IMPACT OF MAHUA OIL, RAPE SEED OIL, MANGE SEED OIL BLENDED WITH METHANOL BIOFUELS ON PERFORMANCE AND EMISSION OF CI ENGINE

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Abstract

In view of increasing pressure on crude oil reserves and environmental degradation as an outcome, fuels like Biofuel may present a sustainable solution as it can be produced from a wide range of carbon based feedstock. The present investigation evaluates Mahua oil, Rape seed oil, Mange seed oil blended with Methanol as a fuel in C I engine.

A Twin cylinder C I engine was adapted to study the brake thermal efficiency, brake specific energy consumption, and emissions with the fuel of Mahua oil, Rape seed oil, Mange seed oil blended with Methanol. In this study, the diesel engine was tested using Mahua oil, Rape seed oil, Mange seed oil blended with Methanol. Twin cylinder C I engine is able to run with Bio fuel but the engine needs to run by using diesel fuel first, then followed by Bio fuel and finished with diesel fuel as the last fuel usage before the engine turned off. The performance of the engine using Mahua oil, Rape seed oil, Mange seed oil blended with Methanol compared to the performance of engine with diesel fuel. Experimental results of Mahua oil, Rape seed oil, Mange seed oil blended with Methanol and Diesel fuel are also compared.

Keywords: Diesel, Performance, Emissions, Methanol, vegetable oils.;

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