30th SMM
Ship&Offshore | Schiff&Hafen
Daily News
No 2 | 7 September 2022

Claudia Müller, Federal Ministry for Economic Affairs and Climate Action, Coordinator for the Maritime Industry and Tourism Source: SMM

New fuels another challenge as labour crisis deepens

The maritime industry should expect to see an increasing number of retrofits in the near future, expert panellists at the SMM opening conference predicted, as owners opt for a number of alternative fuels including ammonia, methanol and synthetic e-fuels.

Uwe Lauber, CEO of MAN Energy Solutions, appeared to favour a transition to synthetic LNG. This fuel, he said, would operate and perform identically to today's fossil LNG. And it would therefore enable the growing number of dual-fuel ships using LNG today to adopt synthetic LNG in future. ›

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SMM DAILY NEWS is published daily during SMM 2022 by
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Heidenkampsweg 73-79,
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DISTRIBUTION:
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PRINT:
v. Stern'sche Druckerei,
Lüneburg

A committee of experts welcome delegates and press to the show Source: Charlie Bartlett

Meanwhile, Claudia Müller, Federal Government Minister for Maritime, called for more stringent regulations from governments to stimulate greater investment in technology. "Stricter rules give a push," she said. "When we know where to go, we can make the investments. Rules can be a driver for innovation."

However, the opening sessions of the SMM show were characterised by an overriding concern over the growing shortage of seafarers which, experts, said would not be adequate to sustain the transition to new and more complex fuels.

"Training is really essential," said MAN's Lauber. "Any fuelled engine is somehow different. Dealing with gas, for example, is totally different and when I had to learn the engine business, I was really shocked at how people are dealing with the engines, because even the default classroom engine is not a simple beast.

"If we are talking about dealing with ammonia, you have to be very careful, and there are no regulations or norms in place. You need fuel supply systems. We have decided to build academies to train people how to handle this equipment and are offering this service to shipowners."

Later in the follow-up conference, ICS Secretary General Guy Platten predicted a shortage of some 90,000 officers. This, he said, would only compound the problem of having insufficient numbers of trained seafarers to deal with new and more complex fuel types.

"And that's before we take into account that 40% of our workforce is Russian and Ukrainian seafarers," he added. "This officer shortage must be addressed, and we must upskill seafarers so they can handle these new fuels."

Speaking on the importance of attracting new talent into the industry, Claudia Müller joked: "I think whoever has the solution to this problem will be the front-runner on all the podiums and discussion groups! On a more serious note, she continued: "First of all, we have to make sure people understand how innovative and versatile this industry actually is. And, we have to show the variety of possibilities.

"Once you decide on one career, it doesn't mean you are stuck there for the next 50 years. By training, you can move along, change, and adapt to the changes that are coming – and the industry needs to support that training. As much as people love their jobs, pay is one of the necessities, and if you're not willing to pay a budget that will attract people to come, you will simply not have a business case."

German Chancellor sends video message to SMM

In his video address, Germany's Chancellor, Olaf Scholz, spoke of wide opportunities in the maritime field but he also predicted a spell of "unprecedented change". His message echoed the sentiments of others at the official opening of SMM yesterday.

From left: Bernd Aufderheide; Claudia Müller; Kitack Lim; and Guy Platten Source: Charlie Bartlett

Claudia Müller, Federal Government Minister for Maritime, warned that we are in a more dramatic situation than ever. The supply of food and raw materials has become a weapon, she said, and we have war in Europe. With the vulnerability of global supply chains now clearly evident, Europe faces an urgent requirement to become independent of Russian energy.

Though Müller stressed that these challenges must be tackled, the overriding one is universal, she declared: "The climate crisis is an existential crisis for all humanity."

The IMO's Kitack Lim took the opportunity to stress the progress the IMO has made in the drive to decarbonise shipping, as well as noting the commitment of seafarers as they strive to ship grain exports along the Black Sea corridor.

However, others had already noted that gaps and delays in the regulatory framework were delaying shipping's decarbonisation initiatives. The message: shipping is still moving too slowly. "We'll be up against other industries as we compete for fuels," declared Guy Platten, Secretary General of the International Chamber of Shipping, adding that supplies of renewable energies must increase dramatically.

In his speech, Bernd Aufderheide, CEO of Hamburg Messe und Congress, once again took the opportunity to welcome delegates back to the shipping hub of Hamburg. Virtual meetings had provided essential links at times during the four long years, but there was no substitute for face-to-face contact and real human interaction.

› 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

Source: Schiff&Hafen

Alfa Laval set to begin testing ammonia and fuel cells

Diversifed engineering group, Alfa Laval, is preparing to test ammonia and pave the way for fuel cell development at its testing and training centre in Denmark.

Most recently, ABS granted an Approval in Principle for Alfa Laval to test methanol in its boilers. Now, the company plans to undertake tests using ammonia. Ammonia will be converted into hydrogen in-situ, allowing the higher-energy-density alternative to be used as a fuel, explained Jeroen Van Reil, Senior Business Development Manager for Marine Energy Solutions.

Van Reil told Schiff&Hafen: "Inside the box, we are going to have to a reforming unit as well as a fuel cell. The reformer splits the ammonia into hydrogen. This is how we would do it with methanol, as well."

The fuel cell together with the reformer would be able to achieve an efficiency of around 43 to 45%, when taking the fuel feeding system into account . This compares favourably with internal combustion engines, which have a maximum efficiency of around 40%. The higher efficiencies of fuel cells, together with electric drivetrains, is one way ships are expected to overcome the low energy content of methanol and ammonia e-fuels.

"We expect the shipowner to replace one or two auxiliary engines, and then potentially add to that," Van Reil explained.

Alfa Laval will test new fuels as well as fuel cells, in its Denmark facility Source: Alfa Laval

Testing with ammonia is scheduled for the fourth quarter of this year. "First in our lab we will consider the smaller quantities of ammonia. Then we will move into testing our boilers with it – this will be the materials testing.

"It's still only a very small fuel cell – 6kW. But the size of the fuel cell depends on the customer, and we can easily expand those boxes," he said.

Alfa Laval at SMM: Hall A1 / Stand 226

Wärtsilä Voyage unveils "AHTI" – a new testbed for maritime technologies

Wärtsilä has a new floating laboratory and testbed, which it has "packed" with the OEM's latest technologies. Despite being relatively small, the former 25m-long fishery patrol vessel, originally built in 1998, is today festooned "like a Christmas tree" with Wärtsilä technology, according to Sarah Barrett, marketing consultant with Wärtsilä Voyage, formerly Transas.

Wärtsilä's delightful vessel enables it to test its solutions in real world conditions, as well as reducing the cost and duration of its research and development cycles, explained Barrett. "By testing aboard AHTI, fail fast, we can shorten time to market…

View from AHTI's bridge Source: Charlie Bartlett

and show our customer the technology that is here now. AHTI will be berthed in Hamburg and will operate around north European ports."

Currently, the vessel's bridge is outfitted with advanced radar and optical camera arrays, which Barrett and colleague Henrik Bushoff confirmed pertained to automated navigation. "Our focus has been on radar and camera technology, integrating those into the bridge," said Bushoff. "We have filled the ship up with our technology. There is a lot more space for more OEMs as well, we don't want to build a fence around this thing."

Wärtsilä upgrades engine lineup with modern technologies

Wärtsilä has launched a new medium-speed engine in the smaller size range, the Wärtsilä 25, which it claims represents a new paradigm for its small-bore engines range in terms of modularity and efficiency.

