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NEW ENGINE METHOD FOR BIODIESEL CETANE NUMBER TESTING

ABSTRACT

Substitution of fossil fuels with fuels that come from part renewable sources has been a subject of many studies and researches in the past decade. Considering the higher cost and limits of production resources, a special attention is focused on raising the energy efficiency of biofuel usage, mainly through optimization of the combustion process. Consequently, in biofuel applications, there is a need for determination of auto-ignition quality expressed by cetane number as a dominant characteristic that influences combustion parameters. The fact that the method for cetane number determination is comparative in nature has led us to try to develop substitute engine method for cetane number determination, by the use of the available laboratory equipment and serial, mono-cylinder engine with direct injection, DMB LDA 450. Description of the method, results of optimization of engine's working parameters for conduction of the test and method's Accuracy estimation are given in the paper. The paper also presents the results of domestic biodiesel fuels cetane number testing with the application of described engine method, developed at the Laboratory for internal combustion engines and fuels and lubricants of the Faculty of Mechanical Engineering from Kragujevac, Serbia

KEYWORDS

[auto-ignition](#), [biodiesel](#), [cetane number](#), [engine test method](#)

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