

SBP 306 SEARLE'S THERMAL CONDUCTIVITY SETUP



Searle's bar method (named after George Frederick Charles Searle) is an experimental procedure to measure thermal conductivity of material. A bar of material is being heated by steam on one side and the other side cooled down by water while the length of the bar is thermally insulated

Setup Description

The apparatus comprises of copper bar 25mm in diameter and 300m in lengthfitted with steam jacket heaterat one end to be supplied from a steam boiler and a copper water cool spiral at the other end.The bar has tubes for inlet of water and for thermometers Fitted in superior quality case and packed with material for thermal insulation to avoid any heat loss. The wooden case structure is in such a form that it has been provided with hinges so that front can be open to show its construction

Searle's setup	- 1nos.
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Optional :

Thermometers 110 degree	- 4nos.
Steam Boiler	- 1no.
Stop watch	- 1no.
Hot Plate	- 1no.
Screw gauge	- 1no.
Constant level tank	- 1no.
Rubber pipe	- 1 roll

Experiment : To find the coefficient of thermal conductivity of good conductor using searle's method

AUTH. DEALER