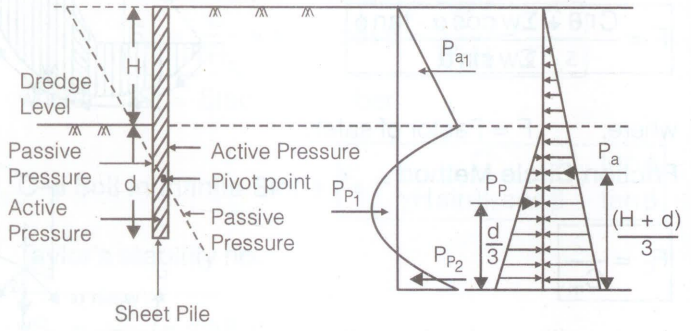
12. SHEET PILE WALLS

SHEET PILE WALLS EMBEDDED IN SANDS



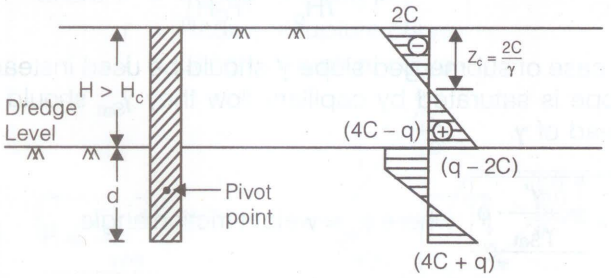
$$P_p \cdot \frac{d}{3} = P_a \frac{(H+d)}{3}$$ ... without factor of safety.

$$\frac{P_p}{Fos}\frac{d}{3} = P_a \frac{(H+d)}{3}$$ ... with factor of safety.

$$P_p = \frac{1}{2} k_p \gamma d^2$$

$$P_p = \frac{1}{2} k_a \gamma (H+d)^2$$

SHEET PILE WALLS EMBEDDED IN CLAYS



$q = \gamma H$

Active earth pressure at depth H,

$P_a = q - 2C$

Passive earth pressure at depth 'H'.

$P_p = 2c$

Resultant earth pressure of depth H, is $(P_p - P_a)$

$P_p - P_a = 4c - q$

Resultant earth pressure at base i.e., at depth (H + d) is $(P_p - p_a)$

$P_p - P_a = (4c - q)$

Resultant earth pressure of base i.e., of depth (H +d) is $(P_p - P_a)$

$P_p - P_a = (4c + q)$

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