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gmec panellists discuss how to kickstart green projects

Source: Charlie Bartlett

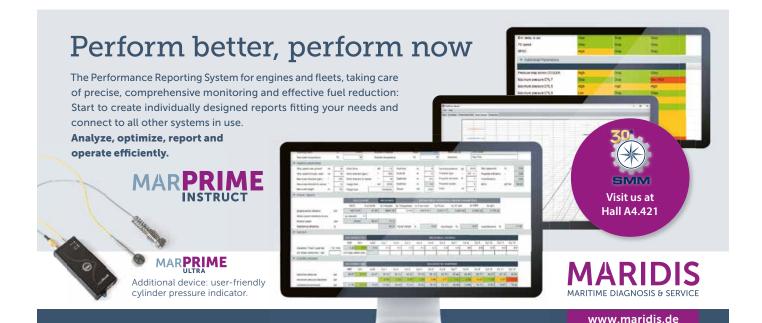
gmec: 'green' technologies no longer just an option

"We should not be talking about 'green technology'. At this point, we should be talking about 'technology'. We should not be talking about 'green finance,' either. We should be talking about 'finance,' and 'black,' 'dirty,' or 'dangerous finance'."

This was the declaration from Gavin All-wright, Secretary General of the International Windship Association, commenting a few minutes before his own session was due to start at the Global Meeting of the Environmental Congress (gmec) in SMM yesterday. The point he was making: sus-

tainability is now an essential component of ship operation.

Silverstream Technologies' Chief Technologist David Connolly explained the development of sustainable technologies – in this case, hull lubrication – as an exercise in patience. "It's not a short



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journey," he explained. "Going back to the analogy of the tree, when it sprouts it does not mean the journey is over. Most of the time you grow the tree, you have a stake next to it, to make sure it's not going to be taken out by whatever happens in the first few years.

"It is the same journey for innovators. That Eureka moment for [Silverstream] technology ... that was 2010. 2014 was the first trial, and then it has taken effectively until 2020 for that to accelerate and for everything to line up. It's a long journey, and takes not just finance, but expertise. We had private financing and a very determined CEO... bloody-minded, to be quite honest, but fantastic with that." He was referring to Silverstream Technologies' founder and CEO, Noah Silberschmidt.

In the following session, attendees saw this phenomenon in action, with Cristina Aleixendri, COO and co-founder of bound4blue, who began her career in aviation. Her rigid sail designs, rather than scooping air, propel a ship forward like an aircraft wing turned upwards, she explained. Her company has recently fitted sails to a vessel in the space of one month, a record so far.

"We spent so long looking at aeroplane wings. And then I saw the shipping industry; high fuel consumption, because the technology was not the best. This is not available today and they will need it." Professor Orestis Schinas of green financier HHX Blue, explained that lofty green ambitions were not so well borne out in practice. "In my experience, the owners have a very simple question: I have a bulk carrier... it consumes 40 tonnes of fuel a day... how can I make that 36?" They don't even know what CII or EEXI means"

Most panellists agreed that this showed that sails, hull lubrication and other technologies had reached the point of being self-justifying, in respect of cost. "It is just a matter of time," said Johan Boomsma, managing partner of Boomsma Shipping, a ship management firm. "With today's fuel prices, and ETS coming up sooner or later, it is very clear that wind ship propulsion will be different." Allwright extolled the virtues of wind propulsion: "We've always looked at the industry as a hard-to-abate sector," he said. "But wind is a propulsor, you don't have to mine it, store it, carry it on board, or bunker it."



> DAILY VIEW

Don't miss the Daily View - our team of reporters will broadcast highlights from this year's SMM in an exciting daily video.

Watch it at

www.shipandoffshore.net www.youtube.com/user/ ShipOffshoreTV

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Oversea customers will now benefit from more than ten years of Wallenius Marine performance data

Source: Charlie Bartlett

ABB and Wallenius 'take it external' with Oversea

ABB and Wallenius came together to discuss Oversea, a joint service offering which comprises performance monitoring, digitalisation, and shore support as-aservice. The service was formed as a way for Wallenius Marine, a ship design and ship management subsidiary, to capitalise on its years of accrued knowledge, explained Jesper Lögdström, head of performance management, Wallenius Marine.

"Collecting the data, looking at that to optimise, the rest - we have actually been doing that for over a decade," said Lögdström. "But this is an in-house service that we have and after a while, we were thinking 'why don't we take it external?'

"But we realised we couldn't do this on our own... we are ourselves quite a small company when it comes to global coverage. So we were lucky that ABB has a lot of experience in the utilisation of a global network service, and they can reach out to service all the customers coming in."

It has been built on ABB Genix big data architecture, which Tomas Arhippainen, head of Business Development, Service, ABB Marine & Ports, described as "scaleable ... and cyber-secure."

