

**Analisis Perbandingan Penggunaan Bahan Bakar Premium dan Gasohol Pada Generator Set BBM Ganda IMOTO TL300-LPG** (*Comparison Analysis of the Use of Premium Fuel and Gasohol in the Generator Set BBM Double IMOTO TL300-LPG*)

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***Abstract***

*Industrial machinery and motor vehicles that use fuel oil act as a contributor of air pollution to the environment. Bioethanol is an alcohol which is an alternative energy source that has been developed in Indonesia as raw material for food industry and chemical industry. Bioethanol is also used as a fuel gas mixture to increase the octane rating of the fuel. The difference in ethanol and premium density makes the fuel unable to mix. The results of the type of premium mass testing 748.94 kg / m<sup>3</sup> and ethanol type of mass 801.8 kg / m<sup>3</sup>. Testing power generator with standard compression shows the use of premium fuel is more stable than using fuel gasohol because of the incomplete combustion process due to the separation of fuel mixture in the carburetor. The use of fuel gas can save 10-20 ml of fuel consumption compared to premium. Levels of ethanol addition above 20% need to increase compression ratio on the machine.*

***Keywords*** : *octane values, density, power, fuel saving.*