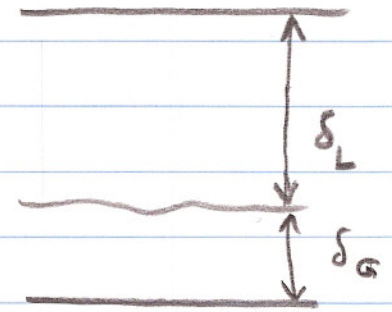
# Problem 2.11




Starting from Eqs. (2.117) and (2.118) we must express $\phi_L'$ and $\phi_G'$ such that

$$\frac{d\phi_G'}{dz} = 0 \quad \text{at} \quad z = -\delta_G$$

$$\frac{d\phi_L'}{dz} = 0 \quad \text{at} \quad z = +\delta_L$$

Thus, instead of Eq. (2.117) use

$$\phi_L' = b\cosh[-k(z-\delta_L)]\,e^{i(\omega t - kx)}$$

and instead of Eq. (2.118) use

$$\phi_G' = b'\cosh[k(z+\delta_G)]\,e^{i(\omega t - kx)}$$

The result of the analysis will be similar to Eq. (2.129) except that $\rho_L$ and $\rho_G$ are replaced with $\rho_L'$ and $\rho_G'$ where

$$\rho_L' = \rho_L \,/\tanh(k\,\delta_L)$$

$$\rho_G' = \rho_G \,/\tanh(k\,\delta_G)$$