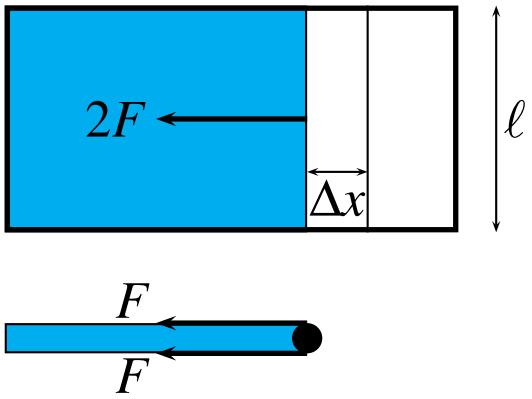
Surface tension and Marangoni effect

$$\sigma \propto \frac{U}{2\delta^2},$$

$$[\sigma] = MT^{-2} = \frac{[F]}{[L]}$$



$$2F\Delta x = 2\sigma\ell\Delta x$$

$$F = \sigma\ell$$

$$\begin{cases} [\sigma_{xz}] + \dfrac{\partial \sigma}{\partial x} = 0 \\ [\sigma_{yz}] + \dfrac{\partial \sigma}{\partial y} = 0 \\ [-p + \sigma_{zz}] = \sigma \left(\dfrac{1}{R_1} + \dfrac{1}{R_2} \right) \end{cases}$$