While ABB's engineers freely admitted that their company has been one of many to develop a performance and condition monitoring framework, the group believes that the addition of more than ten years of expertise and data from Wallenius Marine makes for a compelling value proposition. "It's about action," Arhippainen explained. "It's not just about getting a screen showing you a KPI. We actually built in the workforce, so if there is a critical failure, you do not need to send an email somewhere."

And in terms of the value proposition: "many shipowners have five, six, seven tools to do that same thing as Oversea. When we combine them, together with fleet support centres as-a-service, we can push down cost."

ABB at SMM: Hall B6 / Stand 329



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Source: Schiff&Hafen

Rolls-Royce opts for methanol, rolls out hybrid propulsion timeline

Rolls-Royce has released a roadmap for a hybrid propulsion system, which comprises methanol-fuelled engines, and from 2028, a fuel cell system. Committing to launch a methanol-fuelled engine in 2026 based on the mtu Series 4000, the group has appeared unusually forthright in favouring methanol over ammonia for future engine designs, saying that it is easier to handle and store.

"We are clearly committed to methanol as a marine fuel for the future and want to be a pioneer here," said Denise Kurtulus, vice president Global Marine at Rolls-Royce.

The company also went on to suggest synthetic diesel as a future fuel. "Today we have no green hydrogen, and ammonia from our perspective is a very specialised fuel, with very high challenges from a safety perspective," said Tobias Kohl, Rolls-Royce Power Systems director, Application Engineering Marine.

"So we run through the analysis, we believe methanol is a kind of sweet spot in energy density, cost, and several other issues," he continued.

Methanol as a carbon-based fuel can be stored as a liquid at room temperature, and is relatively non-toxic compared with the far more noxious ammonia. It also has advantages over ammonia in terms of energy density. However, direct funnel emissions from methanol contain CO2, and to re-



Rolls-Royce is pinning its colours to the methanol mast

Source: Charlie Bartlett

main carbon-neutral, methanol must have been generated using a combination of renewable energy, and captured CO₂.

Rolls-Royce also intends to use fuel cells with methanol. The advantage of doing so would be lower maintenance thanks to almost no moving parts, as well as higher efficiency, with fuel cells generally capable of an efficiency between 50 and 60%. Fuel cells powered by green methanol emit small amounts of CO2 from the required methanol reformer, but no more than would be found in the e-methanol.

Rolls-Royce Solutions GmbH at SMM: Hall A3 / Stand 307



MAN's Jones calls for more 'green retrofits'



The *ElbBlue* was the first ship to bunker SNG, generated from renewable energy

Source: MAN Energy Solutions

Wayne Jones OBE is the latest senior shipping figure to call for more action to cut emissions from existing ships and make their operation more sustainable. Jones, a Member of the Executive Board of MAN Energy Solutions, said that without further action, shipping could significantly overshoot Paris Agreement targets.

Speaking at a panel discussion on 'Climate Analysis and Perspectives', Jones warned that 'net-zero' is already out of range by 2050 and that ambitious actions are required to limit the emissions

overshoot. Shipping is being held back by a lack of regulations that would incentivise the take-up of synthetic fuels, he declared. He referred to earlier analysis with German industry associations, VDMA and VSM, which demonstrated that with the right regulatory framework, shipping in Europe could be climate-neutral by 2045, not emitting any more greenhouse gases after that. But even though this would be faster than the IMO's 2050 target, it might still not be possible to hit the Paris Agreement goals because of the overshoot in emissions from existing ships between now and then. "I'm confident that the industry will incentivise newbuildings and encourage dual-fuel take-up [but] it's crucial that it also focuses on the challenge posed by the existing, fossil-fuel-burning fleet. Here, it must encourage green retrofits; otherwise any initiatives will have just a negligible effect on total fleet emissions," he said. Jones insisted that there are no technological obstacles for tougher CO, regulations and cited the container ship, ElbBLUE, as an example. Owned by German owner, Elbdeich Reederei, and chartered to Unifeeder, the ship has a MAN 51/60DF dual-fuel engine, previously converted to burn LNG. Last September, the vessel bunkered 20 tonnes of synthetic natural gas, generated using 100% renewable energy.

MAN Energy Solutions SE at SMM: Hall A3 / Stand 301





Advanced lifeboat for more than 1,000 persons

Survitec, a specialist in safety and survival technology, will be showcasing Seahaven, one of the world's largest advanced evacuation systems at SMM. Having received Lloyd's Register type approval earlier this year, Survitec is set to revolutionise the way shipowners, designers and builders meet SOLAS requirements for the safe and rapid evacuation of passenger ships.

This year, Survitec announced that it is teaming up with Norwegian Cruise Line Holdings Ltd to work on a cruise ship design incorporating Seahaven as the primary means of evacuation for the cruise line's Prima class of ships. The 1,060-person-capacity Seahaven, a self-propelled inflatable lifeboat, marks a significant step forward in the maritime business, the company stated.

