

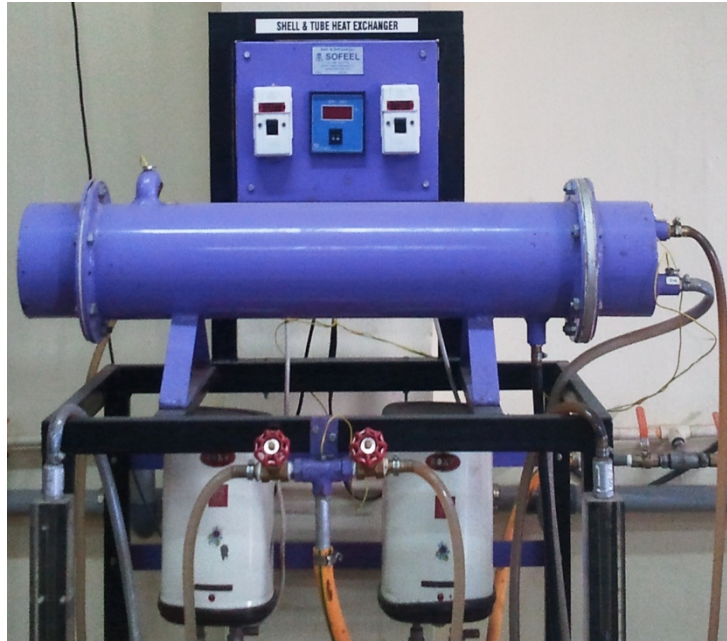
NUCLEAR THERMOHYDRAULICS LABORATORY

LAB HEAD: SUCHETA S DESHMUKH

ASISTANT LAB HEAD: MR.S.SIVASHANKAR

Equipments available:

1. Shell and tube heat exchanger



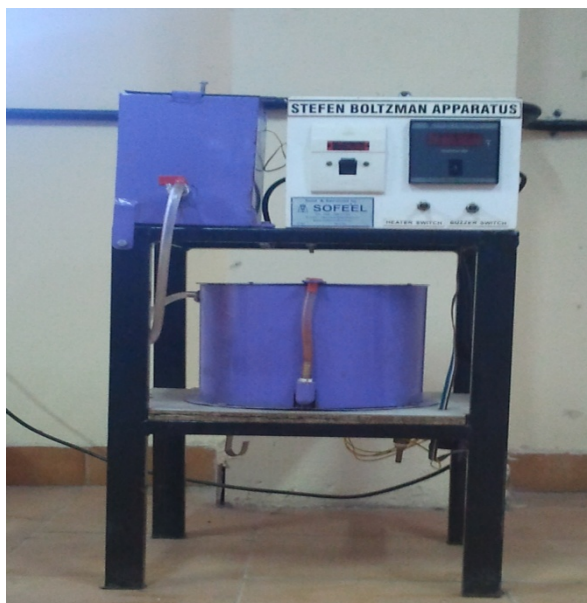
2. Finned tube heat exchanger



3. Plate type heat exchanger



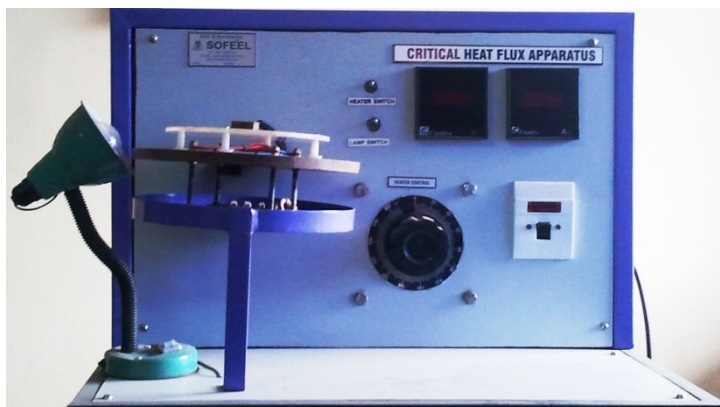
4. Stefan-Boltzmann experimental set-up



5. Emissivity equipment



6. Critical heat flux equipment



7. Lagged pipe equipment



8. Composite wall apparatus

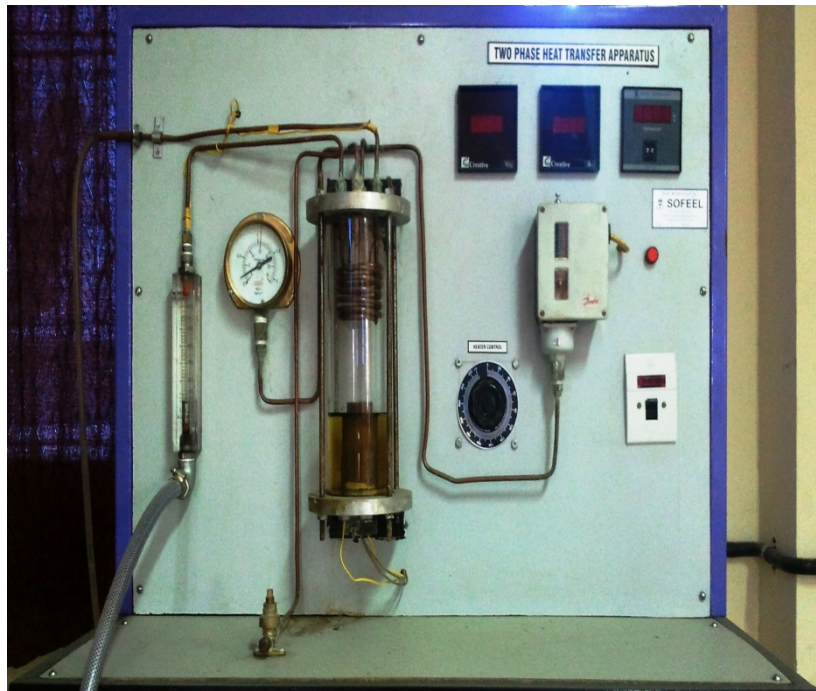


9. Thermal
conductivity of metal
rod

10. Thermal conductivity of liquid



11. Two-phase flow



12. Drop and film condensation equipment



List of experiments:

1. To find the effectiveness of the shell and tube heat exchanger.
2. To calculate the thermal conductivity of water
3. To calculate thermal conductivity of the metal rod at various points in the rod
4. To find the effectiveness of the finned tube heat exchanger.
5. To calculate the value of Stefan-Boltzmann constant experimentally.
6. To calculate the amount of heat flux taken away by the cooling water during the boiling of R-11 liquid.
7. To plot water sink temperatures and longitudinal temperatures for the heat pipe, the stainless steel pipe and copper pipe.
8. To calculate the thermal resistance and total thermal conductivity of the composite walls in series and plot the temperature profile for the same.
9. To find the effectiveness of the plate type heat exchanger.
10. To calculate the heat loss from a lagged pipe.
11. To measure the critical heat flux for a Nichrome wire.
12. To study two types of condensation processes.
13. To study two-phase flow of a refrigerant R-11.
14. To calculate the emissivity of the gray plate.