

MULTI CYLINDER FOUR STROKE PETROL ENGINE TEST RIG (EE-1614)

IC engines are widely used in automobile, domestic and industrial sector. They are classified according to cycle, number of cylinders, arrangement of cylinders, fuel used, type of ignition, valve arrangement, cooling system. Test rigs are used to find out the performance of an IC engine. It consists of an IC Engine, dynamometer, fuel measuring, air intake measuring and various other arrangements. Provision for morse test is done.

SCOPE OF EXPERIMENTS:

- To determine specific fuel consumption
- To determine Brake Horse Power
- To determine Brake Thermal Efficiency
- To determine Mechanical Efficiency
- To determine indicated thermal efficiency

UTILITIES REQUIREMENTS:

- Continuous Water Supply
- 10LPM Approx.
- Fuel
- 10Ltrs.
- Floor Area
- 3m X 2m

**TECHNICAL DETAILS:**

- Engine
 - A Four stroke, Multi Cylinder, water cooled, self start, self lubricating petrol engine with ignition coil and throttle control.
- Type of Loading
- **Rope Brake Dynamometer**
- Rope Brake arrangement fitted with the brake drum fitted on the engine shaft and provided with cooling water arrangement & spring balances in Kg units.
- Fuel measuring system consists of a fuel tank, a burette and a three way cock arrangement.
- Air intake measuring system
 - Air tank fitted with orifice and water manometer.
- RPM indicator to measure the RPM
- Measurement of heat carried
- It consist of inlet outlet piping with flow control valve water meter to measure the rate of flow of cooling water and Thermocouple for measuring inlet & outlet water temperature
- Panel Board Arrangement
- Panel Board Arrangement consisting of, ignition & starting switch, a high voltage knife switch assembly for cutting off each cylinder for Morse test.