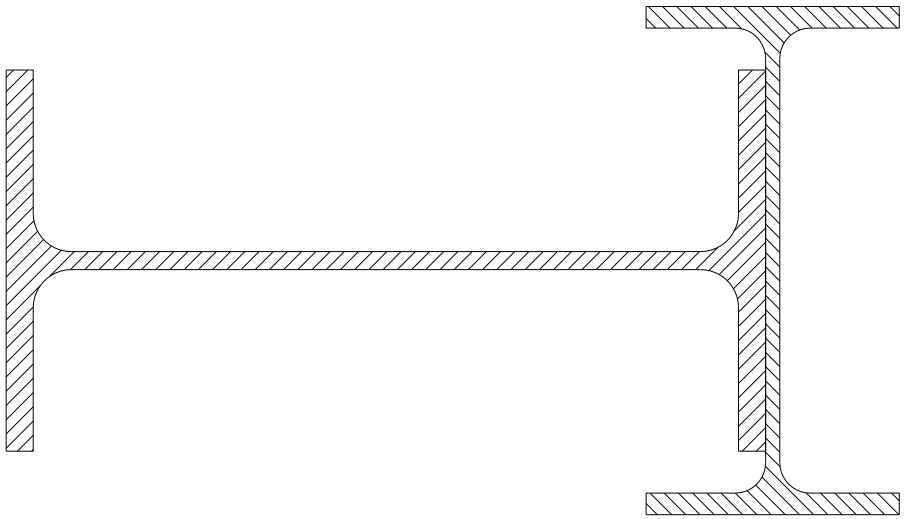
$J_x = 16270\,cm^4$

$J_y = 1040\,cm^4$

$A = 72{,}7cm^2$

$b_f = 170\,mm$

Zadanie 7



$IPE\,300$

$J_x = 8360\,cm^4$

$J_y = 604\,cm^4$

$A = 53{,}8cm^2$

$IPE\,200$

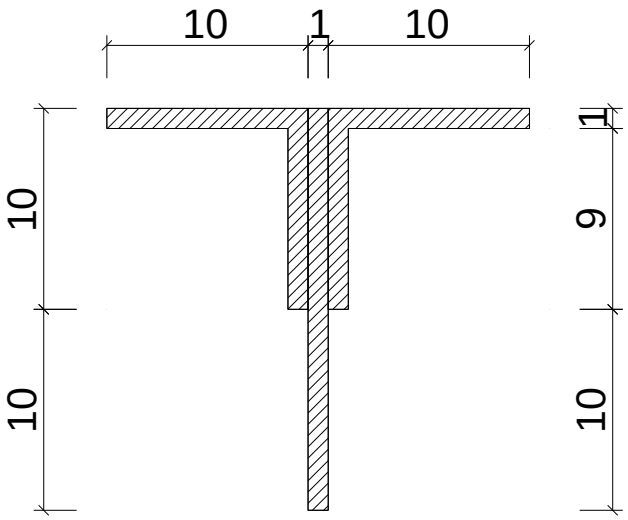
$J_x = 1940\,cm^4$

$J_y = 142\,cm^4$

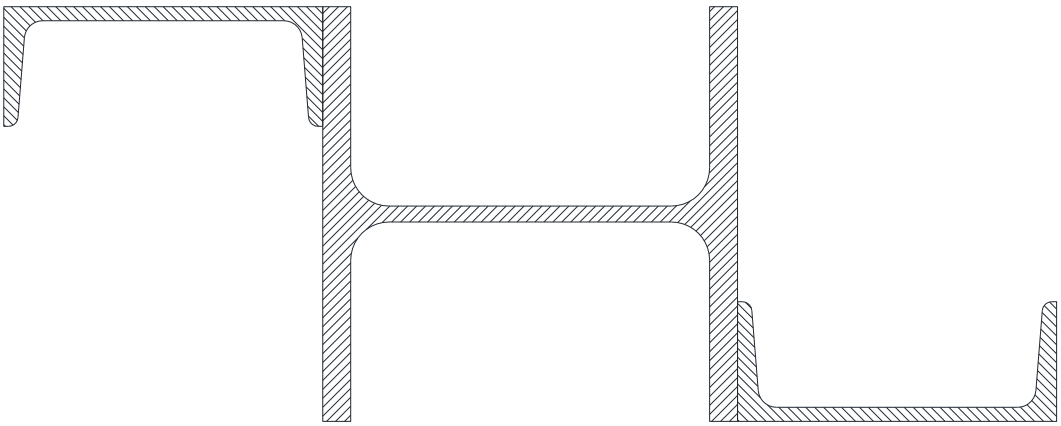
$A = 28{,}5cm^2$

$t_w = 5{,}6mm$

Zadanie 8



Zadanie 9



$C200$

$J_x = 1910cm^4$

$J_y = 148cm^4$

$e = 2{,}01cm$

$b_f = 75mm$

$A = 32{,}2cm^2$

$HEB260$

