$r := 5\ mm$ $k := 237\ \frac{W}{m \cdot K}$

$T_0 := 100\ °C$ $T_2 := 42\ °C$ $T_4 := 24.2\ °C$ $T_6 := 0\ °C$

$T_1 := 78.3\ °C$ $T_3 := 35.8\ °C$ $T_5 := 12.8\ °C$

$S := \pi \cdot r^2 = 78.54\ mm^2$ $\Delta x := 800\ mm$ $\Delta T := T_6 - T_0 = -100\ K$

$$I := -k \cdot S \cdot \left(\frac{\Delta T}{\Delta x}\right) = 2.327\ W$$

$\Delta T_{0\_1} := T_1 - T_0 = -21.7\ K$ $\Delta T_{3\_4} := T_4 - T_3 = -11.6\ K$

$\Delta T_{1\_2} := T_2 - T_1 = -36.3\ K$ $\Delta T_{4\_5} := T_5 - T_4 = -11.4\ K$

$\Delta T_{2\_3} := T_3 - T_2 = -6.2\ K$ $\Delta T_{5\_6} := T_6 - T_5 = -12.8\ K$