

Product Code . JA-HTLE-7377

Emissivity Measurement Apparatus

Description

Emissivity Measurement Apparatus

The present Set-up is designed to measure the emissivity of test plate.

The test plate comprises of a mica heater sandwiched between two circular plates.

Temperature Sensors are provided to measure the temperature of each plate and surrounding.

As all the physical properties, dimension and temperature are equal; heat losses from both plates will be same except radiation loss.

Hence the input difference will be due to difference in emissivity.

Black plate is identical with test plate, but its surface is blackened.

Both plates are supported on individual brackets in a wooden enclosure with one side glass to ensure steady atmospheric conditions.

Supply is given to heaters through separate variacs so that temperatures of both can be kept equal and is measured with Digital Voltmeter and Digital Ammeter.

Experiment:

Study the variation of emissivity of test plate with respect to absolute temperature.

Determining the Emissivity of a test plate.

Utilities Required:

Table for set-up support.

Electricity Supply: 1 Phase, 220 VAC, 4 Amp.

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