

# Providing one-stop solutions for natural gas transportation needs

[Provision of consistent solutions from the upstream to the downstream processes of natural gas transportation projects]

01

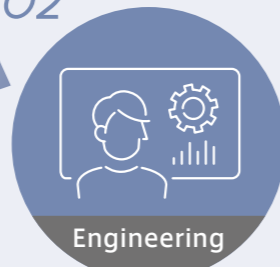


Consulting

Consulting services including the selection of ship specifications for ship owners

MES TGE

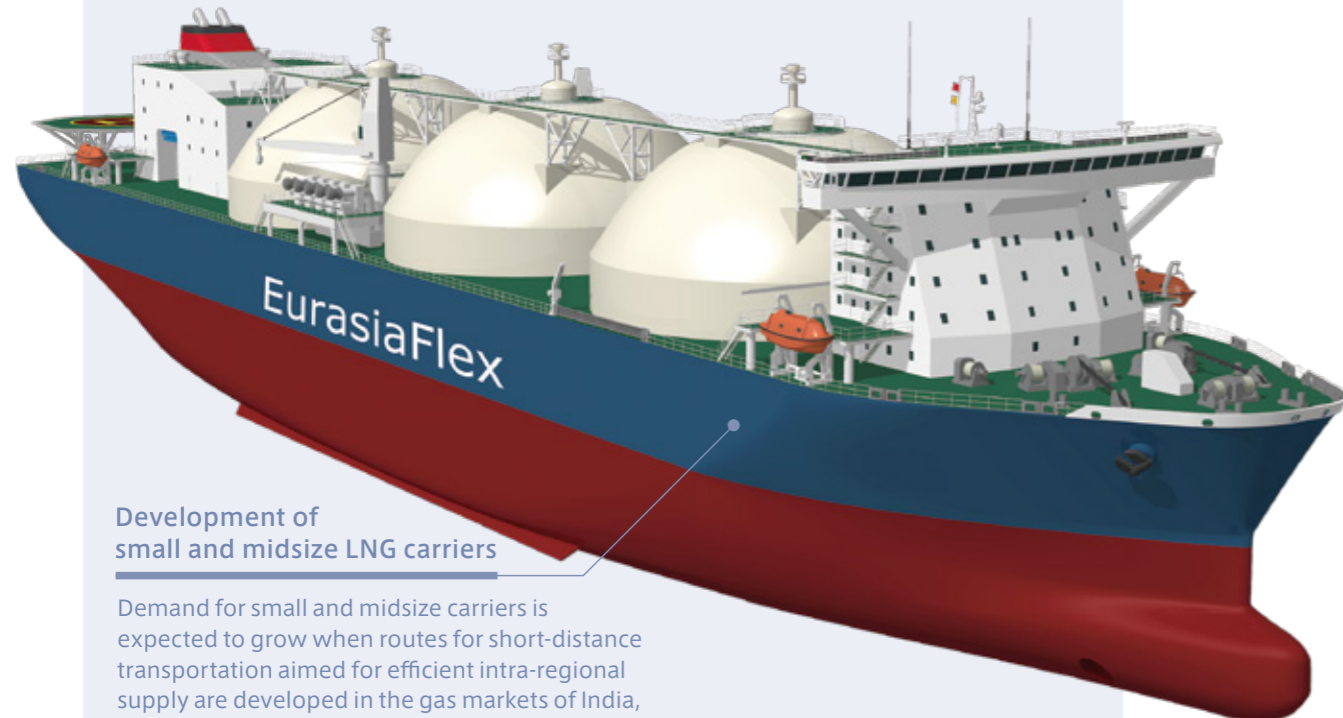
02



Engineering

Provision of engineering services for small LNG carriers, small LPG carriers, ethylene carriers, LNG bunker ships, and others

