

Messgröße x	partielle Ableitung $\frac{\partial \eta}{\partial x}$ (Formel)	Glaskugeln		Stahlkugeln		Bleikugeln	
		Δx	$\left(\frac{\partial \eta}{\partial x} \Delta x\right)^2$	Δx	$\left(\frac{\partial \eta}{\partial x} \Delta x\right)^2$	Δx	$\left(\frac{\partial \eta}{\partial x} \Delta x\right)^2$
L	$\frac{\partial \eta}{\partial L} = -\frac{2}{3} r_k^2 g (s_k - s_{FL}) \frac{\bar{t}}{L^2}$	0,1 mm	2,29 $\cdot 10^{-5}$ (Pas) ²	0,1 mm	1,90 $\cdot 10^{-5}$ (Pas) ²	0,1 mm	2,59 $\cdot 10^{-5}$ (Pas) ²
t	$\frac{\partial \eta}{\partial t} = \frac{2}{3} r_k^2 g (s_k - s_{FL}) \frac{1}{L}$	0,075	3,107 $\cdot 10^{-4}$ (Pas) ²	0,035	4,58 $\cdot 10^{-4}$ (Pas) ²	0,045	1,61 $\cdot 10^{-3}$ (Pas) ²
r	$\frac{\partial \eta}{\partial r_k} = \frac{4}{3} r_k g (s_k - s_{FL}) \frac{\bar{t}}{L}$	0,04 mm	0,028 (Pas) ²	0 mm	0 (Pas) ²	0,05 mm	0,076 (Pas) ²
$\eta \pm \Delta \eta = \frac{2}{3} r_k^2 g (s_k - s_{FL}) \frac{\bar{t}}{L} \pm \sqrt{\frac{4}{81} r_k^2 g^2 (s_k - s_{FL})^2 \frac{1}{L^2} \cdot \left[\left(\frac{r_k \bar{t}}{L} \Delta L \right)^2 + (r_k \Delta t)^2 + (2 \bar{t} \Delta r_k)^2 \right]}$ $\eta \pm \Delta \eta$		$(6,26 \pm 0,17) \text{ Pas}$		$(5,69 \pm 0,03) \text{ Pas}$		$(6,61 \pm 0,28) \text{ Pas}$	