

**DESCRIPTION:**

The apparatus is designed to determine the Stefan Boltzmann constant. The apparatus consists of a hemisphere fixed to a Bakelite plate, the outer surface of which forms the jacket to heat it. Hot water to heat the hemisphere is obtained from a hot water tank, which is fixed above the hemisphere. The copper test disc is introduced at the center of hemisphere. The temperatures of hemisphere and test disc are measured with the help of temperature sensors.

EXPERIMENTATION:

Ø Determination of Stefan Boltzmann constant and study the effect of hemisphere temperature on it.

UTILITIES REQUIRED:

- Ø Electricity Supply: 1 Phase, 220 V AC, 2 kW.
- Ø Table for set-up support.

TECHNICAL DETAILS:

- Ø Hemisphere :Dia.- 200 mm (approx.) made of Copper
- Ø Jacket: Dia. 250 mm (approx.) made of Stainless Steel
- Ø Test Disc Size : 20 mm Dia. x 1.5-mm thickness made of Copper
- Ø Water Tank :Stainless steel 12 Ltrs. cap.
- Ø Heater : Nichrome wire immersion heater.
- Ø Control panel comprising of :

Digital Temp. Controller : 0 to 199.9⁰C, (for water tank)

Digital Temp. Indicator : 0 to 199.9⁰C, with multi channel switch

Temperature sensors : RTD PT-100 type.

With standard make on/off switch, Mains Indicator etc.

Ø Instruction Manual :An ENGLISH instruction manual will be provided along with the Apparatus.

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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