The new engine is designed to incorporate key features of its successful Wärtsilä 31 design, which is one of the most efficient engines currently available, to a smaller form factor for applications either as a main propulsion or auxiliary power unit for larger craft. With an LNG, biofuel and marine diesel version on offer, designs benefit from modern engine technologies including two-stage turbocharging, variable valve timing, common-rail injection, and various other advanced efficiency features. Crucial to the design is its modular construction which, Product manager Lucas Esselström explained, enables it to be retrofitted quickly to meet with a requirement for future fuels.

"The engine is built in a modular structure, which means that you only need to replace selected components," explained Esselström. "Individual cylinders, for instance."

While the 25 is not necessarily as efficient as the 31 – thanks to the design limits of a smaller bore size and shorter piston stroke, Esselström explained – the engine does bring the same technological advances to bear on Wärtsilä's smaller maritime engines and gensets.

"We are trying to renovate our engine product portfolio – so our vision with the 25 is that it would replace the older generation 26, and also the smaller size 32," said Esselström. "We are modernising the portfolio with future-proof technology."

Wärtsilä at SMM: Hall B6 / Stand 309

Clean Autonomous Public Transport Network

The CAPTN Initiative (Clean Autonomous Public Transport Network) is exhibiting its concept of an autonomous and sustainable mobility chain - starting with a ferry - at this year's SMM. Interested parties can learn about the progress of the development at booths of CAPTN partners Raytheon Anschütz and Kiel University of Applied Sciences (Kiel UAS).

Among other things, the CAPTN Initiative is currently working to create an autonomous, sustainable ferry for the Kiel Fjord in Northern Germany. "We have designed an innovation desk for SMM," says Daniel Sommerstedt, System Engineer Development Strategy at Raytheon Anschütz. The Kiel-based company has been involved in the CAPTN initiative since its beginning. "When we present our innovations related to shipping, CAPTN with its vision of an autonomous ferry, and possibly an entire innovative mobility chain, is naturally one of them," Sommerstedt emphasises. The partners in the CAPTN Förde Areal project are developing the infrastructure and a digital test field on which a test vehicle ("MS Wavelab") is to operate - as autonomously as possible in the future. CAPTN Förde Areal has been funded by the German Federal Ministry of Digital Affairs and Transport (BMDV) since 2021 as part of the funding guideline "Investments for the development of digital test fields on federal waterways".

Ferry on the way Source: Schiff&Hafen

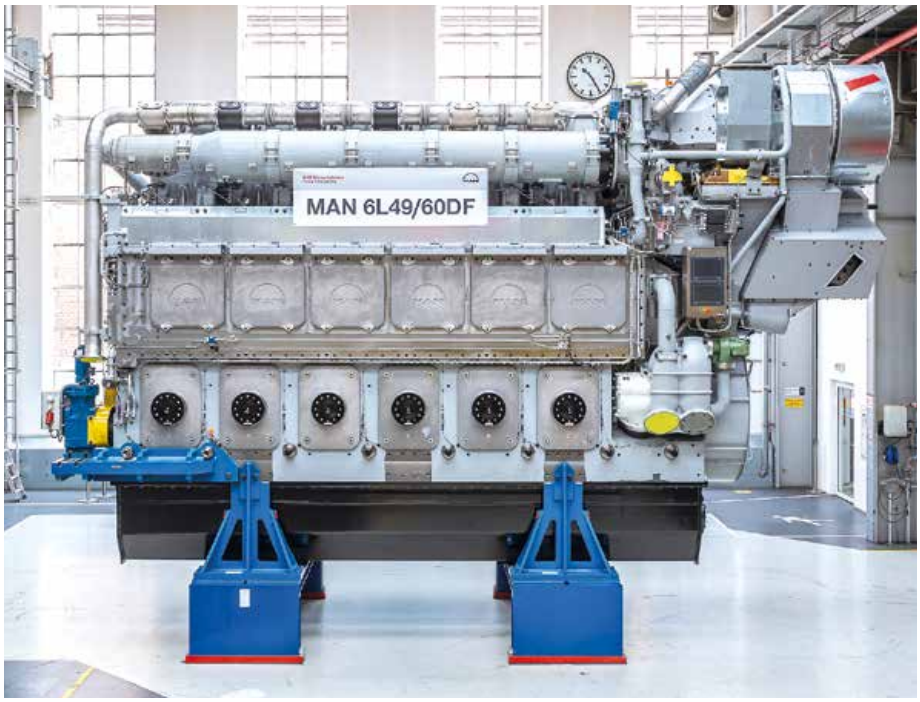
The Institute of Naval Architecture and Maritime Technology at Kiel UAS is also conducting research as part of the CAPTN initiative and is presenting itself at SMM for the first time. "Supported by the university's Technology Transfer Department, the UAS Research and Development Center and university-affiliated start-ups, we will provide exciting insights into current research projects," reports Dr.-Ing. Hendrik Dankowski, professor at the Institute of Naval Architecture and Maritime Technology. One of the projects is the research carrier "MS Wavelab", which the UAS is helping to develop as part of the CAPTN Förde Areal project. The model used for experiments on propulsion and flow behavior will be on display as an exhibit at the stand of Wirtschaftsförderung und Technologietransfer Schleswig-Holstein GmbH (WTSH) in the Institute of Naval Architecture and Maritime Technology.
The vision of the regional CAPTN innovation network is an urban mobility system characterised by autonomous solutions that are integrated, safe and attractive, significantly reduce individual traffic and intelligently connect the various modes of transport on land and water in a climate- and user-friendly way.
Currently, the stakeholders in the CAPTN Förde Areal project are having an experimental vehicle ("MS Wavelab") built by the Gebr. Friedrich Shipyard in Kiel. The CAPTN Förde 5G project is concerned with infrastructure and secure networks and CAPTN KI is intended, among other things, to make CAPTN tangible and to further develop processes and products.

Raytheon Anschütz at SMM:
Hall B6 / Stand 304

WTSH at SMM:
Hall B7 / Stand 128

New MAN engine offers "full fuel flexibility"

MAN Energy Solutions has advanced its strategy of providing flexible fuel options to owners and operators with yesterday's launch of the MAN 49/60DF engine. The dual-fuel engine can burn LNG, diesel, heavy fuel oil and various other more sustainable fuels including biofuel blends and synthetic natural gas. The company claims to have set a benchmark in terms of fuel efficiency within four-stroke engines in both gas and diesel modes, thereby minimising fuel costs.



Flexible engine will give owners more options

Source: MAN Energy Solutions

The 49/60DF is now available, ready to order, and features a range of MAN technologies including two-stage turbocharging, second-generation common-rail fuel injection, and Adaptive Combustion Control ACC2.0 that automatically sets combustion to optimum levels. Other standard features include the gas injection system, pilot-fuel-oil setup, and MAN's selective catalytic reduction system.

Marita Krems, head of the company's Four-Stroke Marine & License, noted that the number of projects involving alternative fuels continues to grow although none has yet established market dominance. "It is crucial for new vessels to be driven by engines that provide options for emission compliancy over the vessel's lifetime," she said. "Fuel flexibility and efficiency are the key features ... [ensuring] best fuel costs in many applications, especially within the cruise, RoPax, RoRo, dredger, and LNG carrier segments."

The engine company's Wayne Jones OBE, member of the Executive Board – Global Sales & After Sales, said: "Dual-fuel engines are the ticket to the maritime energy transition. As we enter a new era of decarbonisation, the 49/60DF is a great new choice for vessel owners that have ambitious, emission reduction targets on their agenda. In essence, it offers full fuel-flexibility to operators who can then choose from the various decarbonisation paths that open up as new fuels make their way into the marine industry."

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

Wilhelmsen's growth trajectory continues with Stromme buyout

Wilhelmsen Ships Service (WSS) has revealed that 100% of the shares held by Seven Seas in cargo-hold cleaning company Stromme have now been acquired. WSS president Kjell André Engen points out that Stromme customers now have lots to look forward to, underpinned by the worldwide WSS network and global supply chain.

