

Product Name :
Francis Turbine Test Rig for engineering schools

Product Code :
Fluid Machinery002

Description :

Francis Turbine Test Rig, technical teaching equipment for engineering

We are counted among the most prominent manufacturers, traders and exporters of premium quality **Francis Turbine Test Rig**.

Our professionals manufacture this apparatus in compliance with the industry laid parameters, using good quality raw materials. This apparatus undergoes several stages of quality checks to ensure of best quality. Appreciated for sturdy construction, optimum water circulation and cost-effectiveness, this apparatus is highly demanded around the globe.

Description:

- Francis Turbine is a reaction turbine, which was developed by an English born American Engineer Sir J. B. Francis.
- The water enters the turbine through the outer periphery of the runner in the radial direction and leaves the runner in axial direction and hence it is called a mixed flow turbine.
- As the water flows to the runner, a part of pressure energy goes on changing into kinetic energy.
- Thus the water through the runner is under pressure.
- The runner is completely enclosed in an air tight casing and the casing & runner is always full of water.
- The present set-up consists of a runner. The water is fed to the turbine by means of Centrifugal Pump, radially to the runner.

- The runner is directly mounted on one end of a central SS shaft and other end is connected to a brake arrangement.
- The circular window of the turbine casing is provided with a transparent acrylic sheet for observation of flow on to the runner.
- This runner assembly is supported by thick cast iron pedestal. Load is applied to the turbine with the help of brake arrangement so that the efficiency of the turbine can be calculated.
- A draught tube is fitted on the outlet of the turbine. The set-up is complete with guide mechanism. Pressure and Vacuum gauges are fitted at the inlet and outlet of the turbine to measure the total supply head on the turbine.

Experimentation:

- To study the operation of a Francis Turbine.
- To determine the Output Power of Francis Turbine.
- To determine the Turbine Efficiency

Utilities required:

- Water Supply and Drain.
- Electricity 5 kW, 440V AC, Three Phase.
- Floor Area 2 x 1 m.

Technical Specifications:

- Output Power: 1 KW

- Discharge: 1000 LPM (Approx.)
- Supply Head: 10 m (Approx.)
- Speed: 1000 RPM (Approx.)
- Runner: Having Curved Vanes
- Dynamometer: Rope Brake type
- Sump Tank: Capacity 200 Ltrs
- Water Circulation: Centrifugal Pump, Standard Make, Capacity 5 HP Three Phase.
- Discharge Measurement: Pitot Tube with Manometer
- Instruction Manual: An ENGLISH instruction manual will be provided along with the Apparatus

Technical Specification :

Francis Turbine Test Rig

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