



## MEDIA RELEASE

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### **TWO NEW PARTNERS AND A NAME REVEALED FOR THE AMMONIA-FUELLED TANKER JOINT DEVELOPMENT PROJECT**

Ammonia-fuelled tanker Joint Development Project (JDP) partners - MISC Berhad (MISC), Lloyd's Register (LR), Samsung Heavy Industries (SHI) and MAN Energy Solutions (MAN) announced the entry of two new partners – the Maritime and Port Authority of Singapore (MPA) and Yara International ASA (Yara) at a recent webinar focused on Ammonia as a Shipping Fuel which was organized by the Getting to Zero Coalition's Fuels & Technologies workstream. The JDP partners also went on to announce a name for the expanded coalition - The Castor Initiative.

Leading fertilizer company- Yara will work alongside MISC, LR, SHI and MAN to develop ammonia propulsion ships to support the maritime industry's drive to decarbonisation.

In addition, the consortium will be able to tap onto MPA's experience as a bunkering hub and flag state to gather insights on safety issues and ammonia bunkering procedures, and gain access to research capabilities in Singapore.

The addition of MPA and Yara means that the alliance which was first unveiled in January 2020, now has a complete representation from all areas of the maritime ecosystem. The experience and expertise of each partner will be central to the success of the initiative, from conception to project realisation.

This announcement follows a key project milestone in September 2020 when LR awarded Approval in Principle to SHI for its ammonia-fuelled tanker design with the aim of commercialising these developments by 2024.

To meet the International Maritime Organization's (IMO) 2050 ambitions on halving greenhouse gas (GHG) emissions from 2008 levels, zero-carbon vessels need to enter the world fleet by 2030. The JDP was motivated by the partners' shared belief that the maritime industry needs leadership and greater collaboration if shipping is to meet the IMO's GHG ambitions.

While ammonia is one of the fuels being considered by maritime stakeholders, the partners also recognise that the shipping industry will need to explore multiple decarbonisation pathways and hope their collaboration will spur others in the maritime industry to join forces on addressing this global challenge.



“Supporting the enabling role of ammonia in the energy transition, we recognize the need for value chain collaboration to make zero emission shipping by using ammonia as a fuel a reality,” said Magnus Ankarstrand, EVP Clean Ammonia, from Yara.

MPA Chief Executive, Ms Quah Ley Hoon, said, “Decarbonisation remains a key priority for the maritime sector, not just in Singapore but globally. As a transshipment and bunkering hub, we are committed to meet IMO2030/2050 decarbonisation goals. We are also looking forward to collaborating with like-minded industry partners to support the development and trials of alternative future marine fuels such as ammonia.”

MISC President and Group CEO, Yee Yang Chien said, “We are honoured to have MPA and Yara join us as partners on this journey to develop deep sea zero carbon vessels. This JDP has come a long way since our inception in January 2020 and it now stands complete as Castor Initiative; with absolute collaboration and commitment from principal key stakeholders in the shipping industry. We are certainly excited with the expansion of the alliance and look forward to unlocking new possibilities to accomplish our GHG aspirations ahead of 2050 together with MPA and Yara, both of which are global leaders in their respective areas of authority and expertise.”

LR Group CEO Nick Brown said, “Making deep-sea zero-carbon vessels a reality within this decade calls for leadership commitment and collaborative action. Lloyd’s Register welcomes the expertise that the MPA and Yara will bring to the ammonia-fuelled tanker joint development project (JDP). The calibre of the partners involved in this JDP as well as the milestones agreed are testament to the maritime industry’s determination to deliver on the IMO’s 2050 GHG ambitions.”

SHI President and CEO Jin Taek Jung said, “In the course of energy transition, joining this JDP towards developing zero-carbon vessels coincides with our endeavor to find sustainable growth momentum and fulfill our social responsibility for clean environment. The long-term journey to realize zero-carbon and ultimately zero-emission vessels requires extensive cooperation of the stakeholders in the maritime industry. In light of this, participation of the Maritime and Port Authority of Singapore and Yara raises our expectations for the outcome of this JDP by adding expertise and fostering an ecosystem of the JDP partners playing a key role in the fields encompassing ammonia supply to operating vessels.”

Brian Østergaard Sørensen – Vice President and Head of R&D, Two-Stroke Business – at MAN Energy Solutions said, “We are looking forward to working with such distinguished industry partners on this joint development project that is so closely aligned with our own strategy to develop sustainable technologies. In this respect, ammonia is a very interesting candidate as a zero-carbon fuel. The right engine technology is key to decarbonisation and MAN Energy Solutions already has a convincing track-record in developing engines that run on alternative fuels. We look forward to adding our expertise to this study.”

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## Notes to editors

### **About Lloyd's Register (LR). For a safer world.**

Lloyd's Register is a global professional services organisation specialising in engineering and technology solutions. Our experts advise and support clients to improve the safety and performance of complex projects, supply chains and critical infrastructure. We help to keep the world moving safely, efficiently and sustainably.

