

Design an Undershot Water Turbine With Floating System.

Anggy

*Renewable Energy Engineering Program Study
Engineering Departement*

ABSTRACT

Electricity demand will continue to increase along with economic growth, increasing population and increasing the number of jobs or industries. The effort to develop electricity generation infrastructure is an important prerequisite that must be built along with the increasing need for electricity. The limited number of power plants cannot meet the electricity demand along with the increasing industrial development and the social economic level of the people. Especially to meet the electricity needs of rural communities whose areas have not been supplied by electricity from PLN. The design of a water turbine prototype with a floating system is used on a small scale using water as its prime mover. The purpose of the floating system is to simplify operation and minimize disruption to the turbine in the event of a flood. The type of turbine used in pikohidro power plants with a floating system is crossflow because in a turbine crossflow the water flows transversely and cuts the turbine blade. Crossflow turbines are accommodated by large water discharge and low altitude. An undershot water turbine with a floating system produces an alternator rotation speed of 887.6 Rpm, 238 Volt voltage, 152.9 Watt power and 50 Hz frequency.

Keywords: *Undershot Turbine, electricity, pycohydro, crossflow, floating*