The Effect of Hho Gas Discharge Variations in Wet Cell Type Generator on Diesel Motor Smoke Density (Opacity)

M. Ulya Ajda Hukma
Automotive Engine Study Program
Department of Engineering

ABSTRACT

The incomplete combustion process in a diesel engine produces exhaust gases that are harmful to the environment such as carbon compounds, hydrocarbons and nitrogen so that by perfecting the combustion process it can reduce the toxic gas content that is generated, in this case, hydrogen and oxygen gas are used to complete the combustion process because Hydrogen is colorless, odorless, non-metallic, single-valent, and is a very flammable gas at a concentration of 4% in free air. HHO gas will be added to the diesel engine intake channel in the hope that HHO gas can improve the combustion process and reduce the toxic gas content produced by the diesel engine. The data obtained from the research results show that the percentage of smoke density has decreased after the addition of HHO gas with a variation of the discharge in the intake manifold with a difference of 23% at 0.2 L / m, 21% at 0.4 L / m, and 4% at 0 , 6 L / m compared to the test results before the addition of HHO gas.

Keywords: HHO Gas, HHO Discharge, Smoke Density, Diesel Engine