MES TGE

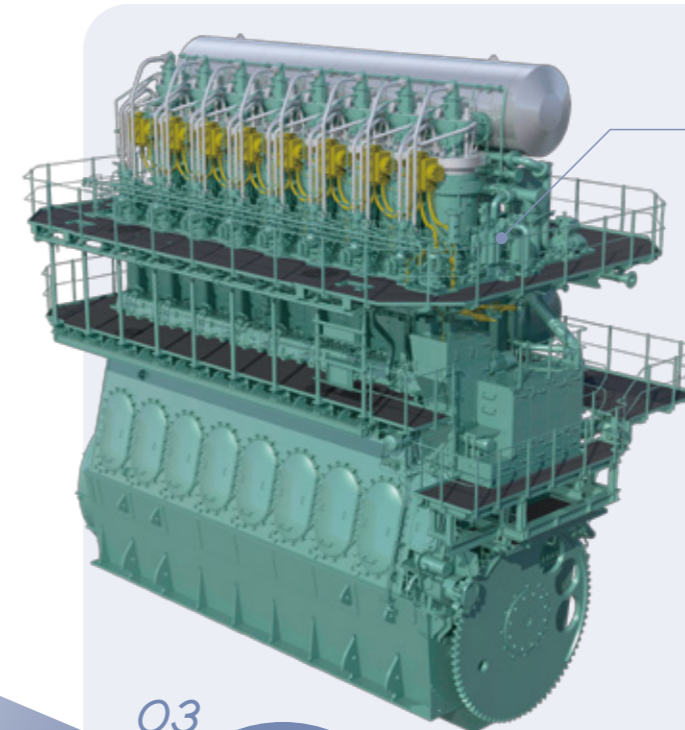


## Development of small and midsize LNG carriers

Demand for small and midsize carriers is expected to grow when routes for short-distance transportation aimed for efficient intra-regional supply are developed in the gas markets of India, China, and Southeast Asia in the future.

Natural gas is attracting attention as a clean energy with a small environmental footprint. Demand for gas carriers for importing and exporting natural gas is expected to grow with future increases in natural gas consumption. Working together with our subsidiary TGE Marine Gas Engineering GmbH (TGE), a German gas carrier engineering company, we are aiding the development of the small and midsize gas carrier market. We will enter the upstream processes of gas carrier construction by acquiring expertise from TGE, which

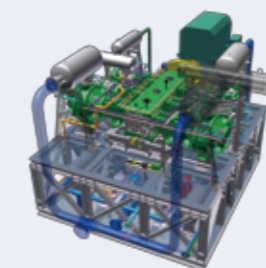
has worked on a large number of Engineering, Procurement, and Construction Supervision (EPCS) projects, including the development of small and midsize gas carriers, demand for which is expected to increase in the future. In addition, we will provide solutions that are not limited to shipbuilding through an integrated provision of technologies and products for handling gas fuels, including the electronically controlled gas injection diesel engine (ME-GI), which we developed jointly with MAN Diesel & Turbo SE, the licensor, and fuel gas supply systems (FGSS).



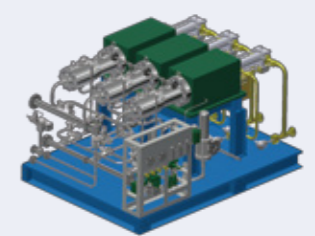
## Electronically controlled gas injection diesel engine (ME-GI)

An ME-GI is a dual fuel engine that can be fueled by both natural gas (LNG) and heavy oil, despite being a large, two-cycle low-speed diesel engine with high thermal efficiency.

## Fuel gas supply systems (FGSS) for LNG carriers

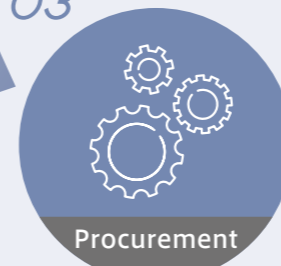


High-pressure compressor for FGSS



High-pressure pump for FGSS

03

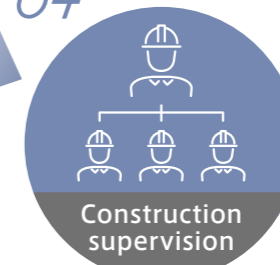


Procurement

Provision of gas engineering equipment

MES Kaji Technology

04



Construction supervision

MES

05



After-sales services

MES Technoservice Dept.

## After-sales services

We have established facilities for maintenance and repairs at key locations in Japan and overseas. At these facilities, we provide services for the overall lifecycle of marine diesel engines.

## e-GICSX

This equipment provides early detection of abnormalities by analyzing and monitoring big data, which include not only data from multiple main engine sensors but also navigation data, such as weather and sea conditions.