HANSA DAILY
SMM Newswire Thursday | 5-9-2024

HANSA reception bursting with guests

© Jonas Walzberg

On Tuesday, the International Maritime Museum in Hamburg once again became the center of the maritime world for a whole night. After a successful first day of SMM, more than 400 exhibitors from across both the globe and the entire industry met at the museum in the historic Speicherstadt. Representatives from various shipping companies, suppliers, shipyards and the navy joined HANSA for a well-deserved get-together in a relaxed atmosphere.

»We are very proud to have so many guests here,« said Peter Tamm, Managing Director of TAMM Media, in his opening speech. »Thank you very much for coming tonight. Let's have a great evening and talk the whole night about

business.« He was joined by Krischan Förster, Editor-in-Chief of *HANSA* International Maritime Journal, and Florian Visser, Commercial Publishing Director at Schiffahrts-Verlag »Hansa«, who both extended a heartfelt welcome to all guests and thanked everyone involved in this year's exhibition. »To a wonderful evening and a successful fair«, Visser concluded before (re-)opening the bar. What followed was a night of friends meeting friends and plenty of chances for business talk between historic ship models and exhibits before heading right back into the hustle and bustle of SMM 2024 the next day. ■

© Jonas Walzberg

ACCELLERON

Somas appoints Accelleron as global provider

Somas Instrument AB, a leading valve manufacturer, has appointed Accelleron as its authorized global service provider for marine customers. This partnership allows Accelleron's service engineers, trained by Somas, to service Somas valves used in marine exhaust systems, such as selective catalytic reduction (SCR) and exhaust gas recirculation (EGR). Through Accelleron's global network of over 100 locations, Somas customers will have a high level of support.

Somas, known for its butterfly valves, entered the marine industry in 2017. The partnership with Accelleron ensures Somas valves meet stringent fuel efficiency and environmental standards. It also allows Accelleron to expand its services to include additional engine components, enhancing its support for marine sustainability efforts.

»Our agreement with Accelleron will ensure that our marine industrial customers have access to high-quality aftercare that supports the enduring performance of Somas valves,« said Somas CEO Peter Hägg. »With Accelleron's global network and several decades of service experience, we are confident that the service needs of our marine customers are in good hands.«

Accelleron's Service Division President, Roland Schwarz, emphasized the importance of this collaboration in improving maintenance efficiency and operational availability for marine engines. »Somas valves play an important role in keeping marine engines operating at peak efficiency and compliant with environmental regulations, as do our Accelleron turbochargers,« he said. »This is a time when global voyage efficiency, reliability and uptime are all equally paramount for shipping companies, ship managers and charterers. We are excited about being able to provide valve and turbocharging service from one source, to minimize maintenance time and increase operational availability. We look forward to building on the technical competency of our service engineers and expanding our scope to deliver even greater value as a trusted service partner.«

Hall A3 | booth 210

WILHELMSEN

New brand »Navadan by Wilhelmsen«

Wilhelmsen Ships Service, a subsidiary of the global maritime group, has successfully integrated Stromme, a provider of cargo hold cleaning solutions, and tank and cargo hold cleaning specialists Navadan into its portfolio. The strategic acquisitions of both companies was fully in line with Wilhelmsen's strategy to expand, grow and further develop within these segments.

»Our costumers face tough challenges in maintaining complaint and efficient operations,« President Kjell André Engen said. »Navadan by Wilhelmsen illustrates our commitment to assist them in achieving the highest standards of compliance and safety, all while minimising downtime and operational cost.«

The integration of Stromme and Navadan into Wilhelmsen has resulted in a new expert advisory service in combination with a specialised product portfolio under the brand »Navadan by Wilhelmsen.« This combined portfolio represents the best offerings from all three companies, Wilhelmsen stated. The new portfolio is designed to deliver »unparalleled benefits« to costumers, including a wide range of high-quality products, technical expertise, global availability and more.

Hall B6 | booth 331

BERG PROPULSION

Substantial gains

In an innovative retrofit project requested by charterer CMA CGM, Berg Propulsions worked with Rambow on a comprehensive package of efficiency optimization measures onboard »Henneke Rambow« to match current and anticipated requirements. Recommendations followed a performance review by Berg, analysis of the vessel's installed propeller and data-based scrutiny of its propulsion system. Upon completion, owner Reederei Rambow reported significant gains in the ship's operational efficiency.

Hall A4 | booth 316

Civilian and military shipping benefit from each other

Security and defence have become an even greater focus of the public debate in recent years – not least in the maritime industry. The background to this is the growing number of conflicts, which often have an impact on important shipping routes and free maritime trade: The Black Sea is affected by Russia's war against Ukraine; attacks by Yemen's Houthi rebels in the Red Sea threaten merchant shipping; and, finally, growing tensions between China and Taiwan could turn the South China Sea into a risk zone.

It is obvious that these complex situations will be prominent topics at the international conference on maritime security and defence (MS&D) at SMM in Hamburg in September. We have developed the programme in close cooperation with our new partner, the German Maritime Institute. MS&D brings together high-calibre international experts in the field of maritime security, including high-ranking naval delegations from all over the world. Current challenges for sea-based defence, strategies for asymmetric conflicts, trends in naval shipbuilding: The four panels on the two days of the conference, 5 and 6 September, will deal with important issues facing the maritime security community. The conference, which is open to all trade visitors this year for the first time, will benefit in particular from the close integration with the world's leading maritime trade fair SMM. Dual-use is the keyword: innovative propulsion systems, high-tech bridges, AI-supported navigation – at SMM, more than 2,000 exhibitors from 70 countries present their latest technologies, many of which are relevant for both civilian and naval shipbuilding. In addition to the maritime energy transition, the topic of digitalisation is at the top of the agenda, with a separate exhibition area dedicated to promising maritime applications of artificial intelligence at the AI Center.

Numerous shipbuilding companies exhibiting at SMM, such as Damen and Lürssen/NVL Group, as well as technology companies such as ABB and Kongsberg, which are successful in both segments, show that civilian and military shipbuilding benefit from each other. They are also likely to benefit from orders for new ships in the coming years, such as the recent expansion of the German Navy's frigate programme by two units. In addition to the modernisation and reinforcement of naval forces, maritime sovereignty includes the ability of nations to protect their own critical infrastructure against threats such as cyber attacks in an increasingly connected world. The exhibitors at SMM and the panellists on the Digital & Security Stage will provide the right answers to related questions.

More security at sea! With this in mind, the SMM and MS&D teams are looking forward to in-depth insights and stimulating discussions with you! ■

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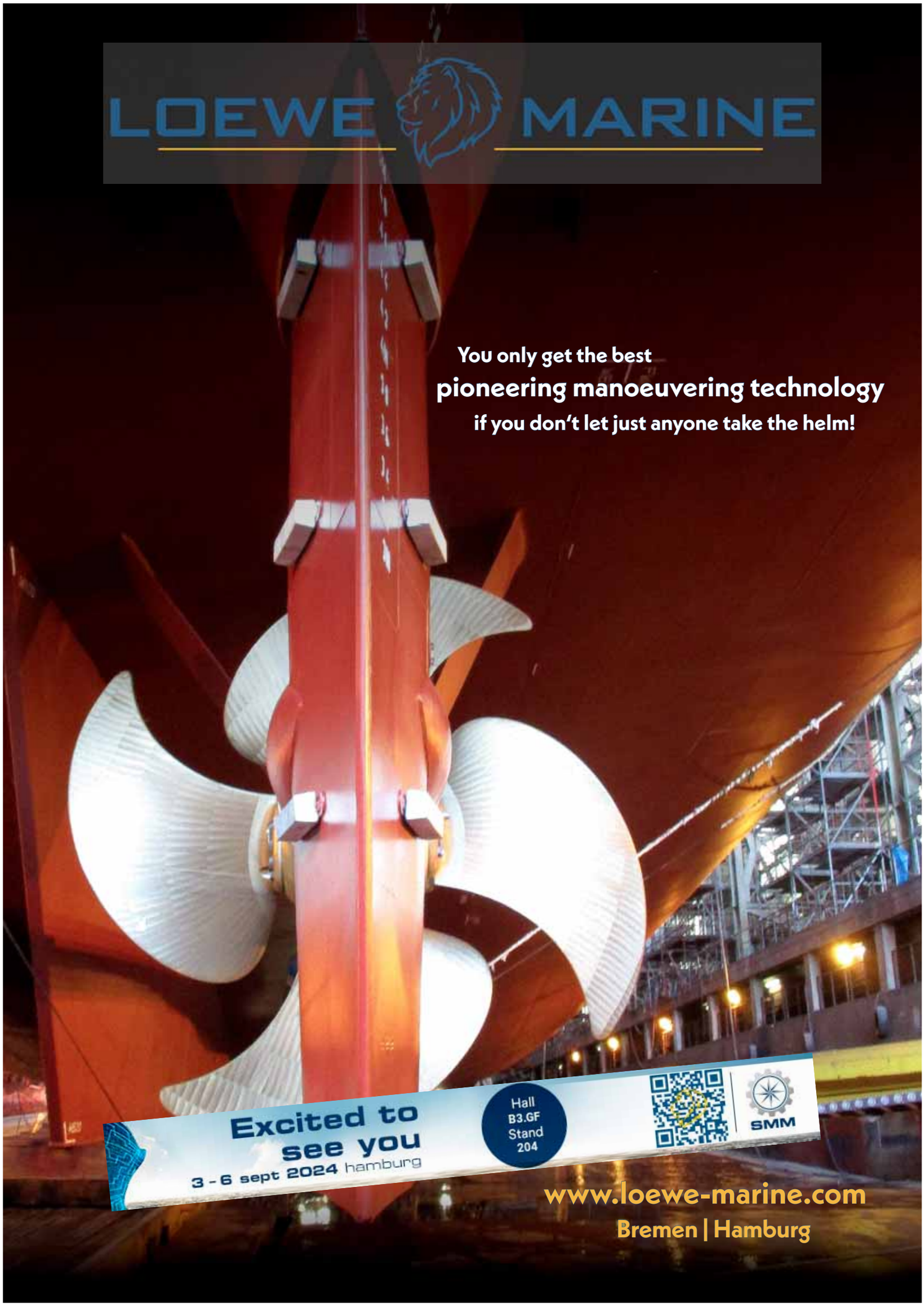
Heiko M. Stutzinger, CEO, Hamburg Messe und Congress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Global Shipbuilding – A question of security