Typically, a 4,000-passenger-capacity cruise ship requires at least twelve to 16 lifeboats and up to four marine evacuation systems with liferafts, taking about 30 minutes to evacuate the ship. Just four Seahavens would be required to evacuate the same number of passengers in the same amount of time, freeing up to an additional 85% of existing lifeboat deck space for greater passenger experiences.

Visitors will also be able to learn more about Survitec fire safety applications for vessels operating and transporting alternative



Fire-fighting, evacuation, enhanced safety on the Survitec stand

marine fuels together with a portfolio of life-saving appliances and wearables.

Survitec at SMM: Hall B5 / Stand 528



Fuel and retrofit flexibility



WinGD presents its latest fuel-flexible and emission-reducing engine technologies

Swiss marine power company WinGD (Winterthur Gas & Diesel Ltd) will showcase its latest fuel-flexible technologies, including engine advances and energy applications needed to decarbonise the merchant fleet.

The XDF engine has been enhanced with XDF2.0 technology, now available in a compact on-engine version for easy installation. XDF2.0 improves combustion control, minimising fuel consumption and pilot fuel requirements across the engine

load range. On top of emissions reductions and including meeting Tier III NOx limits in both gas and diesel mode, the XDF2.0 has achieved reductions in methane slip of up to 50%.

All WinGD's engines, along with those already in service, can be retrofitted for ammonia and methanol fuels from 2025. To drive emission reductions further and reduce fuel costs, WinGD's XEL Energy Solutions is a system integration and advisory service for electric and hybrid power arrangements with the two-stroke engine at their core. The whole system is designed, configured, and optimized for the vessel's specific requirements. To meet the upcoming EEXI regulations, WinGD has developed a simple, cost-effective software-based power limitation solution that assures compliance within a single port stay.

WinGD at SMM: Hall A3 / Stand 108

Becker already optimising rigid sails

Having merged with Japanese propeller maker Nakashima last year, Becker Marine Systems, as well as its usual range of fore-and-after-flow propeller optimisation devices, is also now exhibiting a range of technologies for sailing vessels, developed by the company during the pandemic years.

Updates to Becker's fore and aft duct and rudder designs include new materials such as carbon fibre below the waterline. One of its newest offerings is a retractable daggerboard system, which acts as a passive foil, as on a small sailing boat, to optimise a vessel's heading against lateral

movements. Becker says the foil can improve performance on such vessels by 5%. The designers working on the sails, managing director Dirk Lehmann told Schiff&Hafen, say that something is needed below the waterline, to support "the core stability of the ship".

"It is a hollow profile, so very efficient and with low drag. When the ship has a certain deviation, it produces lift to the correcting side, like the daggerboard on a sailboat." Becker has also designed what Lehmann claims is a more efficient design of rigid sail. Though rigid sails have featured in various new tanker, bulker and car carrier designs recently, Becker purports to have

applied the same knowledge of fluid dynamics used in the designs of its Mewis Duct, Twisted Fin and other designs, to that of sails. The result is an off-centre, wing-like construction which narrows towards the trailing edge, and makes for better aerodynamics, Lehmann claims. Lehmann says that Becker's rigid sail design would provide propulsion at lower wind speeds, enabling it to provide better fuel economics for the ship overall. "So we can use it for wide ranges of wind velocity, from slow to high winds."

Becker Marine Systems GmbH at SMM: Hall A1 / Stand 225



ONE OF THE LARGEST IN MENA BOOTH: B3.EG.204

PART OF PETER GAST SHIPPING GMBH



Tailor-made davit systems and cranes on display

d-i davit international-hische GmbH is a German supplier of deck equipment, such as tailor-made davit systems and cranes. Rather than off-the-shelf items, the company specialises in customised systems including those for offshore, navy, mega-yachts, and Arctic temperatures down to -52°C.

At its booth, the supplier provides details of its new staff member qualification: FROSIO Inspector Level III for Surface Coating. FROSIO is an advisory board from Norway that has been responsible for the certification of coating inspectors since 1986. The FROSIO certificate is recognised worldwide. Among other things, FROSIO inspectors monitor the entire corrosion protection process. They are responsible for the planning, the implementation, and the acceptance of all protective coatings.

In addition, the company highlights its successful implementation and use of the whole branch of digital applications to master the last pandemic years. In this changed work setup and with new skills, two big shipyards in Northern Europe awarded substantial cruise liner orders to



The supplier shows one of its all-electric slewing cranes at its booth

Source: Evers/Schiff&Hafen

d-i davit. This provides a welcome boost for mid- and long-term business for all involved industry branches. d-i davit international-hische at SMM: Hall B5 / Stand 223













