Outline of the Summary of the Study Group on the Formation of Methanol Bunkering Hubs

Ministry of Land, Infrastructure, Transport and Tourism

Introduction

The objective is to formulate strategies for methanol bunkering, which is one of the next-generation fuels, in order to ensure that Japan does not fall behind the global trend toward decarbonization in ports and maritime shipping.

Current status of methanol bunkering

- Trends in regulations on marine fuels
  International shipping: At the IMO, a convention to introduce new GHG reduction measures are expected to be adopted in 2025 and come into force in 2027.
  Domestic shipping: Aiming to reduce greenhouse gas emissions by 17% in FY2030 and by 36% in FY2040
- Trends in next-generation fuels
  Characteristics of methanol: Liquid at normal temperature and pressure; classified as hazardous material
- Construction status of methanol-fueled ships
  Increasing trend, with some projections suggesting it could account for 40% by 2050
- Implementation status of methanol bunkering
  Since 2021, pilot projects and infrastructure development have progressed worldwide
- Methanol procurement and supply system
  In Japan, all methanol is imported; global plans for green methanol production are underway

Government policy for the utilization of next-generation fuels

- Government strategy
  As part of the GX Promotion Strategy, goals of net-zero GHG emissions for maritime shipping with investments more than around ¥3 trillion over next 10 years
- Initiatives by the MLIT
  Requisite support programs will be introduced to spread the use of zero-emissions ships, and so on, in domestic and international shipping.
  Developing Carbon Neutral Port (CNP) and supporting low- and zero-carbon fuel bunkering in ports as part of the International Container Hubs (ICHs) Policy
- Initiatives by the METI
  Commencing the production of synthetic fuels (e-methanol) by 2025 and supporting facility investments and establishing business models for commercialization by the early 2030s

Flow of methanol bunkering implementation

- Standards for harbor master's permission procedures and safety measures
  Clearly outline specific considerations for harbor master's permission procedures; bunkering using existing chemical tankers can be approved based on the harbor master's expertise, without the need for individual safety assessments by third parties or other entities related to the operator
- Equipment and seafarers' requirements for methanol-fueled ships and bunkering ships
  Comply with "Interim Guidelines for the Safety of Ships Using Methyl/Ethyl Alcohol as Fuel (MSC.1/Circ.1621)" (methanol-fueled ships); Comply with construction and equipment requirements of chemical tankers (methanol bunkering ships); Seafarers on methanol-fueled ships shall hold a certificate in accordance with Japanese Law, which complies with regulation V/3 of the STCW Convention. Also, seafarers on methanol bunkering ships shall hold a certificate in accordance with regulation V/1-1 of the STCW Convention.
- Specific operational procedures, etc.
  Conduct a methanol bunkering simulation for large container ships at the Port of Yokohama and identify detailed challenges and issues for consideration toward actual operations

Toward the formation of methanol bunkering hubs

- Considerations for hub formation
  Scenario development using Tokyo Bay as a model case, including evaluation of necessary facilities and equipment
- Establishment of an information aggregation and sharing system
- Collaboration with international partners
- Future challenges
  Examination of safety measures for nighttime operations, feasibility studies, and education, training, and securing qualified personnel

Roadmap for methanol bunkering implementation

- Short-term initiatives
  External communication and outreach, accumulating experience through bunkering using existing facilities, and stimulating demand
- Medium- to long-term initiatives
  Securing dedicated bunkering vessels in line with increasing demand and investing in facilities to strengthen the supply system for green methanol

Conclusion

The groundwork for initiating methanol bunkering in Japan has been completed, and accelerated efforts through public-private partnerships are anticipated.