Wilhelmsen and Stromme team at the Wilhelmsen stand: Pirjetta Stueven, Timo Gahrmann, Ane Fosseng, Steffen Krüss, Kjell André Engen, Florian von Kempen Source: Bosch/Schiff&Hafen

As the world's first specialist hold-cleaning company established in 1971, Stromme has come a long way over its half century. A leader in its field, the company has developed a range of high-quality and innovative systems for hold cleaning in line with the development and expansion of both standard and specialised cargo vessels.

Engen declared: "At Ships Service we want to grow our business by strengthening and broadening our customer offering, making Stromme the perfect fit within cargo hold cleaning. Their strong history and leading position in the market is solid proof of what this team has built. Really glad the deal is complete!"

His enthusiasm was reflected in remarks made by Ane Fosseng, Stromme's general manager. "Stromme has been focusing on cargo hold cleaning only, making us a specialist within our field," she said. "We see a great potential for growth by becoming a part of Wilhelmsen Ship Service and their global distribution network. At the same time, we will continue to have a strong focus on our customers, meeting their needs and maintaining the high service level we have become known for until now."

Now, as the acquisition is completed, begins the hard work on developing the opportunities that lie in the best strengths of both organisations. For the moment, Stromme will continue to operate as a standalone unit under WSS ownership, and all customers of both organisations are to continue to conduct business as they have until now.

The two entities will be back with more information at a later date.

Wilhelmsen Ships Service GmbH at SMM: Hall B5 / Stand 442


Sternschanze
U3 S H TAXI
Green Transition Stage
West Entrance
Fairground Shuttle
West Entrance ↔ East Entrance
Car Park Shuttle
West Entrance ↔ Heiligengeistfeld
Airport Shuttle
West Entrance ↔ Airport
TAXI
A3
A4
TV Tower
Messeplatz
Tiergartenstr.
Conference Room Chicago
Central Entrance
Sales Lounge
CCH – Congress Center Hamburg
TAXI
Planten un Blomen Park
St. Petersburger Str.
A2
A1
Lagerstr.
Karolinenstr.
B1
B2
Conference Room Marseille
DB S H TAXI
Dammtor
MariMatch
East Entrance
B3
B4
B7
Fairground Shuttle
East Entrance ↔ West Entrance
Wilhelmsen
Flora-Neumann-Str.
Digital Transition Stage
B5
TAXI
Marseiller Str.
Maritime Career Market
B6
Bei den Kirchhöfen
U2
Messehallen
South Entrance
Cruise & Ferry Stage
TAXI
Holstenglacis
Car Park Shuttle
Heiligengeistfeld ↔ West Entrance
P Heiligengeistfeld
Hall A1 Ship operation equipment, environmental technologies
Deck equipment, cargo handling systems
Hall A2 Pumps, valves, compressors
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 rotection
Hall B6 Navigation and communication
Electrical equipment, electric drives, automation, lights, sensors and indicators, software and IT
Marine technology
Marine interiors
Hall B7 Shipbuilding materials
National pavilions
As of August 2022
Hamburg Messe + Congress

WEDNESDAY, SEPTEMBER 7th

10:00 **Wind Assisted Ship Propulsion (WASP) Conference**
Netherlands Maritime Technology
Room Kopenhagen / Conference Area B

10:15 **India - Your Destination for Maritime Business**
Informa Markets India
Cruise & Ferry Stage / Hall B5

10:30 **Panel I – Hydrogen and the shipping energy mix**
gmec | Conference Session
Room Chicago / Conference Area A

11:00 **Pre-final Start-up Pitch Digital Performance**
Maritime Start-ups Germany: Pre-final Start-up Pitch I
Digital Transition Stage / Hall B6

11:00 **ABS Coffee and Conversation - Containerships**
ABS & Affiliated Companies
Stand 200 / Hall B3. EG

11:30 **Optimizing Bunker Procurement Processes with StormGeo and BunkerMetric Technology**
StormGeo
Room Osaka / Conference Area A

11:45 **Panel II – Navigating the zero-carbon transition**
gmec | Conference Session
Room Chicago / Conference Area A

12:00 **ADMIRALTY Navigating the maritime future seminar**
UK Hydrographic Office
Meeting Room B6.4 / Hall B6

12:30 **ABS Coffee and Conversation - Nautical Systems eLogs™**
ABS & Affiliated Companies
Hall B3.GF / Stand 200

12:30 **Driving Decarbonization with Integrated Data Sharing**
StormGeo
Room Osaka / Conference Area A

12:40 **Achieving the maritime energy transition in demanding times**
Green Transition Stage / Hall A4

13:00 **Pre-final Start-up Pitch Hardware Performance**
Maritime Start-ups Germany: Pre-final Start-up Pitch II
Digital Transition Stage / Hall B6

13:45 **Panel III – Nurturing green shipping innovation**
gmec | Conference Session
Room Chicago / Conference Area A

13:45 **Designing Yachts 2022 – New Directions and Insights**
ArtLink
Cruise & Ferry Stage / Hall B5

14:00 **Avoid Cargo Loss with New StormGeo-DNV Anti-Roll Assist**
StormGeo
Room Osaka / Conference Area A

14:30 **LOHC Innovation Talks w. Hydrogenious**
NCE Maritime CleanTech & Hydrogenious LOHC Maritime
Room Kopenhagen / Conference Area B

14:45 **Panel IV – Wind propulsion – the time is now**
gmec | Conference Session
Room Chicago / Conference Area A

15:00 **Pre-final Start-up Pitch Inspection**
Maritime Start-ups Germany: Pre-final Start-up Pitch III
Digital Transition Stage / Hall B6

15:00 **Female innovators in maritime & WISTA PotY award ceremony**
WISTA Germany e.V.
Green Transition Stage / Hall A4

15:00 **StormGeo and Oceanbird: Next-Gen Weather Routing for Maritime Decarbonization**
StormGeo
Room Osaka / Conference Area A

15:30 **SnakeWays' SnakeBox Smart-Router + GSM, Wi-Fi & GPS for Managed Satcom with AI**
Mackay Marine
Stand 312 / Hall B6

16:00 **Panel V – The NGO debate – is shipping doing enough to decarbonise?**
gmec | Conference Session
Room Chicago / Conference Area A

16:00 **Pre-final Start-up Pitch Marketplace**
Maritime Start-ups Germany: Pre-final Start-up Pitch IV
Digital Transition Stage / Hall B6

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

16:30 **Get together Northern Germany Pavilion**
WTSH Wirtschaftsförderung und Technologietransfer Schleswig-Holstein GmbH
Stand 128 / Hall B7

16:30 **STI Fires it up!**
STI Marine Firestop
Stand 226 / Hall B7

17:00 **Wine o'clock**
Green Transition Stage Hall A4
Cruise & Ferry Stage / Hall B5

17:00 **Cocktail reception**
SKF Marine GmbH
Stand 210 / Hall A1

17:00 **WISKA Stand party**
WISKA Hoppmann GmbH
Stand 212 /Hall B6

17:00 **NL Networking Reception**
Netherlands Maritime Technology/ NL Pavilion
Stand 508 / Hall B7

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.

Fuel-efficient hybrid propulsion system

With a new flexible hybrid system, Reintjes GmbH presents a resilient propulsion system at the stand that combines two different power sources: an electric motor and a combustion engine (diesel, dual-fuel or gas engine).

In the low load range, purely electric operation is possible; in the normal range it is achieved by means of the combustion engine; and in the upper load range, in a head wind or sea, for example, the electric motor can be switched on as an additional booster. When operating the combustion engine, the electric motor can also be used as a generator and use the excess energy to charge an installed battery pack. The system is suitable for installation in newbuild ships and as a retrofit to existing vessels.

