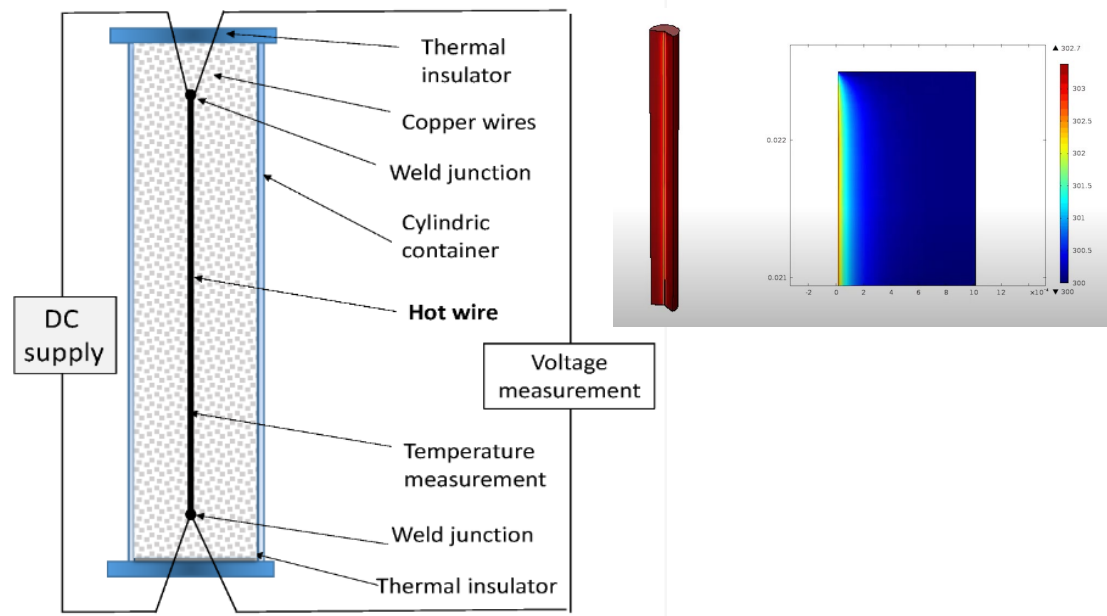


MODELLING THE TRANSIENT HOT WIRE METHOD FOR FOAM

Problem Description

- Thermal conductivities (λ) of foam are difficult to measure by experiment as λ depends significantly on the heat rate.
- The transient hot wire method is a well-known method for measuring thermal conductivity.
- Within this master thesis, a simulation model of the experimental set-up using Comsol will be created.
- The model will provide a deeper understanding of the heat transport in the material under expansion.
- Once working, the model will be enhanced by information from other test methods to predict the thermal conductivity for unsteady cases.



Objectives & Tasks

- Build model of test set-up
- Adjust model with data from experiment
- Extend model to estimate unsteady behavior by using additional temperature dependent material data, e.g. density and heat release.