عنوان مقاله:

Theoretical and Experimental Analysis of OM۳۱۴ Diesel Engine Combustion and Performance Characteristics Fueled with DME

محل انتشار:

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خلاصه مقاله:

Homogeneous Charge Compression Ignition (HCCI) combustion is a pioneer method of combustion in which pre-mixed fuel and oxidizer (typically air) are compressed to the point of auto-ignition. HCCI engines can operate with most alternative fuels, especially, dimethyl ether (DME) which has been tested as a possible diesel fuel due to its simultaneously low NOx and PM emissions. In this paper a single zone detailed chemistry combustion model for determining the time evolution of the homogenous reacting gas mixture in the combustion chamber and performance characteristics of the engine has been developed. The aim of this paper is to analyse the effect of intake temperature and EGR on the characteristics of auto-ignition and operating window of the HCCI combustion considering knock and misfire boundaries.

کلمات کلیدی:

Dimethy ether, multi zone combustion, emissions, Disel Engine, modeling, Dimethy ether, multi zone combustion, emissions, Disel Engine, modeling