

Product Name :
Four Cylinder Four Stroke Diesel Engine Test Set Up

Product Code :
NEGEMG146



Description :

Four Cylinder Four Stroke Diesel Engine Test Set Up

The test setup consists of Four Cylinder Diesel Engine coupled to Eddy Current / Hydraulic Dynamometer. The dynamometer provides variable load on engine to study engine performance under variable load conditions. The engine can be operated at different throttle settings enabling investigation of engine performance at different speeds. Exhaust gas calorimeter is used for estimation of heat carried away by exhaust gases for determination of heat balance of the engine. Air is supplied to the engine through an air box, fitted with orifice plate.

The instrumentation console includes measuring instruments for Engine Speed, Torque, Air consumption, Fuel Consumption & temperature of water, gases.

Experimental Capabilities:

- Determination of brake power & mechanical efficiency at different load conditions.
- Determination of fuel consumption & brake specific fuel consumption, brake thermal efficiency.
- Determination of air consumption & volumetric efficiency, Air/Fuel Ratios.
- Calculation of Heat balance of the engine.
- To study performance of engine at different operating speeds.

Specifications:

- Engine: Four
Cylinder Diesel Engine, complete with wiring, starter. Capacity 1500 cc, Output Power 35 hp @ 4000 RPM, Torque 75 N-m@2250 RPM
- Dynamometer Options:
 - Eddy current dynamometer: Water Cooled, Capacity 30 kW with electronic controller.
 - Hydraulic Dynamometer: Sluice Gate Type, Capacity 50 hp @ 6000 RPM Exhaust Gas
- Calorimeter: Shell & Tube type Heat Exchanger
- Air Box: Made in M.S. with damper & Orifice Plate
- Instrumentation Console:
 - Load cell with digital indicator for Load Measurement, Range 0-50 Kg
 - Non-contact type sensor with Digital indicator for Engine speed, Range 0-9999 RPM
 - U Tube Differential Manometer for Air, Range 0-300 mm
 - 'K' Type Thermocouples & 8 channel digital temperature indicator, Range 0-600 °C
 - Volumetric Fuel Measurement Unit with digital indicator
 - Rotameter for water, Range 100-1000 LPH – 2 Nos.

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