

3.7.2 CORTE EN (14)

$$L_v = 33.10 \quad L_A = 32.37 \quad X_c = L_A/2 - 14 = 2.185 \text{ m}$$

$$\phi(V_c + V_s) \geq V_u = 1.3(V_d + V_{sc}/0.6)$$

$$0.90(189.1 + 69) \geq 1.3(63.35 + 40.07/0.6)$$

$$232.2 \text{ TON} \geq 169.2 \text{ TON} \quad \text{O.K.}$$

EN QUE

$$\begin{aligned} V_c = V_{cw} &= (0.93 \sqrt{f'_c} + 30 f_{pc}) b' d + V_p < V_{ci} \\ &= (0.93 \sqrt{550} + 30 \times 58) 20 \times 209 + 43.6 \\ &= 145.5 + 43.6 \\ &= 189.1 \text{ TON} \end{aligned}$$

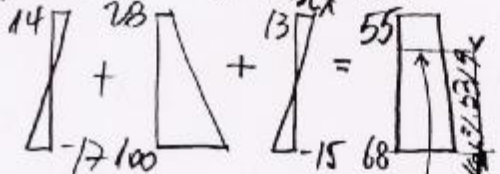
CON:

$$P_u - F_R = 457.7 \text{ TON}$$

$$0.777 \text{ m}$$

$$M_{prx} = 63.6 \text{ tm}$$

$$M_{sux} = 61.03$$



$$f_{pc} = 58 \text{ Kg/cm}^2$$

$$\begin{aligned} V_p &= \frac{1}{2} \bar{Q}_L (P_u - F_R) \\ &= 0.095 \times 457.7 \\ &= 43.6 \text{ TON} \end{aligned}$$

$$\begin{aligned} V_d &= (1.928 + 1.85 + 0.747) \times 14 \\ &= 63.35 \text{ TON} \end{aligned}$$

$$\begin{aligned} V_{sc} &= 2.25 P_d \times \frac{1.3}{C \cdot I} \left(\frac{Q_u}{2} + 14 - 2.845 \right) \\ &= 47.44 \times 0.845 \\ &= 40.07 \text{ TON} \end{aligned}$$

$$\begin{aligned} V_s &= A_s f_y d / s \\ &= 1.571 \times 4.2 \times 209 / 20 \\ &= 69.1 \text{ TON} \end{aligned}$$