Date: 14 OCT 2021

Magnetic Thermal Annealing

Aim: To run the Magnetic Thermal Annealing Setup for 1 Hr. at under 400mT

Experiment performed at

* Room Temperature:
* Chiller Temperature:
* CCPS Threshold:

Procedure:

Electromagnet is calibrated and set to 400mT (PWM=68%), two thermometers are placed touching the pole (not touching the heating chamber) to monitor the pole temperature.

Heater PID set as:

* SV\_1 400, TM\_1 20 min, OUT\_1 75
* SV\_2 400, TM\_2 2 Hrs., OUT\_2 75
* SV\_3 100, TM\_3 10 min, OUT\_3 75
* SV\_4 30, TM\_4 5 min, OUT\_4 75

Observations:

1. The heater started at 03:24:25 PM and reached at 03:43:01 PM.
2. EM and the CCPS was started at 03:43:58 PM, the pole temperature was and (Left and Right pole respectively)
3. The full data of the CCPS temperature against time and poles temperature against time is available in the excel sheet

CCPS(EM) Temperature vs Time elapsed (min)

Left Pole Temperature vs Time Elapsed (min)

Right Pole Temperature vs Time Elapsed (min)

Conclusion:

1. The Magnetic Thermal Annealing can be run safely for 1 Hr. at under 400mT
2. The CCPS temperature curve shows slight deviation from linear curve
3. The Pole temperature saturates eventually at .