ABSTRACT

Development of home industry made in exhaust system (it is known knalpot) in Surabaya, especially at Tidar. It is so important to improve the performance of motorcycle if used to transportation as well as racing. But in fact, that is difficult.

We concentrate in exhaust system, hopeful to encourage modifier of motorcycle. There are 2 kind of exhaust system to analyze, that is factory standard and modify random at market. In this experiment, calculate Power, Torque, Fuel Consumption, and exhaust gas emission from two kinds, by water brake dynamometer is to measure torque, strobotester is to measure circular engine (RPM), bottle is to measure fuel consumption in ml/second.

From the experiment result, we can conclude that the best kind of exhaust system is exhaust system modification with the highest torque (0.66 Kgf-m) in 2000 rpm, 5.22 HP for the effective power, 9.6 Kgf/cm² mean effective pressure at 2000 rpm, the lowest specific fuel consumption for every rotation, and the most important is it have the highest thermal efficiency. But if we see from the gas emission, the exhaust system standard have the less danger gases then modification exhaust system.