

***Analysisi of the Effect of Variation in the Number of Blade on the Output Power in the Pelton Turbine.***

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***ABSTRACT***

*Pelton turbine is one of the new renewable energy that can be utilized as a power plant. The purpose of this study was to determine the effect of variations in the number of blades on the output power produced by the Pelton turbine. This research was conducted in the Water Sharing Building, Kranjingan sub-district, Jember Regency, East Java by varying the number of turbine blades, namely turbine blades 18, 22 blades and 26 blades. 90 watts. The results show that in the turbine test with 18 rotation blades the maximum achieved is 1589.9 rpm, at 22 rotation blades the maximum achieved is 1599.3 rpm and at 26 rotation blades the maximum achieved is 2105.7 rpm. Likewise, the voltage, frequency, turbine rpm, generator rpm and the power achieved by the turbine with 26 is greater when compared to blades 18 and blades 22. The power generated when a load is 90 watts, the turbine blade test 18 produces a power of 107.47 Watt. on turbine blade 22 it produces a power of 123.5 Watt and on blade 26 it produces a power of 130.57 Watt. From this study it can be concluded that the number of blades affects the voltage, frequency, turbine rpm, generator rpm and power.*

***Keyword: Pelton Turbine, Blade, Power***