

***Performance Test Of Washing Machine Motor As Induction Generator With
Permanent Magnet Method***

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ABSTRACT

The need for electrical energy in Indonesia is very much needed by the community, the article is that population growth in Indonesia continues to increase every year. This population growth makes the need for electricity supply throughout Indonesia continues to increase. Data from the Ministry of Energy and Mineral Resources states that the ratio of electricity use in Indonesia reaches 67%. This means that 33% of the population in Indonesia does not have electricity. To generate electrical energy that utilizes energy from nature, it is necessary to have a tool, namely a generator. Because the purchase price of a generator is quite expensive, it is necessary to have a replacement to generate electrical power. This study aims to design and build a washing machine motor into an induction generator, calculate the performance and power generated by the washing machine motor after becoming an induction generator. Testing the induction generator is assisted by using an electric drill, the rotation is set at a speed of 200 – 2000 rpm. In the test, the best results were obtained at a speed of 1500 rpm with a frequency value of 50.56 Hz, and at a speed of 2000 rpm the largest voltage value was 169 V. At a speed of 1500 rpm, constant retesting was carried out for 60 minutes to produce an average voltage value. , and the frequencies are 122 V, and 51.2 Hz, respectively. At a speed of 2000 rpm, the test was carried out again to produce the highest values of voltage, electric current, and power generated, respectively, 147 V, 0.5 A, and 34.5 Watt, and the lowest values of voltage, electric current, and power generated respectively. 68 V, 0.06 A, and 8.82 Watts, respectively.

Key Word : Energy, Washing Machine Motor, Induction Generator