



LUIS EDUARDO GUILLÉN MELGAR
UDS CAMPUS COMITÁN

5° A.
ANÁLISIS DE ESTRUCTURAS.
PEDRO GARCÍA.

0.5465

0.7013

0.7927

0.2987

5757696

Concreto

Acero

$F'c = 200 \text{ kg/cm}^2$

$F_r = 4,200 \text{ kg/cm}^2$

.5590

$P_b = 0.01524$

0.441

$P_{min} = 0.002357$

2500

3086316

$P_{max} = 0.01143$

1.0430

3028

$$P = \frac{(-q^2 + 1) \cdot F'c}{F_y}$$

$$M = \frac{W \cdot L^2}{8} = 12.3809 \text{ t/m}$$

$$M_U = M \cdot 1.3 = 1,609,517 \text{ kg} \cdot \text{cm}$$

$$q^2 = - \frac{M_U}{F_r \cdot b \cdot d^2 \cdot F'c} \cdot 2 + 1$$

$b = 15 \text{ cm}$

C

0.4205

$h = 45 \text{ cm}$

$d = 41 \text{ cm}$

$M_U = 1,609,517 \text{ kg} \cdot \text{cm}$

0.5798

$F_y = 4,200 \text{ kg/cm}^2$

$F'c = 200 \text{ kg/cm}^2$

0.6484

$F_r = \text{Factor} = 0.9$

0.01138

$b = \text{base supuesta}$

1681

0.0256

$h = \text{altura de Trabe}$

4,538,700

$d = \text{Peralte efectivo} = h - r$

1.7092

$r = \text{Recubrimiento} = 4 \text{ cm}$

5553900

0.01088

$q = 0.2073$

0.6640

4590000