Reintjes is a one-stop shop for engineering, hardware, installation and service. The hardware scope of supply includes the gearbox, the electric motor/generator, the coupling between the electric motor and the gearbox, the frequency converter for controlling the electric motor, and a drive control and monitoring system.

The combination of electric motors and combustion engines in the drive train enables an efficient propulsion arrangement across the entire power range. At low speed only the electric motor drives the ship smoothly and quiet.

A combustion engine with a lower power output can be selected, as the upper load range can be supplied by simultaneous operation of both propulsion systems. This makes operation more efficient and thus more fuel-efficient than conventional drive systems with only one combustion engine and reduces the release of CO_2 emissions.

Reintjes at SMM:
Hall A4 / Stand 211

New variable speed generator range from Volvo Penta

A new range of variable speed marine generators launched by Volvo Penta will provide more flexibility for ship designers, operators, and shipyards. Enabling modular propulsion arrangements, the generators are intended to reassure owners and operators that they can adapt to, and keep abreast of, new and emerging sources of power, the company said.

The generator sets facilitate the installation of smaller battery packs which can be charged while in transit. This makes the switch to hybrid-electric propulsion more cost-effective and has already been adopted by some customers.

Generator sizes range from the 190-kWe D8 unit to the 545-kWe D16 system. They can run on HVO 100 fuel instead of standard diesel, Volvo Penta revealed, enabling a reduction in carbon dioxide emissions of up to 90%. The water-cooled generators are less noisy, more compact, and meet latest IMO Tier III regulations.

The company's head of marine business, Johan Inden, said: "By making our Volvo Penta variable speed marine generator sets more widely available, it takes us further forward in our journey towards more electric- and fuel-cell propulsion for the marine industry. Now, more vessels will be able to install modular hybrid propulsion systems ready to be adapted to future energy choices, meanwhile delivering important sustainability and fuel efficiency gains from day one."

Volvo Penta at SMM:
Hall A3 / Stand 419

Source: Evers/Schiff&Hafen

Three questions for...

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

Events like SMM are at the backbone of the industry – bringing people together for inspiration, collaboration and just simply getting this global industry back together in the same room is hugely valuable if we are to meet the challenges in front of us. We expect to see a significant focus on the latest decarbonisation strategies and technologies as well as the continuing emergence of powerful digital solutions. These are areas where ABS is leading, and we have a lot to share. We expect to see more evidence of the industry coming together to progress the energy transition, which is something we are entirely committed to, and have been supporting some of the industry's leading players in projects designed to put shipping on a more sustainable footing.

What can visitors expect at the ABS booth?

Visitors to the ABS booth can expect a warm reception from key specialists ready to answer questions. There are several "Coffee and Conversations" at our stand throughout the week which spotlight key topics of interest to different sectors of the industry. For manufacturers and suppliers, there are a couple of sessions: one where we will share the benefits of being an official ABS Service Supplier and another to talk about supply chain support. ABS Digital Solutions will also be there to discuss the latest digital strategies to drive efficiency and decarbonisation in your fleet. On containerships, where ABS has been at the forefront of providing classification and technical services since the voyage of the first such vessel in 1956, we will have specialists on hand to discuss areas such as firefighting on board, lashing and decarbonisation.

What do you consider the biggest challenges for the maritime industry and how can we meet them?

To me, the biggest challenge for the maritime industry now is finding the determination to take action on decarbonisation and to not let perfection get in the way of good. There are pathways to decarbonisation that can begin now and we as an industry and as a world need to start walking them today. Methanol, LNG, more efficient operations and ammonia are pathways that can be walked today. Some further than others. Don't hesitate to reach out to discuss these with as your trusted partner and advisor.

ABS at SMM:
Hall B3.EG / Stand 200

Sophisticated monitoring solutions

Bremen-based besecke GmbH & Co KG specialises in automation and system technologies. The company focuses on the engineering design of the overall electrotechnical system. besecke supports customers with design integrative modules from planning to commissioning and in some areas, the development of individual product applications is an option.

besecke supports customers with design integrative modules Source: Evers/Schiff&Hafen

At SMM 2022, besecke will present its latest "AllViu 4" generation as a platform application. With the scalable visualisation adapted to operators' needs, all relevant systems such as monitoring, energy and power management, safety, security and the alarm and control system are visible at a glance.
Another product novelty developed by besecke is „MarESiS". The aim is to offer the option to simulate the behaviour of onboard consumers depending on typical processes and realistic scenarios and thus to determine the energy demand before construction starts. Based on these simulation results, hybrid systems with different generators and battery storage can be optimally designed and dimensioned. Worldwide, besecke offers its customers complete solutions from a single source and projects these on site with its own personnel.

besecke at SMM:
Hall B6 / Stand 625

Erma First unveils shore power setup

Greece's Erma First has launched a shore power system, Blue Connect, suitable for RoRo/RoPax and passenger vessels, container ships and tankers, during port calls. Customised systems are also available on request, the company said.

Blue Connect will enable ships to be connected to a port's electrical grid instead of using their own generators to provide power. This cuts noise and emissions, including carbon, SOx, NOx, volatile organic compounds, and particulates.
The Blue Connect system comprises a power transformer to convert high to low voltage, switchgear for safety, a Shore Connection Main Control Panel, and a Cable Management System. A power changeover setup ensures synchronisation between ship and shore to avoid any interruptions to power supplies when connecting or disconnecting.

Erma First's managing director, Konstantinos Stampedakis, said: "The launch of Blue Connect represents another key technological milestone for the Erma First Group. Protecting the environment has always been at the core of Erma First's offering. Blue Connect is a highly advance cold-ironing solution that can help significantly reduce emissions in ports around the world."

Erma First at SMM: Hall A1 / Stand 218

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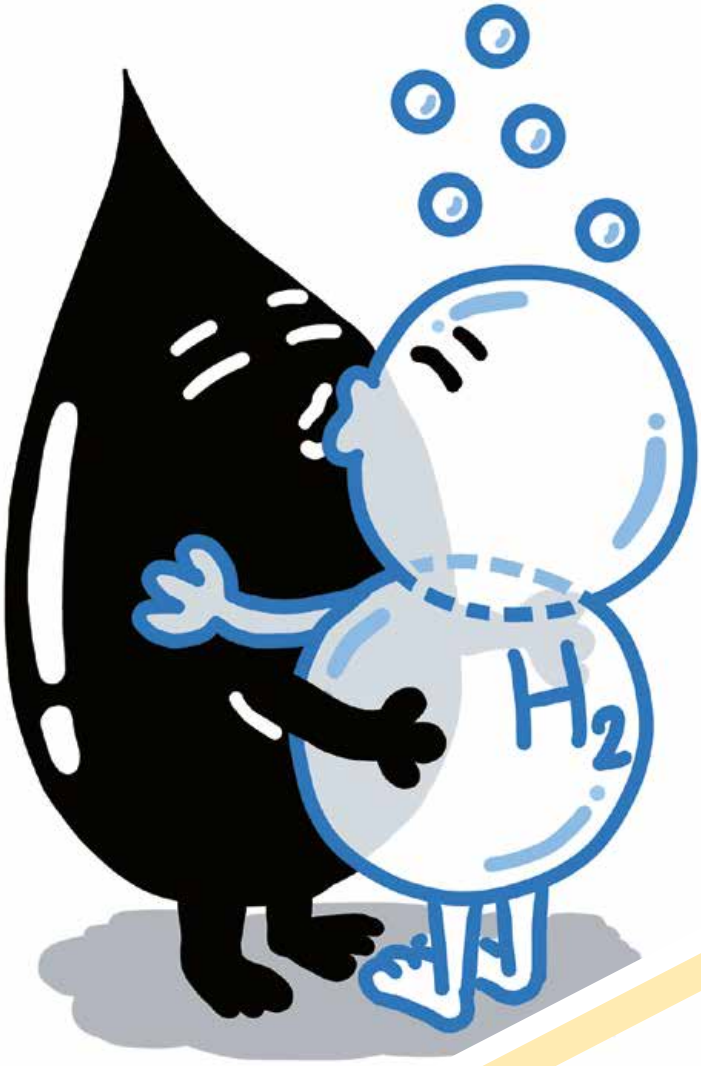


www.eek-energy.com/smm2022

EEK

Collaboration is key to scale up fuel availability in time

DNV's latest Maritime Forecast to 2050 models future fuel availability to assist decisions on ship design, operations and infrastructure developments. These will be the issues that determine whether shipping can achieve current and future IMO decarbonisation ambitions.

