Analysis Of Electric Motor Power Consumption With Variation Of Speed Rate On Convertible Hybrid Motorcycle

by

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ABSTRACT

Hybrid vehicles are vehicles that combine the drive system between conventional engines and electric motors. Hybrid vehicle technology can be used interchangeably to move the vehicle when certain conditions, so that fuel consumption becomes more efficient. In this study, conventional two-wheeled vehicles were converted into Hybrid vehicles and tested the power consumption of electric motors with speed variations to determine the power of electric motors at each predetermined speed variation. The purpose of this research is to find out how to convert conventional two-wheeled vehicles into Hybrid vehicles and test the power consumption of electric motors with speed variations and loading variations on converted motorbikes. The research method used in this research is a quantitative method which uses a lot of numbers, and there is a process of data collection to interpretation, so that systematic, planned, and structured research results are obtained. From the results of the research that has been done, the results obtained are that the greater the speed and loading on the BLDC motor, the greater the power consumption, this can occur because BLDC motors consistently consume more electrical energy when receiving large loads. The results of the largest power consumption of electric motors are obtained at a load of 62 kg with a speed of 20 km / h and a power consumption of 1,10 kW.

Keywords: *Hybrid, Conventional Vehicles, Power Consumption, BLDC Motor.*