THERMAL ENGINEERING LAB

Course Code: 15ME2309

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Course Outcomes: At the end of the course, the student will be able to

CO1: Measure the compressibility of real gases and dryness fraction of steam.

CO2: Evaluate the performance of variable compression engines, air conditioning systems, heat pipe and refrigeration system.

CO3: Analyze exhaust gases and test the evacuated tube concentrator.

CO4: Determine overall heat transfer co-efficient for double pipe heat exchanger with parallel and counter flow.

CO5: Test the performance of pin fin under natural convection and forced convection.

LIST OF EXPERIMENTS

Any TEN Experiments

1. Compressibility factor measurement of different real gases.
2. Dryness fraction estimation of steam.
3. Performance test on a variable compression ratio (VCR) diesel engine.
4. Exhaust gas analysis with gas analyzer.
5. COP of refrigeration system.
6. Performance of an air-conditioning system.
7. Pin fin experiment under natural convection heat transfer conditions.
8. Pin fin experiment under forced convection heat transfer conditions.
9. Double pipe heat exchanger with parallel and counter flow.
10. Finned tube heat exchanger.
11. Performance of heat pipe.
12. Evacuated tube concentrator.