ETHER
Engineeering Educational Equipments
An ISO 9001 : 2015 Certified Co.
ETHER ENGINEERS
52, Industrial Estate, Ambala Cantt - 133006
Mb : 098963 33447, 098961 33557, 090340 83447
Website: www.etherengineers.com
Email: etherengineers@rediffmail.com, info@etherengineers.com
Manufacturers & Exporters of Engineering, Scientific & Laboratory Equipments

HEAT TRANSFER THROUGH COMPOSITE WALLS (EE-1558)

The setup consists of a heater sandwiched between two sets of slabs. Three types of slabs are provided on either sides of heater, which forms a composite structure. A small hand press frame is provided to ensure the perfect contact between the slabs. A variac is provided for varying the input to the heater and Digital Voltmeter and Digital Ammeter display the heat input. Heat produced by heater flows axially on both the sides. Temperature Sensors are Embedded between interfaces of slabs to determine the temperature gradient. The experiment can be conducted at Various values of input and calculation can be made accordingly.

EXPERIMENTATIONS:

- To determine total thermal resistance and thermal conductivity of composite wall
- To plot temperature gradient along composite wall structure

UTILITIES REQUIRED

- Electricity Supply: I Phase, 220 VAC, 2 Amp.
- Table for set-up support..

TECHNICAL DETAILS:

- Slab assembly arranged symmetrically on both sides of heater

Slab Material	:	Slab Size
Cast Iron	:	250 mm dia. & 20 mm thick
Bakelite	:	250 mm dia. & 15 mm thick
PressWood	:	250 mm dia. & 12 mm thick
Heater	:	Nichrome wire

- Temperature Sensors : RTD PT-100type (8 Nos.)
- Control panel : Digital Voltmeter : 0-300 Vol.,
  Digital Ammeter : 0-2 Amp.
  Variac : 0-230V, 2A,
  Digital Temperature Indicator: 0-200° C, with multi-channel
  Switch, On/off switch, Mains Indicator etc.
- Cabinet to accommodate the slab assembly, with front window of glass/acrylic
- The whole set-up is mounted on a base plate.