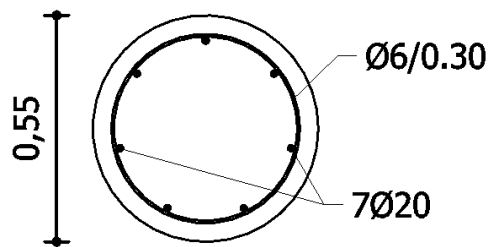


Ejercicio 1

$$w = 0,20 \rightarrow A_s = 21,86 \text{ cm}^2 (7\phi 20)$$

Estribos $\phi 6/0,30$



Ejercicio 2

- $N_u = 1650 \text{ kN}$
- Estribos $\phi 6/0,30$
- $l_{bl} = 420 \text{ mm}$

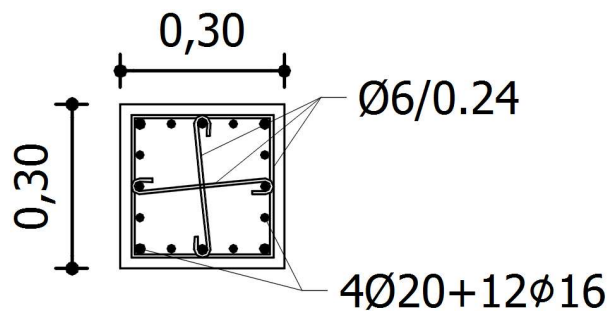
Ejercicio 3

$$w = 0,66 \rightarrow A_s = 31,9 \text{ cm}^2 (4\phi 20 + 12\phi 16)$$

Estribos $\phi 6/0,24$

$l_{bl} (\phi 20) = 435 \text{ mm}$

$l_{bl} (\phi 16) = 348 \text{ mm}$



Ejercicio 4

- $e_{\text{máx}} = 9,5 \text{ cm}$

Ejercicio 5

a) $w = 0,45 \rightarrow A_s = 20,70 \text{ cm}^2 (12\phi 16)$

Estribos $\phi 6/0,24$

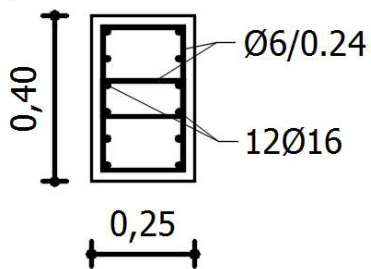
b) $w = 0,20 \rightarrow A_s = 9,20 \text{ cm}^2 (6\phi 16)$

Estribos $\phi 6/0,24$

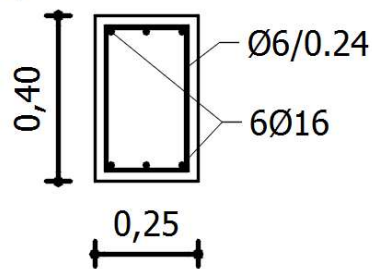
c) $w = 0,54 \rightarrow A_s = 24,84 \text{ cm}^2 (8\phi 20)$

Estribos $\phi 6/0,25$

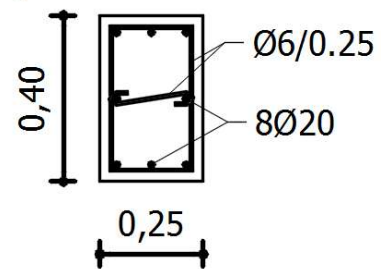
a)



b)



c)



Ejercicio 6

$w = 0,62 \rightarrow A_s = 38,50 \text{ cm}^2 (8\phi 25)$

Estribos $\phi 8/0,30$

