

Design of a Fuel Magnetization Tool with the Use of Remanent Magnets (Not Fixed)

Yuli Hananto, S.TP, M.Si (minithesis counselor)

Edué Juniansyah

Study Program of Renewable Energy Engineering

Department of Engineering

ABSTRACT

The use of petroleum as an energy source has increased significantly in line with the increasing growth and welfare of people in the world. One way to overcome this is to save fuel consumption, for example, to save fuel by using a fuel magnetization device that is mounted on the fuel hose before entering the carburetor. This study aims to design a fuel magnetization device using remanent magnets (not fixed). A fuel magnetization device using a remanent (non-permanent) magnet that has been made with 0.5 mm diameter copper wire then wrapped around a 10 mm diameter iron core of 1000 turns. Tests carried out include fuel consumption before and after using a fuel magnetization device. Before using the fuel magnetization tool, the fuel consumption of a motorcycle with an engine speed of 1000 rpm for 5 minutes was 9,8 ml. Meanwhile, fuel consumption with the use of a fuel magnetization device with a voltage of 1 volt is 9,5 ml, a voltage of 2 volts is 9,2 ml, a voltage of 3 volts is 9 ml, a voltage of 4 volts is 8,7 ml, a voltage of 5 volts is 8,4 ml, 8,1 ml of 6 volts, 7,9 ml of 7 volts, 7,6 ml of 8 volts. So that the best fuel consumption is produced when using a tool with a voltage of 8 volts which can save fuel consumption by 22,4%.

Keywords: *fuel saving, fuel magnetization, fuel consumption*