The MS&D conference, Maritime Security and Defence, offers a great line-up of geopolitical competence. Don't miss it! *By Reinhard Lüken*

© picture alliance / dpa | Lukas Schulze

China has overtaken both Germany and all other countries worldwide in shipbuilding

SMM, the global hotspot for maritime technology and commerce, isn't about politics. However, growing geopolitical risks create numerous challenges also for the maritime Industry. Topics that no one in our sector should ignore. Therefore, watch out for the MS&D conference where these issues will be addressed.

The development of the global shipbuilding industry over long periods of time resembles an unstoppable caravan that is moving from one oasis to the next.

In the early 1950s, the United Kingdom led the list of shipbuilding nations by a wide margin. Europe supplied 85% of global newbuilding tonnage at that time. In the 1960s, continental Europeans, especially Germany, became stronger. By the early 1970s, the UK had already shrunk to a market share of less than 5%. Japan rose to become the leading shipbuilding nation and supplied around half of the world's newbuilding fleet in the mid-1970s.

Next stop Korea: At the end of the 1980s, Korean shipyards grew to become the world's number two. Ironically, they were only able to take over the baton as largest shipbuilder as a result of their financial crisis in the second half of the 1990s: by offering low prices with high down-payments, shipbuilding served as a liquidity pump of foreign currency – invaluable for the nation at that time.

The rise of China

All these developments were strongly influenced by industrial and trade policy interventions. Geopolitical aspects came to the fore at the next stage of development: in 2005, China officially announced its goal to become the leading shipbuilding nation by 2015. It took them only five years to achieve this goal. At first, many western observers considered this development economically driven. European shipbuilding associations in particular have long wondered why China has pushed ahead with the massive expansion of shipbuilding capacities with such a high level of state capital investment – American think tanks estimated an order of magnitude of USD 200 billion in taxpayers' money poured into shipbuilding in just over a decade. The shipbuilding industry is particularly well suited to driving forward the technological and industrial development of an economy. The particularly complex value chain means that a large number of key technologies can be developed simultaneously. This is precisely what was behind the dedicated growth periods in Japan and Korea. However, the scale of state investment and speed of development in China was hardly comparable.

> *»China has perhaps better than any other nation recognised the vital* importance of the maritime economy and is following an old European wisdom: he who rules the sea rules the world.«
>
> Reinhard Lüken

Within a decade, commercial shipbuilding production in China rose from 1.4 million cgt to 20.3 million cgt. It suffered a short set-back during the slump following the shipping crisis. However, in 2023, China accounted for more than 62% of all newbuilding orders, almost three times as much as Korea. And further large-scale production investments have already been announced. The comparison with Europe in this context is devastating: 48 million cgt newbuilding orders for China versus 1 million cgt for the whole of Europe (including Norway and the UK). The data for US yards, just to be complete in terms of geopolitics: 0.05 million cgt.

Taking geostrategic and, in particular, security policy aspects into account well explains China's motivation: The shipbuilding industry is a backbone of Chinese security policy. It is key to enable a strong navy able to dominate in the South China Sea and safeguarding global access, especially for its submarine fleet.

Rapid growth of the Chinese Navy

A decade of rapid expansion of shipbuilding production had made China a very attractive target market for the entire supply chain. The civilian market made it possible to bring a lot of foreign know-how into the country that is equally crucial to advance naval shipbuilding. Only this enabled the country to accelerate the build-up of the largest naval fleet in the world. And the Chinese navy continues to grow at breathtaking speed: China is building the equivalent of the entire British Royal Navy every two years.

China has perhaps better than any other nation recognised the vital importance of the maritime economy and is following an old European wisdom: he who rules the sea rules the world.

Europe, on the other hand, has gotten its grandiose maritime heritage out of sight. Although security policy was initially the driving force for the European integration, economic policy objectives

have formed the core of the EU institutions: the internal market, trade, competition policy. Security and defence policy remained a matter of national sovereignty. While community rules also today do not fully apply to the defence industry, better coordination within the EU has become increasingly important and urgent.

Reaction of the EU

Of course geopolitical developments have had an impact also on the EU affairs. However, the buzzword 'resilience' and the discussions about 'open strategic autonomy' have only been gaining momentum in recent years. In this context, also the importance of the maritime dimension has been on the radar. The Council Secretariat's research and analysis team presented an interesting paper on this at the beginning of 2023. It titles From Maritime Actor to Sea Power and provides a holistic description of the many strategic aspects of the maritime dimension. Maritime critical infrastructure in particular has received much attention. However, there is still one crucial point missing: a critical analysis on the industrial capabilities of the maritime sector in Europe.

© VSM

»China is preparing for war. That is the simple truth.«

Reinhard Lüken

US Navy outperformed

In the USA, the maritime industry has been viewed against the backdrop of national security for many decades. The Jones Act, the ultra-protectionist law that has sealed off the American industry from the global market has been sacrosanct. However, awareness of the danger of the industrial weakness in shipbuilding, which is a result of the lack of competition, seems to be maturing. The Chinese navy has outnumbered the US navy already around ten years ago. In terms of fighting power, the Americans still consider themselves superior. However, in case of a prolonged conflict, its lack of industrial capacity would quickly become their Achillies heel. The marginal market share of the USA in civilian shipbuilding mentioned above means that the US Navy has to maintain the entire US shipbuilding industry almost single-handedly. China, on the other hand, has a huge industrial base that is largely financed by civilian shipbuilding orders for customers from all over the world. This industrial base would be able to supply large numbers of new naval vessels fast and cheap.

It needs to be underlined: Shipowners cannot be blamed. From a business point of view, they have few options. Nevertheless, it would be fatal not to seriously address this problem. China is preparing for war. That is the simple truth.

For Europe, the current development is not sustainable. Europe has a coastline which is double the length of China and the USA together. Contrary to the US, which is largely run on land transport, Europe has a huge intra-European maritime trade. Roughly 10.000 seagoing commercial vessels trade in European waters permanently. Last year, European shipyards built about 200 sea-going vessels of which only 28 were large than 100m in length.

Europe must therefore work flat out to seriously analyse the problem and start implementing effective countermeasures without further delay. The industrial and military sides must be considered together. Industry must also face up to its responsibilities and look constructively and without reservation for solutions that strengthen both the production and operation of ships and maritime Infrastructure in Europe. A common European cabotage area that enables appropriate incentive structures and, in particular, equity-enhancing financing instruments could be some of the key elements. And excellent technology. At least at that front we have all reason to be self-confident. Nothing demonstrates this better than the SMM. ■

Author: Reinhard Lüken,
Managing Director at German Shipbuilding and Ocean Association (VSM)

