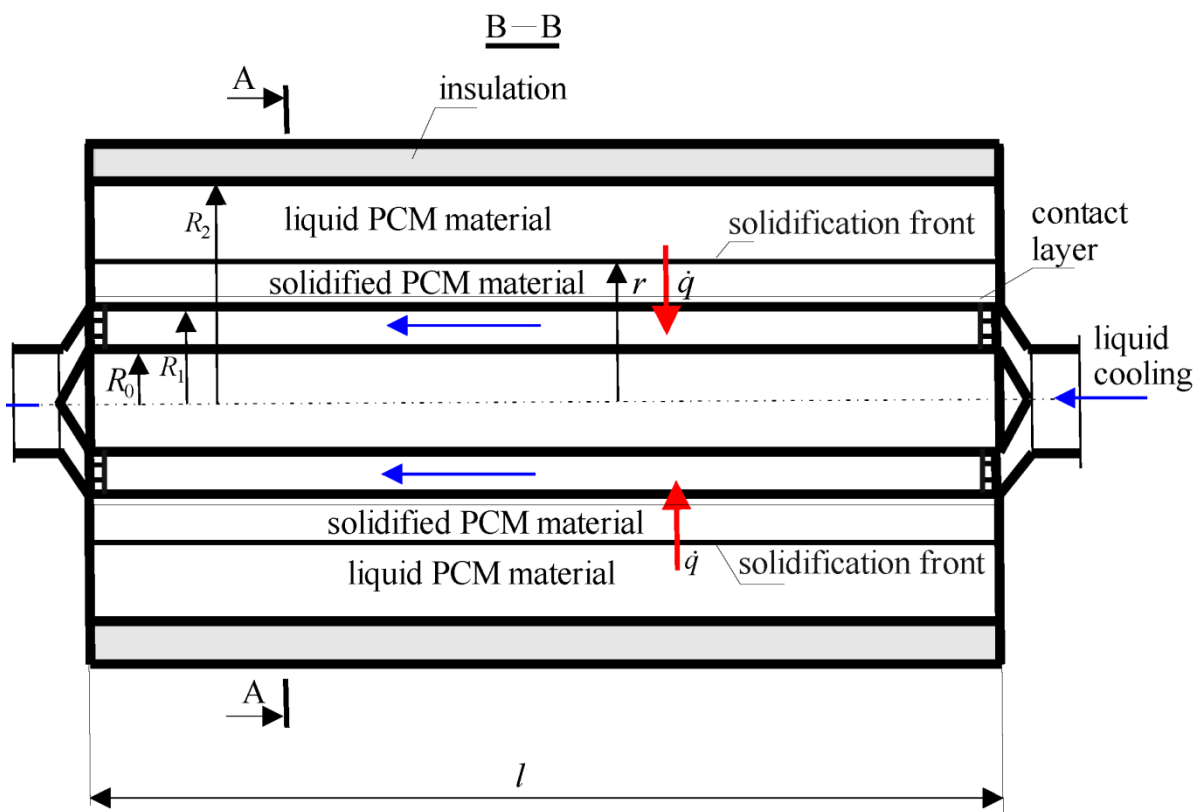


Electrical Analog Solidification

The 'Swarg Systems & Instruments' apparatus consists of a transparent tank, which can demonstrate heat conduction in solid or composite walls by electrical analogy. Tank is made of acrylic sheets, at the both ends of which are attached the electrodes. D C supply is connected to the electrodes. The temperatures in heat conduction are analogous to voltages at corresponding points. Salt water filled in tank acts as conducting medium. The temperature drop corresponds to voltage drop & voltage with reference to one electrode is measured. The current through electrical circuit is analogous to flow of heat, Q and the electrical resistance corresponds to thermal resistance. By putting separators in the separators in the tank across the current (i.e. heat) flow, composite walls models can also be simulated, & thus conduction can be studied by relating electrical parameters to thermal parameters.



SPECIFICATIONS

- 1) Transparent Tanks
 - a) For plain composite wall model.
 - b) For corner of 'L' shaped composite wall model.
- 2) Separators for above tanks – 2 nos. for each tank.
- 3) 9 V DC supply source.
- 4) Voltmeter 0-10 volts, L. C. 0.1 volts.
- 5) Milli ammeter – 0-100 MA

6) Probes and electrodes for measurement of total voltage and intermediate voltages.

A technical manual describing operating procedure and sample examples accompanies the unit.