Pemanfaatan sistem tenaga air menggunakan turbin pelton sebagai penggerak generator listrik

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Abstrak

Making of this script final duty, needed turbine prototype or small object appliance Pelton to be examination of activator characteristic. Making of appliance with material design changing when unable to function or experience of failure. Design of last turbine use material stainless steel with tacking on welding with axis runner turbine. Election and making of electrics generator shall precisely can release supply 50 I-lz - 60 Hz. Generator is not have to rotate 1500 rpm, but with design addition of magnet pattem tide and our bobbin place ang|e=cornel‘5 make I HZ, hence velocity tum around generator can be degraded- With this method of course will growing bigly size measure of generator. Exsperiment turbine characteristic to look working efficiency from effect change head pressure energy or elevation source. Capacity water How constitute parameter velocity from elevation source and extensive squirt for bucket. Intake of data with measuring water capacities function entry, value pressure gauge of actual head at point gauge and tum around velocity moment turbine work without burden with tachometer. Making difference water squirt for turbine to use n02.Z|c with diameter 0.005 m and 0.008 m to compare effect result of water velocity. Diference head pressure energy and kinetic energy from nonle constitute efficiency loss network piping and using nozzle. Test turbine characteristic make input head energy from water velocity at nozzle and potential elevation noule from bucket. Power energy output turbine is torsion theory, not measuring actual condition. With result equation of momentum will yield energy output of turbine or equation Euler head energy. Energy torsion turbine or BHP (Brake Horse Power) from activator of turbine required to transfer velocity tum around for the burden of electrics generator torsion. Analysis indicate that speed turn around turbine can be arranged by controlling input energy irrigate to bucket. Input energy from head depress conversion of velocity water in bucket and water capacities direction into turbine. Relation of WHP (Water Horse Power) and speed tum around although non linear but we earn to design velocity tum around with condition of different.