Propagacja niepewności dla v

u(v\_{gr}) = \sqrt{ [\frac{\partial v\_{gr}}{\partial s} u(s)]^2 +[ \frac{\partial v\_{gr}}{\partial t} u(t)]^2 }

Chyba średnica rurki

\Phi = 40,0 (\pm 0,3) mm

R = \frac{\phi}{2}

V gr

v\_{gr} = \frac{s}{t}

V\_gr wzor przekszatalcony na eta

Przed:

v\_{gr} = \frac{2r^2 g(g\_k-g\_c)}{9 \eta (1+2,4\frac{r}{R}) (1+3,1\frac{r}{h})}

Po:

\eta = \frac{2r^2 g(g\_k-g\_c)}{9 v\_{gr} (1+2,4\frac{r}{R}) (1+3,1\frac{r}{h})}

Ewentualnie to można zapisać tak: (to chyba lepsze)

v\_{gr} = \frac{2r^2 g(g\_k-g\_c)}{9 \eta (1+2,4\frac{r}{R}) (1+3,1\frac{r}{h})} \Rightarrow \eta = \frac{2r^2 g(g\_k-g\_c)}{9 v\_{gr} (1+2,4\frac{r}{R}) (1+3,1\frac{r}{h})}

Propagacja ρk

Propagacja po eta :

U(\eta) = \sqrt{ [\frac{\partial \eta}{\partial r}u(r)]^2 + [\frac{\partial \eta}{\partial g\_k}u(g\_k)]^2 + [\frac{\partial \eta}{\partial R}u(R)]^2 + [\frac{\partial \eta}{\partial h}u(h)]^2 + [\frac{\partial \eta}{\partial v\_{gr}}u(v\_{gr})]^2}

U(\eta) = \sqrt{ [\frac{-4rg(\rho\_{k} - \rho\_{c})9v\_{gr}(1+3,1\frac{r}{h}+2,4\frac{r}{r}+7,44\frac{r^2}{Rh})-2r^2g(\rho\_{k} - \rho\_{c})[9v\_{gr}(1+\frac{3,1}{h}+\frac{2,4}{h}+\frac{14,88}{Rh})]}{81v\_{gr}^2(1+3,1\frac{r}{h}+2,4\frac{r}{r}+7,44\frac{r^2}{Rh})}u(r)]^2+ }