

Seebeck Coefficient measurement System

About the system

Seebeck Coefficient measurement is designed and developed by our company and has recognition in the industry. The new system is digital and does not require an external computer or PC interface. Total operations are performed by a smart 7 inches touch panel and are fully automatic. The following tests can be performed with the system.

- Seebeck Coefficient (microvolt per degree K)
- Resistivity Ohm m per degree K

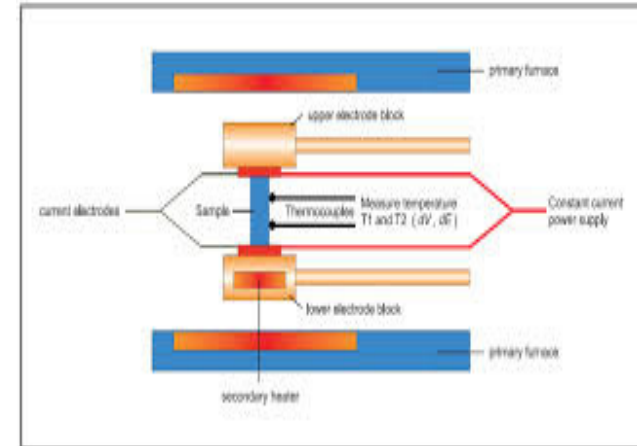


About Us

Marine India is a Professional company, working in design development and production of material research systems for the welfare of Indian Scientific Natured Groups. The main thrust of our company is to produce highly advanced adaptable and low cost systems to suit both Indian and Foreign research facilities.

Main Product Line

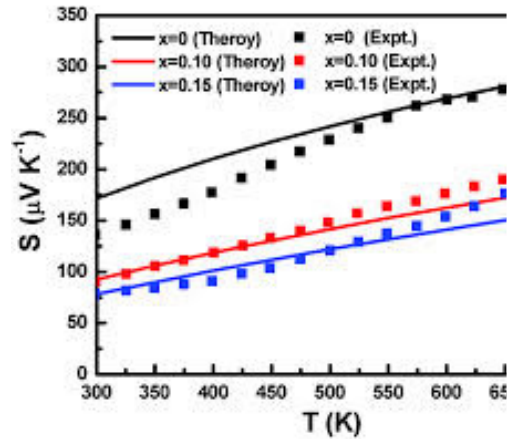
- PE loop tracer system
- BH loop tracer systems
- Multi Ferroic Test system
- Resistance measurement systems
- Strain measurement System
- Electromagnets
- DC polling unit
- AC/DC power supplies
- Source Measure Unit
- LCR Meter/Impedance analyzers interfacing, software's



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*Application Oriented Basic Science
Group*



General Specifications

Current source

- Current Range 1 mA, 1micro A, 1nano A
- Resolution 1% of the range

Micro Voltmeter

- Measurement range 20,000 microvolt's
- Resolution 1 microvolt

Temperature range

- Main furnace RT – 600 degree C
- Delta T option to choose steps of 5,10,15,20,25 degree
- Auto balancing temperature algorithm for fine measurement

Vacuum furnace

- Main furnace is Vacuum furnace

Sample holder Specifications

Sample dimensions can be cylindrical, cuboids, disk shaped

Die for producing the sample from powder is provided along with the unit

Sample holder is made up of advanced 304 grade SS with high temperature insulation.

Software specifications

Software sets heating rate, set point step difference in temperature etc

Software to have inbuilt feature to control the temperature difference between two ends

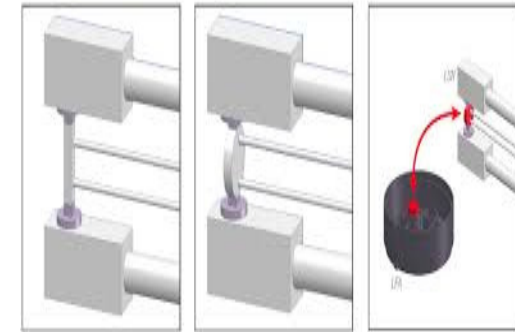
Standard graph and data in tabular form for following

Seebeck vs temperature in fixed interval

Resistivity vs temperature in fixed interval

(Software can be modified with mutual discussion to conclude desired parameters free of cost)

RS232/USB interface hardware



References

- Solid State Lab (SSPL) Delhi
- IIT Mandi
- Indian Institute of Science Bangalore
- CAT Indore
- IIT Delhi
- Rajkot Saurashtra University
- IIT Roorkee
- Shimla university
- Cat indore
- IIT Chennai
- Delhi University
- IASC Calcutta
- DMRL Hyderabad
- Osmania Univeristy

The full list is very exhaustive but above is only few major references.