

Product Name :
Pelton Turbine Test Rig

Product Code :
NEGEMG178



Description :

Pelton Turbine Test Rig

Test rig consists of a Pelton wheel water Turbine, designed for laboratory experimental purposes and to conduct test in metric units. The setup consists of a Pelton turbine coupled to a rope brake dynamometer. A centrifugal pump supplies water at high pressure to the turbine unit. The turbine consists of a cast iron body with a large transparent acrylic window, a nozzle and spear arrangement, a rotor assembly of shaft, runner and a brake drum all mounted on a sturdy base frame. The pelton buckets and nozzle are made of gunmetal and the spear made of brass for corrosion resistance. The input to the turbine is controlled by adjusting the spear position with a hand wheel. The transparent perspex sheet side casing is provided for visual observation of flow on the buckets. The power developed by the turbine is absorbed by the rope brake dynamometer. Instruments are provided to measure the input water flow rate & pressure as well as speed & torque.

Experimental Capabilities:

- To measure power developed by Pelton Turbine.
- To calculate mechanical efficiency of the Turbine.
- To plot performance curve for Pelton Turbine.

Technical Specifications:

- Pelton Turbine: Design Speed - 1000 RPM. Output Power - 1.0 KW
- Dynamometer: Rope brake dynamometer coupled to the turbine
- Pump: Centrifugal monoblock pump, Capacity 5 hp, 440Volts, 3 Phase, 50 Hz with DOL Starter
- Water flow measurement: Venturimeter with pressure taps connected to two pressure gauges
- Storage tank: Made in MS, FRP Lined for rust protection
- Spring balance: 0-50 Kg, for torque measurement
- Tachometer for Speed measurement

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