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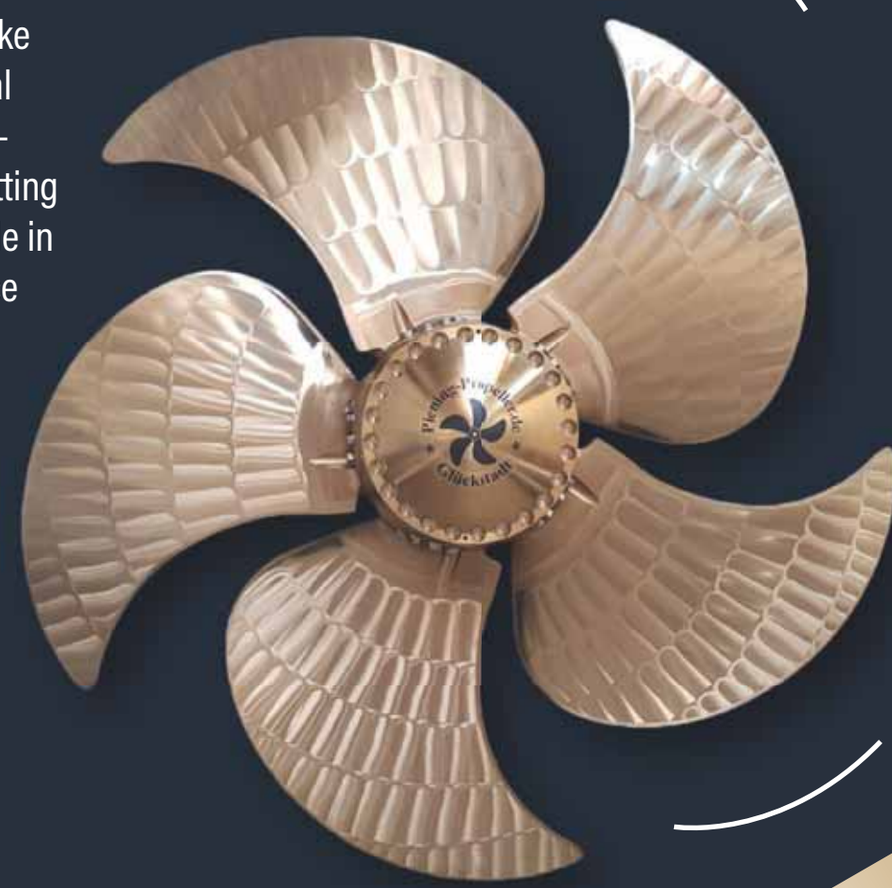

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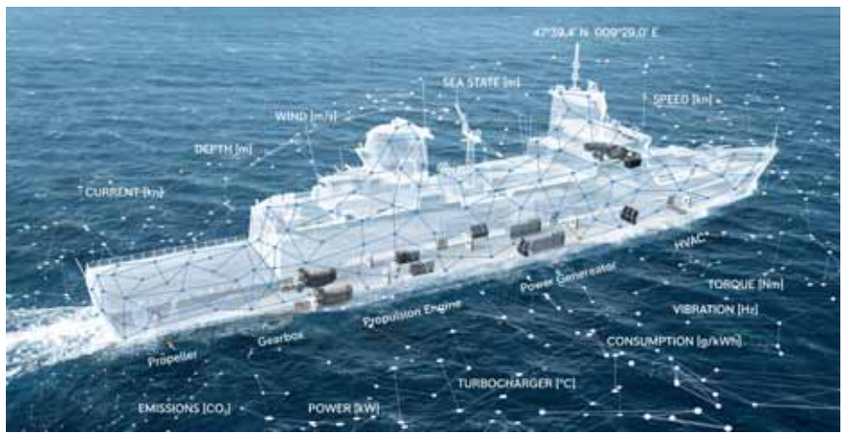
Hall **A3** | booth **226**

Navies want to go online

Until now, navies have been very reluctant to collect data from ships digitally and to transmit and analyse it ashore. The trend is in the meantime that navies are getting more and more interested because the need for live data access and crew support is growing



© Rolls-Royce

The mtu NautIQ family of automation systems has been specially developed for newbuilds and for retrofitting on older vessels

Rolls-Royce's solution for navies is the marine automation system mtu NautIQ Foresight. The Equipment Health Management System (EHMS) from the Rolls-Royce business unit Power Systems is an contribution to more sustainable and reliable ship operation. It monitors the technical condition of an entire ship, from the bridge to the propeller, by collecting and evaluating data from mtu and third-party components, considering also additional factors, such as weather and navigational data.

This enables predictive maintenance before a component fails and helps the ship's crew to operate the vessel at maximum efficiency. mtu NautIQ Foresight can help achieve minimum fuel consumption – and therefore CO_2 emissions.

The system maximises the availability of vessels and it can even be used to monitor a whole fleet. By providing system status at a click, mtu NautIQ Foresight makes availability management easier than ever before. It provides support for the maintenance and upkeep 24 hours a day, 7 days a week – and thus helps minimise vessel downtime.

Mode of operation

Mtu NautIQ Foresight is collecting all data available on a ship-based server. If required, additional sensors can be installed for vibration monitoring, lube oil quality monitoring, torque measurement, etc. All this data is stored in one database, a number of algorithms and analytic functionalities are running on-board the ship. This pre-processed data can be transferred ashore over a dedicated interface. Connectivity is done by the navies, because each navy has its own strategy how to deal with data transfers. The data can then be viewed by the experts on the land-side, further algorithms (especially on a fleet level) can be deployed, ships and engines can be compared. The data can be shared with an OEM (i.e. local mtu service) to get constant support. The service supplier can arrive on board prepared with the right tools and spare parts.

According to Rolls-Royce there are several advantages of automation systems: The crew can focus on its main tasks and competences, especially for small crews this is a big advantage. The technical complexity and maintenance tasks can be managed by the fleet management team on the land-side. Decisions are made based on live data, not on historical data. Cloud analytics

ITALIAN MARITIME INDUSTRY @ SMM

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Hall B3.OG | booths 100 – 108, 110, 112, 201, 203, 205 ,207, 209, 211, 213

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and AI technologies can be made available for Navies.

Order for F126 frigates

Rolls-Royce will supply the command and automation system (FüSAS) for the six new F126 frigates of the German Navy. The delivery consists of the components integrated ship automation system (IPMS) and condition monitoring system (CMS). Rolls-Royce is supplying its mtu NautIQ Master and mtu NautIQ Foresight solutions for this purpose. They will enable efficient operation of the vessels and ensure optimum availability so that the German Navy can fulfill its global operational tasking.

About the automation platform

The mtu NautIQ family of automation systems has been specially developed for newbuilds and for easy retrofitting on older vessels. The product range consists of reliable, efficient and future-proof monitoring and control solutions from the bridge to the propeller. mtu NautIQ Master is the latest generation of Rolls-Royce's Integrated Platform Management System (IPMS). The advanced, tailor-made solution meets the complex automation and integration requirements of operators of modern specialized vessels.

All products in the mtu NautIQ family are based on state-of-the-art software platforms and allow for easy integration or upgrade of additional hardware, software and auxiliaries throughout the life of the vessel, effectively reducing the risk of obsolescence and providing customers with long-term planning and reliability. ■

© Rolls-Royce

Rolls-Royce will supply the command and automation system (FüSAS) for the six new F126 frigates of the German Navy

BOEHM KABELTECHNIK

Iserlohn Marine cables with VG 95218 60–66 approval

The supplier of high quality cables and wires, with more than 35 years of experience working in various sectors, will showcasse marine cables at SMM. Highly specialised marine cables are certified by the the Federal German Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw) in accordance with the VG 95218 Part 60–66 standard and are said to offer safety and reliability for maritime applications. The cables are specially developed to withstand the demanding conditions at sea. With this approval, the marine cables fulfil the highest safety and quality standards, making them the ideal choice for shipbuilders, shipping companies and offshore plant operators who depend on reliability and safety. »Thanks to their outstanding resistance to oils, UV radiation and mechanical stresses, the cables are particularly durable, which significantly reduces maintenance costs, the frequency of replacements and increases cost-effectiveness«, Boehm Kabeltechnik states. This robustness is said to improve operational safety and offering optimum performance for the transmission of power and signals in demanding maritime environments. The marine cables can be used universally and are suitable for a wide range of applications in the maritime sector, from communication systems to power supply.

Hall B6 | booth 603

© Böhm Kabeltechnik

The company provides marine cables with VG 95218 60–66 approval

TAMSEN MARITIM

Shipyard with special expertise in repair and new construction

© Tamsen Maritim

Tamsen Maritim delivered two identical patrol boats, each 23 metres long, to the German Directorate General of Customs in 2023. They are specially designed for use in the Wadden Sea.

Tamsen Maritim from Rostock is represented at this year's SMM with its largest exhibition stand to date at the international shipbuilding trade fair. It will be presenting its portfolio as a repair and newbuild shipyard at Stand 311 in Hall B.4 EG. In the repair sector, the shipyard specialises in medium-sized government, SAR and special ships as well as German Navy units. Framework agreements with the Hohe Düne naval base in Rostock, the Parow naval technology school near Stralsund and the new Warnowwerft naval arsenal in Warnemünde include a comprehensive service for various naval vessels.

Units of up to 1,000 tonnes, including minehunters and naval tugs, can be docked and repaired at the shipyard in Rostock-Gehlsdorf. The shipyard has been located on the Warnow for 30 years. Larger units such as corvettes and supply vessels are serviced directly at the naval bases by the medium-sized company's mobile repair teams. 'We see further opportunities to make even greater use of our expertise in servicing the navy in the coming years,' says Christian Schmoll, Managing Director of Tamsen Maritim. In addition to modernisations, major ship conversions will also be carried out, for example.

