

THERMAL ENGINEERING LAB

Objective: Thermal Engineering lab is equipped with internal combustion engines, boilers and test rigs with an aim to inculcate practical knowledge.



Sections Handled: II A & B

Major Equipment Detail:

S.NO	Name of The Equipment/Make/Model No	Qty	Unit Price(In Rupees)	Total amount(In Rupees)(Incl. Tax)
1	Four stroke diesel engine cut section model	1	20000	22700
2	Four stroke petrol engine cut section model	1	14400	16344
3	Multi cylinder four stroke petrol engine test rig with Hydraulic dynamometer.	1	392000	444920
4	Models of Boilers Lancashire Wilcox Cornish Locomotive and Cochran	1	41840	51914.5
5	Single cylinder four stroke petrol engine test rig with Mechanical dynamometer	1	67200	76272
6	Single cylinder four stroke diesel engine test rig with retardation equipment	1	96800	109868
7	Single cylinder two stroke petrol engine test rig with Eddy current dynamometer	1	119600	140949.5
8	Two stage air compressor test rig	1	124800	142272
9	Two stroke petrol engine cut section model	1	12000	13620
10	Variable compression ratio four stroke single cylinder diesel engine test rig with Eddy current dynamometer	1	315000	333645
Total amount of machinery(In Rupees) (Incl. Tax)				13,52,505 /-

Lab In Charge with Qualification: P. kranthi Kumar , M. Tech

Lab Technician Name with Qualification: S.Venkata Rao, D.M.E

Experiments List as per Curriculum:

1. I.C. Engines valve / port timing diagrams.
2. I.C. Engines performance test (4 -stroke diesel engines)
3. I.C. Engines performance test on 2-stroke petrol.
4. I.C. Engines performance test on multi cylinders 4-stroke petrol engine
5. Evaluation of engine friction by conducting Morse test on 4-stroke multi cylinder petrol engine.
6. Determination of FHP by retardation and motoring test on IC engine.
7. I.C. Engines heat balance.
8. Economical speed test of an IC engine.
9. Performance test on variable compression ratio engines.
10. Performance test on reciprocating air compressor unit.
11. Study of boilers
12. Dis-assembly / assembly of Engines.

Experiment List beyond the Curriculum:

1. Heat balance test on 4-stroke, single Cylinder diesel engine test rig.
2. Dis-assembly and assembly of a 4-Stroke 4- Cylinder engine.