THURSDAY, SEPTEMBER 8th

9:00	MS&D Opening & Keynotes MS&D international conference on maritime security and defence Room Chicago / Conference Area A	11:30	Panel II – Offshore Energy Technologies for Today Offshore Dialogue Conference Session Room Marseille / Conference Area B
9:00	MariMatch at SMM Enterprise Europe Network Hall B4.0G	12:00	ADMIRALTY Navigating the maritime future seminar
9:30	Panel I – Offshore Technology – Mitigation and Adaption to		UK Hydrographic Office Meeting Room B6.4 / Hall 6
	Climate Change Offshore Dialogue Conference Session Room Marseille / Area B	12:00	Sea Machines Automation & Perception Enabling your Safest Voyage Yet Mackay Marine
10:00	Shipowners Event "New Blue		Stand 312 / Hall B6
	Innovations" GCE Blue Maritime Cluster Meeting Room B7.1 / Hall B7	13:00	Sustainability on the agenda: How do we design and build ships? Danish Export Association Cruise & Ferry Stage / Hall B5
10:00	TrAM seminar: The world's first zero-emission high-speed craft		
	NCE Maritime CleanTech Room Kopenhagen 4 / Conference Area B	13:25	Panel II – Regional Maritime Security MS&D Conference Session
10:00	Castrol Smartgains card game		Room Chicago / Conference Area A
	Castrol Stand 213 / Hall A4	14:00	Metal Casting innovation with sand 3D printing technology
10:15	e4ships & Zero-Emission Shipping Symposium		Samyoung Machinery Co., Ltd. Room Kopenhagen 4 / Conference Area B
	NOW GmbH Room St. Petersburg / Conference Area A	14:00	CIMAC Circle: The ship as a "data" ecosystem
11:00	Peace Boat's Ecoship - towards a zero emissions cruise ship Peace Boat		VDMA presenting CIMAC Room Kopenhagen / Conference Area B
	Cruise & Ferry Stage / Hall B5	15:00	Cobham Satcom: Connectivity Challenges Today & Future; Hybrid
11:10	Panel I – Maritime Security		Solution Benefits
	MS&D Conference Session Room Chicago / Conference Area A		Mackay Marine Stand 312 / Hall B6
	noon energy content read		5 tall 5 2 2 / 11 tall 50

DNV's Happy Hour 16:00 DNV Stand 221 / Hall B4.GF

Networking event Norwegian Maritime Exporters Stand 300 / Hall B7 16:30

17:00 Wine o'clock Cruise & Ferry Stage / Hall B5

17:00 Reception Observator / Hepworth Group

> All dates at SMM including Speaker Slots on the Digital Transition Stage, Green Transition Stage and Cruise & Ferry Stage:



Selection, no claim to completeness, all information without guarantee.

VDMA presentation programme

The Marine Equipment association VDMA is providing a programme of presentations held at VDMA main stand in hall A1. Attendance is free of charge. Experts will held presentations according to a fixed schedule and they will be available for individual discussion on the VDMA stand.

15-minute-presentations at VDMA stand Thursday 08th Sept

Hall A1 / Stand 520

11:30 - 11:45 Uhr

"CCUS - Carbon Capture, Utilisation and Storage"

Dr. Daniel Peitz, HUG Engineering AG, Elsau, Schweiz

11:45 - 12:00 Uhr

"The new MTP automation standard works! A big step forward for the shipbuilding industry" Hauke Schlegel, VDMA Marine Equipment and Systems

12:00 - 12:15 Uhr

"Smart module automation with MTP designer" Oleg Makarov, PHOENIX CONTACT Electronics GmbH, Bad Pyrmont

12:15 - 12:30 Uhr

"360° security for modular ship systems" Niklas Lecker, PHOENIX CONTACT Electronics GmbH, Bad Pyrmont

Digital Transition Stage, VDMA-Sessions Thursday 08th Sept

Hall B6

10:30 - 12:00 Uhr

"Additive Manufacturing - Solutions for Industry - Technology experts report"

14:30 - 15:30 Uhr

"Smart Connectivity by MTP - Improvements for Shipping and Shipbuilding"



Woodward – new injectors for new fuels

Source: Woodward L'Orange GmbH

New injection systems from Woodward L'Orange

US parent, Woodward, and German engineering subsidiary, Woodward L'Orange are developing a portfolio of new injection systems for P2X fuels intended for large engines, the group has announced. Ranging from 100 kW to 1,000 kW per cylinder, the injectors will enable all combustion concepts.

For methanol, the companies are developing a range of injection systems for both port fuel injection (PFI) and direct injection (DI). The injectors are designed for optimisation of fuel to enable good mixing and minimise wall-wetting.

Hydrogen injectors are also under development. As with methanol, they can either inject hydrogen directly into the combustion chamber, or integrate the in-

jectors close to the intake valves into the intake manifold, the group said.

In another development, Woodward's SOGAV gas admission valves are being optimised to withstand the properties of new fuels including lubricity, corrosion behaviour, and hydrogen embrittlement. Some valves also now comply with the IGF Code. For example, the SOGAV235 is now IGF Code-compliant and, together with SOGAV105/145 types, can be used in IGF Zone 0 applications. This is defined as an area in which an explosive gas atmosphere or a flammable gas or vapour is present continuously or is present for long periods.

