

Product Name :
Natural Convection Heat Transfer Apparatus

Product Code :
NEGEMG165



Description :

Natural Convection Heat Transfer Apparatus

The equipment is designed to determine heat transfer rate in natural convection. It consist of vertical hallow copper tube with heating coil evenly spaced inside it. It is assembled in a wooden box with glass door. Number of thermocouples are fitted on the surface of the tube along its length one thermocouple is use to record the ambient temperature of surrounding.

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.

Detailed Operation & Maintenance Manual is provided along with the trainer.

Specifications :

- Test Pipe: Copper Pipe, Diameter 30 mm, Length of Pipe 500 mm
- Wooden Cabinet: Cabinet with glass door on front side for housing the pipe
- Heater: Rod Type Heater, Capacity 300 W, Supply 230 V AC
- Dimmer: Range 0-250 V AC, 2 A
- Digital Voltmeter: 0 – 500 V AC for Heater Load
- Digital Ammeter: 0 – 2 A AC for Heater Load
- Temperature Sensor: Type 'K' Thermocouples – 12 Nos.
- Temperature Indicator: 12 Channel Indicator with Selector Switch, Range 0-199.9 °
- Base Frame: Made of M.S. Square Tubes & Sheets, welded & powder coated for long life

Experimental Capabilities:

- To study phenomenon of Heat Transfer in Natural Convection.
- To determine the Heat Transfer Coefficient (h) in Natural Convection.
- Comparison of experimental results with theoretical values.

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