

Recent Advances for Effects of Higher Alcohols on Emission Characteristics of Different Diesel Fuel Blends in Compression Ignition Engines

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Keywords. (diesel engine, emission, higher alcohol, diesel fuel)

Abstract.

The widespread use of diesel engines has begun to cause serious environmental problems such as global warming and acid rain. The harmful emissions emitted to the environment as a result of the combustion of diesel fuel used in diesel engines are the main causes of these problems [1]. These harmful emissions are encountered in different forms such as nitrogen oxides, hydrocarbon, carbon monoxide, and carbon dioxide. For a cleaner environment and a more livable world, these emissions must be largely avoided. To achieve this, researchers start to look for alternative fuels [2]. As a result of these studies, biofuels like higher alcohol and biodiesel have emerged and are used in many different types in recent years. In this study, recent developments on the effects of higher alcohol additives in diesel fuel and diesel fuel blends on emissions in diesel engines have been reviewed.

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[2] A. A. Taha, T. Abdel-Salam, M. Vellakal, *Large Bore Engines; Fuels; Adv. Combust.* **2015**, 1.

This work was supported by Çukurova University Scientific Research Project Coordination [grant number FBA-2019-12154].