



Product Name:

Heat Transfer Through Through Lagged Pipe

Product Code: ALABS-A104-365



Description:

Heat Transfer Through Through Lagged Pipe

The setup is designed and fabricated to study lagging phenomenon in case of pipes. It consists of three concentric pipes of small thickness as compared to diameter and are arranged concentrically, and closed with the help of two discs. Two different insulating materials fill the annuli between the cylinders compactly. Temperature Sensors are fitted to measure the temperature of pipe walls for radial outward heat flow measurement. Inside the inner pipe, a Nichrome wire heater is placed axially. Heat input to the heater is given through a variac and measured by Digital Voltmeter and Digital Ammeter. By varying the heat-input rates, wide range of experiments can be performed

Experiment:

- To estimate the actual rate of heat transfer through the composite cylinders from the measured interface temperature of the known value of thermal conductivity of the two insulating materials.
- To determine the effective thermal conductivity of the composite cylinders

• To determine the theoretical temperature profile within the composite cylinders

Utilities Required:

- Electricity Supply: 1Phase, 220 V AC, 2 Amp.
- Table for set-up support



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