Woodward L'Orange GmbH at SMM: Hall A4 / Stand 407





Three questions for...

How important is it for you personally and the company that SMM is finally taking place again in its traditional format after four years and what do you expect from the show?

It is very important for us to be physically at the show. In the last two years, a large part of the project meetings have been virtual. Increased frequency can cause interpersonal relationships to fall short. In particular, networking with other industry representatives is difficult at large online events. We are therefore pleased to welcome existing customers as well as new potential customers at our booth.

What can visitors expect at the WAGO booth this year?

Visitors will experience how WAGO supports in the development and automation of sustainable marine propulsion systems with future-proof and reliable components, how to reduce downtime and increase operational safety on board, and how to reduce emissions.

Our topics in 2022 are:

- > Solutions for sustainable marine propulsion
- > Controller redundancy for increased availability
- > Smart cabin automation
- > Prepared software modules to easily optimise subsystems

In general, what do you consider the biggest challenges for the maritime industry and how can we meet them?

In my opinion, one of the biggest challenges is to continue the innovative strength. Many supply chains are currently very tense, so a lot of effort is needed to implement projects with existing solutions and time for new innovations is becoming scarcer. For me, it is therefore all the more important to support OEMs as a consulting partner in these times and to drive innovation forward together.

WAGO GmbH & Co KG at SMM: Hall B5 / Stand 511

Lubmarine celebrates 70th birthday

TotalEnergies subsidiary, Lubmarine, marked its 70th anniversary at its SMM booth yesterday with celebrations and the launch of a book covering key developments over the company's history.

In 1952, a small petroleum company based in France inherited a marine business engaged in providing lubrication services for about 40 steam-powered 'Liberty Ships'. Seventy years later, the company is part of TotalEnergies Lubrifiants, a leading marine lubricants supplier, and provides products and service support for more than 8,000 ships every year. The book will detail the company's seven-decade journey, noting the passion and dedication of employees old and new, onshore and at sea.

Arnaud Guichard, Lubmarine general manager, said: "The DNA on which the



Today, Lubmarine is one of the leading marine lubricants suppliers

Source: Bosch/Schiff&Hafen

original business and those that evolved through the last 70 years, remains at the heart of the business today; innovation, entrepreneurship, technical knowledge, support, flexibility, creativity, drive and determination to better serve customers across the marine industry."

Lubmarine TotalEnergies Lubrifiants at SMM: Hall A3 / Stand 409

Sperry unveils more digital functionality

Sperry Marine, the navigation expert, will use SMM 2022 to unveil the latest in its series of initiatives to deploy digital tools that help vessel operators increase efficiency and lower emissions.

The company will debut two new services designed to improve vessel safety, enhance performance, and lower fuel bills. These include an approach that reinforces navigation safety to deliver improved course-keeping with reduced fuel consumption and a lower workload on the bridge. In its latest industry collaboration, Sperry Marine will also unveil a new application designed to help vessel owners collect and analyse onboard data, supporting efficient fuel usage and regulatory compliance, while optimising voyage routing.

The new services reinforce Sperry Marine's heritage of developing and deploying digital, networked navigation and voyage support that enable the maritime industry to safely embrace digital tools that enhance efficiency and improve environmental performance.

Northrop Grumman Sperry Marine BV at SMM: Hall B6, Stand 606+615





New Ships

The most important developments in the worldwide shipbuilding industry at a glance

www.new-ships.net/smm2022



Bachmann electronic: preparing the maritime industry for fully autonomous shipping by 2035

Source: Bachmann electronic GmbH

Autonomous shipping calls for bestin-class automation

Haptic feedback is changing the maritime industry. Haptic technology connects operators with systems and devices by stimulating the sense of touch, and haptic assistance systems provide physiological feedback about steering and speed, as is common in modern automobiles.

On maritime vessels, haptic assistance systems support the crew not only with tactile feedback to warn of imminent danger, but also by assisting with navigation optimisation. This systemic support is an important component of remote vessel operation, and it also represents the next step towards fully autonomous shipping.

Bachmann electronic, global automation hardware and software provider, has announced a tailor-made autonomous shipping package dedicated to the maritime industry. Improved safety and durability, as well as lower maintenance costs and higher profitability, are just some of the benefits promised by Bachmann.

The targeted package combines Bachmann's robust controller hardware and secure software with its condition monitoring, HMI and SCADA solutions. Powered by artificial intelligence, Bachmann

»The security functions, hardened operating system and the process power offered by Bachmann is more than enough to securely run a full dynamic model in real time - making it easier to test new systems and develop new ideas, and allowing us to maintain our quality.«

Roy Kok

Founder of Smart-Ship

systems prioritise security, reliability and smart maintenance to keep autonomous vessels on course.

