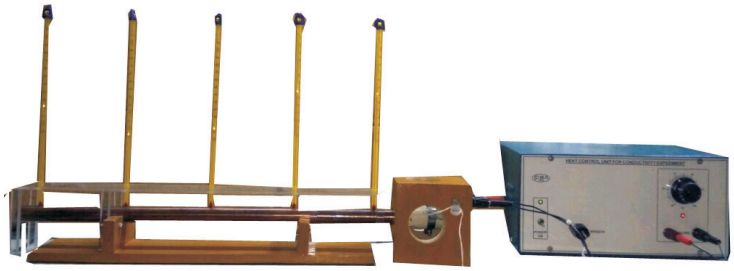
SBP 310
ARMSTRONG'S METHOD
(THERMAL CONDUCTIVITY OF METAL ROD)



This method is used to determine the absolute conductivity of different metals. Consider a long rod of uniform area of cross section heated at one end When a steady – state is reached, the amount of heat passing per second across the cross section at the point.

In thermal physics, thermal conductivity is material's ability to conduct heat; the greater a material's thermal conductivity, the faster heat will spread throughout. To give an example, copper has an extremely high Thermal conductivity, second only to silver.This property leads to its use in heat sinks, where heat is able to quickly pass through the sink and away from a sensitive electronic or mechanical component, as well as the prevalence of copper pots , whose high thermal conductivity allows the surface of the pot to heat evenly and quickly. In this rendition of ˚Angstrom's experiment, the end of a brass rod switches periodically between being heated and being left to sit, producing a heat wave that propagates along the length of the rod.

Basing the derivation off of that given in the lab manual , this heat wave shall be expressed through the function T(x, t), which is the bar's temperature relative to the air. For the moment temperature will be varied at the end of the rod

Setup consists of

Metal	: Copper Rod
Diameter	: 1inch
Length	: 24 inch approx. With equi distance holes for thermometer
Thermometer	: 5 nos. (110 degree)
Stop watch	: 1no.
Heating control unit	: 1no.

MANUFACTURED BY:
SATISH BROTHERS
#4309/20,Marble house,Punjabi Mohalla,
Ambala Cantt -133001(hry.)
Tel: 0171-2642617,4008617
E-mail: info@sibaindia.com

AUTH. DEALER