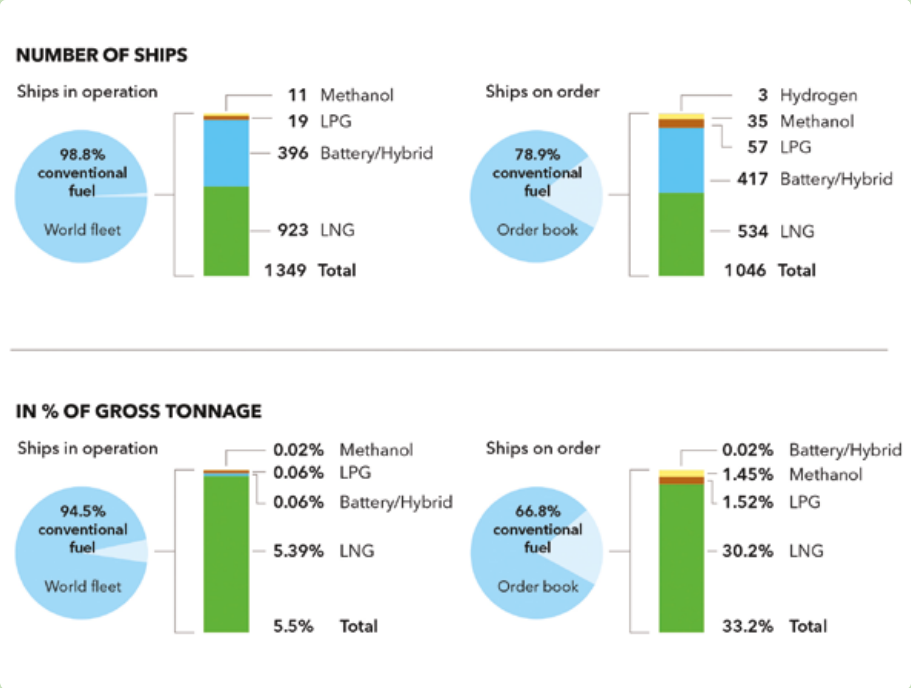
"The energy and technology transition in maritime is gathering pace but has far to go to meet even the IMO's initial decarbonisation ambitions for international shipping. For one thing, supply chains will have to change dramatically to make sufficient carbon-neutral fuels available where and when they are needed." Eirik Ovrum, Maritime principal consultant at DNV and lead author of Maritime Forecast to 2050 observed.

The maritime energy transition is gathering pace

Our latest Maritime Forecast to 2050 report investigates which carbon-neutral fuels are likely to be available for large-scale maritime use," Ovrum continued. "We find a need for strong collaborative initiatives with and beyond the sector to maximise opportunities and reduce risks of the coming fuel transformation."

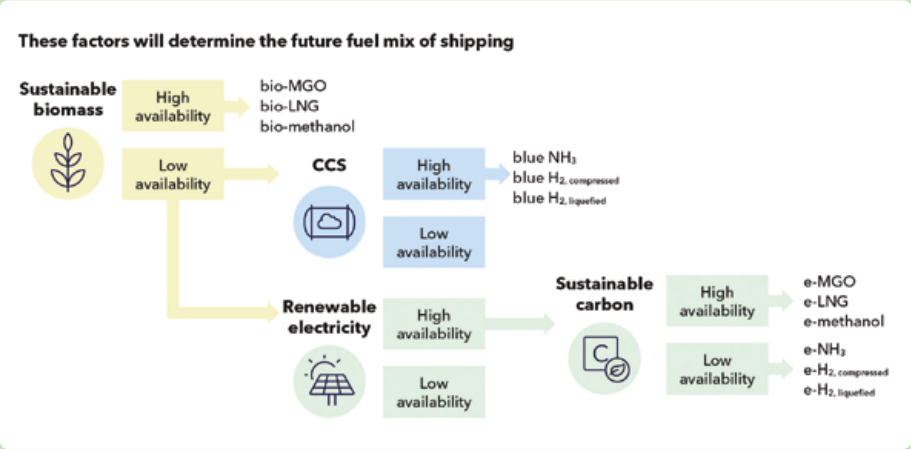
Around 5.5% of ships operating today in gross tonnage terms, and 33% of ships on order, can or will be able to operate on alternative fuels – including liquefied natural gas carriers. The statistics are also starting to show uptake of methanol and liquefied petroleum gas fuel technologies and hydrogen-fuelled newbuilds.

"This is an encouraging start, but ship and cargo owners, finance, ports, fuel providers, energy majors and governments need greater clarity on what the future fuel mix will be, and when the relevant fuel technologies will be ready to use," said Ovrum. "Our latest modelling offers research-based foresight around both these questions. We base our analysis of availability on what we see as the likely supply chain and infrastructure constraints on carbon-neutral fuel use in ships."



Source for all Images: DNV

Alternative fuel uptake in the world fleet by number of ships and gross tonnage



Main questions regarding the availability of fuels in the future fuel mix

Which carbon-neutral fuels will be available to shipping?

Sustainable biomass would be the preferred fuel in an ideal world, mainly because it is relatively easy to convert to energy-dense hydrocarbon fuels such as bio-LNG, bio-methanol, and bio-MGO. Other hard-to-abate sectors like aviation will also want energy-dense hydrocarbons, however. If supply cannot meet demand, sustainable biomass could be expensive compared with electrofuels and blue fuels.

Maritime Forecast to 2050 applies an enhanced model of the development of the global fleet to investigate how the future fuel mix will be affected by the availability of sustainable biomass, renewable electric-

ity, carbon capture and storage for making blue fuels, and sustainable carbon. The report also assesses fuel costs by region, and how regional fuel production and infrastructure impact the future fuel mix.

Which alternative fuel technologies will be available when?