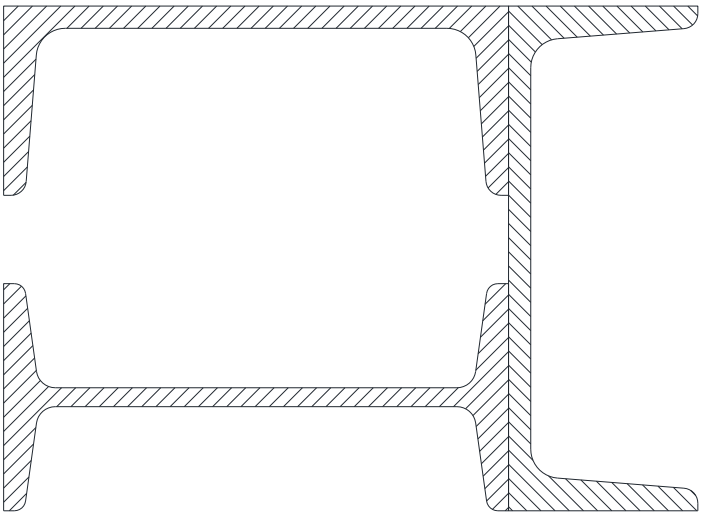
$J_x = 14920cm^4$

$J_y = 5130cm^4$

$b_f = 260mm$

$A = 118cm^2$

Zadanie 10



$C200$

$J_x = 1910\,cm^4$

$J_y = 148\,cm^4$

$e = 2{,}01cm$

$b_f = 75mm$

$A = 32{,}2cm^2$

$I200$

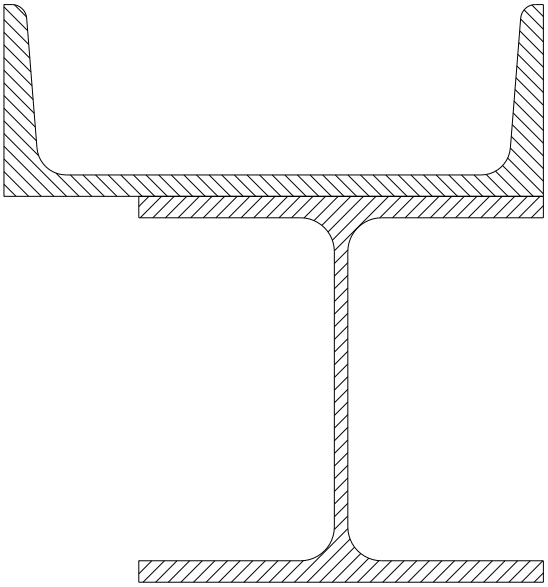
$J_x = 2140cm^4$

$J_y = 117cm^4$

$b_f = 90mm$

$A = 33{,}5cm^2$

Zadanie 11



$C240$

$J_x = 3600cm^4$

$J_y = 248cm^4$

$e = 2{,}23cm$

$b_f = 85mm$

$A = 42{,}3cm^2$

$HEA180$

$J_x = 2510cm^4$

$J_y = 925cm^4$

$h = 171mm$

$b_f = 180mm$

$A = 45{,}3cm^2$