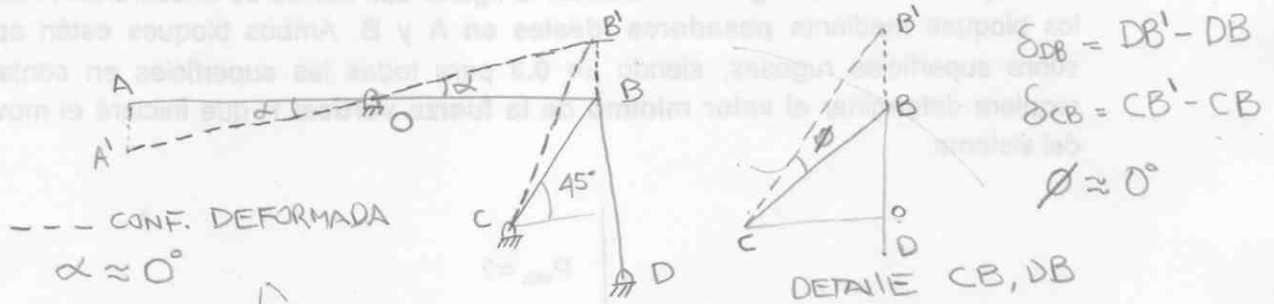


$$\sum M_o^E = 0$$

$$50BD + \frac{\sqrt{2}}{2} CB(50) = 50P$$

DCL (OAB)

$$BD + \frac{\sqrt{2}}{2} CB = P \quad \text{I}$$



--- CONF. DEFORMADA
 $\alpha \approx 0^\circ$

$$\delta_{DB} = DB' - DB$$

$$\delta_{CB} = CB' - CB$$

$$\phi \approx 0^\circ$$

DETALLE CB, DB

$\psi \approx 45^\circ$ (PEQUEÑAS DEF.)

$$\cos(\psi) = \frac{\delta_{CB}}{\delta_{DB}}$$

$$\delta_{CB} = \frac{\sqrt{2}}{2} \delta_{DB} \quad \text{II}$$

DETALLE DEFORMACIÓN δ_{CB}, δ_{DB}
PARA PEQUEÑOS DESPLAZAMIENTOS

OTRA OPCION: $(CB')^2 = (CD)^2 + (DB + BB')^2 \Rightarrow (CB + \delta_{CB})^2 = (CB \frac{\sqrt{2}}{2})^2 + (\frac{\sqrt{2}}{2} CB + \delta_{DB})^2$

$$CB^2 + 2CB\delta_{CB} + \delta_{CB}^2 = CB^2 \frac{2}{4} + \frac{2}{4} CB^2 + CB\sqrt{2}\delta_{DB} + \delta_{DB}^2$$

$\delta_{CB}^2 \ll \delta_{CB} \dots \text{I}$
 $\delta_{DB}^2 \ll \delta_{DB} \dots \text{II}$

I, II DEBIDO A PEQUEÑOS DESPLAZAMIENTOS

$$CB^2 + 2CB\delta_{CB} \approx CB^2 + \sqrt{2} CB \delta_{DB} \Rightarrow 2\delta_{CB} = \sqrt{2} \delta_{DB} \Rightarrow \delta_{CB} = \frac{\sqrt{2}}{2} \delta_{DB}$$

$$\delta_{CB} = \frac{CB L_{CB}}{AE}, \delta_{DB} = \frac{DB L_{DB}}{AE} \Rightarrow \text{EN I} \quad \frac{CB L_{CB}}{AE} = \frac{\sqrt{2}}{2} \frac{DB L_{DB}}{AE}$$

$$CB = \frac{\sqrt{2}}{2} DB \left(\frac{L_{DB}}{L_{CB}} \right) \Rightarrow CB = \frac{\sqrt{2}}{2} \left(\frac{30}{20} \right) DB \Rightarrow CB = \frac{3\sqrt{2}}{4} DB \quad \text{III}$$

$$\text{III} \Rightarrow \text{I} \quad BD + \frac{\sqrt{2}}{2} \left(\frac{3\sqrt{2}}{4} BD \right) = P \Rightarrow \left(1 + \frac{3}{4} \right) BD = P$$

$$BD = \left(\frac{4}{4+3\sqrt{2}} \right) P, \quad CB = \frac{3\sqrt{2}}{4} \left(\frac{4}{4+3\sqrt{2}} \right) P \Rightarrow CB = \frac{3\sqrt{2}}{4+3\sqrt{2}} P$$

$$\left\{ \begin{array}{l} \sigma_{BD} \leq \sigma_{ADM} \\ \sigma_{CB} \leq \sigma_{ADM} \end{array} \right. ; \quad \sigma_{BD} = \frac{BD}{A}, \quad \sigma_{CB} = \frac{CB}{A}$$

$$\Rightarrow CB > BD \Rightarrow \sigma_{CB} > \sigma_{DB}; \quad \frac{CB}{A_{min}} \leq \sigma_{ADM}$$

$$A_{min} \geq \frac{CB}{\sigma_{ADM}} \quad A_{min} \geq \frac{3\sqrt{2}}{4+3\sqrt{2}} \left(\frac{P}{\sigma_{ADM}} \right)$$

$$A_{min} \approx 1.02 \text{ cm}^2$$