
The Stefan Boltzmann constant is an important constant in heat transfer. The apparatus determines Stefan Boltzmann constant. The apparatus consists of a hemisphere surrounded by hot water. Hot water is obtained from a water-heating tank. When the blackened disc is inserted at the center of hemisphere, heat is transferred into the disc from hemisphere by radiation and its temperature begins to rise, and from temperature raise rate. (It is measured at the intervals of 5 sec.) Stefan Boltzmann constant is determined.

SPECIFICATIONS:

1. Water heating tank provided with electric immersion heater.
2. Hemisphere made of copper sheet, 200mm. dia. Surrounded water jacket of 250mm. Dia.
3. Test disc made of copper 20mm. dia. provided with thermocouple at the center.
4. Multichannel digital temperature indicator 0-200 C with 0.1C least counts to measure the temperature of hemisphere and disc.
5. Audible buzzer with timer to ring at every 5 seconds.

A technical manual accompanies the unit.

SERVICES REQUIRED:

1. Bench area of about 1m. x 05m. at working height.
2. 230v, 15A, AC, electric supply with earthing connection

Note: Specifications are subject to change.

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