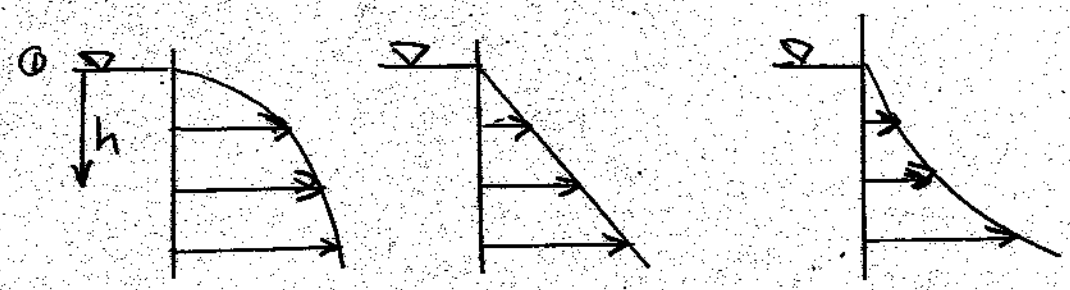
3.10 CI HOLES VS DEPTH

F1 PROFILE OF DISCHARGE



LET ① BE AT SURFACE AND ② AT HOLE

SOLVE FOR V ASSUMING DISCHARGE COEFF SAME FOR ALL HOLES.

$$\cancel{p_1}^{\,p_2} + \frac{1}{2}\cancel{\rho V_1^2}^{\,\approx 0} + \gamma \cancel{z_1}^{\,0} = \text{CONST} = \cancel{p_2}^{\,p_1} + \frac{1}{2}\rho V_2^2 + \gamma z_2$$

$$V_2 = \sqrt{2gh}$$

∴ <u>1ST PROFILE IS CORRECT</u>