

ABSTRACT

The human need for energy is increasing over time, especially the need for fuel oil. However, the availability of fuel oil is increasingly waning. For that we need a new alternative energy as a substitute for fuel oil. One of them is HHO gas fuel. HHO gas can be injected into the combustion engine in lieu of fuel oil. HHO gas can be generated by HHO generator by using water electrolysis principle. Previously, a lot of research has been done on HHO generator, but there are still few who study the effect of electrode geometry on HHO generator. Generally the geometry of the electrode plate on the HHO generator is just a thin parallel plate of rectangular shape. In this study a generator with a cylindrical or tube plate is formed and will be compared with a parallel plate generator having equal volume to analyze the effect of the electrode geometry on the HHO gas flow rate that be produced. The measuring instrument used is a debit measuring device that is MEMS mass flow meter type MF5706. In this study, the generator volume made is 0.15 liters and produces different capacitance values on each generator ie 2925 μF for parallel plate generator and 1765 μF for cylinder generator. From this research it can be concluded that the geometry of the electrode plate on the HHO generator will affect the steady-state (T_s) time of the HHO generator.

Keywords: Energy, HHO gases, HHO generators, mass flow meter, capacitance.