

6th Technical Committee Meeting Summary

The 6th Technical Committee Meeting commenced at 3:15 PM, with the Chairman, Ms. Cristina, addressing members remotely as she was unwell. This was followed by the formal adoption of the 5th Technical Committee Meeting minutes, held on 4th September 2024 with no further amendments.

The meeting proceeded with representatives from the Republic of Singapore Navy (RSN) and the Information Fusion Centre (IFC) delivering comprehensive presentation on Maritime Security Unmanned Surface Vessels (USVs). Speakers included MAJ Jacky Ng, LTC Tan Kai Ling, and LTC Daniel Ng. The presentation explored the role of USVs in enhancing maritime security within the Singapore Straits, emphasising their advanced capabilities, safety features, and operational considerations.

The presentation on Maritime Security USVs highlighted their advanced capabilities, including autonomous navigation systems and calibrated threat response mechanisms. The crafts are equipped with robust safety redundancies and underwent rigorous testing and simulations prior to deployment at sea. Deployment strategies emphasize close collaboration with the Port Operations Control Centre (POCC) to effectively deter and address maritime threats.

Members raised various questions related to operational aspects such as visibility, threat detection, communication protocols, hull materials, and challenges in adverse conditions like haze. The presenters provided detailed responses, affirming the USVs' robust safety features and operational procedures.

The USVs increase the RSN's capacity to deploy warships for other more complex missions, and at further ranges from Singapore. Additionally, plans to engage stakeholders, including the Maritime and Port Authority of Singapore (MPA), aim to enhance seafarer awareness and facilitate the seamless integration of USVs into maritime operations.

The meeting then moved on to a presentation by Mr Rahul Ramachandran, Head of Lubrication Services (APAC & Middle East) of Viswa Group, on Viswa Group's eco-friendly bunker sample collection pouches. His presentation introduced the development of fuel sample pouches as an environmentally friendly alternative to High-Density Polyethylene (HDPE) bottles. Highlighted that approximately 500,000 fuel sample bottles are produced annually, with substantial numbers used in Singapore, he detailed the environmental concerns of single-use plastics, including low recycling rates and high plastic waste. He outlined the lifecycle of HDPE bottles, from production to disposal, emphasising the need for sustainable alternatives.

Viswa Group explored various options, such as Post-Consumer Recycled (PCR) Resin bottles, biodegradable materials, and biodegradable alternatives. However, these were deemed unsuitable due to their cost, material degradation, and uncertainty about biodegradation in marine environments. Flexible pouches emerged as the most viable solution, offering reduced plastic waste, improved logistics processes, and enhanced sustainability. Rahul detailed their development, including material selection, nozzle design,

and rigorous testing to ensure suitability for fuel storage. Logistical adjustments, such as new nozzles and packaging solutions, would support their adoption.

This initiative received general support from the committee members, though concerns were raised regarding the product's compliance with SS648 standards. To address these concerns, Rahul assured that Viswa Group is in touch with MPA. The Chairman reiterated about the environmental benefits while emphasising the need to adhere to standards. Ms Haniza Mustaffa, Technical Director of SSA, affirmed SSA's commitment to working with Viswa Group and the Standards Council of Singapore to ensure alignment with relevant standards if the initiative is approved.

The Chairman then introduced Mr Abhijit Chatterjee, Managing Director and Tech Lead of Canada-based Qualiteas, to present on Artificial Intelligence (AI) technology applications for corrosion inspection in the maritime industry. Abhijit highlighted the significant economic and environmental impacts of corrosion and the limitations of traditional inspection methods, including their inefficiency and human errors. He showcased Qualiteas' AI-powered solution, which detects and quantifies corrosion, categorized paint failures, and automates report generation using generative AI. The software also integrates with existing platforms via APIs and supports projects like AI-driven biofouling analysis to reduce greenhouse gas emissions.

Abhijit emphasised the software's benefits, including increased inspection efficiency, improved accuracy, and better decision-making through consistent results. He proposed a low-cost trial project to validate the technology using archived image data, generating detailed reports for classification societies. During discussions, committee members inquired about mapping corrosion findings, analysing video data, measuring material thickness, and collaborating with classification societies. Abhijit addressed these points, noting the development of 3-Dimensional mapping capabilities and the importance of partnerships for validation and responsible AI deployment.

The committee expressed general support for this project, with members encouraged to contact the Secretariat for more details. The Chairman acknowledged the transformative potential of AI-powered corrosion inspection technology for improving asset management and sustainability in the maritime sector, encouraging continued collaboration with Qualiteas.

The meeting then moved on to the last presentation by Mr Marinos Kokkinis, Managing Director of OneCare Group, on the well-being of seafarers, highlighting its importance in maintaining a healthy maritime workforce. Marinos participated from Cyprus using holographic technology and showcasing its potential for enhancing communication in the industry. He provided an overview of OneCare's evolution, emphasising its holistic approach to seafarer health, which integrates predictive analytics, comprehensive care programs, and personalized interventions. Key statistics demonstrated OneCare's impact, including the number of vessels supports and cases managed, with a focus on preventive healthcare through risk assessments and tailored health plans.

Marinos detailed OneCare's core solutions, including the Wellbeing Companion platform for medical access and mental health support, the OneLearn e-learning platform, 24/7 telemedicine services, and extensive mental health resources. He emphasized proactive mental health care, addressing issues like family concerns and contract stress, and highlighted cultural sensitivity as essential to effective support. The discussion touched on mental health prevalence, crew acceptance of these services, integration with shipboard operations, and

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addressing root causes such as contract overruns and financial stress, with Marinos underscoring the importance of tailored interventions.

The Chairman thanked Marinos for his insightful presentation and commended OneCare's innovative and comprehensive approach to improving seafarer well-being. She encouraged continued exploration of these solutions to enhance the health, resilience, and overall welfare of maritime professionals.

Members were informed of the date of the 7th Technical Committee Meeting before proceeding with the final agenda item. Haniza updated the committee on the outcomes from the 82nd session of the International Maritime Organisation (IMO)'s Marine Environment Protection Committee (MEPC) held in London from 30 September 2024 to 4 October 2024. Key decisions included the establishment of Emission Control Areas (ECAs) in the Canadian Arctic and Norwegian Sea, requiring compliance with NOx Tier 3 standards from 2025 and 2026, respectively. The MEPC also designated the Nusa Penida and Gili Matra Islands as Particularly Sensitive Sea Areas (PSSAs) and agreed to develop a net-zero framework, including a marine fuel standard and economic incentives. Additionally, challenges related to the Carbon Intensity Indicator (CII), ballast water management systems, and alignment between the Hong Kong and Basel Conventions were discussed, with work plans and clarifications outlined as next steps.

The Chairman addressed a query regarding the European Union Emission Trading Scheme (EU ETS) applicability to offshore ship-to-ship (STS) operations without a designated port of call. The European Commission clarified that such operations fall within the scope of EU ETS and referenced guidance treating offshore facilities with LOCODES as ports under the Monitoring, Reporting, and Verification (MRV) system. The Chairman emphasized the need for continued dialogue with the Commission and urged members to share case studies for further clarity.

The Chairman concluded by thanking participants and encouraging ongoing engagement to address regulatory changes. Members were advised to contact the Secretariat for additional matters via email at anis@ssa.org.sg.

Singapore, 22nd November 2024

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