PRESS RELEASE

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National Maritime Research Institute,
National Institute of Maritime, Port and Aviation Technology

Development of new ISO standards for evaluation of fuel consumption and propulsion performance in actual seas is launched

At an international meeting held in Baltimore, USA, from June 9 to 13, 2025, the Marine Environment Protection Subcommittee of the International Organization for Standardization (ISO/TC 8/SC 2) has agreed to begin developing new standards proposed by Japan. The new standards will define methods for the evaluation of fuel consumption and propulsion performance in actual seas.

This initiative aims to support the design and operation of ships that reduce greenhouse gas (GHG) emissions, using fair and transparent evaluation methods. It is expected to significantly contribute to reducing loads on the environment by the shipping sector.

Dr. Mariko Kuroda, National Maritime Research Institute (NMRI), National Institute of Maritime, Port and Aviation Technology, serves as the Project Leader of the working group on developing the new standards. Through this work, NMRI is going to contribute to reducing greenhouse gas emissions from the shipping sector by realizing the standards.

At an international meeting held in Baltimore, USA, from June 9 to 13, 2025, the Marine Environment Protection Subcommittee of the International Organization for Standardization (ISO/TC 8/SC 2, Chair: Dr. Chiori Takahashi, NMRI) has agreed to begin developing new standards proposed by Japan. The proposed methods aim to evaluate fuel consumption and propulsion performance of ships in actual seas, which is based on the output of the "OCTARVIA" project -Japan maritime cluster collaborative research- by 27 organizations.

A new working group titled "Evaluation of fuel consumption and propulsion performance in actual seas" has been established to develop ISO standards for evaluating the performance of ships in actual seas, served as Convenor by Mr. Yoshihiko Sugimoto (Mitsui O.S.K. Lines, Ltd.)

Japan presented that these standards could organize fair and transparent technologies enabling design and operation of ships that truly reduce GHG emissions, thereby significantly contribute to efficient operations in the maritime industry. This explanation was well understood by the participating countries. Consequently, ISO/TC 8/SC 2 has agreed to carry out the following work items under the newly established working group, aiming to develop standardized methods for calculating fuel consumption and ship performance in actual seas using monitoring data and design data, as well as standardized methods for calculating the life cycle fuel consumption of ships.

- ISO 25817-1 Ships and marine technology- Evaluation of fuel consumption and propulsion performance in actual seas- Part 1: Method for evaluating fuel consumption and propulsion performance (Project Leader: Mr. Tetsuro Ashida (Mitsui O.S.K. Lines, Ltd.))

- ISO 25817-2 Ships and marine technology- Evaluation of fuel consumption and propulsion performance in actual seas- Part 2: Index for life cycle fuel consumption (Project Leader: Dr. Mariko Kuroda (NMRI))

Dr. Mariko Kuroda, Head of the Performance of Ships in Actual Seas Research Group, Fluids Engineering & Hull Design Department, NMRI, serves as the Project Leader of the working group. Through this work, NMRI is going to contribute to reducing greenhouse gas emissions from the shipping sector by realizing the standards.

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