

**Product Name :**  
Thermal Conductivity of Metal Rod**Product Code :**  
Heat Transfer0012 LAB ENGINEERING**Description :**

Thermal Conductivity of Metal Rod

**Technical Specification :**

Thermal Conductivity of Metal Rod Description:-

The experimental set up consists of metal bar, one end of which is heated by an electric heater while the other end of the bar projects inside the cooling water jacket.

A cylindrical shell filled with insulating material surrounds the middle portion of the bar.

The temperature of the bar is measured at different sections.

Water at constant rate is circulated through the jacket and its flow rate and temperature rise is noted.

By varying the heat input rates, data can be obtained.

Heat Input to the heater is given through variac.

Utilities Required:-

Continuous Water supply @2LPM at 0.5 Bar. Floor Drain. Table for set-up support.

Electricity Supply : 1 Phase, 220 V AC, 2 Amp.

Stop Watch. Experimentation:- To determine the thermal conductivity of given bar at various temperatures.

To plot the temperature distribution along the length of Bar. Technical Detail:-

Metal Bar Material : Copper Length : 400 mm (approx.) Diameter : 25 mm Water Flow measurement :

By Measuring cylinder Digital Voltmeter : 0-300 Volt. Insulating shell Length : 250 mm Diameter : 200 mm

Cooling Water Jacket Variac : 0-230 V, 2 Amp.

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