

April 6, 2022

Kawasaki Kisen Kaisha, Ltd.

“K” LINE’s Participation in Joint Study to Explore Ammonia as Marine Fuel in Singapore

Kawasaki Kisen Kaisha, Ltd. (hereinafter “K” LINE) is pleased to announce that, effective as from today, we have participate in the feasibility study jointly conducted since March 2021 by and among A.P. Moller - Maersk, Fleet Management Limited, Keppel Offshore & Marine, Maersk Mc-Kinney Moller Center for Zero Carbon Shipping, Sumitomo Corporation, and American Bureau of Shipping (*1), with the aim to establish a ship-to-ship based ammonia bunkering at the Port of Singapore, the largest bunkering port in the world (hereinafter “the Study”). Memorandum of Understanding was executed by and among the 8 companies, including Maritime & Port Authority of Singapore who has also decided to participate in the Study, at a ceremony held today during the occasion of Singapore Maritime Week 2022.

Emitting zero CO2 when combusted, ammonia has been considered as one of promising options among various alternative marine fuels to reduce greenhouse gas (GHG) emissions within the shipping industry, which is in line with the International Maritime Organization (IMO) strategy to achieve reduction of GHG emission by 50% in 2050 compared to the levels in 2008.

The Study aims to cover the entire end-to-end supply chain of ammonia bunkering, design of ammonia bunkering vessels, as well as related supply chain infrastructure. Relevant government agencies and experts in Singapore will be engaged in working towards the standardization of safe operation and regulations. Each partner will contribute to the Study within the scope set in line with their business domain.

We have long experience in handling of ammonia on board the vessel through technical management of ammonia carriers. In addition, we have know-how and expertise in the ship management service of bunkering vessel conducted within the regulatory framework and guidelines in Singapore which has been acquired through the management of Singapore’s first LNG bunkering vessel.

We believe that our engagement in the Study on the grounds of these expertise embodies the initiatives designated under our long-term environmental guideline - “K” LINE Environmental Vision 2050 (*2) - including “decarbonization of “K” LINE” and “promoting and supporting decarbonization of society”; hence we decided to participate in the Study. While watching trends in the development of international regulations concerning ammonia as marine fuel, we are planning to study ammonia-fueled vessels in more detail.

- ※1: American Bureau of Shipping participated in the Study in October 2021.
- ※2: “K” LINE’s environmental guideline. The target in 2050 was revised to be “net-zero” in November 2021.

<https://www.kline.co.jp/en/csr/environment/management.html>

[Partners]

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| - | A.P. Moller - Maersk A/S | (HQ: Denmark) |
| - | Fleet Management Limited | (HQ: Hong Kong) |
| - | Keppel Offshore & Marine | (HQ: Singapore) |
| - | Maersk Mc-Kinney Moller Center
for Zero Carbon Shipping | (HQ: Denmark) |
| - | Sumitomo Corporation | (HQ: Japan) |
| - | American Bureau of Shipping | (HQ: U.S.A.) |
| - | Maritime & Port Authority of Singapore | (Location: Singapore) |
| - | Kawasaki Kisen Kaisha, Ltd. | (HQ: Tokyo) |