Tamsen Maritim has developed two types of patrol boats in-house recently. Last year, two identical patrol boats, each 23 metres long and specially designed for the Wadden Sea, were delivered to the German Directorate General of Customs. A 17 metres-patrol boat, also designed by our own construction and project planning team, will follow this year for the Mecklenburg-Western Pomerania state fisheries authority. Tamsen Maritim will be offering these two innovative specialised ship projects at SMM primarily to so-called state 'blue light' authorities. 'In this area, for example the fire brigade, customs or police, the fleet is older in some cases, so there is a need for renewal,' emphasises Schmoll.

The customs patrol boats boast environmentally friendly propulsion technologies. The vessels are each equipped with two 973kW engines that fulfil the strict limits for ship emissions in the Baltic Sea with an integrated exhaust gas purification system. One of the shipbuilding innovations is that the deckhouses are elastically mounted. This effectively dampens the noise and vibration levels on the bridge when the ship is underway.

Tamsen Maritim would also like to interest foreign customers in the patrol boat projects at the SMM, the company says. The shipyard is also planning to open up another export business segment following the acquisition of two minehunting vessels. 'We intend to modify the former naval vessels for countries that want to use them to protect sensitive infrastructure, for example,' announces the shipyard's Managing Director.

Hall B.4 EG | booth 311

FRIESLAND-KABEL

Variety in cables and wires

For the first time since its founding in 2007, Friesland-Kabel will have its own booth at the SMM. Friesland-Kabel GmbH is one of Germany's largest ship cable warehouse. Most of its products for the maritime industry (civil and navy), onshore/offshore, industrial, data technology and standard cable sectors are available from stock, the company says. The company's customers include shipyards and electrical installation companies.

Friesland-Kabel is certified by the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw) as an approved supplier of in-stock military cables meeting Bundeswehr VG standard 95218. Additionally, its cables and wires for the on-/offshore, industrial and data technology sectors as well as standard cables are sold worldwide.

In addition to the company headquarters close to Hamburg, it also has a logistics center in the Hanseatic city of Wismar (Germany). This facility includes two warehouse halls covering an area of 10,000m². Hall 1 is equipped with modern cable winding machines. This is where the cables and wires are cut, taped, labelled and assembled at the installation temperature according to customer-specific requirements. Hall 2 features 10 rows of high racks with space for around 2,500 pallets.

Around 5,000 articles are always in stock at its logistics center and can be called off by customers at any time. Friesland-Kabel delivers worldwide – just in time or time to time, depending on your needs. Alternatively, the goods can also be picked up directly from the logistics center. The company also offers individual logistics services such as cutting, taping and labelling or assembling cables and wires according to customer requirements and cable lists.

© Friesland-Kabel

Friesland-Kabel has a high stock availability for short-term requirements.

Hall B6 | booth 500

Hall A1
- Ship operation equipment, environmental technologies
- Deck equipment, cargo handling systems

Hall A2
- Pumps, valves, compressors, new fuel technologies

Hall A3/A4
- Prime movers, propulsion systems and new fuel technologies

Hall B1
- National pavilions

Hall B2
- Shipyards, shipbuilding industry
- Production equipment, ship engineering and design
- National pavilions

Hall B2/B3
- Maritime security and defence

Hall B3/B4
- Shipyards, shipbuilding industry
- National pavilions

Hall B5
- Marine interiors, heating, ventilation, air conditioning
- Safety equipment, fire protection, marine coatings, corrosion protection

Hall B6
- Navigation and communication
- Electrical equipment, electric drives, automation, lights, sensors and indicators, software and IT
- Marine technology

Hall B7
- Shipbuilding materials
- National pavilions

NEW

Hall B8
- Shipyards, shipbuilding industry, navigation and communication, electrical equipment, automation, software and IT

Hall A1 | booth 110

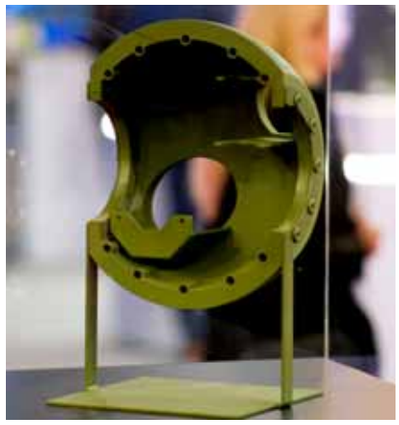
JASCO SHIP CONSULT

www.shipconsult.com

JASCO ShipConsult (formerly DW-ShipConsult) is Europe's leading consultancy for ship acoustics and underwater acoustics.
JASCO supports shipyards in the planning, design and construction of a ship to meets specifications for noise and vibration on board or radiated underwater noise and supports ship owners and operators in identifying and eliminating the cause of the problem

MEHLER PROTECTION

First time at the SMM under new brand



© Mehler Protection

3D-printed sensor case

Mehler Protection is one of the leading technology and market leaders for naval protection systems in Europe. With the M-RACC system (Multirole Armour Composite Components), Mehler Protection offers a modern, modular protection system with a low basis weight, which is specially tailored to the requirements of maritime mission scenarios. M-RACC systems offer reliable protection against ballistic projectiles and fragments as well as shaped charges and anti-tank weapons in maritime threat scenarios, tested according to STANAG 4569 AEP-55, Vol. 1. The protection of critical areas of the ship, such as the bridge, operation command, machine gun emplacements and ammunition depots, ensures the operational capability of the overall system and significantly increases the probability of survival of the crew. The individual protection solutions are designed by Mehler Protection on the basis of extensive threat analyses depending on the intended use and the resulting threat scenario. Based on decades of experience, Mehler Protection offers the expertise as a system consultant for the design of marine protection systems and is therefore an important partner of leading shipyards in Europe. At this year's SMM, Mehler Engineered Defence will be presenting itself for the first time under the new brand Mehler Protection and in a new design as part of the Mehler Systems Group. The exhibition includes M-RACC protection systems against ballistic threats according to STANAG 4569 Level 1–4 and integrative systems for the protection of weapon mounts and ship bridges. As its latest innovation, Mehler Protection will present the patented 3D printing of armored steel for protective components. The protected 3D-printed sensor case, STANAG Level 3, demonstrates the possibilities that 3D printing opens up for complex components. In addition to completely new design options, the main focus of this technology is on reducing weight and installation space as well as integrating functions.

Hall B5 | booth 335

RWO

Solutions for marine water treatment

For over 45 years, RWO has been supplying future-proof solutions for marine water treatment – made in Germany. The product portfolio includes equipment for the treatment of drinking and process water as well as systems for pollution prevention such as oily water separators or sewage treatment plants. Today RWO is recognized as a technological leader in the field of oil/water-separation with over 16,000 units delivered worldwide. More than 40 sales and service stations ensure short communication links and local availability of trained service engineers. The intelligent spare parts supply enables the rapid delivery of customized kits, which minimizes maintenance intervals as well as freight and operating costs. RWO offers an individually designed range of services: around the world, around the clock, 365 days a year. RWO is headquartered in Bremen, Germany and is part of the Erma First Group based in Piraeus, Greece.

Hall A1 | booth 218

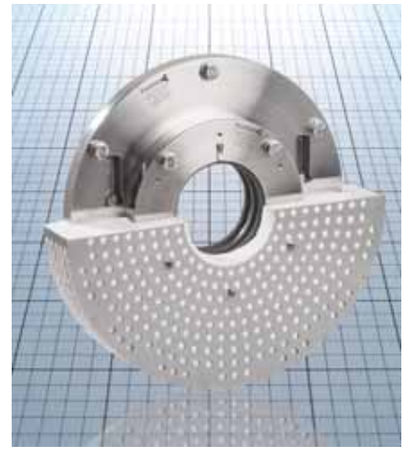
PROFISEAL

Fireproof bulkhead seals for more safety

Since its market launch in 2015, ProfiSeal has equipped more than 150 shaft lines with its latest fireproof A60 bulkhead seal technology. This innovative solution is primarily used in larger passenger vessels, including cruise ships, RoRo, and RoPax ferries. Additionally, coast guard and navy vessels are increasingly adopting this advanced technology.

Bulkhead seals, traditionally known for preventing water from spreading through a hull after a breach, now also effectively stop the spread of fire from high-risk areas like engine rooms. This modern approach eliminates the need for additional fire protection systems beyond the bulkhead, especially for dynamic components such as rotating shafts.

ProfiSeal introduced the fireproof bulkhead seal with a third sealing ring made from special carbon, enhancing fire containment capabilities. This design includes a sacrificial outer ring that oxidizes upon contact with fire, releasing carbon dioxide to protect the inner rings and prevent further combustion. The three-ring system ensures that even if the outer ring is compromised, the second ring continues to block oxygen, and the third ring remains intact to prevent water spread. Testing at the Institute for Safety Engineering in Freiberg, Germany, demonstrated the effectiveness of these seals. Under controlled high-temperature conditions of 950 °C, the bulkheads were tested with computer-controlled heats that brought shaft ends to extreme temperatures. Various sensors measured the temperature of the bulkheads on the non-flame side, showing a significant limitation in temperature increase, thus preventing the synthetic carbon components from combusting. Fire and smoking gas did not penetrate along the shaft line.



