



Technical Papers | Jun 28, 2018



Autoignition Process in Compression Ignition Engine Fueled by Diesel Fuel and Biodiesel with 20% Rapeseed Biofuel in Diesel Fuel

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Abstract

Controlled autoignition delay is considered a very promising new technology, having the potential of combining low fuel consumption with low pollutant emissions. In this study, the effect of pure diesel fuel and biodiesel B20 (20% rapeseed oil mixed with 80% diesel fuel, by volume) on ignition delay period, at different engine speeds, under full load operating conditions, has been investigated experimentally and numerically. For this purpose, two models were proposed. The experimental results were compared with the ignition delay predicted by some



Acknowledgments

The authors of this paper acknowledge the AVL advanced simulation technologies team for the support they have offered in performing the simulation part of this study. One of the authors (M.A) wants to thanks the Iraqi government for its financial support.



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