

Abstract

This Thesis discusses the method of selecting the hydro ejector to draw leakage water from the turbine top cover sump (Gland seal), which always lead to the sinking of turbine guide bearing sump in the event of complete blackout in the national network or when the loss of electricity due to any malfunction emergency in the line of services Supplying the leakage water pumps.

The aim of this Thesis is to choose a model for Hydro ejector with specifications to suit the process. The methodology used in this Thesis is to calculate the net positive suction head for Hydro ejector, and to calculate the sufficient pressure (the motive) to run this system, also to find out the amount of water leaking in the basin of the top cover of the turbine then to determine the location to discharge the combined resulting of leakage and motive water of the system

The calculation of losses due to flow through pipe lines was made in each of the suction and discharge connection.

Results obtained from the research is selection of the model of Hydro ejector (HL model) three inches with motive pressure 30 PSIG(Pound per square inch gauge) , with flow 206 GPM(Gallons per minutes) in motive line and pumping 106 GPM from suction line . The results were fit the work of model to withdraw the leakage water without leaking any defect or disability. Full analysis of the results was made and recommendations for operation, safety of personnel and equipment were clearly stated. Also recommendation to apply this model in Rosaries Hydro power station and continuation for further studies and improvement