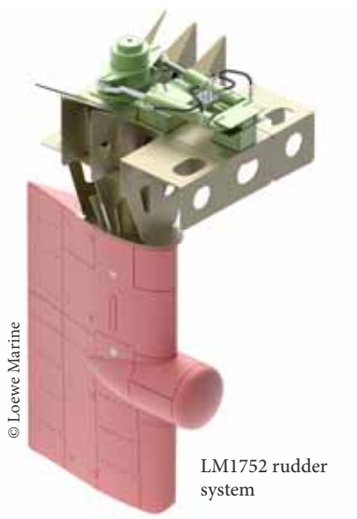
© Mehler Protection

Fireproof bulkhead

Hall A3 | booth 408

Rudder technology for naval vessels

To tailor maneuvering technology—rudder systems and steering gear packages—specifically for use on naval vessels, Loewe Marine established a rudder-system-focused approach while also adopting a holistic development procedure



© Loewe Marine

LM1752 rudder system

This approach made it possible to increase system and combat endurance, maximise unit manoeuvrability and reduce fuel consumption as well as rudder-induced cavitation, which generates a significant additional positive signature effect, the company says.

With this technology, developed specifically for surface ship applications, it is possible to additionally tailor the design, system optimisation, structural integration into the ship's hull and installation according to the given operational scenario and the marine-specific requirements of floating naval platforms. An example of this is amongst others, the perfect positioned and propeller-slipstream adapted rudder with fully twisted leading edges and, depending on the requirements, also with fully twisted trailing edges. Compared to a non-twisted rudder, the twist of the water induced by the propeller is countered by considerably reduced angles of attack.

Homogenised pressure curve

This results, among other things, in a considerably homogenised pressure curve over the entire height of the rudder blade, even in the neutral steering angles. The improved pressure curve reduces the drag of the rudder, and, since the propeller is untwisted downstream, energy consumption is reduced, but above all, manoeuvrability and signature, which are so important for warships, are positively improved. In short, Loewe Marine's overall rudder system optimisation technology "Navy ES/MS-Opt" achieved the following positive results:

- Simplified system installation & maintenance
- Reduction of system's Opex costs
- Increased manoeuvrability of units in operational use
- Reduction of acoustic and vibration signature
- Increased service life and redundancy
- Increased combat rating and performance

Rudder for MEKO frigates

Loewe Marine's newly developed "Navy ES/MS-Opt" rudder technology was adapted up to now for four MEKO200 and four MEKO100 units actual under construction. About four years ago, TKMS commissioned the Loewe Marine team to design and build four pairs of full-spade rudder systems with "plug-and-play rudder trunk sections for installation in four MEKO 200 frigates being built in Germany and abroad for a foreign navy. On the strength of their excellent performance on the MEKO 200 rudder orders, company has been commissioned to design, build and deliver eight special full-spade rudder systems for four defence vessels for the Brazilian Navy programme. Equipped with special "Navy ES/MS-Opt" rudder systems complete with eight differential-cylinder steering gears. Amongst others the complete rudder systems will deliver maximum possible energy efficiency and signature optimization for naval applications, Loewe Marine says.

Hall B3.EG | Stand 204

JASTRAM | INSUMO

Setting a new standard in silent thrusters

Jastram, a renowned German manufacturer of marine drive and control systems, and Insumo, a deep tech research and development company from the Netherlands, are joining forces to introduce the next generation of Rim drive technology: bearingless electric thrusters. »This partnership promises to revolutionize the marine industry by setting new standards in silent and efficient propulsion«, says Jastram.

The partnership represents a significant advancement in marine propulsion technology: by combining traditional craftsmanship with cutting-edge engineering, these companies are set to deliver thrusters that do not only meet but exceed current industry standards for performance, durability, and environmental sustainability. The introduction of bearingless electric thrusters heralds a new era of quieter, cleaner, and efficient marine propulsion systems.

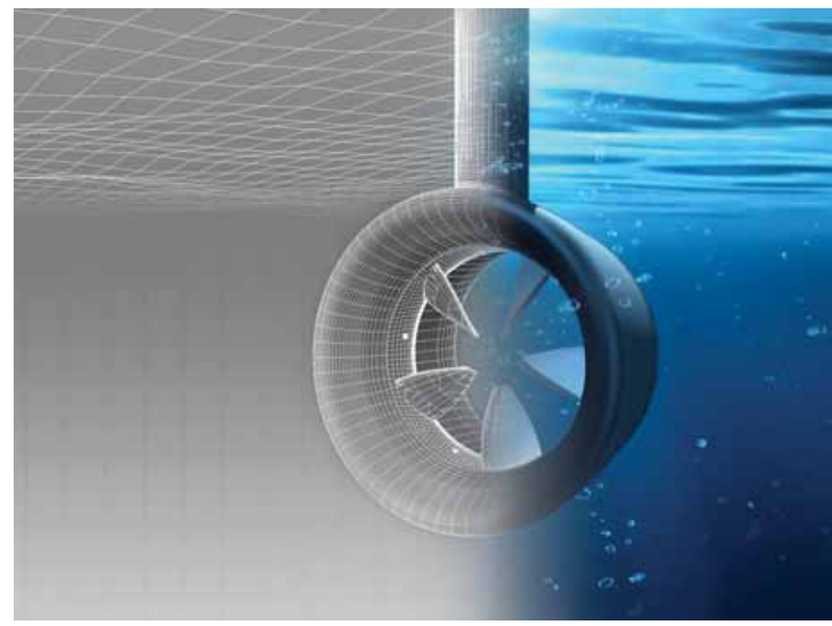
The key factors include several benefits, among them environmental and operational advantages. The shift to bearingless electric thrusters marks a significant step towards environmentally friendly marine technology. These bearingless thrusters are not only designed to meet lowest noise requirements and minimize cavitation, making them nearly silent. Their bearingless design and water-cooled systems eliminate the need for polluting lubricants, ensuring an eco-friendly operation. Moreover, the design requires minimal maintenance, significantly lowering operational costs and downtime.

Central to this technological leap is the bearingless implementation achieved through magnetic levitation. By employing magnetic forces to keep the rotor in position, these thrusters become the most silent and resilient on the market. This approach eliminates the components most susceptible to wear and tear, effectively increasing the thruster's lifetime and reducing the number of parts by 50 %.

The compact, modular, and simple design of these electric motors ensures they are low on maintenance while delivering superior performance. The magnetic force fields are kept low, further contributing to the silent operation of the thrusters. This innovative design is scalable, making it possible to create powerful rim-drives that retain all the benefits of the technology.

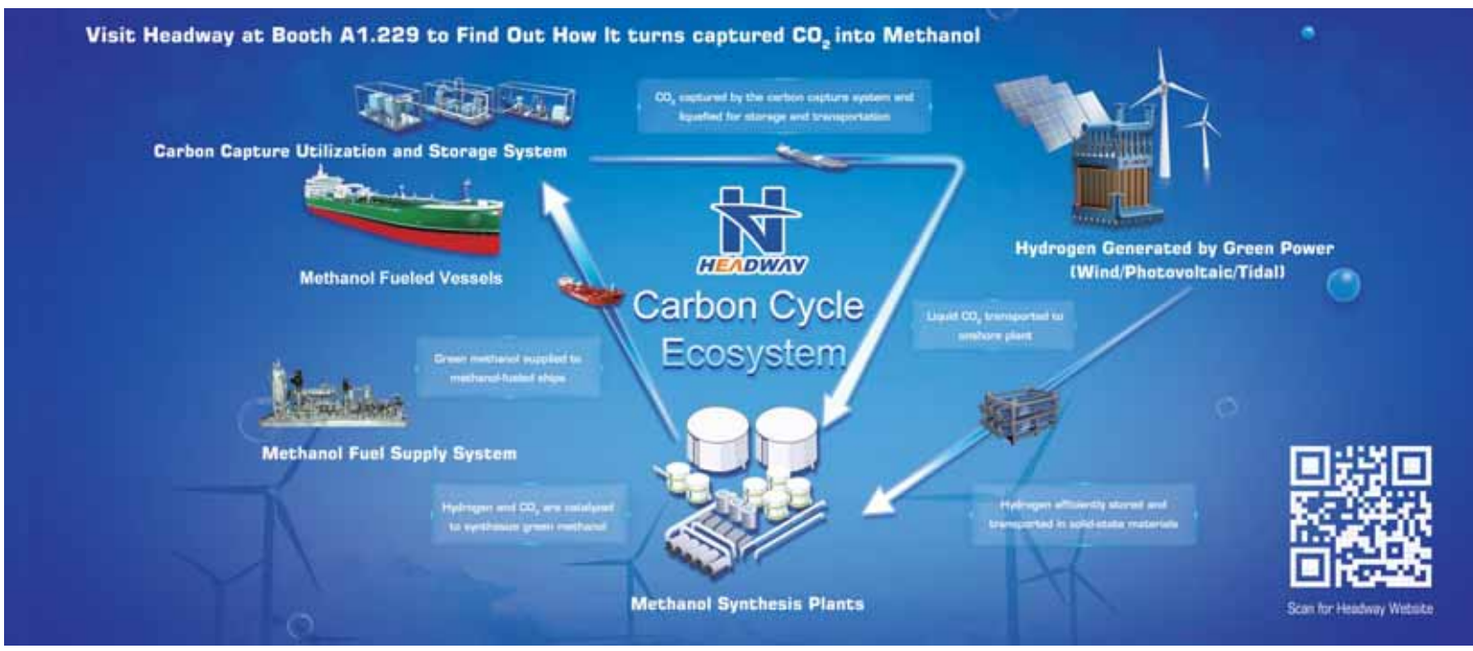
At this year's SMM visitors will be able to get a »sneak peek« of the bearingless electric thrusters in motion. The team at Jastram is looking forward to have in-depth discussions about this new technology.

