

# Action for

## Marine Logistics & Transportation

Providing propulsion systems that are environmentally friendly and economically efficient

Action report

Completion of Japan's first commercial electronically controlled gas injection diesel engine (ME-GI) that burns LNG

As a marine logistics professional that understands the entire global supply chain, we are expected to have a view upon which we collectively consider economic efficiency and environmental performance. We started with the evolution of the marine diesel engine. There is a growing interest in natural gas as a marine fuel alternative to heavy oil because it allows for a significant reduction in emission of sulfur oxide (SOx) and CO<sub>2</sub>, and it is expected to help reduce emissions of nitrogen oxide (NOx) and particulate matter (PM). MES has established a system for responding to diverse fuel needs with engines such as the ME-GI (LNG and heavy oil), ME-GI-Ethane (ethane and heavy oil), and ME-LGI (methanol and heavy oil). In October 2015, we completed Japan's first commercial ME-GI. In addition, we are the first in the world to create a form of operation that combines ME-GI and fuel gas supply system (FGSS) compressor. Moving forward, we will continue to tackle these kinds of challenges.

Resource 01  
Technologies for manufacturing ship engines

Resource 02  
Technologies related to the supply of high-pressure gas

Resource 03  
Technologies for operation support and maintenance with IoT

Creating a marine logistics system that enables quick, smart transport

Building a crank shaft into a marine diesel engine / Tamano Works, Okayama Prefecture