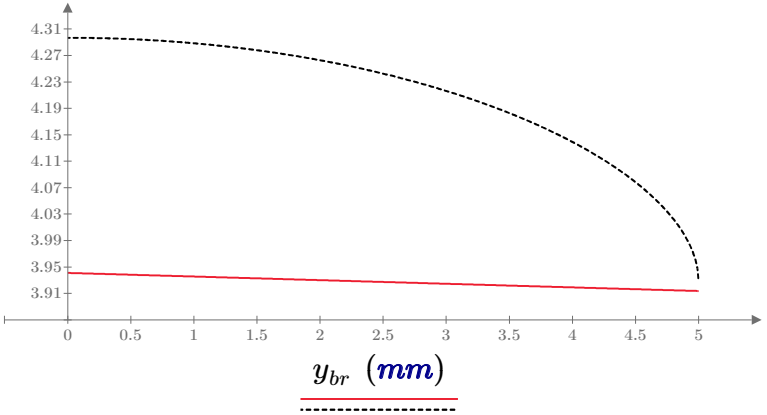
$$\alpha(y_{br}) := \operatorname{atan}\left(\frac{y_{br}}{\sqrt{R^2 - {y_{br}}^2}}\right)$$

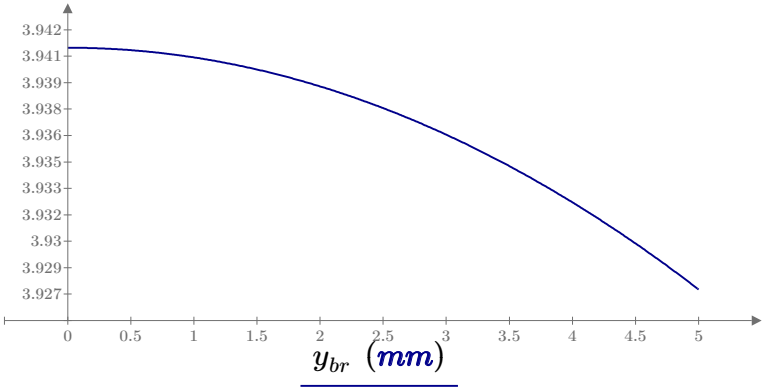
$$\tau_{z1}(y_{br}) := \frac{\frac{T_{BB}}{2}}{\frac{J_{Bn}}{2}} \cdot \frac{S_{nr1}(y_{br})}{b_{r1}(y_{br}) \cdot \cos(\alpha(y_{br}))}$$

$$\tau_{z2}(y_{br}) := \frac{T_{BB}}{J_{Bn}} \cdot \frac{S_{nr2}(y_{br})}{b_{r2}(y_{br}) \cdot \cos(\alpha(y_{br}))}$$



$\tau_{zp}(y_{br})$ $\left(\frac{kgf}{mm^2}\right)$

$\tau_{z1}(y_{br})$ $\left(\frac{kgf}{mm^2}\right)$



$\tau_{z2}(y_{br})$ $\left(\frac{kgf}{mm^2}\right)$