

Product Name :
Thermal Conductivity of Metal Rod Apparatus

Product Code :
NEGEMG162



Description :

Thermal Conductivity of Metal Rod Apparatus

Metal Rod Apparatus consists of a metal rod horizontally placed in a M.S. cylinder (insulating jacket) & is insulated by covering the metal rod by insulating powder. An electric heater is fixed at one end of rod while the other end protrudes in to a water jacket. The heat flows through the rod by mode of conduction. A number of thermocouples are fixed along the length of rod. Six thermocouples are embedded along the length of the rod to measure the temperature distribution. Four more thermocouples are placed within the insulating powder while two thermocouples measure the water temperature at inlet & outlet. The control panel consists of a dimmers stat to control the voltage supplied to the heating element. A Voltmeter, an ammeter and a digital temperature indicator are also provided.

Specifications:

- Metal Rod: Mild Steel Rod, Diameter 25 mm, Length of rod 300 mm
- Insulation Jacket: Made in Mild Steel, Mild Steel Rod is insulated by Asbestos powder
- Electric Heater: Clamp Heater, Capacity 200 W, Supply 230 V AC
- Dimmer: Range 0-250 V AC, 2 A
- Digital Voltmeter: Range 0-500 V AC
- Digital Ammeter: Range 0-2 A AC
- Temperature Sensors: Type 'K' Thermocouples – 12 Nos
- Temperature Indicator: 12 Channel Indicator with Selector Switch, Range 0-199.9°
- Frame: Made of M.S. Square Tubes & Sheets, Welded & Powder coated
- Optional Accessories: Rotameter for Water Flow Measurement

Experimental Capabilities:

- Determination of thermal conductivity of Metal Rod
- Comparison of calculated value of thermal conductivity with actual value

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