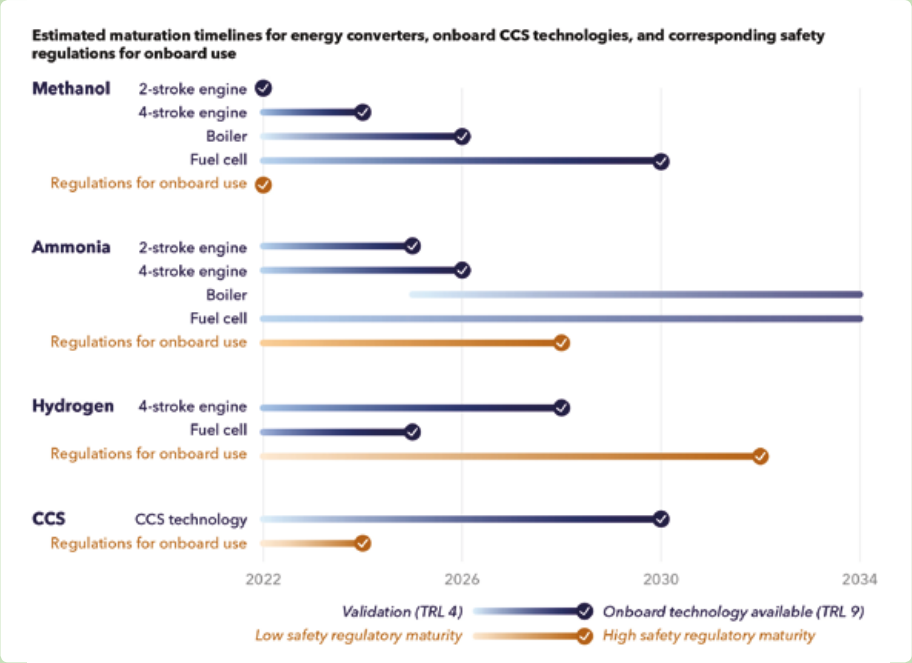
Maritime Forecast to 2050 also presents an updated timeline showing current and anticipated maturity levels of several on board fuel technologies between now and the mid-2030s. Technology readiness levels (TRLs) ranges from validated (TRL 4) to those available from one or more manufacturers (TRL 9).

Using new fuels and fuel technologies will require all maritime industry stakeholders to focus increasingly on safety and to develop and implement relevant safety regulations.

Digitalisation enabling the transition

Digitalisation is the other major transformative force alongside decarbonisation in shipping today, and the two go hand-in-hand. Digital tools can deliver up to 15% of greenhouse gas (GHG) emission savings required by 2050.

We anticipate greater use of increasingly sophisticated 'digital twins'. These virtual ships model all equipment on board, machinery, networks and control systems, connecting and integrating them in cyberspace. Potential benefits includes optimising GHG performance for ships in operation through monitoring, better routing and planning, diagnostic and corrective actions, and simulator-based crew training.



Estimated maturation timelines for energy converters, onboard CCS technologies, and corresponding safety regulations for onboard use with alternative fuels other than LNG/LPG

How much will decarbonisation cost?

About 5% of energy for shipping should come from carbon-neutral fuels in 2030. Maritime Forecast to 2050 estimates that USD 8 to 28 billion additional total investment per year will be needed just on ships to achieve decarbonisation by 2050. USD 30 to 90 billion per year would also be needed to scale onshore production, fuel distribution, and bunkering infrastructure sufficiently to supply 100% carbon-neutral fuels by mid-century.

"The scale and scope of the challenge mean we absolutely need strong alliances to push development of fuel supply chains," concluded Ovrum. "Charterers, energy majors, fuel suppliers, governments, ports, and shipowners should collaborate to ensure adequate funding for the right projects. It could spell opportunity for first movers to launch projects making large volumes of alternative fuels available where and when needed. Green shipping corridors can help to unlock this opportunity and reduce the risk of infrastructure obsolescence as the fuel mix shifts."

DNV at SMM:
Hall B4.EG / Stand 531

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
Hall A1 / Stand 520

11:15 - 11:30 Uhr
"The new MTP automation standard works! A big step forward for the sipbuilding industry"
Hauke Schlegel, VDMA Marine Equipment and Systems

11:30 - 11:45 Uhr
"Smart module automation with MTP designer"
Oleg Makarov, PHOENIX CONTACT Electronics GmbH, Bad Pyrmont

11:45 - 12:00 Uhr
"360° security for modular ship systems"
Niklas Lecker, PHOENIX CONTACT Electronics GmbH, Bad Pyrmont

12:00 - 12:15 Uhr
"Marktausblick Maritime Industrie: Highlights aus dem VDMA-Konjunkturspiegel 2022"
Hauke Schlegel, VDMA Marine Equipment and Systems, Hamburg

13:30 - 13:45 Uhr
"Marktausblick Maritime Industrie: Highlights aus dem VDMA-Konjunkturspiegel 2022"
Hauke Schlegel, VDMA Marine Equipment and Systems, Hamburg

13:45 - 14:00 Uhr
"Offshore-Ladestationen"
Stefan Krahn, Baumüller Nürnberg GmbH, Nürnberg

14:00 - 14:15 Uhr
"Climate protection needs alternative marine fuels - a PtX Roadmap for the Maritime Energy Transition"
Peter Müller-Baum, VDMA Power-to-X for Applications, Frankfurt/Main

14:15 - 14:30 Uhr
"Power-to-X Value Chain - Europe's industry in a nutshell"
Daniel Erdmann, VDMA Power-to-X for Applications, Frankfurt/Main

15:00 - 15:15 Uhr
"Marktausblick Maritime Industrie: Highlights aus dem VDMA-Konjunkturspiegel 2022"
Hauke Schlegel, VDMA Marine Equipment and Systems, Hamburg

15:15 - 15:30 Uhr
"Motion Control Solutions for the Shipbuilding Industry"
Robert Forisch, MOOG GmbH, Böblingen

DIT seminar to focus on future technology

The UK's Department for International Trade (DIT) and the Society of Maritime Industries (SMI) are holding a seminar at SMM on Wednesday September 7, to reveal the latest developments in maritime technologies across the UK. Speakers at the seminar will present and discuss topics including digitalisation, cyber security, emissions reduction, hydrogen propulsion, power from the wind, and robotics.

They will reveal that although some of these technologies are still viewed as futuristic, in practice they are already being adopted by progressive ship operators, both for newbuildings and as retrofits for existing ships. During a spell of dramatically high fuel prices, for example, keeping ships' hulls clean with underwater robots or installing hull lubrication systems during a routine drydock could yield significant efficiency gains. The Future of Maritime Technology seminar will be held in Room A3.2 at Hamburg Messe und Congress between 10.00am and 12.45pm.

Department for International Trade (DIT) at SMM:
Hall B1.OG / Stand 324

New OWS offers more design flexibility

Bremen-based RWO GmbH has launched a new oily water separator (OWS) specially developed for large vessels including VLCCs and VLOCs. The OWS-PT is based on a 'pressure-type' arrangement which provides more flexibility in the location of the unit on board ship. The design enables the OWS to be installed several decks above bilge water holding tanks where separators are usually placed.

The company explained that the OWS has been developed in response to feedback from ship operators. New designs of such ships often have little space available close to the holding tanks. Now, the pressure-type arrangement therefore not only provides more design flexibility but also avoids the need for an auxiliary pump.

Stratos Papamichalis, RWO managing director, explained: "Reliable and efficient OWS performance is increasingly important in ensuring effluent standards are met, but operational expenditure on OWS remains a concern for owners – especially where larger ships are involved. In the new ship designs reviewed by RWO's product development teak, space for the OWS is only available on higher decks. Conventional solutions will therefore add installation and material costs because an auxiliary pump will be needed to feed the OWS."

Papamichalis said that ship designers can now choose the most suitable location for the OWS, without earlier constraints. He gave the example of a pump installed on the tank top where it could push water up to an OWS-PT on an upper deck.

RWO GmbH at SMM:
Hall A1 / Stand 218

Source: Evers/Schiff&Hafen

The new oily water separator

Berg control system delivers double-digit efficiency gains

Source: Berg Propulsion

The *Lessow Swan*, one of two chemical tankers which underwent a Berg review

A Berg Propulsion control system installed on two chemical tankers owned by Denmark's Uni-Tankers has generated efficiency gains of 15-17%. The 2008-built vessels, *Anhout Swan* and *Lessow Swan*, both underwent a Berg review of their operating profiles and an evaluation of their EEXI ratings. Retrofit options were then assessed using 3D scanning and modelling tools.

