Calculation of contact pressure in Press fit

Given that max. Torque transmitted

$T := 1100\ N \cdot m$ $D := 50\ mm$ $\mu := 0.15$ $L := 25\ mm$ $D_{SI} := 18.5\ mm$

$D_{HO} := 130\ mm$ $E := 2.0 \cdot 10^5\ MPa$ $R_z := 0.4 \cdot 10^{-3}\ mm$

$$F_{Tangential} := T \cdot \frac{2}{D} = \left(4.4 \cdot 10^4\right)\ N$$

$$F_{Normal} := \frac{F_{Tangential}}{\mu} = \left(2.933 \cdot 10^5\right)\ N$$

$$p := \frac{F_{Normal}}{\pi \cdot D \cdot L} = 74.697\ MPa$$