Vessel autonomy, safely navigated

Modern control algorithms eliminate the risk of human error, ensuring safe navigation and preventing maritime collisions and accidents. Multi-tasking in real-time guarantees rapid processing during critical situations and ensures the quickest possible response. Artificial intelligence is further applied to optimise navigational efficiency and route planning. By reducing energy usage, costs and environmental impact are also minimised.

High-level security

The role of AI in autonomous shipping involves the aggregation and processing of vast amounts of data, all of which must be securely stored. Bachmann offers comprehensive security as an integral part of its



solution development. A versatile control platform includes all relevant hardware and software interfaces. The Bachmann programming environment enables simulation, modern languages, and scripting, with guaranteed connectivity to all vessel components, such as bow thrusters, generators, and control levers.

Continuous condition monitoring and smart maintenance

Bachmann's condition monitoring systems combine condition and operational data to enable optimised vessel maintenance and repair planning, reducing the corresponding costs. The early detection of an emerging failure prevents major downtime and minimises the cost of repairs. Smart, strategic maintenance is achievable thanks to advanced machine learning and superior monitoring capabilities, keeping systems running smoothly at all times.

Hard-wearing in all conditions

Uninterrupted, top-level performance is guaranteed with robust hardware and software that are well protected from the elements, Bachmann's hardware withstands temperatures ranging from -40°C to 70°C, as well as up to 100% relative

»With the help of Bachmann electronic's modern control architecture, we can offer modules for all areas of navigation, monitoring and fleet management for inland vessels, allowing us to jointly facilitate the daily activities of captains and shipping companies.«

Dr. Alexander Lutz

Founder and CEO of Argonics GmbH

humidity. In-built redundancy ensures the continuous availability of critical systems, and powerful CPUs effortlessly process complex control algorithms, supporting fully integrated, functional systems.

Reliability: the key to profitability

Autonomous vessels depend on reliable, tried-and-tested control systems. Bachmann facilitates virtual vessel commissioning that reduces errors, increases system quality, and improves functional reliability during real-world operations. Modern simulation technology, such as HIL testing and digital twinning, further optimises efficiency and maximises quality. With systems fully certified for harsh conditions, where reliability becomes especially critical, Bachmann also paves the way to classification approval with experience and a pragmatic approach.

The human touch: lower complexity, better working conditions

Rapidly changing environmental conditions, busy shipping lanes and unforeseen course changes present constant challenges to reliable vessel control. Simplifying this complexity, without making any sacrifices, enables crews to focus on what matters. State-of-the-art visualisation technology with web-based SCADA and HMI fine-tune this focus and lead to improved working conditions for everyone on board, with user-friendly haptic control that is guaranteed through rapid cycle

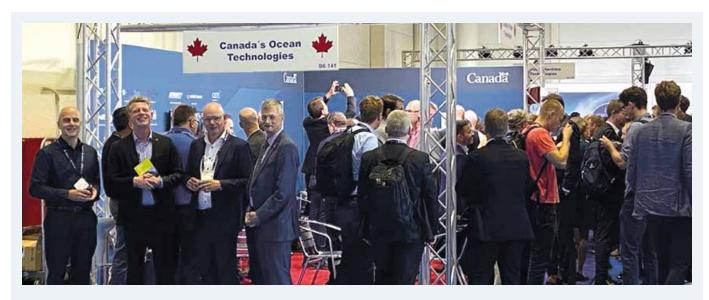
Taken together, this product and service portfolio has been specially designed to help prepare maritime vessels for the transition from manual operation to remote operation to complete autonomy.

Bachmann electronic GmbH at SMM: Hall B6 / Stand 305



Navigation is just one feature of Bachmann's software

Source: Bachmann electronic GmbH



Canada reception at SMM: strengthening the German-Canadian partnership

Source: Lau/Schiff&Hafen

Wind power benefits come under the spotlight

Participants at the Wind Assisted Ship Propulsion (WASP) Conference 2022 yesterday received updates on the significant energy savings relating to three technologies installed on five ships.

Three early adopters of wind power technology – Scandlines, Rord Braren, and van Dam Shipping – recounted their experiences in a session moderated by Gavin All-

wright, secretary general of the International Windship Association.

The WASP project is funded by the Interreg North Sea Region programme, part of the European Regional Development Fund, with a grant of EUR 5.4 million. It brings together academic institutions, technology providers and shipowners to research, test, and validate the performance of different technologies.

Trial results vary but are positive. After a year of operation with a Norsepower Rotor Sail on board the hybrid ferry, MV Copenhagen, for example, Scandlines opted to install a second system on another hybrid vessel, MV Berlin, in May this year. Fuel savings on board the MV Copenhagen had averaged about 4% the company said, but in optimal conditions could rise as high as 20%.



Ecochlor and Sinotech announce new alliance

Ballast water manufacturer, Ecochlor Inc. (USA), and Shanghai engineering firm, Sinotech, CCS Co., Ltd (China), have agreed a new framework to cooperate in sales, marketing and after-sales technical support. The companies plan to build on their respective strengths and extend each other's reach into new markets. The new agreement has been formalised in a Memorandum of Understanding.