Installation of a Berg MCP800 control system and modifications to main engines enabling them to run efficiently over a range of engine loads were identified as key strategies in raising efficiency. This was partly because ships built prior to the introduction of the energy efficiency design index in 2013 often had engines that were optimised for high loads.

"With fuel prices at unprecedented levels, suboptimal performance by propulsion systems running at 'part load' is a cost inefficiency that can eat into competitiveness," Berg said. The scale of the efficiency improvements provides a valuable insight on what can be done with some older ships.

"This is an excellent example of the way vessels already in operation can be optimised to anticipate the transition to the EEXI and CII regimes," declared Jonas Nyberg, Berg Propulsion's managing director West. "The aim is to stay ahead of the curve and help our customers more towards greener operations with lower CO_2 emissions by offering solutions which also enhance competitiveness."

His colleague, Global Account manager Mattias Hansson, added: "Our way to measure the success of a project is how much benefit our total integrated main propulsion solutions will bring for our customer's operation. We are pleased for the very good and open cooperation with Uni-Tankers and with our dealer, Erik Hass at Zeppelin in Denmark, to enable these efficiency upgrades in order to maximise the gains in ship performance and lower the total cost of ownership."

Berg Propulsion Production AB at SMM: Hall A4 / Stand 316

At the booth the companies´ experts discuss with delegates

Source: Evers/Schiff&Hafen

Decarbonising shipping

Classification society Bureau Veritas M&O (BV) is driven by its commitment to shape a better maritime world for future generations. The company is at the forefront of the energy transition, working with the industry to develop clean energy concepts, from low- and zero-carbon fuels to alternative propulsion systems for both newbuilds and in-service vessels. With its expertise and independent position, BV is in a unique position to ensure safety and validate performance, building the trust needed by all maritime stakeholders in the transition towards sustainability.

At SMM, the companies' experts will discuss how classification societies, the industry and technology providers can drive the development of the new fuels that are needed to decarbonise shipping, and how collaboration and independent validation will be key in the coming years, as several technologies and fuel options are likely to coexist.

BV's experience with LNG has provided a blueprint for safe improvements with new fuels – demonstrating how class can support early designs, manage change, and work collaboratively with shipyards, tech providers and shipowners on future alternatives. BV understands the challenges the industry faces, and is supporting stakeholders with practical advice, tools, and technology to run safe, sustainable, and high performing businesses.

Bureau Veritas at SMM:
Hall B3.EG / Stand 103

Nautical precision instruments

At Cassens & Plath, traditional seafaring meets the latest high-tech experience and scientific knowledge.

At this year's SMM, the company will showcase various compasses and sextants as well as the latest nautical precision instrument, developed and built in Bremerhaven: the BETA/125 spherical compass. With a card dia meter of 125mm, the compass is close to being approved as a MED/4.1 Class A/A2 compass and can thus be used for worldwide navigation. These precision instruments are crafted, adjusted and tested in Germany. The company's high quality standards result in products that sailors and captains all over the world rely on, and whenever needed, Cassens & Plath can respond to individual customer requirements.

Cassens & Plath at SMM: Hall B6 / Stand 326

Source: Evers/Schiff&Hafen

Craftet, adjusted and tested in Germany

Digitally connected, insight-driven operations are key to unlocking optimal safety, efficiency, and sustainability Source: Wärtsilä Voyage

Connecting the dots across the maritime ecosystem will unlock true digitalisation

By Alexey Pirozhnikov, senior director, Connected Marine Solutions - Wärtsilä Voyage

In the past few years, the maritime industry has begun truly to recognise the benefits of digitalisation and how it can help organisations tackle emerging challenges. As a result, there has been a proliferation of different systems, which has often resulted in a complex and fragmented digital ecosystem.

Today, software is disparate and often operates in silos, requiring a significant amount of manual effort to leverage the huge volumes of data that are routinely generated properly. In fact, estimates show that 90% of data generated on board a vessel never leaves the deck. Without a joined-up approach to data, operators may miss out on invaluable insight and analytics from the engine, control and bridge systems that could inform decision-making and vastly improve performance, efficiency, and voyage and vessel optimisation.

At Wärtsilä Voyage, we firmly believe that digitally connected, insight-driven operations are key to unlocking optimal safety, efficiency, and sustainability. Through our cutting-edge technology, such as our Fleet Optimisation Solution (FOS), we are helping to overcome some of the main challenges when it comes to digital transformation.

FOS offers support to crew both on board, such as voyage planning, built-in weather optimisation and streamlined reporting, and onshore, such as real-time decision support tools. What's more, by providing a single source of truth through its shared digital platform, FOS can help unify a fragmented tech ecosystem and enable enhanced decision-making. From an operational perspective, this includes saving time and reducing workload for crew and shoreside staff, allowing them to focus on business-critical decisions, long-term planning, safety, and asset management. FOS also provides a central overview of a fleet and its performance, which is critical when it comes to generating optimisation that can improve revenue, avoid potential damage and loss of value, and cut fuel costs, which are by far the largest single cost in maritime operations.

Based on weather forecasts, FOS optimises the route that a vessel, or a fleet of vessels, will take. This is based on given criteria – such as the fastest, most efficient or cost-effective voyage. FOS delivers various chart backgrounds and overlays to enable users to review the voyage continuously. This optimisation also continues after a voyage. FOS offers post-voyage analysis which can benchmark vessels, routes and ports and breakdown areas which contributed most to fuel consumption in order to drive efficiencies in the future.

FOS is also equipped with a multipurpose alert functionality. For one, it provides increased awareness on any navigational hazards and improves ship-to-shore communication because everyone is working from the same source of truth. This significantly reduces the manual work that crew have had to do previously to gain these insights, freeing them up

Source: Wärtsilä Voyage

Technology such as the Fleet Optimisation Solution helps to overcome some of the challenges when it comes to digital transformation

to focus on value-add activity. What's more, FOS encompasses a powerful engine for onshore alerts, such as, for example, when a vessel deviates from a planned route more than a certain number of miles, or when engine parameters go into a critical zone.

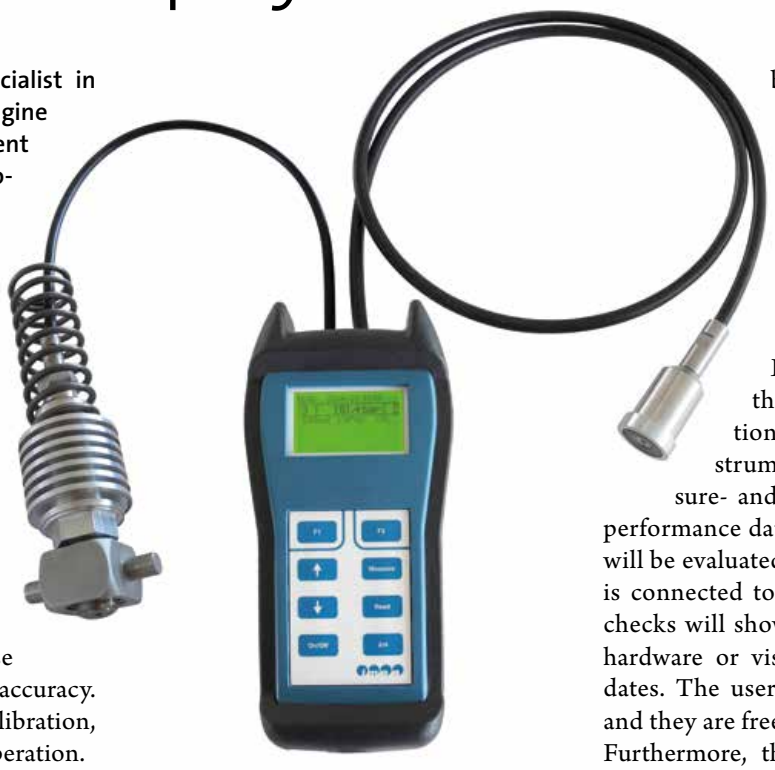
The full visibility into vessel and fleet performance provided by FOS can also help organisations navigate an increasingly complex compliance landscape. For example, FOS can support preparations for meeting the Carbon Intensity Indicator regulation that enters force in January 2023. The platform provides a centralised source for all the data needed to identify factors that are contributing to fleet CII ratings and highlight specific vessels at risk of low ratings. Armed with this information, organisations are given a head start in making the necessary improvements. FOS also delivers future-proofing, providing a timeline of projected CII progression and helping owners and operators to make decisions today that will impact performance in the future. For example, the platform can help weigh up the impact of installing clean technology at the next scheduled drydocking and provide a pathway for continued CII compliance in the interim period.

