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DESIGN OF HIGH EFFICIENCY PELTON TURBINE FOR MICROHYDROPOWER PLANT

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Abstract

The Pelton turbine was performed in high head and low water flow, in establishment of micro-hydro electric power plant, due to its simple construction and ease of manufacturing. To obtain a Pelton hydraulic turbine with maximum efficiency during various operating conditions, the turbine parameters must be included in the design procedure. In this paper all design parameters were calculated at maximum efficiency. These parameters included turbine power, turbine torque, runner diameter, runner length, runner speed, bucket dimensions, number of buckets, nozzle dimension and turbine specific speed.

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Pelton turbine, Maximum efficiency, Designparameters, Micro-hydro power plant

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Pelton hydraulic turbine, Turbine parameters, Turbine specific speed

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