Ecochlor will help Sinotech to develop sales of its low-powered marine scrubber and carbon capture and storage (CCS) systems. These are available separately or as a package. Meanwhile Sinotech will assist the US company in developing a Chinese market for its Ecochlor filter-less and hybrid EcoOne® ballast water management systems. The company recently launched the EcoOne® Container Unit for the offshore drilling sector and vessels with infrequent ballasting operations at medium-to-high flow rates. Sinotech co-founder and CEO, Chen Shifu, said: "We are grateful to have this opportunity with Ecochlor to collaborate in promoting their ballast water management systems in the Asian market, as well

as their valuable input in assisting us with

our scrubber and CCS system global sales."

Andrew Marshall, Ecochlor CEO, commented: "I am pleased to announce this initiative. We have put significant resources into researching partnerships with other like-minded environmental companies in the marine industry. I look forward to continuing to build on our agreement in the interest of jointly promoting our businesses so that we may better support shipowners comply with all their environmental regulatory requirements both now and into the future."

Ecochlor at SMM: Hall A1 / Stand 327

TGE well-placed in rapidly expanding gas sector

TGE Marine is one of the leading liquefied gas systems' providers, specialising in the design and engineering of cargo handling systems and tanks for any type of liquefied gas carriers, bunker ships and floating storage and regasification units (FSRUs).

At SMM, the company highlights four of its core competences. With its track record as a pioneer in the development of LNG fuel gas systems, including systems for all major engine makers and types of engines (two-stroke, four-stroke, high/low pressure), the company

claims to be the most experienced independent provider of fuel gas systems worldwide. Having equipped more than 250 gas tankers, TGE demonstrates its capabilities to supply cargo handling systems and cargo tanks for LPG and ethylene gas carriers. Furthermore, TGE Marine has a proven track record for small LNG carriers, shuttle tankers, and bunker vessels of 5-30,000m³ capacity. Its supply includes cargo tanks and complete gas-handling systems for LNG carriers and bunker vessels of up to 40,000m³ capacity. The company's floating LNG storage systems are devel-

oped for midsize energy centres and remote gas consumers. They can be used for monetising stranded gas from offshore locations on FPSOs and FSRUs. TGE Marine supports its clients and their projects for gas carriers and fuel gas systems from the development throughout the lifetime of the vessel. Project management, excellence in engineering and a strong team of supervisors ensure professional results during the project execution.

TGE Marine Gas Engineering GmbH at SMM: Hall A4 / Stand 235



Napa's systems – maximum efficiency and safety

In Hamburg, Napa, a global provider of software and data analysis for the maritime industry, will reveal how data-powered solutions help design and operate the sustainable ship of the future to maximise efficiency while ensuring safety.

Napa is spearheading digital twin and cloud-based technology, which it applies throughout the vessel's lifetime, from its design to stability calculations and voyage optimisation. In shipyards, Napa's 3D model-based integrated design platform supports innovation and optimisation in ship design by facilitating quick iterations, reliable analyses, better collaborations as well as 3D model-based class approvals. At sea, Napa's product suite uses vessel-specific insights, provided by 3D models and digital twins, taking voyage planning to the next level. Coupled with weather data, Napa Voyage Optimization calculates optimal routes and speed profiles, enabling captains and operators to minimise emissions for each voyage. Crucially, Napa's digital applications also ensure the safety of fleets during this green transition. The next-generation Napa Stability module enables crews to manage stability and loading conditions on board, and its cloud-based platform facilitates real-time information shar-



Screenshot of the Napa FLEET Intelligence fleet view

Source: Napa Oy

ing between teams at sea and on shore – supporting a more proactive approach to safety. Concerning bridging design and operational data, Napa's experts will be available to discuss how it is supporting the industry's decarbonisation by designing the greener future fleet and operating today's vessels safely and sustainably.

Napa Oy at SMM: Hall B1.OG / Stand 307

Low-emission mobile power generation

eCap Marine GmbH develops and manufactures mobile, containerised power generation applications for supplying sustainable power to ships at berth and at sea. At SMM, the company is demonstrating the eCap EPS (Electric Power System) — including all eCap Marine's semi-mobile and emission-reduction or emission-free power generation technologies.

According to specific application scenarios, and requests and specifications from clients, each EPS can be customised and configured for using a range of different propulsion systems and alternative fuels. Compact and movable power genera-

tion systems guarantee stable, decentralised off-grid power supply.

