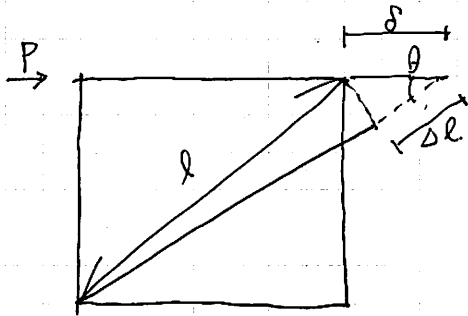


RCスラブ フラース置換.



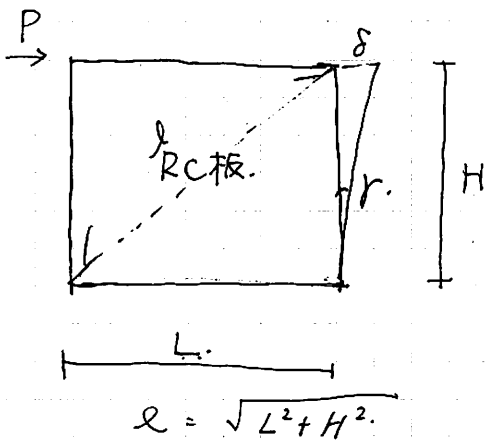
$$\Delta l = \delta \cos \theta$$

$$\sigma = E \epsilon \rightarrow \frac{N}{A} = E \cdot \frac{\Delta l}{l}$$

$$N = P / \cos \theta \quad \therefore \frac{P}{A} \cdot \frac{1}{\cos \theta} = E \cdot \frac{\delta \cos \theta}{l}$$

$$\therefore P = \left( \frac{EA}{l} \cdot \cos^2 \theta \right) \delta$$

フラース 水平剛性.



せん断変形

$$\tau = G \gamma \rightarrow \frac{P}{A} = G \cdot \frac{\delta}{H}$$

$$P = GA \cdot \frac{1}{H} \cdot \delta = \frac{G \cdot t \cdot L}{H} \cdot \delta$$

$$\therefore P = \left( \frac{G \cdot t \cdot L}{K \cdot H} \right) \cdot \delta \quad K=1.2$$

↑  
せん断剛性.

• たまたのフラースと等価とする.

$$\left( \frac{EA}{l} \cdot \cos^2 \theta \cdot 2 \right) = \frac{G \cdot t \cdot L}{K \cdot H}$$

$$\therefore A = \frac{G \cdot t \cdot L \cdot l}{2 \cdot K \cdot E \cdot H \cdot \cos^2 \theta}$$

$$l = \sqrt{L^2 + H^2}, \quad \cos^2 \theta = \left( \frac{L}{\sqrt{L^2 + H^2}} \right)^2$$

$$A = \frac{G \cdot t \cdot L \cdot (\sqrt{L^2 + H^2})^3}{2 \cdot K \cdot E \cdot H \cdot L^2} = \frac{G \cdot t \cdot (\sqrt{L^2 + H^2})^3}{2 \cdot K \cdot E \cdot H \cdot L}$$

• 計算例.  $\gamma = 1.4$   $E = 3.35 \cdot 10^4 \cdot \left( \frac{\gamma}{24} \right)^2 \times \left( \frac{F_c}{60} \right)^{1/3}$

ポアソン比 = 0.2.

$$G = \frac{E}{2(1+\nu)} \quad G = \frac{E}{2(1+0.2)} = \frac{E}{2.4}$$

$$A = \frac{E}{2.4} \cdot t \cdot (\sqrt{L^2 + H^2})^3 \cdot \frac{1}{2 \cdot K \cdot E \cdot H \cdot L}$$

$$= \frac{t \cdot (\sqrt{L^2 + H^2})^3}{4.8 \cdot K \cdot H \cdot L}$$

↑  $\gamma$ -スラブ  $E = 3.35 \times \dots$   
2.4 x 7.