

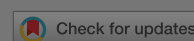
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Articles

Experimental investigations on a variable compression ratio (VCR) CIDI engine with a blend of methyl esters palm stearin-diesel for performance and emissions

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ABSTRACT

The present work deals with an experimental evaluation of the existing diesel engine with a blend of methyl esters of palm stearin (PS) oil and petro-diesel under varying injection pressures and compression ratios (CRs). It was observed that the brake thermal efficiency of 210 bar and CR of 18 was higher than 230 bar. However, the maximum pressure of 210 bar was higher than 230 bar. The maximum emissions of CO, HC and NOx were lower at 210 bar. The maximum smoke was observed at 210 bar. It is observed that the maximum smoke was observed at 210 bar.

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reduction of emissions. The study revealed that PS could be explored as a source for producing biodiesel effectively with environmental concerns.

KEYWORDS: CI engine PSME40 blend fuel injection pressures compression ratios engine performance exhaust emissions

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Disclosure statement

No potential conflict of interest was reported by the authors.

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