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Product Name :
Thermal Conductivity of Liquid and Gases Apparatus

Product Code :
LBNY-0005-10200011



Description :

Thermal Conductivity of Liquid and Gases is aspect of heat transfer studies that is often overlooked but of crucial importance in the prediction of heat exchanger performance. A compact unit designed for the direct measurement of the Thermal Conductivity of a wide range of liquid and gases. The unit is complementary to the Thermal Conductivity of Building and Insulating Materials Unit. The simple calibration procedure enables the effect of incidental heat transfer to be determined and the unit is supplied complete with a console for the control and display of temperatures and heat input.

Technical Specification :

Experimental Capabilities:

A small scale bench top accessory designed to allow experimental investigation of the thermal conductivity of liquids and gases. The unit is designed specifically for teaching purposes.

Calibration of the unit to establish the effect of incidental heat transfers.

Determination of the thermal conductivity of any suitable gas or liquid compatible with the materials of construction.

Specification of Thermal Conductivity of Liquid and Gases Apparatus:

The unit is calibrated using air, in order to account for incidental heat losses and is suitable for determining the thermal conductivity of viscous non-corrosive liquids such as oils, glycerine etc. and non-flammable gases.

The unit comprises a heated plug and water cooled jacket with a small radial clearance in which gas or liquid samples may be tested. The thin laminar film prevents natural convection in the fluid under test.

The unit may be readily dismantled for cleaning and is re-assembled with a single bolt and replaceable O ring seals.

The temperatures either side of the sample under test are recorded by integral thermocouple sensors.



Laboratory Instrument India