Department of Mechanical Engineering, NITW

Theraml Engineering Laboratory-Experimental Setups

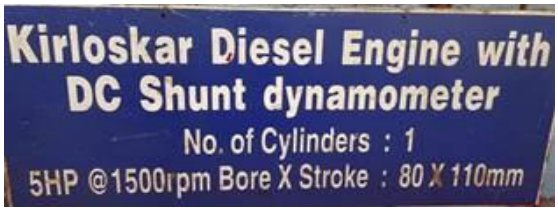
Laboratory Incharges: Dr. G. Naga Srinivasulu and Dr. Satyanand Abraham

	 To conduct a fuel consumption test on the given Kirloskar engine at its rated speed and to draw the performance curves.
	 To draw the valve timing diagram of Lister vertical 4-stroke diesel engine

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	 To conduct fuel consumption test on the given Kirloskar engine at its rated speed and to draw the performance curves.
	 To conduct a constant speed performance test on the axial flow fan and to draw the performance curves.
	 To study the effect of forward backward and radial curved vanes.

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	 To conduct a constant speed performance test on the compressor and to determine the volumetric efficiency.
	 To draw the heat balance sheet of the engine at different loads.
	

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	**GE Sponsored Gas Engine** **(16-Cylinder V-type)** Cut section model of 16-cylinder V-type engine. Students can observe the internal features of the engine. This engine is operated by electric motor.
	**Perkins Diesel Engine with water brake dynamometer** No. of Cylinders : 4 36HP @1600rpm Bore X Stroke : 89 X 127mm This facility is used to conduct the constant speed performance test.

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The multi-fuel VCR engine is interfaced with computer. The test like dual-fuel mode, emission, performance and EGR can be conducted.





BMW sponsored the engine. This is demo model. Students can go through the recent advancement features in the engine.

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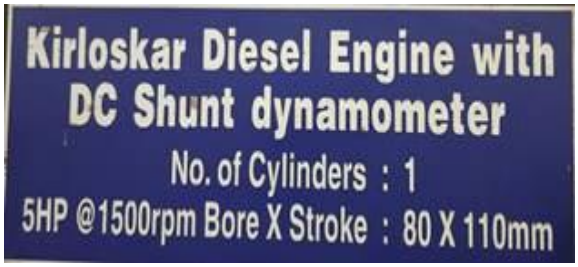
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Performance test and pressre-crank angle diagram can be obtained using this setup.





Mortoring, retardation and performance tests can be conducted using this setup.



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	**Staem Power Plant** The small capacity thermal power plant. It consists of boiler, turbine, nozzle and condenser. Students can experience the steam generation and turbine is operated by steam. Also study of flow through nozzle can be explored.
	**Steam Nozzle.** **Pressure variation along the nozzle can be measured using this setup.**

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Steam Turbine:

Performance test can be conducted by supply of different steam flw rates and steam pressures.