FADAK LAB EQUIPMENTS

HT-006 HEAT TRANSFER FROM PIN-FIN APPARATUS

RANGE OF EXPERIMENTS TO BE CARRIED OUT:

1. To study the temperature distribution along the length of a pin fin in natural & forced convection.
2. To calculate Gr, Pr& Nu number in natural conviction.
3. Calculate Re, Pr & Nu number in forced conviction.
4. Calculate the values of heat transfer rate from the fin &

   the fin effectiveness in natural & forced conviction.
5. The experiments can be conducted at various values of input & calculation can be made accordingly.

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TECHNICAL DESCRIPTION

The apparatus consist of a brass fin of circular cross section is fitted across a long rectangular duct. The other end of heater is connected to the suction side of blower .Air flows fast through the fin perpendicular to its axis. One end of the fin is outside the duct & is heated by the heater. Temperature at five points along the length of the fin are measured by Thermocouples. The air flow rate is measured by Orifice meter fitted on the delivery side of blower. Auto transformer is provided for varying the input to the heater & measurement of input is carried out by a voltmeter, ammeter

DIMENSIONS AND WEIGHT :

Size :1.5 m.(L)x 1.0 m(W) X 1.5m (H)

Weight :Approx. 70 Kg

SERVICE REQUIRED :

230 v Ac Supply 50 Hz

SCOPE OF DELIVERY:

1. Experimental Setup
2. Instructional Manual

OPTIONAL FACILITY: Data logging Facility

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