Hall A3 | booth 200



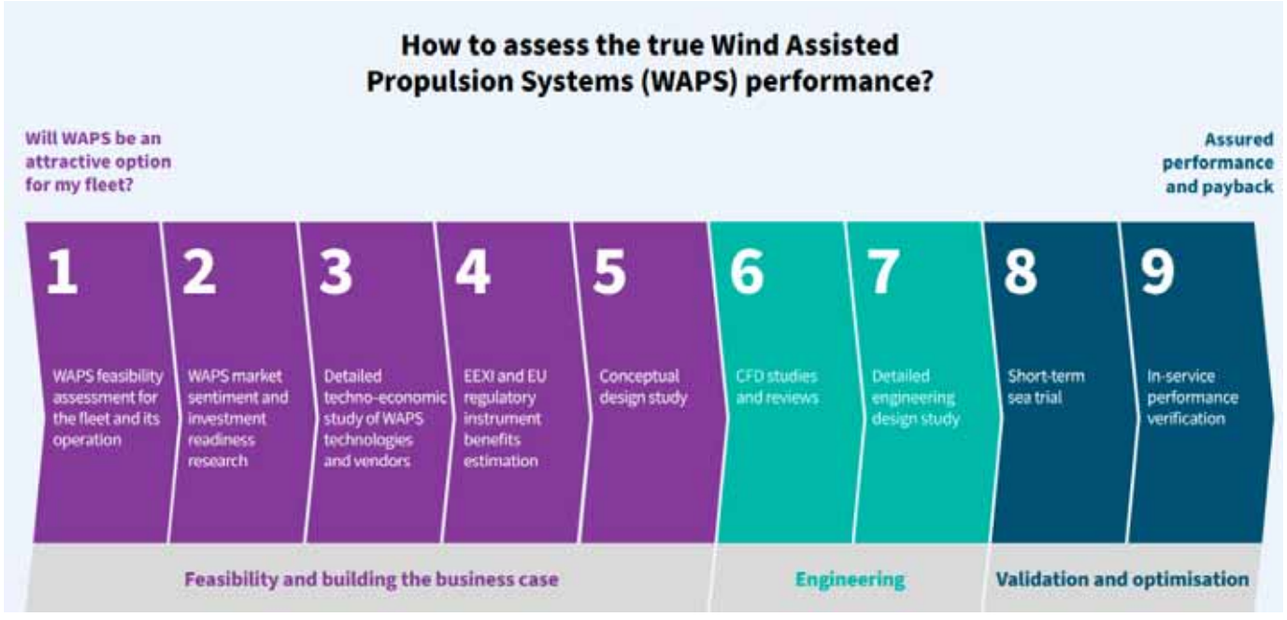
© Jastram

Jastram and Insumo's bearingless electric thrusters



Tipping points nears as regulations drive return to wind

New analysis of the market and drivers for wind-assisted propulsion from Lloyd's Register highlight their sizeable fuel savings potential – and crucial considerations for ship operators planning to install them



© LR

Amid a surge in the number of vessels planning installations of wind-assisted propulsion systems (WAPS), challenges still remain if shipping is to realise the significant potential of one of its original power sources. Several of those challenges – as well as essential advice for those embarking on installation projects – are featured in LR's WAPS Retrofit Report, released shortly before SMM.

LR's analysis of the current market finds that uptake of WAPS is on the verge of a tipping point, expected to pass the 100-installation milestone in the next 2–3 years. There is some uncertainty on exact order numbers as the established industry data does not fully match disclosures from technology providers, considerably overestimating the number of suction wing orders by, LR believes, including several 'wind-ready' projects that are not yet firm orders.

However, it is clear that the shape of the market is evolving; more orders are coming from a wider range of vessel segments, often with more units per installation, reflecting greater confidence in the technology. The number of projects featuring WAPS from initial design, as opposed to the retrofits commonly used for pilot projects, also highlights growing confidence in the fuel-saving advantages and technical feasibility.

Dr Santiago Suarez de la Fuente, LR's Ship Performance Manager, says: »Wind-assisted propulsion systems are increasingly being used by ship operators to reduce fuel consumption, meet energy efficiency regulations and minimise exposure to carbon costs. With 29 installations between 2018–2023 and 72 in the orderbook, LR's new research report demonstrates that there is growing confidence in the available solutions.«

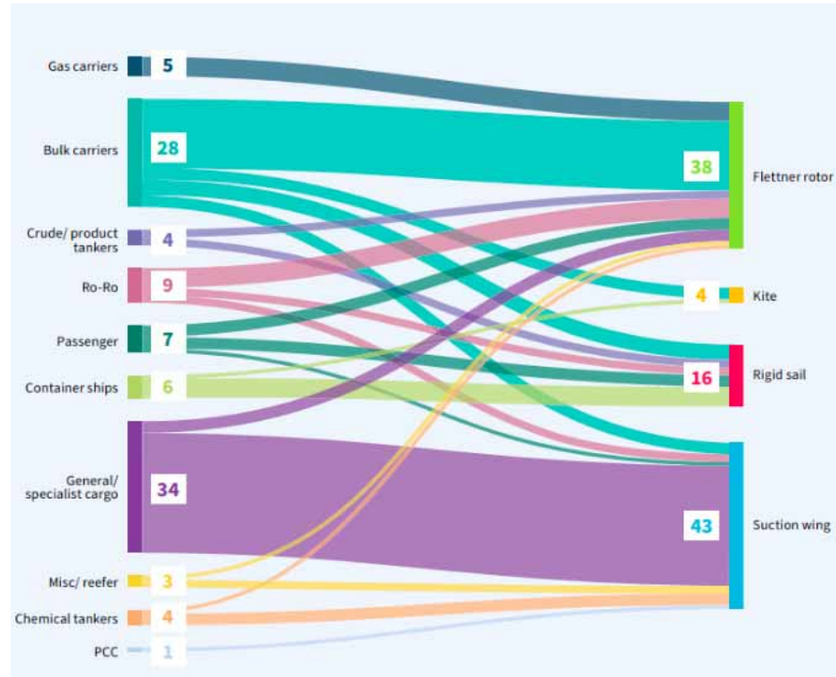
Gathering force

Beyond 100 installations, market forecasts indicate that orders will accelerate rapidly, notably in the bulk and tanker vessel segments, with analysis of top-end potential identifying nearly 14,000 candidate vessels over the next 26 years. Uptake is being driven by increasingly well-established savings in the face of energy efficiency and emissions regulations that impose significant stepped reductions in energy intensity, as well as dramatically increasing the cost of greenhouse gas emissions. Fuel reductions from WAPS technologies, like other energy efficiency technologies, also act to improve the viability of adopting zero- or near-zero emissions fuels to meet long term reduction targets.

However, notable challenges remain in the application WAPS technologies. First is the uncertainty around actual fuel savings, with no standardised criteria for validating savings claims. The potentially hidden costs around WAPS – including the full scope of engineering work and operational costs – also contribute to uncertainty around the business case. The ramp-up of the supply chain will be

critical to meet rapidly growing demand. For technology suppliers to meet existing orders would entail them delivering around 2.5 times the number of units they have installed in the past five years. To achieve uptake on around 15% of the global fleet – as anticipated in the most optimistic forecasts would require a 75-fold increase on that level, requiring a dramatic increase in production capacity. Several suppliers are bolstering production capacity, but understanding how partners plan to deliver and maintain reasonable lead times amid the ramp up will be a crucial question for shipowners.

To date only around 16 yards have conducted WAPS retrofits, indicating that installation capacity needs to be far more widespread if future installations are to be met. While there are no showstopping capabilities for shipyards, planning projects will require careful consideration.



© Source Clarksons / 29 February 2024

WAPS deployment (installed and order) by vessel and technology type

Maximising payback

One option considered is for a two-stage retrofit process, with WAPS foundations and cabling prepared during a scheduled drydocking – or even from newbuild – and the WAPS solution itself attached during a second docking or, in some cases, during an extended port call. Optimising installation timing to meet regulatory emissions reductions or to maximise payback will require some consideration, as will the alignment of project schedules to component lead times.