Lloyd's Register is the world's first marine classification society, created more than 260 years ago to improve the safety of ships. Now our technical expertise is offered in more than 70 countries, by more than 6,000 employees, across multiple sectors. The surplus we generate funds our shareholder, the Lloyd's Register Foundation, a global charity whose mission is to enhance the safety of life and property.

Our independence means we provide reliable, impartial and informed advice.

All of this helps us stand by the purpose that drives us every single day; working together for a safer world.

### **About MISC Berhad**

MISC Berhad (MISC), was incorporated in 1968 and is a world leading provider of international energy related maritime solutions and services. The principal businesses of the Group comprise energy shipping and its related activities, owning and operating offshore floating solutions, marine repair and conversion, engineering and construction works, integrated marine services, port and terminal services as well as maritime education and training.

As at 31 December 2020, MISC Group's fleet consists of more than 100 owned and in-chartered vessels comprising of Liquefied Natural Gas (LNG), Petroleum and Product vessels, Very Large Ethane Carriers (VLECs), 14 Floating Production Systems (FPS) as well as two (2) LNG Floating Storage Units (FSU). The fleet has a combined deadweight tonnage (dwt) capacity of more than 11 million tonnes.

We take pride in our asset and service reliability, commitment to uphold the highest standards of Health, Safety and Environment (HSE), fostering a culture of excellence amongst our employees, operating responsibly and caring for the environment as well as making a positive difference to the communities in which we operate.

MISC Group is a proud member of 'Getting to Zero Coalition' committed to developing zero-emission vessels by 2030. The Coalition is a powerful alliance of more than 70 public and private organizations that will lead the push for international shipping's decarbonisation.

Since 2014, we have been a proud constituent of the FTSE4Good Bursa Malaysia Index, a testament to our sustainability performance and strong Environmental, Social and Governance (ESG) practices.

### **About SHI**

SHI has successfully completed many of the world's first and largest shipbuilding and offshore EPC projects, with the sole aim of establishing global leadership in each market segment.

Since its inception in 1974, SHI secured orders for 1,250 ships and offshore facilities and successfully delivered 1,137 units as of January 2020. Most notably, it has achieved unbeatable leadership in the high-tech shipbuilding sector by maintaining the world's no.1 share in the drillship, LNG carrier, Shuttle tanker, Arctic vessel and FPSO markets.



SHI is trying to create best products and technology services based on excellent human resources and technology. Moreover, with passion and challenges, SHI's engineers are committed to the development of eco-friendly technologies for green future ships and are continuing their research on the development of Zero Emission Ships for the next generation vessel.

#### **About MAN Energy Solutions**

MAN Energy Solutions enables its customers to achieve sustainable value creation in the transition towards a carbon neutral future. Addressing tomorrow's challenges within the marine, energy and industrial sectors, we improve efficiency and performance at a systemic level. Leading the way in advanced engineering for more than 250 years, we provide a unique portfolio of technologies. Headquartered in Germany, MAN Energy Solutions employs some 14,000 people at over 120 sites globally. Our after-sales brand, MAN PrimeServ, offers a vast network of service centres to our customers all over the world.

#### **About MPA**

The Maritime and Port Authority of Singapore (MPA) was established on 2 February 1996, with the mission to develop Singapore as a premier global hub port and international maritime centre (IMC), and to advance and safeguard Singapore's strategic maritime interests. MPA is the driving force behind Singapore's port and maritime development, taking on the roles of Port Authority, Port Regulator, Port Planner, IMC Champion, and National Maritime Representative. MPA partners the industry and other agencies to enhance safety, security and environmental protection in our port waters, facilitate port operations and growth, expand the cluster of maritime ancillary services, and promote maritime R&D and manpower development.

#### **About Yara International ASA**

Yara International ASA is a global company operating in 160 countries, the world's leading fertilizer company and a provider of environmental solutions. To fulfill our mission of responsibly feeding the world and protecting the planet with the ambition to reach climate neutrality by 2050 we established the global segment Yara Clean Ammonia (YCA). The objective is to commercialize, develop and capture growth opportunities within clean hydrogen and ammonia production, transport, market and distribution. The unit includes activities related to Upstream Projects & Technology, Commercial development of New Markets, Ammonia, Trade & Shipping (ATS), Product & Portfolio Management, and central expert and support functions. To fully develop the business potential, the segment will also explore partnerships and collaboration with external parties, while ensuring the important role that ammonia plays in Yara's integrated business model.

#### **About the Getting to Zero Coalition**

The Getting to Zero Coalition is an industry-led coalition of more than 140 companies within the maritime, energy, infrastructure and finance sectors, supported by key governments and IGOs. The Coalition is committed to having commercially viable zero emission vessels operating along deep sea trade routes by 2030, supported by the necessary infrastructure for scalable zero-carbon energy sources including production, distribution, storage and bunkering. The Getting to Zero Coalition is a partnership between the Global Maritime Forum, the Friends of Ocean Action, and the World Economic Forum.



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