



Pelton Wheel Turbine is only impulse water turbine now in common use named in honor of Sir L.A. Pelton (1829-1908) of California, USA. It is a tangential flow impulse turbine. The water strikes the buckets along the tangent of the runner. The energy available at the Inlet of the Turbine is only kinetic energy. The Pressure at the Inlet and Outlet of the atmospheric. This turbine is used for high heads. The Present Set-up consists of a runner. The buckets are mounted on the runner. The water is fed to the turbine, through SS nozzle with a SS spear, by means of Centrifugal Pump, tangentially to the runner. Row of water into turbine is regulated by adjusting the spear position by the help of a given hand wheel 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 providing with a transparent acrylic sheet for observation of flow on to the buckets. This runner assembly is supported by rigid MS structure. Load is applied to the turbine with the help of this brake dynamometer so that the efficiency of the turbine can be calculated. Pressure Gauge is fitted at the Inlet of the turbine to measure the total supply head to the turbine.

EXPERIMENT:

1. To study the operation of a Pelton Wheel Turbine
2. To determine the Output Power of Pelton Wheel Turbine
3. To determine the Turbine Efficiency

UTILITIES REQUIRED:

1. Water Supply and Drain. ? Electricity 15 kW, 440V AC, Three Phase

Note: Specifications are subject to change.

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