The report, supported by the International Windship Association (IWSA), offers both a rallying call to the industry as well as a reality check on some of the outstanding factors that could inhibit uptake.

Gavin Allwright, Secretary, IWSA, notes: »There is a perfect storm brewing when it comes to reducing GHG emissions in shipping. New regulations, price challenges for existing and new fuels along with the growing pressure from cargo owners to reduce scope three emissions. These are driving the deployment of wind propulsion technologies, both as wind-assist and primary wind, retrofit and newbuild, however these systems need to be robust, safe and validated in order to build trust in the market and lay the foundation for scaling these across the fleet.«

The complex considerations around WAPS technologies and the remaining uncertainties listed above mean that trusted expert advisory will be indispensable across the retrofit process, from exploring feasibility to technology selection, installation and validation of performance.

To learn more about how LR can support ship owners, operators, designers and technology providers in their WAPS projects visit us at SMM this week.

Hall B2, booth 198

Four ways hybrid solutions can reduce GHG emissions

Decarbonisation is a pressing challenge for shipping, spurred by ambitious targets set by the International Maritime Organization (IMO) – net zero by or around 2050. *By Torsten Büssow*

© Wärtsilä

With 2050 only one vessel lifetime away, vessels must be flexible enough to adapt to the changing needs in the future – either through extending the life of the existing fleet or by futureproofing newbuild vessels to comply with these regulations and requirements. Hybrid systems, which combine an energy storage system (a vessel battery) with a conventional engine, offer plenty of different ways to reduce greenhouse gas emissions. A hybrid ship, for example, can use 15–25% less fuel (and therefore generate 15–25% less emissions) compared to an equivalent diesel-powered vessel. Gensets also suffer less wear and tear because they can be powered down when the battery takes over, meaning maintenance costs are lower too. Here are just four ways that a hybrid system can help save on fuel and emissions:

© Wärtsilä

Torsten Büssow, Director, Electrical & Power Systems Business Wärtsilä Marine

1. Reduce installed base on the ship

When a ship is newly built, the installed engine power is designed for the maximum and worse situation (bad weather, ice, high speed etc.) condition. A modern propulsion system combining, for example, PTO/PTI (a shaft generator that can also be used as motor) with hybrid propulsion does not need that anymore. It can cover the worst case scenario with other power sources and in turn, not only reduce capex, but also result in more efficient engine usage.

2. Avoid operating engines at low load

A hybrid system can save fuel by turning off engines that are only needed to run for safety reasons (e.g. as a back-up for a failure scenario). A hybrid ship does not need these engines to run anymore as the battery is always on and available, within milliseconds, to jump in. We call this 'spinning reserve'. This then leaves the needed engine running which runs on a higher, more efficient load. For all ships with Dynamic Positioning mode, or that do a lot of manoeuvring, this is massive fuel and emission reduction lever.

3. Sail ship on battery power only

A full electric vessel turns electricity right from batteries into propulsion power. On its way the losses in the whole propulsion system are approximately 10% only, which is much lower than

during the conversion from fuel into propulsion power. Therefore, when you can sail on battery power – either the whole voyage (applicable for ships such as commuter ferries or harbour tugs) or when you see land at manoeuvring (applicable also for bigger ships like RoPax or RoRo) – ship operators and owners save fuel and emissions. Fuel only is only required when you charge the battery from the grid.

4. Charge hybrid vessel's batteries with green energy

To meet increasingly strict decarbonisation targets, it is important to use green energy instead of fossil fuels whenever possible. In many European countries today, up to 50% of electricity is generated from renewable sources like wind, hydro or solar power. With a shore power connection system, for charging the batteries and for running on shore power while in port, ship owners and operators can operate their hybrid vessel on 50% carbon free battery power.

Cutting emissions and costs by going hybrid

Environmental considerations are, along with the need to optimise operational efficiency, high on the marine industry's agenda. Hybrid systems offer an effective solution for many ship owners and operators looking to immediately enhance the sustainability of their vessels. And we're seeing growing interest in this area – for example, we recently announced that we will supply a hybrid-electric propulsion system for a new Limestone Carrier, contracted by Montreal-based CSL Group. When delivered in 2026, the vessel will be the world's first fully electric battery-capable self-unloading vessel.

We will also supply the electrical systems needed to convert two Scandlines ferries to a plug-in hybrid solution. Operating between Germany and Denmark, the project will involve replacing an engine and existing systems with a new shore-charged electrical system, including a large energy storage system. This will allow electricity to contribute approximately 80 percent of the energy needed for each crossing.

What's more, we also announced that we will power the biggest battery electric ship ever built with our battery-electric propulsion system and waterjets. The vessel, which is a new ferry being built by Incat Tasmania for Buquebús, will be fully battery powered.

Ultimately, the need to decarbonise is driving the sector towards increasingly flexible, electrified and hybridised solutions, with future fuel readiness also being built into newbuild solutions today.

However, it is important to note that the benefits of these solutions are dependent on the vessel and its operating profile. For example, deepsea vessels will have to adopt green fuel engine technology to decarbonise, but electrical systems will still be an integral part of the system, including shaft generators and shore connection. And whilst electric cruise ships and electric cargo ships are currently a futuristic concept, they can go hybrid and take advantage of solar energy to improve their efficiency. But then for short-sea vessels, the shorter distances and highly variable power demands often make electric or hybrid-electric power and propulsion systems more efficient than traditional mechanical drives. At the end of the day embracing new propulsion technology, such as hybrid systems, will lay the groundwork for low and eventually net-zero carbon operations.

Hall B6 | booth 433

About Wärtsilä Marine

Wärtsilä Marine is a global pioneer in power, propulsion and lifecycle solutions for the marine market. We develop industry-leading technologies, advancing maritime's transition to new fuels. We support building an end-to-end digital ecosystem where all vessels and ports are connected. Ultimately, Wärtsilä Marine is driving the shipping industry forward on its journey towards a decarbonised and sustainable future through our broad portfolio of engines, propulsion systems, hybrid technology, exhaust treatment, shaft line solutions and digital technologies, as well as integrated powertrain systems. Our offering, which is underpinned by our performance-based agreements, upgrades, lifecycle solutions, decarbonisation services, as well as an unrivalled global network of maritime expertise, delivers the efficiency, reliability, safety, and environmental performance needed to support a safe and sustainable future for our customers, our communities and our planet.

www.wartsila.com/marine

Green shipping runs along with maritime security and defence

Smaller and larger ships whose task is maritime security and defense nevertheless have environmentally friendly characteristics, making it clear that environmental protection and maritime safety can be in harmony

© Piening / Fassmer

Some boats of the German Federal Police are running with Piening controllable pitch propellers

In contrast to commercial ships, naval vessels, in particular, have a much higher proportion of propulsion systems with water-lubricated stern tubes. With these ships, there is no risk of environmental pollution due to leaks in the sealing system of the shaft systems, and thus no leaking oil. There is currently a recognizable trend for these ships to operate their controllable pitch propeller systems as well as their stern tubes without oil.

Back in 2016, Piening Propeller developed a controllable pitch propeller in which the hydraulic adjustment of the blades can be operated completely oil-free using water hydraulics. This is a much clearer step towards environmentally friendly systems than what could be achieved in the past by using biodegradable oils.

Piening Propeller has already equipped various navy ships for which this special safety is important. Beyond the environmental aspect, other factors favor a controllable pitch propeller system with water hydraulics. The use of biodegradable oil in controllable pitch propellers can have the effect of attacking metals and resulting in more rapid wear between the components. This often leads to extensive welding and machining work on hub and blade carriers, as Piening has already performed for different customers on various brands of CPPs. The solution in the design of the Piening Controllable Propeller (PCP) involves the use of composite components in all highly stressed bearings. This means the reconditioning of hubs and blade carriers is not required; only the components need to be replaced. It is no longer necessary to remove the hub completely to undertake service work. Reducing reconditioning costs is most important in the shipping industry, which in turn lowers dock times, dock costs, and downtime.

Even if the customer cannot decide from the beginning on a PCP with water hydraulics and prefers an oil-hydraulic system or must adhere to internal regulations, it is possible to switch from an oil-hydraulic driven PCP to a water-hydraulic driven PCP later on, simply by changing the hydraulic equipment in the engine room. One of the major references for Piening

Propeller in this market is the four OPVs from the German Federal Police, each with a length of 86 meters, delivered by Fassmer shipyard from 2018 to 2022.

