

ABSTRACT

The title Final Project is Design and Implementation of Electronic Load Controller of mikrohidro power plant with Proportional Integrated Controller. Electronic Load Control (ELC) The Control Unit is used at Micro Hydro Power (MHP). Use Proportional Integrative aims to review increasing the speed of response and also to review eliminate the steady state error.

Electronic Load Control using a synchronous generator. Initial tool used to review Keeping Frequency Network to Keep on preset price. Power Electronic Load Controller arrange dummy load when the power supplied to load Changing. Output voltage from generation Micro Hydro Power Plant, Electronic load controllers Keeping husband to Keep Constant voltage. Keeping electronic load controller Power Output From Micro Hydro Power Plant (generator). If change on expenses, Electronic load controllers regulate the power supplied to the ballast (dummy load) by electronics, by conduct enumeration wave voltage.

The goal of this research is to obtain a Electronic Load Controller that can operate effectively, in order to gain constant voltage, Specified voltage is 12 Volts. The response's rate and error steady state are the parameters that measured in evaluating the performance's control system. This research utilize trial and error constant of control K_p , K_i , each of both parameter given its value $K_p=0,8$ and $K_i=1$

Keywords: Electronic Load Controller (ELC), PI Control (Proportional-Integral), Microhydro Power Plant (MHP)