Adición de un piso – Comprobación pilares bajos

Carga piso — 4'50 x 3'00 x 5 x 400 = 27000 Kgs.

Peso pilar — 0'25 x 0'25 x 17 x 2500 = 2656 "

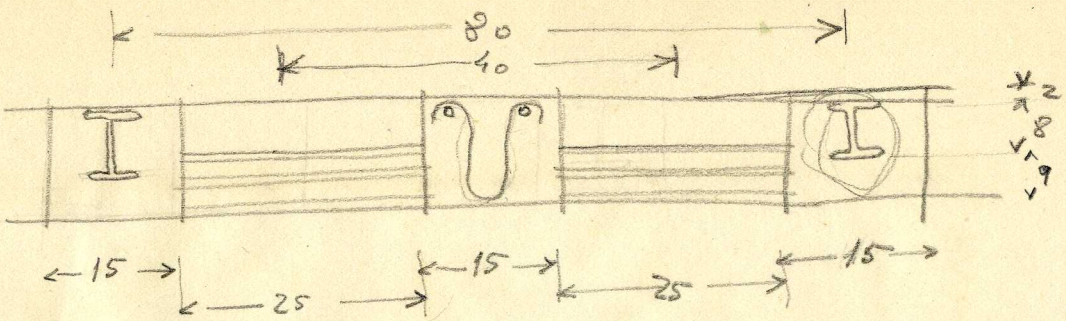
29.656 Kgs. ≠ 30000 Kgs.

Tablas Forsell = para 300 kgs carga, 30 ton, 4 φ 13 mm.

sección altura 24x24 = 576 cm², 28x22 = 616 cm²

25x25 = 625 cm²

Tensión $\sigma_b = \frac{P}{F_b + n F_e} = \frac{30000}{625 + 5'31 \times 15} = \frac{30000}{625 + 79'65} = \frac{30000}{700} = 42'85\ Kg/cm^2$



Voladizo fachada — vuelo 1'50 m —

Carga uniforme = 1'50 × 0'40 × 4000 = 240 Kg. $M_{xx} = \frac{1}{2}\,1'50 \times 240 = 180$ Kg. m. $W_x = \frac{18000}{1000} = 18\ cm^3$

" en el borde = 0'12 × 0'40 × 3'00 × 1600 = 230 Kg. " $M_{xy} = 1'5 \times 230 = 345$ Kg. m $W_y = \frac{34500}{1000} = 34'50\ cm^3$

W_x total = 18 + 34'5 = 52'50 cm^3

Circular franco-abovo

$M_{xy} = 180 + 345 = 525$ Kg. m. $\frac{525}{40} = 13'125$ Kg — y cm.

$\eta_1 = 40$, $\eta_2 = 13'12$ " $h' = 17$ cm. $w' = ?\ mm^2$ =

$w = 0'07 \times 40 = 2'80\ cm^4$ 2 φ 14 mm = 3'08 cm^2

$\alpha = \sqrt{\frac{H}{b}} = \sqrt{\frac{525}{0'40}} = \sqrt{1312} = 36'2$ $\beta = \alpha \times b = \alpha \times 0'40 = 36'2 \times 0'4 = 14'40$ Rankin.

Para 40 y 1200 Kg. cm
$h' = 0'411 \times \alpha = 0'411 \times 36'2 = 14'87$ cm
$\lambda = 0'228 \cdot \beta = 0'228 \times 14'4 = 3'28\ cm^2$
$\alpha = 0'333\,h' = 0'333 \times 14'87 = 4'95$ cm.

2 φ de 15 mm = 3'53 cm^2