$\omega = 2\pi$

$c = \sqrt{\frac{\sigma}{\rho}} = \sqrt{\frac{Fd}{m}} = \lambda\nu \quad \sigma = F/S$

$\lambda = ct_0 = c/\nu$

napeta vrv:

$\lambda_0 = 2b \quad \lambda_1 = b \quad \nu_1 = 2\nu_0$

$\nu_n = (n+1)\nu_0 = (n+1)\cdot\frac{c}{2b} \quad n = 2,3,\ldots$

valovanje kapljevin:

$c = \sqrt{gh}$ - plitva voda

$c = \sqrt{\frac{g\lambda}{2\pi}}$ – globoka voda

$c = \frac{1}{\sqrt{\chi\rho}} = \sqrt{\frac{E}{\rho}} = \text{konst.}\cdot\sqrt{T}$

nihanje zraka v piscali:

$\nu_0 = \frac{c}{2b}$ (zaprta in odprta) $\nu_n = (n+1)\nu_0$

$\nu_0 = \frac{c}{4b}$ (napol odprta) $\nu_n = (n+1)\cdot 3\nu_0$

Doppler: - premikanje sprejemnika:

- blizanje: $\nu = \nu_0(1 + v/c)$ - oddal: $(1 - v/c)$

- premikanje oddajnika:

- blizanje: $\nu = \frac{\nu_0}{1 - v/c}$ - oddal: $(1 + v/c)$

$M = v/c$

$\sin\alpha = c/v = 1/M \quad h = vt\cdot\tan\alpha$

Gostota zvocne energije: $\frac{\Delta W}{\Delta V} = \frac{1}{2}\cdot\rho y_0^2 w^2$

Zvocni tok: $P = \frac{\Delta W}{\Delta t}$

Gostota zvocnega toka: $j = P/S \quad j^* = 10^{-12}\,W/m^2$

$j = \frac{1}{2}\cdot\rho c y_0^2\omega^2 = \frac{P}{4\pi r^2}$ glasnost: $J = 10\log(j/j^*)\ [dB]$