

$$\Delta \eta = \sqrt{\frac{4}{81} r_k^2 g^2 (p_k - p_{FL})^2 \frac{1}{L^2} \left[\left(\frac{r_k t}{L} \Delta L \right)^2 + (r_k \Delta t)^2 + (2t \Delta r_k)^2 \right]}$$

$$\eta = \frac{2}{9} r_k^2 g (p_k - p_{FL}) \frac{\bar{t}}{L}$$

$$\eta \pm \Delta \eta = \frac{2}{9} r_k^2 g (p_k - p_{FL}) \frac{\bar{t}}{L} \pm \sqrt{\frac{4}{81} r_k^2 g^2 (p_k - p_{FL})^2 \frac{1}{L^2} \cdot \left[\left(\frac{r_k t}{L} \Delta L \right)^2 + (r_k \Delta t)^2 + (2t \Delta r_k)^2 \right]}$$

Stahl: $Re = \frac{970 \frac{\text{kg}}{\text{m}^3} \cdot 0,0163 \frac{\text{m}}{\text{s}} \cdot 2 \cdot 0,0025 \text{m}}{5,69 \frac{\text{kg}}{\text{m} \cdot \text{s}}} = 0,14 \ll 1$

Glas: $Re = \frac{970 \frac{\text{kg}}{\text{m}^3} \cdot 0,0052 \frac{\text{m}}{\text{s}} \cdot 2 \cdot 0,003 \text{m}}{6,26 \frac{\text{kg}}{\text{m} \cdot \text{s}}} = 4,84 \cdot 10^{-3} \ll 1$

Blei: $Re = \frac{970 \frac{\text{kg}}{\text{m}^3} \cdot 0,0197 \frac{\text{m}}{\text{s}} \cdot 2 \cdot 0,0024 \text{m}}{6,61 \frac{\text{kg}}{\text{m} \cdot \text{s}}} = 0,014 \ll 1$