

February 28, 2022 IINO Kaiun Kaisha, Ltd.

## Delivery of "CALLUNA GAS" (VLGC) for Equinor ASA ~IINO's First LPG Dual-Fuel Vessel~

IINO Kaiun Kaisha, Ltd. (IINO) today took delivery of "CALLUNA GAS, " our first LPG dual-fuel very large gas carrier (VLGC, hereinafter called "the vessel") at Sakaide works of Kawasaki Heavy Industries Co., Ltd. The vessel will be engaged in a charter contract for Equinor ASA \*1 (hereinafter called "Equinor").

IINO's management philosophy is to care for the environment and in our mid-term management plan "Be Unique and Innovative.: The Next Stage Toward 2030," we have also set sustainability as one of the priority measures to be strengthened. As a concrete measure to achieve this goal, we are investing in next-generation fuels that reduce greenhouse gas emissions, and this will be our first vessel equipped with a dual-fuel LPG main engine.

The vessel is equipped with an LPG tank on the upper deck, and by loading LPG for fuel separately from the cargo, LPG can be used as fuel in addition to conventional fuel oil. By using LPG as fuel, it is possible to significantly reduce emissions of carbon dioxide (CO2), sulfur oxides (SOx), nitrogen oxides (NOx), and particulate matter (PM) compared to conventional fuel oil. In addition to complying with the SOx emission regulations<sup>\*2</sup> strengthened in all seas in January 2020, it also complies with Phase 3 of EEDI<sup>\*3</sup>, the CO2 emission regulations which will be applied for ships contracted for construction after 2022. In addition, the vessel is equipped with NOx emission control systems in the main engine and the power generation engine to comply with NOx emission regulations<sup>\*4</sup> and to reduce the environmental impact.

We will strengthen our relationship with Equinor by adding this new environmentally friendly vessel to our new time-charter contract with the company, and we will continue to strengthen our partnerships with important customers in Japan and overseas.

Based on medium- and long-term contracts with major shippers in Japan and overseas, IINO has been engaged in the transportation of LPG and other liquefied gases for more than half a century since 1963, and in October last year, we decided to re-enter the ammonia transportation business. We will contribute to the realization of a sustainable society by making use of our

abundant experience and technical capabilities cultivated through years of operation and management, striving for stable transportation and safe operation, and actively introducing technologies that reduce environmental impact.



<Overview of CALLUNA GAS> Cargo tank capacity : 84,174 m<sup>3</sup> Gross tonnage : 49,943 tons Length overall : 229.90 m Beam : 37.20 m Yard : Kawasaki Heavy Industries Co., Ltd. Registration : Panama



\*1Equinor ASA:

Equinor is the largest energy company in Scandinavia, headquartered in Stavanger, Norway. It is an integrated energy company with bases in more than 30 countries around the world, and is

actively engaged in the development of renewable energy sources such as offshore wind in addition to oil and gas.

#### \*2 SOx emission regulations:

As for emissions from ships, the IMO has been enforcing SOx emission limits of 0.1% or less sulfur in fuel in the Emission Control Area (ECA) in Europe and North America since January 2015. Starting in January 2020, all other ships sailing the world's oceans will be required to use fuel with a sulfur content of 0.5% or less, or to use alternative equipment that reduces SOx from exhaust gases to an equivalent level.

### \*3 EEDI (Energy Efficiency Design Index) regulations :

An international regulation that enforces compliance with regulations on the energy efficiency performance of new ships using the Energy Efficiency Design Index (EEDI), defined as the number of grams of CO2 emitted when carrying one ton of cargo for one mile. The EEDI regulation values will be strengthened in phases according to the date of the construction contract and the date of delivery. For some types of ships, such as very large gas carriers and LNG (liquefied natural gas) carriers, Phase 3 (30% reduction in CO2 emissions from the baseline value) will be required for ships contracted for construction after 2022.

#### \*4 NOx emission regulation :

Emissions from ships are regulated by the IMO, and the Tier III regulations, which have been in effect since 2016, specify a further 80% reduction from the primary limits, with the European and North American Emission Control Areas (ECAs) as the designated areas.

# Contact: LPG Carrier Section Gas Carrier Department Phone: +81-3-6273-3098 Inquiry Form: https://www.iino.co.jp/kaiun/english/contact/form.php

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