$\Delta T := 0.56\ °C$

Volumetric expansion coefficient of water

$y := 340.909 \cdot 10^{-6}\ °C^{-1}$

Coefficient linear expansion of DSS

$\alpha := 13.5 \cdot 10^{-6}\ °C^{-1}$

$D := 16\ in = 0.4064\ m$

$t := 10.5\ mm = 0.0105\ m$

Young's elastic modulus of DSS

$E := 2 \cdot 10^{6}\ bar$

Poisson's ratio

$\nu := 0.3$

Bulk modulus of water

$B := 23187.5\ bar$

Ratio ΔP/ΔT

$$n := \frac{y - 2 \cdot (1 + \nu) \cdot \alpha}{\frac{D \cdot \left(1 - \nu^{2}\right)}{E \cdot t} + \frac{1}{B}} = 5.0349 \cdot 10^{5}\ \frac{Pa}{°C}$$

$5.0349 \cdot 10^{5}\ Pa \cdot (0.56) = 2.8195 \cdot 10^{5}\ Pa$

relative pressure change for 0.56 C

$\Delta P_{\alpha} := 2.8195 \cdot 10^{5}\ Pa = 2.8195\ bar$

$P_1 := 135.70\ \text{bar}$

$P_2 := 136.35\ \text{bar}$

Pressure measured

$\Delta P_\beta := P_2 - P_1 = 0.65\ \text{bar}$

$\Delta P_\beta \leq \Delta P_\alpha = 1$