VARIATION OF MULTY *HOLE* AND SHIM *NOZZLE* THICKNESS TO FABRIC VISUALIZATION IN DIESEL MACHINES

Rizki Fajar Budiharja
Automotive Engineering Program Study
Departement Enginering

ABSTRACT

The diesel motor is part of the piston combustion engine and is also called the internal combustion engine. In this Internal Combustion Engine, the combustion process and power generation are in one place, namely in the combustion chamber (cylinder). The combustion process occurs because of changes in temperature and pressure in the combustion chamber, so that the fuel in the form of a fine mist that is sprayed or injected when the piston reaches the Upper Deadline (TMA) at the compression step and touches with hot air, it will ignite and there will be a combustion process in the combustion chamber.The fuel spray system includes a nozzle which is a component of the fuel system that functions to regulate the form of mist (injection) of fuel that is injected into the cylinder. The process of collecting data in this study was done by injecting fuel using the Injector pump tester with shim nozzle thickness variations of 0.10 mm and 0.30 mm. The fading result is recorded using a camera with 60 fps resolution to determine the spraying speed. A significant difference in the spread angle was analyzed, namely the difference in the friction angle of the nozzle.

Keyword: Injector pump tester, Motor Diesel, Nozzle, Opacity, Shim Nozzle, Visualisasi.