HMT08.xls
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MULTIPLE ENGINE TEST RIG

MODEL: HMT08

FEATURES

- Compact, comprehensive, sturdy design
- Easy and versatile operation
- Rapid change over of engine

DESCRIPTION

The system is designed for students-to conduct experiments and study the performance of different types engines within the capacity of the specified dynamometer. The engine and dynamometer are mounted on a bedplate. The test rig facilitates easy measurement of temperatures, fuel consumption, air consumption, brake power and engine speed. Testing can be carried out at various loads.
Same dynamometer is used for testing of various engines.

INSTRUCTION MANUAL

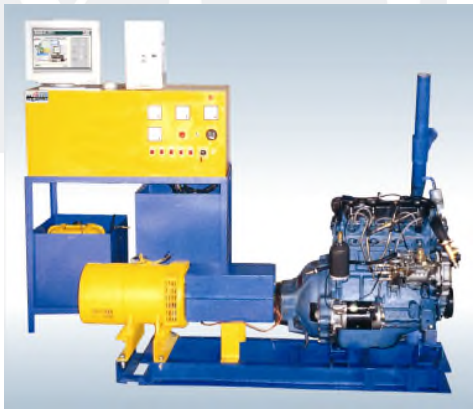
Self -explanatory operating manuals are provided with each system. Detailed theory as well as practical exercises is also included in the manual

LIST OF EXPERIMENT

1. To determine Brake Power
2. To determine engine volumetric efficiency
3. To determine engine mechanical efficiency
4. To determine engine brake thermal efficiency
5. To determine engine specific fuel consumption
6. Complete energy balance using exhaust gas calorimeter.
7. Determining air/ fuel ratios
8. Plot P-θ diagram (Optional)

COMPONENTS

1. Specified Dynamometer of suitable capacity for Specified Engine/Engines
2. Temperature Indicator
3. Tachometer
4. Fuel Consumption Measuring Unit
5. Air Flow Measuring Unit
6. Control Panel
7. Exhaust gas calorimeter
8. Battery



OPTIONAL ADDITIONAL

1. PC Operation
2. Digital indicator for fuel consumption, volumetric type
3. Digital indicator for fuel consumption, gravimetric type
4. Digital indicator for air flow measurement
5. Engine indication system consisting of a Piezo Sensor, Crank Angle marker and necessary software
6. I. C. Engine components cut away model board
7. Water supply arrangement, consisting of sump tank, pump and piping. (Required if hydraulic dynamometer or Eddy Current dynamometer is selected)
8. Battery charger

Note: Details of attachments can be made available on request.

SERVICES REQUIRED

1. Water supply and drainage arrangement
2. Electric supply
3. Exhaust gas removal facility
4. Foundation bed for mounting of test rig base frame
5. Fuel for engine

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(1) Since research and development is an on-going activity, the specifications mentioned herein are subject to change without notice
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