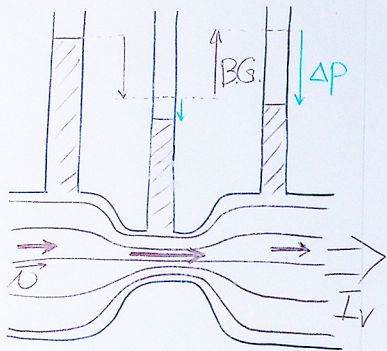
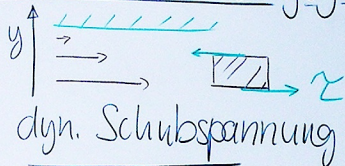


Rep.: Hydrodynamik



Innere Reibung
=> Druckabfall Δp
entlang Strömung

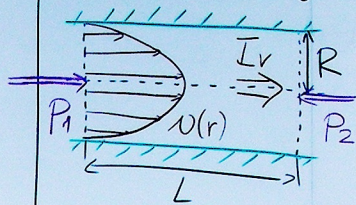
Newton'sches Reibungsgesetz



$$\tau = \eta \frac{dv}{dy}$$

η : Viskosität
 $[\eta] = \text{Pa} \cdot \text{s}$

Rohrströmungen



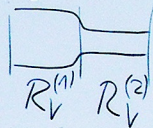
$$I_v = \frac{\pi R^4}{8\eta L} (p_1 - p_2)$$
$$(= A \cdot \bar{v})$$

Gesetz von
Hagen-Poiseuille

Rohrwiderstand

$$I_v = \frac{p_1 - p_2}{R_v}$$
$$\left(\text{cf. } \bar{I} = \frac{U}{R} \right)$$

Serie:



$$R_v^{\text{tot}} = R_v^{(1)} + R_v^{(2)}$$