

**Performance of a Micro Hydro Power Plant Using a Francis Turbine at the
Plantation Area Company Gunung Pasang, Panti, Jember**

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ABSTRACT

A micro hydro power plant (PLTMH) is a small-scale power plant under 100 kW that uses hydro or water power to convert it to electrical energy. This study aims to analyze the stability of the voltage and power usage in PLTMH Gunungasang. The water debit of PLTMH Gunungasang is 172.8 liters / second which is then processed to find the potential value of water energy. One of the instruments used in this research is the Fluke 1735 Power Logger, whose function is to determine the voltage, frequency and power generated by the micro hydro turbine generator. Based on the research, the electric power generated is 3724.02 Watts with an average voltage of 157.59 volts and an average frequency of 41.04 Hz. The use of power used by consumers is 9.8% of the potential water power.

Key Word : *debit, frecuency, PLTMH, voltage.*