

ABSTRACT

Water is a cheap and relatively easy source of energy because water is stored in potential energy (in falling water) and kinetic energy (in running water). Hydropower is energy obtained from flowing water. Energy owned by water can be used and used in the form of mechanical energy and electrical energy. The use of water energy is mostly done by using a water mill or water turbine. The amount of hydropower available to a water source depends on the size of the head and the water discharge. With the availability of fluid mechanics, the technical specifications relating to the application of pump pressure to water discharge are very rare.

For this reason, the author conducts research on the regulation of water discharge in a pump without electricity, to overcome the problem of water waste and can optimize the performance of the pump, making calculations so that the pump without electricity can run continuously so as to produce maximum electrical power.

For that purpose, a tool was made to calculate the flow of water debit so as to facilitate the calculation of the flow rate, in this study the author made a tool to calculate the speed of water discharge. The results obtained from the study of this tool using a measuring cup obtained a tolerance value of 6.57%, therefore, this tool can be used to calculate water discharge. Testing the length of the input and torch filling above, the water filling in the toren above 200 liters is fully charged in 38 minutes as much as 202 liters with a water discharge speed of 4 to 6 liters / minute, and filling the water in the input tub using a 125w pump can be fully charged in 10 minutes of 191 liters with a water discharge rate of 16 to 18 liters / minute, so that there is no wasted water and the water cycle runs continuously.

Keywords: Water, water pump, water discharge