

Analysis of Performance-Emission Characteristics of a Single Cylinder Diesel Engine Fueled with Coconut Oil

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Abstract : The present experimental work was carried out to investigate performance and emission characteristics of single cylinder diesel engine operating under dual-fuel mode with coconut oil blended with diesel. Coconut oil is one of the edible oil which is abundant in tropical countries and has properties like diesel. To this end, performance and emission parameters of diesel-coconut oil blends were reported in the current study. The results were drawn at different load steps of engine operation with 10% and 20% of coconut oil linearly blended with diesel. From the results, it was evident that coconut oil can be successfully replaced up to 20% of diesel without hampering the performance-emission characteristics of the existing diesel engine.

Keywords : coconut oil, alternative fuel, emissions, dual-fuel

Conference Title : ICAFB 2018 : International Conference on Alternative Fuels and Biofuels

Conference Location : Rome, Italy

Conference Dates : December 13-14, 2018