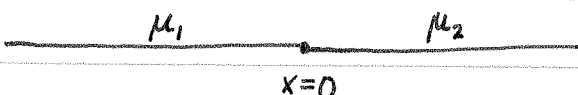


Refleksjon, transmisjon:

Grenseflate (3D), evt "grensepunkt" (1D) mellom to medier $\Rightarrow$ innkommende bølge blir delvis reflektert og delvis transmittert.

Bølge på streng:  A horizontal line representing a string. Above the line, the left part is labeled μ_1 and the right part is labeled μ_2 . At the center of the line, there is a dot labeled $x=0$.

$$x < 0: \xi = \xi_i + \xi_r$$

$$x > 0: \xi = \xi_t$$

krav om kontinuerlig ξ og $\partial\xi/\partial x$ i $x=0$ fastlegger ξ_r og ξ_t for gitt ξ_i ($\xi_i =$ innkommende bølge)

$$\Rightarrow \xi_{r0} = r \xi_{i0}, \quad \xi_{t0} = t \xi_{i0}$$

$$\text{med } r = \frac{\sqrt{\mu_2} - \sqrt{\mu_1}}{\sqrt{\mu_2} + \sqrt{\mu_1}}, \quad t = \frac{2\sqrt{\mu_1}}{\sqrt{\mu_2} + \sqrt{\mu_1}}$$

$$T = P_t/P_i = \frac{4\sqrt{\mu_1\mu_2}}{(\sqrt{\mu_2} + \sqrt{\mu_1})^2} = \text{transm. koeff.}$$

$$R = P_r/P_i = 1 - T = \text{refl. koeff.}$$

Plan lydbølge mot grenseflate mellom medier 1 og 2:

$$T = 4\sqrt{\rho_1 B_1 \rho_2 B_2} / (\sqrt{\rho_1 B_1} + \sqrt{\rho_2 B_2})^2; \quad R = 1 - T$$