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Prediction of Best operating point of IC engine on different blends of Jetropha Bio-diesel using Matlab

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ABSTRACT: The predicted shortage of fossil fuels has encouraged the search for substitutes for petroleum derivative. This search has resulted in an alternative fuel called Bio-diesel. In this study a four stroke IC diesel engine and jetropha Bio-diesel is considered. Matlab code was programmed with the pre-defined formulas for different blends of Bio-diesel. Load, Engine specifications, calorific value and density of fuel were taken as inputs. Brake power, Brake thermal efficiency and Brake specific fuel consumption were obtained outputs. Finally, Outputs for all the blend are compared to obtain the best operating point. The study shows that the obtained result matches to the experimental result and the Matlab code can be used to predict the best operating point.

Keywords: IC engine, Jetropha Bio-diesel, Matlab

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