

## 3.6.5 DEFORMACIONES Y CONTRAFLECHAS

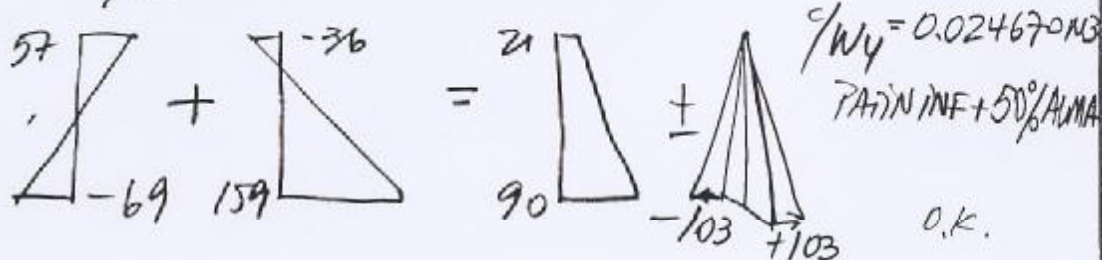
$$\begin{aligned}
 PPVIA & (5/384) P_V L^4 / E_c I_c = 0.025 \text{ m} \\
 POSIZI\ddot{O}N & (C_0 + 5/6 e_g) P_H L^2 / 8 E_c I_c = -0.052 \text{ m} \\
 SOBRECARGA & (5/384) P_{SL} L^4 / E_c I_{\phi} = 0.021 \text{ m} \\
 P+B+P & (\checkmark) P_{P+B+P} L^4 / E_c I_{col} = 0.004 \checkmark
 \end{aligned}
 \left. \begin{array}{l} \\ \\ \\ \end{array} \right\} \begin{array}{l} \text{CONTRAFLECHA INSTANT} \\ \\ \text{X } E_c \approx 24 \text{ GPa} \\ \text{I}_c = 1109479 \text{ cm}^4 \\ \text{I}_{\phi} = 1272634 \text{ cm}^4 \\ \text{I}_{col} = 2424137 \text{ cm}^4 \end{array}$$

$$CON \quad P_H = (P_0 - 1.5 FR) \cos \bar{\theta}_y = 524 \text{ TON} \quad \Delta_{if} = -0.074 \text{ m}$$

$$\begin{aligned}
 e_g &= \bar{y} = 0.842 \text{ m} & E_c I_c &= 1109479 \text{ TXM}^4 \\
 C_0 &= y_c - \bar{y} - .11 = 0.141 & E_c I_{\phi} &= 1272634 \checkmark \\
 & & E_c I_{col} &= 2424137 \checkmark
 \end{aligned}$$

## FLEXION LATERAL

$$\begin{aligned}
 & P'_1 = 215.5 \text{ TON EN } e_g \\
 & + P'_2/2 = 181.3 \text{ TON @ } +0.14
 \end{aligned}
 \left. \begin{array}{l} \\ \end{array} \right\} \begin{array}{l} \bar{P}'_0 = 396.8 \text{ TON} \\ @ 0.064 \text{ m} \end{array}$$



LOS GIROS IMPUESTOS A LAS PLACAS DE APOYO SERAN LOS CORRESPONDIENTES A

$$SOBRECARGA \quad \theta_{sc} = 2.054\%$$

$$P+B+P \quad \theta_{P+B+P} = 0.434\%$$

$$SOBRECARGA \quad \theta_{sc} = 0.939\% \text{ EN POSICI\ddot{O}N MAX SIN IMPACTO}$$

$$\text{GIRO MAX. } \bar{\theta}_v = 3.427\%$$

EN ESTUARIOS EL ALOJAMIENTO POR  $\Delta T = 20^\circ$

$$\Delta_T = \alpha \Delta T \times L/2 = 10^{-5} \times 20^\circ \times 65.67/2 = 0.007 \text{ m}$$