

国際技術講演会

Advanced Research in Internal Combustion Engines through a Worldwide Effort

(国際協力による内燃機関の先端研究)

企画： 日本機械学会中国四国支部
開催日： 2016年2月12日(金)16:00-17:30
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(東広島市鏡山1-4-1)

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Abstract

The internal combustion engine (ICE) has been equipping ground transportation devices for over a hundred years and intensive research is being carried out today to mainly make it cleaner and more efficient. Experiments are being performed on the different aspect of combustion in ICEs, but a collaborative effort initiated about half a decade ago has made a real difference in our understanding of sprays and other ICE processes. This talk provides a brief overview of recent work from the Engine Combustion Network (ECN), including results for diesel and gasoline sprays. In addition to the development of state-of-the-art experimental diagnostics, major achievements from the ECN include coupled simulation of inside nozzle flow and near field spray, and comparisons to experiments in a quantitative way for both gasoline and diesel sprays. A better understanding of the relation between the internal nozzle hole geometry, the internal flow field, and the near field liquid spray structure has emerged. New information on chemistry-turbulence interaction and its flame structure by OH and formaldehyde LIF has been made available to the community. A soot database for diffusion flame diesel combustion with associated transients has also been provided.

参加費 無料 事前申込み 不要
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国際技術講演会では米国サンディア国立研究所が中心となって進めているECN: Engine Combustion Networkによるディーゼル・ガソリンエンジンの噴霧・燃焼に関する研究について紹介いただきます。