Applications include shore power supply or auxiliary power units facilities in ports as well as silent and emission-free power supply for construction sites, remote areas, festivals, and so on. Compared with other systems, the compact eCap EPS has a small environmental footprint while all key and required components are integrated. In addition to land-based applications, eCap EPS is advantageous for installation on board vessels, as a battery system, hydrogen setup, or hybrid-drive, either for retrofits or for newbuilds.

eCap Marine GmbH at SMM: Hall A3 / Stand 317





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Elbe beach at Övelgönne in the west of Hamburg

Source: Mediaserver Hamburg/Andreas Vallbracht

Alster or Elbe, that is the question

HSV or St. Pauli, Holsten beer or Astra, Kiez or classic – Hamburg is full of contrasts. Especially when it comes to the two rivers shaping its face. "Alster or Elbe?" is a question of faith among Hamburg residents, and literally everyone has their own answer. While the Elbe River with its port that never sleeps is the city's main artery, the Alster Lake represents the heart of Hamburg.

The rough Elbe with its tireless port has always been the domain of the working classes – even if many offices and luxury apartments have now settled along its banks. Gigantic container ships from China or returning cruise liners from Scandinavia can be seen making their way, accompanied by the constant humming of the cranes. There

are many favourite spots along its banks of which "Brücke 10" is certainly one: Hamburg's best fish rolls, what more is there to say? Go there, sit by the water, watch the ships passing by, add a cold beer – that is pure Hamburg happiness. Or visit a small shack in Oevelgönne, where the locals are looking for the only real beach feeling: the "Strandperle" is the living room of Hamburg whenever the weather is nice. Another local cult has become "Frau Hedi", a floating club that sails across the Elbe. Only 90 people can travel on the barge, so be quick with bookings when one of the famous parties is on.

While the port denies the Elbe a moment's peace, the Alster creates Hamburg's idyllic centre. On the western banks of the Outer Alster Lake begins the Hamburg of white

villas, white boats and white swans. "The right side of the Alster" is home to many of the city's affluent citizens. On a sunny afternoon, you can see them in the club houses of the time-honoured rowing clubs, and on their sailing boats on the water. In "Café AlsterCliff", you can watch typical residents having breakfast - those who, if there is one thing they would rather be than being from Hamburg, would choose to be British. While this cliché may be true in essence, the truth is fortunately more complex. As an urban recreational area and Hamburg's most popular jogging route, the Alster belongs to everyone. The best way to explore it and its adjacent canals is by boat. There are a couple of boat rentals, but none is as well located for a glimpse of Winterhude's water life as "Bootsvermie-

tung Dornheim", which rents out different types of boats, from Alster canoes over pedal boats to gondolas. Be sure to plan a stop at "Café Canale" in the Mühlenkampcanal, where coffee and homemade sheet cakes are served directly to the boat. Sporty ones venture on to a stand-up paddling board and glide standing over the water. Rentals and courses are for example offered via the "SUP CLUB". More comfortable are the Alster water taxis, departing hourly from Jungfernstieg and other stops - you just have to decide whether you want to get off again and again at the different stopovers or whether you want to take a tour of the canals. Whichever transportation mode you choose, make sure to be nice to the swans. Insulting an Alster swan is forbidden by law since 1664...

Alster or Elbe - whichever answer you will find for yourself, at the end of the day, Hamburg remains a unique mixture of its own. And isn't that just wonderful?

> BEAUTY SPOTS BY THE WATER

Brücke 10, St. Pauli Landungsbrücke 10, 20359 Hamburg *bruecke10.com*

Strandperle, Oevelgönne 60, 22605 Hamburg *strandperle-hamburg.de*

Frau Hedis Tanzkaffee, St. Pauli Landungsbrücke 10, 20359 Hamburg *frauhedi.de*

AlsterCliff, Fährdamm 13, 20148 Hamburg *alster-cliff.de*

Bootsvermietung Dornheim, Kaemmererufer 25, 22303 Hamburg *bootsvermietung-dornheim.de* **Café Canale,** Poelchaukamp 7, 22301 Hamburg *cafecanale.de*

SUP CLUB, Isekai 1, 20249 Hamburg (access via the stairs to the right of the Stüffel restaurant) supclubhamburg.de

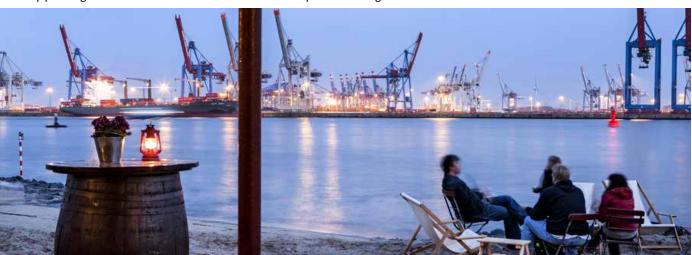
Alster water taxis departing hourly from Jungfernstieg, Atlantic hotel, Mühlenkamp, Krugkoppelbrücke and others alstertouristik.de



Stand-up paddling on the Alster canal



Outer Alster pier with sailing boats



At the small beach restaurant "Strandperle" you can enjoy a drink and a view of the Elbe river with your feet in the sand

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