Hall A3 | booth 226

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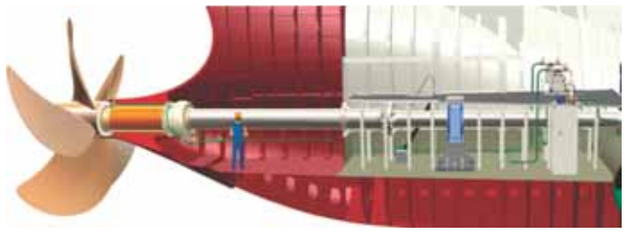
THRODON BEARINGS

T-Boss Shaft solution for the sterntubeless ship unveiled



© Thordon

T-Boss system featuring Thordon's Compac polymer bearing with tapered key set, Thordon Bearing Condition Monitoring system, a Wärtsilä Enviroguard shaft seal, and Thordon's Water Quality Package

Canada's Thordon Bearings has unveiled the Thordon-Blue Ocean Stern Space (T-Boss), a new solution designed to meet the propeller shaft requirements of the sterntubeless ship design proposed by the Blue Ocean Alliance.

Introduced to the global maritime industry today at the SMM trade fair in Hamburg the new T-Boss propeller shaft arrangement includes Thordon's award-winning Compac polymer bearing with tapered key set, Thordon Bearing Condition Monitoring system, a Wärtsilä Enviroguard shaft seal, and Thordon's Water Quality Package.

Thordon's Technical Director Anthony Hamilton said: »T-Boss has been designed as a sterntubeless ship solution, which will replace the traditional sterntube system with a dry chamber, that will allow for the full range of inspection and maintenance activities for a seawater-lubricated single bearing and seal arrangement. These activities can be done while the vessel is afloat, thus avoiding the need for shaft withdrawal or drydocking. This has never before been possible. »By creating an opening in the engine room bulkhead, adjusting stiffeners, shortening the intermediate shaft (allowing the main engine to be moved further aft), eliminating the sterntube, forward sterntube bearing and aft seal and installing the T-Boss solution, shipbuilders can take advantage of reductions in material and labor costs, while ship operators benefit from significant OPEX savings. It is the most significant ship design intervention in more than a century.« In June 2024, ABS published guidelines for the Requirements for Sterntubeless Vessels with Water-Lubricated Bearings and introduced the ABS STBLess-W Notation. The Blue Ocean Alliance is a consortium of industry partners – ABS, Thordon Bearings, Wärtsilä, SDARI, and the National Technical University of Athens (NTUA) – that have collaborated to develop and promote the sterntubeless ship concept.

Hall A4 | booth 123

DUALOG

Data exchange in shipping

At SMM Hamburg 2024, Dualog presents, besides its maritime cybersecurity, email, and internet management solutions, »Drive« – a data exchange service designed in collaboration with shipping companies. According to the company Dualog Drive supports automated file transfer tasks, such as syncing PMS, SMS files, transfering IoT and VDR data. Dynamic folder creation for each vessel simplifies file routing. It automatically moves new files to or from ship once detected in the specified folder. Files are removed from the source folder once they are sent, saving disk space. Furthermore, Dualog Drive provides one-way sync (mirroring) to maintain data integrity across systems, avoiding conflicts and inconsistencies.

It also integrates with SharePoint. Ensures a unified folder structure across the fleet. A local mirror copy of SharePoint onboard provides availability of documents in case of connection failure.

Besides Dualog Drive ensures a consolidated view of all fleet transfers in a single interface. Filtering by ship and type of transfer. Provides alerts and notifications.

Hall B6 | booth 609

MARITIME BOOKS

Ulrike Fischer – Likes won't help you in a storm. Stories told by Hapag-Lloyd captains and crew members, Vol. 2

What's it like, to be responsible for steering a new, 400 meters container ship like the »Berlin Express« from Singapore to Dubai for the first time? How to cope with a collision in the Suez Canal? And why would you take 600 herring on a voyage?

In this, the second volume of Hapag-Lloyd's seafaring stories, captains and crew between the ages of 37 and 84 tell exciting, touching and amusing tales of their everyday lives on board. They take the reader along on a journey into their working life, their favourite ports and unforgettable moments. They share the experience of all Hapag-Lloyd seafarers: a profound sense of responsibility for each other, the ship and the cargo and most of all, a love of seafaring.

Likes won't help you in a storm. Stories told by Hapag-Lloyd captains and crew members, Vol. 2
Author: Ulrike Fischer
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HANSA.NEWSCAST WITH REINHARD LÜKEN, MANAGING DIRECTOR AT VSM

Navigating the future of shipbuilding

As we continue with the third day of SMM 2024, we are pleased to share an insightful conversation with Reinhard Lüken, Managing Director of VSM, the German Shipbuilding and Ocean Industries Association (VSM / Verband für Schiffbau und Meerestechnik).

Reinhard Lüken shares his insights on the current trends shaping the maritime industry, the pivotal role of sustainability, and the challenges and opportunities that lie ahead for shipbuilding and maritime technology. Join us as we explore how the industry is adapting to global changes, the push towards greener practices, and what the future holds for shipbuilding innovation.

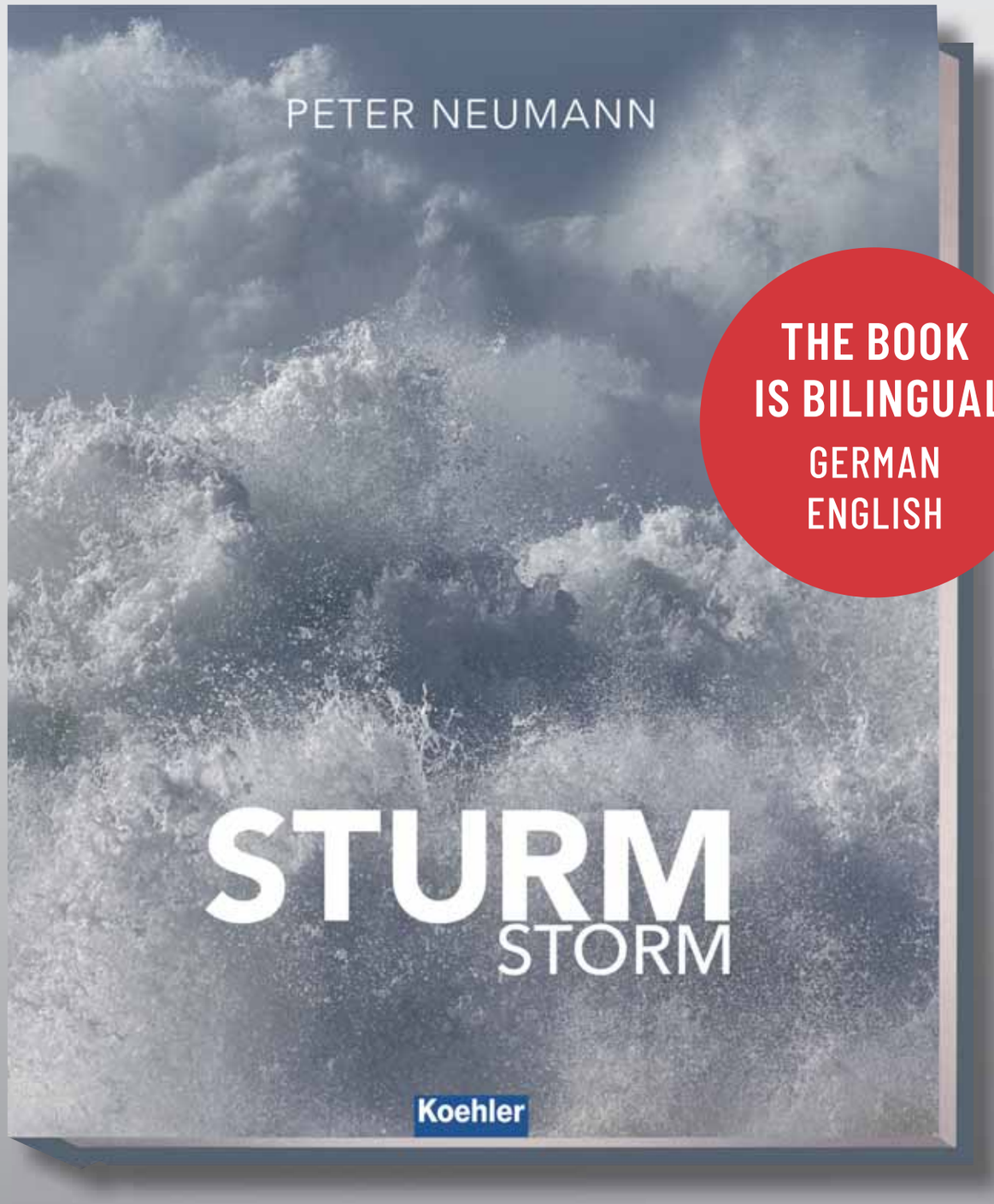
- **Industry Insights:** the global developments impacting maritime industries are discussed – from pandemic-driven challenges to the future of shipbuilding in a changing world.

Reinhard Lüken, Managing Director, VSM

- **Sustainability at the Forefront:** Discover how Germany is leading the way in adopting greener practices in shipbuilding and the role of innovation in driving climate neutrality.
- **Looking Ahead:** What trends and technologies will shape the next decade?

Whether you're a maritime professional or just interested in the future of ocean industries, this is a discussion you don't want to miss.

Listen now and stay informed as we continue to explore the key themes of SMM 2024.



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