

()

$HSt = HSd \pm HSs$	$Hm = Hmd - Hms$
$H = HSt + hf + hp + \frac{V^2}{2g}$	$N_s = 0.2108N \left(\frac{Q^{0.5}}{H^{0.75}} \right)$
$WP = \frac{Q \times H}{102}$	$\frac{Q_1}{Q_2} = \left(\frac{N_1}{N_2} \right) \times \left(\frac{D_1}{D_2} \right)^3$
$BP = \frac{Q \times H}{102 \times E}$	$\frac{H_1}{H_2} = \left(\frac{N_1}{N_2} \right)^2 \times \left(\frac{D_1}{D_2} \right)^2$
$NPSHR = \sigma H$ $NPSHA = P_{atmos} - Z_s - hf_s - P_v$	$\frac{BP_1}{BP_2} = \left(\frac{N_1}{N_2} \right)^3 \times \left(\frac{D_1}{D_2} \right)^5$
$P_{atmos} = 10.33 - 0.00108E$	$H_m = H_{St} + h_f + h_p$
$h_f = f \cdot \frac{L}{d} \cdot \frac{V^2}{2g} = \frac{f L Q^2}{12.1 d^5}$	$H_m = h_s + KQ^2$