

**Seminar on World Maritime Day 2024: "Navigating the Future - Safety First"**

The Institution of Engineers (India), Punjab and Chandigarh State Centre (IEI P&CSC), in collaboration with the Chandigarh Chapters of the Institute of Marine Engineers India – IME(I) and the Company of Master Mariners of India (CMMI), along with the Merchant Navy Officers' Association (MNOA), organised a seminar to celebrate World Maritime Day 2024. The seminar, themed "*Navigating the Future - Safety First*," aligned with the International Maritime Organization (IMO)'s focus for World Maritime Day 2024, aiming to address innovations and solutions for achieving IMO's sustainability goals for the maritime industry.

The seminar commenced with a tribute to Sir Mokshagundam Visvesvaraya, as Chief Guest **Shri. Ramkishan Bhaker**, Chief Engineer, along with other dignitaries, garlanded his bust. **Dr. Labh Singh Bhari**, Chairman of IEI P&CSC, welcomed the attendees, followed by addresses from key speakers, including the Chairman of the CMMI-Chandigarh Chapter, who shared their thoughts on the occasion.

Shri Bhaker delivered an insightful speech, followed by **Prof. Dr. S.K. Sharma**, Professor at Panjab University, Chandigarh, who highlighted the environmental impacts of various fuels on greenhouse gas emissions. He emphasised the importance of life cycle assessments in evaluating fuels from production to disposal. Dr. Sharma also explored innovations in *Carbon Capture, Utilization, and Storage (CCUS)*, the development of small modular nuclear reactors, and advancements in energy efficiency and hybrid propulsion systems. He noted the potential of the North-South Corridor, connecting Iran to Russia, in reducing shipping distances, costs, and emissions.

**Capt. Dr. Nitin Agarwala**, Senior Fellow at the Centre for Joint Warfare Studies, Indian Navy, spoke about the IMO's efforts to meet the carbon emission targets set by the Paris Agreement. While Liquefied Natural Gas (LNG) has shown limitations as a decarbonising fuel, hydrogen is emerging as a promising net-zero emission fuel for the future. He elaborated on ongoing research to make hydrogen production safer, more reliable, and cost-effective for ships.

**Sardar Harjinder Singh Cheema**, a renowned entrepreneur and innovator, presented his research on hydrogen fuel cells, explaining how he successfully produced hydrogen in a cost-effective and safe manner. He described the use of doped graphite plates (a more affordable alternative to rare earth elements like palladium) in hydrogen cells and discussed his plans to commercialize these technologies for land-based engines and boilers.

**Capt. L.C. Dharmani**, former Principal and Senior Faculty Member of SHAPE-ARI, raised safety concerns related to the use of alternative fuels, particularly regarding handling, storage, and fire risks. He emphasised the critical need for training not only ship staff but also stakeholders involved in the shipping industry to ensure safe operations.

**Shri. Ashok Gupta**, former Head of the Marine Safety Inspectorate (MSI) office in Delhi, spoke about the challenges posed by Maritime Autonomous Surface Ships (MASS), including issues

related to safety, security, and accountability in case of accidents or pollution. He highlighted the implications for insurance companies, classification societies, and port state controls.

The event also included an engaging panel discussion led by **Capt. Jagdeep Kahlon**, Managing Director of Ocean One Ship Management and Chairman of CMMI-Chandigarh Chapter, along with his team.

The seminar concluded with a vote of thanks by **Shri. Swinder Singh**, FIE, Honorary Secretary of IEI P&CSC, and the proceedings were expertly moderated by **Shri. Rakesh Mittal**, President of MNOA. **Shri. Arun Kr. Agarwal**, Chairman of IMEI-Chandigarh Chapter, provided a closing summary.

The seminar was attended by approximately 80 participants from various sectors of the maritime industry, including a significant number of sailing personnel. Certificates of participation were jointly issued by the Chandigarh Chapters of IME(I) and CMMI to all attendees. The event concluded with the singing of the National Anthem.

In summary, the seminar on "*Navigating the Future - Safety First*" was a highly successful and thought-provoking event. It brought together experts from diverse fields to discuss innovative solutions for achieving net-zero emissions in the maritime industry. The collaboration between multiple organisations and the active engagement of participants contributed to the success of the event, offering valuable insights for a sustainable future in maritime operations.

*Glimpses of the Seminar*





