Computerized Heat Transfer in Pin fin Apparatus (Product Code: HMTC06)



Features

- Extensive range of Experiments
- Comprehensive teaching manual
- Three-year warranty
- Esthetically designed and finished Rig.
- High Quality instrumentation
- To Determine pin type of fin efficiency.

Product Description

This system provides the information regarding the heat transfer from the hot zone to the chamber. Thus reducing the temperature of the source and spreading the same through pin type fin and further provides the knowledge regarding the distribution of temperature along the length of fin in forced convention and also to facilitate the comparison of fins of brass material. Further, it also enables the student to compare theoretical and practical results. Thermocouples are fitted on the pin for measuring the various temperatures. The heat input to the heater is varied by Variac and is measured by Ammeter & Voltmeter.

Plot No: 34/G, 4TH Main 3RD Phase Peenya Industrial Area, Bangalore - 560 056.
Ph.: +91 9740987814
Email: info@legionbrothers.com, sales@legionbrothers.com. www.legionbrothers.com

Computerized Heat Transfer in Pin fin Apparatus (Product Code: HMTC06)

Product / Component Specification

Brass	12mm Dia x 230mm Length
Enclosure Size	100 x 150 x 550mm
Variac	2 amps
Digital voltmeter	0-300 volts AC
Digital ammeter	0-5 Amps AC
Digital temperature	0-300 Deg (K Type)
Thermocouple	K type
Insulation Powder	Asbestos powder
Stop watch	Digital
Heater	Band type (250 watts)
Velocity measurement	Orifice and manometer
Blower	Hotech/equivalent

Data Acquisition card

Analog Input	
Differential Channels	12
Resolution	12 bits
Sample Rate	200 Ks/s
Max Voltage	5 V
Number of Ranges	4
Simultaneous Sampling	Yes
On-Board Memory	5120 samples
Analog Output	
Channels	2
Digital I/O	
Input-Only Channels	30
Output-Only Channels	12
Timing	Software
Logic Levels	TTL
Maximum Input Range	0 V - 5V
Maximum Output Range	0 V - 3.3 V
Counter/Timers	
Counters	2
Max Source Frequency	84 MHz
Resolution	12 bits
Logic Levels	TTL
Total DC output Current on all I/O lines	130mA

Measurement of Temperatures at different points

Type Range Signal conditioning/transmitter Location	"K" 0-300°C Standalone Fin Temperature
Type Range Signal conditioning/transmitter Location	"K" 0-300°C Standalone Fin Temperature
Type Range Signal conditioning/transmitter Location	"K" 0-300°C Standalone Fin Temperature
Type Range Signal conditioning/transmitter Location	"K" 0-300°C Standalone Fin Temperature
Type Range Signal conditioning/transmitter Location	"K" 0-300°C Standalone Fin Temperature
Type Range Signal conditioning/transmitter Location	"K" 0-300°C Standalone Chamber Temperature

Measurement of Voltage & Current

Type Range Signal conditioning/transmitter	Voltage Transducer 0-300V Standalone
Type Range Signal conditioning/transmitter	Current Transducer 0-10Amps Standalone

Plot No: 34/G, 4TH Main 3RD Phase Peenya Industrial Area, Bangalore - 560 056.
Ph.: +91 9740987814
Email: info@legionbrothers.com, sales@legionbrothers.com. www.legionbrothers.com