

Rancang Bangun Pengatur Kecepatan Elektrolisis Generator HHO (*Dihydro Oxygen*) Dry Cell Berbasis Mikrokontroler AT Mega 8535 (*Design and Manufacture of Electrolisys Reaction's Speed Controller for Dry Cell HHO Generator Based on AT Mega 8535 Microcontroller*)

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ABSTRACT

This research is about the manufacturing processes of interface electrolisys reaction's speed controller for dry cell HHO generator to improve its efficiency. AT Mega 8535 microcontroller is used to modificate PWM (Pulse Width Modulation) signal to control the power taken from the batteries. The manufacturing processes is devided into designing, simulating, manufacturing, particular testing, assembling, and final testing. Based on the research's test, the device can running well to control the number of HHO gases production by changing the number of duty cycle value. If the number of duty cycle increase, the number of gas volume also increase. The using of controller device also make the number of HHO generator's efficiency increase. The highest efficiency's average achieved using the device up to 27.772% on 25% duty cycle's value. The energy consumption also decrease by using this controller device on HHO gases generation system, this device is able to save energy up to 37.26%. Its shows that the device can improve the HHO generator's ability to save the energy consumption.

Keywords: *HHO Generator, PWM, Microcontroller, Efficiency.*