

### **5<sup>th</sup> Technical Committee Meeting Summary**

The 5th Technical Committee Meeting commenced at 3:00 PM, chaired by Mr. Michael Phoon, Executive Director of the SSA, in place of Ms. Cristina, who was unable to attend due to an urgent matter.

Michael provided context for the strategy meeting, outlining four critical drivers: supply chain disruptions, the demand for a skilled workforce, ESG and sustainability focus, and cybersecurity and risk management. He highlighted the engagement process between the secretariat team and consultants, which included a pre-workshop survey, operational committee workshops, and interviews with industry leaders, all aimed at shaping the SSA Vision to position the association as an international shipping leader.

Michael then detailed the top six themes voted by the EXCO and Council:

- Industry leadership
- Digital maturity
- Government program adoption
- Collaborative platforms
- Sustainability – alternative fuels and decarbonisation
- Human capital – workforce initiatives, upskilling, and talent attraction

Mr. Paolo Tonon of Berge Bulk shared insights on the company's decarbonisation efforts, structured around four pillars: efficiency, technology adoption, clean fuels, and carbon capture. He emphasized optimizing current assets and highlighted the adoption of energy-efficient technologies such as shaft generators and wind propulsion systems. Berge Bulk has explored biofuels and is investigating the potential of ammonia, methanol, and LNG as future fuel sources. Carbon capture, the fourth pillar, is set to see further development with Berge Bulk planning to install its first carbon capture system by early 2025.

Paolo also addressed the importance of wind propulsion technology, notably the use of rigid wings on the Berge Olympus. Despite challenges with crew training and integrating new technologies, collaboration with shipyards, equipment manufacturers, and classification societies has proven vital in advancing these innovations. He concluded by encouraging members to review Berge Bulk's ESG report for a deeper understanding of their sustainability strategy.

Mr. Girish Sreeraman from DNV discussed onboard carbon capture and the challenges of achieving shipping decarbonisation. He referenced the IMO MEPC 80 meeting's goal of carbon neutrality by 2050, noting that current reductions in emissions fall short of the 2030 targets. Girish emphasized the potential of energy efficiency improvements and wind-assisted propulsion, similar to those adopted by Berge Bulk. Onboard carbon capture and storage (CCS), while promising, faces hurdles such as underdeveloped value chains and infrastructural limitations. He also highlighted the ongoing development of reception facilities, critical to the feasibility of CCS, and the role regions like Rotterdam and Singapore may play in the future.

Girish reviewed various CCS technologies and noted that while mature in other industries, they are still in early maritime adoption. Economic factors, such as fuel penalties and the cost of retrofitting vessels, make CCS a potentially viable option for shipowners. However, regulatory and infrastructural developments are needed for broad adoption.

Mr. Jang Yong Yoon from Value Maritime presented the company's second-generation scrubber technology, which integrates carbon capture modules. Their technology has been successfully demonstrated in ship-to-ship CO<sub>2</sub> transfers at the Port of Rotterdam. The scrubber system captures 10-40% of carbon and is designed to work efficiently with LNG or methanol-fueled vessels, offering flexibility for permanent storage or use in green projects like Northern Lights. Jang Yong highlighted the system's cost-efficiency, requiring minimal energy increases, though retrofitting existing systems is not currently feasible.

Xi An from North Standard provided insights into the FuelEU Maritime regime, emphasizing its differences from the EU Emissions Trading System (EU-ETS). Unlike EU-ETS, FuelEU Maritime may shift compliance responsibility to managers, creating a need for clear charter party agreements. Penalties under FuelEU Maritime include vessel detention or expulsion from EU ports, with compliance mechanisms involving operational modifications, biofuel usage, or flexibility mechanisms like pooling allowances.

The meeting closed with a note on upcoming events, including the Pre-MEPC 82 Industry Briefing Session scheduled for September 11, 2024, and the 6th Technical Committee Meeting set for November 22, 2024. With no further business, the meeting concluded at 4:50 PM.

Singapore, 4<sup>th</sup> September 2024

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### **Singapore Shipping Association**

The Association was first formed as Singapore National Shipping Association (SNSA) on 29 January 1985 to represent its Members, who are basically shipowners and operators, shipmanagers, ship agents and shipbrokers. The Association will take the view of the shipping industry as a whole. It will play its due role to promote the interests of shipping in Singapore, ASEAN, Asia and the world. The Association will cooperate with governmental and non-governmental organisations to promote freedom of the sea, safety at sea and to protect the marine environment.