March 28, 2023
Engineering Advancement Association of Japan
Kawasaki Kisen Kaisha, Ltd.
Nippon Gas Line Co., Ltd.
Ochanomizu University

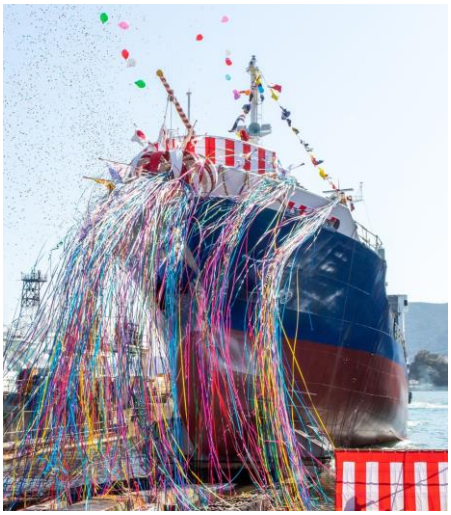
NEDO Demonstration Project: Demonstration Test Ship for Liquefied CO_2 Transportation has been Launched.

The launch ceremony for the liquefied CO2 transportation demonstration test ship was held today, 28th March 2023 at the Shimonoseki Shipyard of Mitsubishi Shipbuilding Corporation (Mitsubishi Shipbuilding").

At the launch ceremony, participants from related organizations including the Ministry of Economy, Trade and Industry, NEDO (the New Energy and Industrial Technology Development Organization) and the ship owner, Sanyu Kisen were on hand to offer their congratulation for the safe launch of the ship. The ceremonial rope was cut by Mrs. Noriko Ishizaki, the wife of the Nippon Gas Line Co., Ltd. (NGL, in charge of management and operation of the demonstration test ship) representative while all participants looked on.

This demonstration test ship hull will be equipped with the liquefied CO2 tank system researched and developed by the Engineering Advancement Association of Japan (ENAA). After completion, the demonstration test ship will be engaged in liquefied CO2 transportation for the CCUS R&D and Demonstration Related Project, the Large-scale CCUS Demonstration in Tomakomai, the Demonstration Project on CO2 Transportation, the R&D and Demonstration Project for the Marine Transportation of CO2 (hereinafter the "Demonstration Projects") which have been conducted by NEDO since June 2021.

<Launch Ceremony>



(Launching)

ENAA, Kawasaki Kisen Kaisha, Ltd. (“K” LINE), NGL, and Ochanomizu University will accelerate their research and development of the LCO2 transportation technology and contribute to the reduction of the cost of CCUS technology and realization of LCO2 safe large-scale long-distance transportation.

ENAA has been engaged in research and development towards the operation of a demonstration ship equipped with a liquefied carbon dioxide ship tank system, and it will continue to be responsible for the planning, analysis and supervision of the demonstration test.

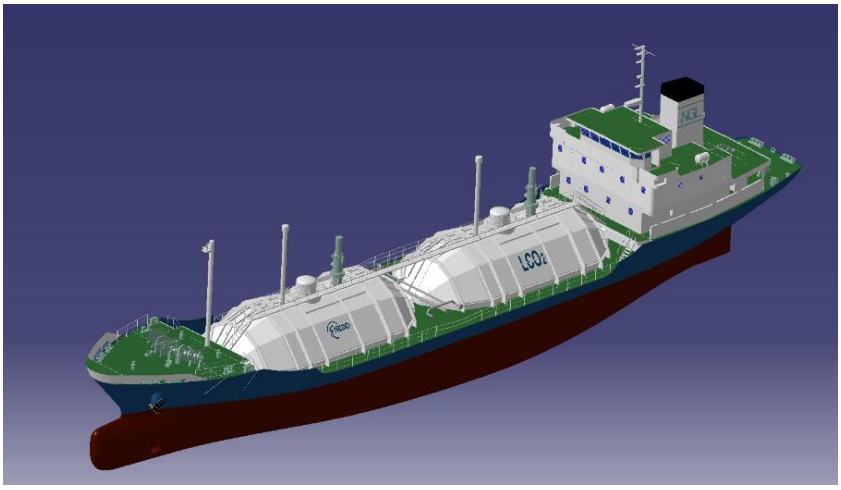
“K” LINE carried out a risk assessment of the demonstration test ship in the safety evaluation in 2022 and will contribute to the development of an operation manual for the demonstration vessels.

NGL is proceeding with the planning of the management and operation of the demonstration vessel. In addition, NGL is conducting a case study of its own LPG vessel in preparation for the measurement of data related to the temperature, pressure, flow, etc. of the CO2 on the demonstration vessel.

Ochanomizu University conducts fundamental research on the control of the state of carbon dioxide (phase changes) and provide the information necessary for safe transportation studies.

ENAA, “K” LINE, NGL, and Ochanomizu University will contribute to the realization of a carbon neutral society through this demonstration project.

Render of the LCO2 transportation demonstration test ship



General Specifications

Cargo tank capacity:	1,450 m^3
Overall length:	72.0 m
Breadth:	12.5 m
Draft:	4.55 m

<Related releases>

June 22, 2021: Participation in R&D and demonstration project for CO2 marine transportation
https://www.kline.co.jp/en/news/carbon-neutral/Liquefied_gas851156112799299267 9/main/0/link/210622EN.pdf

February 2, 2022: NEDO Demonstration Project: The World's First Demonstration Test Ship for Liquefied CO2 Transportation to be Built
https://www.kline.co.jp/en/news/carbon-neutral/Liquefied_gas-7680599579843084358/main/0/link/220202EN.pdf

October 7, 2022: NEDO Demonstration Project: Demonstration Test Ship for Liquefied CO2 Transportation has broken ground
https://www.kline.co.jp/en/news/carbon-neutral/carbon-neutral-239031784827641936/main/0/link/221007EN.pdf