

KME 551 Heat and Mass Transfer Lab

List of Experiments

1. To determine thermal conductivity of composite wall materials and to plot temperature gradient along composite wall structure.
2. To determine thermal conductivity of materials used in lagged pipe apparatus.
3. To determine the natural convection heat transfer coefficient for the vertical tube exposed to atmospheric air.
4. To determine the forced convection heat transfer coefficient for the flow through the horizontal tube.
5. To find the effectiveness of a pin fin in a rectangular duct under Natural & Forced convective condition and plot temperature distribution along its length.
6. To verify the Stefan-Boltzmann constant for thermal radiation.
7. To determine the LMTD and Effectiveness of parallel flow and counter flow heat exchangers.
8. To determine the axial heat flux in a heat pipe using water as the working fluid with that of a solid copper and stainless steel with different temperatures.

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LIST OF EQUIPMENTS**

S. No	Machine
1	Composite Walls Set Up
2	Stefan Boltzmann Apparatus
3	Parallel & Counter Flow Heat Exchanger
4	Lagged Pipe Apparatus
5	Natural Convection Apparatus
6	Heat Pipe Apparatus
7	Pin Fin Apparatus
8	Forced Convection Apparatus
9	Heat Exchanger Plate Type