

Start of Joint Research with Oita University

We have started a joint research project with Oita University on the development of more effective ammonia-hydrogen co-combustion engines by visualizing the combustion process of ammonia and hydrogen fuels in the co-combustion process.

This joint research aims to clarify the formation mechanism of unburned ammonia, nitrous oxide, and nitrogen oxide, which are harmful components in exhaust gas, by combining our combustion analysis technology with Oita University's combustion process visualization technology for ammonia fuel which is considered difficult to burn completely due to its slow combustion rate in medium-speed four-stroke engines for marine use, then, by elucidating the formation mechanism, we aim to establish combustion technology for highly efficient combustion and suppression of the formation of toxic components.

In this joint research, in addition to the application of the "hydrogen combustion visualization technology" in the "Technical Development of Hydrogen Fuel Propulsion Plant for Oceangoing Vessels, 2021-2023 Maritime Industry Intensive Cooperation Promotion Technology Development Support Project" by the Ministry of Land, Infrastructure, Transport and Tourism, which we have been promoting with Oita University, we are also considering applying the technology to our own hydrogen engine technology. In addition, we will improve the thermal efficiency of ammonia-fueled engines and conduct combustion evaluation and analysis.

We consider global environmental protection to be a key management issue, and through its efforts with universities and other educational institutions, we will contribute to the realization of a sustainable and prosperous society by developing human resources to realize a decarbonized society and by doing its best to balance its business activities with environmental conservation.

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