In today's increasingly complex and competitive market, the maritime industry needs to be able to connect the dots. This can help to ensure that the sector's wealth of data is being used to maximum benefit. Not only will this unlock commercial and operational gains, but organisations will also see rewards from the impact that these wins have on wider compliance and environmental concerns. This will be even more critical in the near future, as maritime moves away from commodity fuels and commercial success will be increasingly tied to environmental performance.

Wärtsilä Voyage at SMM:
Hall B6 / Stand 309

New generation of measurement devices on display

The German IMES GmbH, specialist in cylinder pressure sensors and engine monitoring systems, will present the new generation of its electronic hand-held devices type EPM at SMM in Hamburg.



The engine diagnostic device EPM-XP-plus with vibro sensor Source: IMES

IMES offers four different EPM types: EPM-Peak, EPM-XP, EPM-XPplus and EPM-XPplus-vibro. All EPM devices are battery powered, compact and lightweight hand-held devices for two- and four-stroke diesel engines. According to the company, which celebrated its 25-year anniversary in July, they convince with their ease of use, robustness, and high accuracy. There is no need for factory calibration, not even after several years of operation. More than 5,000 units have been sold up to now, IMES recently stated. The measurements that can be performed depend on the EPM type. The digital peak pressure indicator EPM-Peak is designed to measure the maximum value of cylinder pressure while the engine analyser EPMXPplus-vibro enables advanced combustion pressure measurements including vibro-acoustic diagnostic on two- and four-stroke diesel engines. The further development EPM Next Generation offers one common hardware for all EMP types, thus enabling a simple upgrade from peak pressure indicator EPM-Peak up to engine analyser EPM-XPplus-vibro. The user can download a higher version from the internet and it is not necessary to send the device back to IMES. The collected data of all EPM types can be displayed and evaluated from EPM software. The device is connected to a PC via USB, and the visualisation software identifies the EPM type and activates the corresponding functions. Depending on the instrument, peak pressure, pressure- and combustion behaviour, performance data as well as valve timing will be evaluated and analysed. If the PC is connected to the internet, automatic checks will show whether there are any hardware or visualisation software updates. The user can install the updates and they are free of charge.

Furthermore, the optimised hand-held devices of the EPM next generation offer two additional function keys for an easier handling and a larger and more comprehensive display.

All devices of EPM family are equipped with the robust cylinder pressure sensor HTT-06 that offers a good thermodynamic performance. They all have a battery capacity of more than 20 working hours.

IMES at SMM:
Hall A2 / Stand 235

Ballast water treatment systems on display

The French UV water treatment pioneer Bio-UV Group will be exhibiting a pair of Bio-Sea ballast water treatment systems (BWTS) at this year's SMM.

Bio-Sea´s BWTS disinfects water and eliminates all microorganisms Source: Bio-Sea by Bio-UV Group

For the first time, the company will be showcasing its new 'M'-Series Bio-Sea unit alongside the company's low-flow Bio-Sea 'L' series. All Bio Sea units incorporate Bio UV Group's next generation UV-C lamp technology, developed in response to market demand for a BWTS with reduced operational costs, a small footprint and simplified maintenance and installation. For instance, the low-energy-consumption UV-reactor in the Bio-Sea 'L' Series is based around a completely new type-approved 6-kW UV lamp arrangement.

The system is sized to guarantee full IMO and USCG compliance, treating flow rates of between 13m^3/h and 120m^3/h from one the most compact, low energy consuming BWTS on the market. However, the UV technology has been applied across the range of Bio-Sea systems developed for flow rates between <100m^3 /h to >2,000m^3/h".

In addition, Bio-UV Group provides customers with full turnkey solutions, offering everything from front end engineering and design, 3D-scanning through to pre-installation pipework, installation, commissioning and through-life service and maintenance.

Bio-Sea by Bio-UV Group at SMM:
Hall A1 / Stand 124

Rendering of a container vessel

Source: Aquametro Oil & Marine AG

Measurement technology for CO_2 reduction

With "fit for alternative fuels", Aquametro Oil & Marine AG will use this year's SMM to illustrate which options for the reduction of CO_2 emissions have already reached market maturity within the maritime industry. Whether as an admixture to fossil fuels or as a pure alternative fuel such as carbon-neutral methanol, the use of fuels that are as climate-neutral as possible plays an important role in achieving climate targets.

As shipping companies begin to convert their fleets to operate on alternative fuels, the corresponding measurement, control and regulation technology must also be able to measure and regulate these new fuels. "Fit for alternative fuels" enables conventionally operated ships to blend sustainable biofuels with little effort, thus reducing CO_2 emissions in shipping in the long term. In addition, new regulations and methods under IMO to limit shaft power – ShaPoLi – are effective ways to reduce CO_2 emissions. To achieve the set targets, the Aquametro Shaft Power Meter was developed as a key element of the Fuel Performance System (FPS). This is an open PLC web-based signal recording system with data-log that provides full transparency of all fuel and power parameters of the ship operation process.

Aquametro at SMM:
Hall A1 / Stand 414

METIS takes in the weather

Launching at SMM 2022, METIS Cyberspace Technology's Augmented Routing Optimization seamlessly integrates weather-routing functionality from specialised providers into the cloud-based METIS analytics platform.

Already optimising vessel performance for fuel consumption, hull fouling, emissions and more, the METIS platform can now consider all variables affecting a ship using a single interface. This represents a significant step forward in voyage optimisation, allowing precise comparisons and setting new data-driven standards to enhance ship safety, efficiency and sustainability. While the International Maritime Organization and International Association of Marine Underwriters work with the assumption that weather routing helps ships save over 3% in fuel consumption, Augmented Routing Optimization is already proving far more productive, METIS noted. In a six-month pilot, a METIS customer using the system achieved a 923-tonne reduction in fuel oil consumption, equivalent to around USD 750,000 at current prices. This was despite the distance travelled by the ship increasing by 25%. The CII was also calculated as 19.5% lower. On board a ship, Augmented Routing Optimization enables ship-specific comparisons between the weather-optimised route with other user-defined routes. On shore, managers can take account of route adjustments, calculate and recalculate routes to optimise schedules and better evaluate voyage and post-voyage performance, against expectations or charter party terms.

METIS Cyberspace Technology at SMM:
Hall A1 / Stand 218

Cross-industry shipping groups for methane slip task force

Led by Lloyd's Register, the Methane Abatement In Maritime (MAM) Innovation Initiative is looking to address the big problem with LNG-fuelled propulsion – methane slip.

From left: LR's Mark Warner and Steve Price; Dominik Schneiter, WinGD; Peter Jackson, Seaspan; and Carnival's Tom Strang
Source: Charlie Bartlett

While successive generations of engines have improved methane slip – the phenomenon of unburnt methane leaking into ship exhaust gas – the problem is still serious enough that many, including the IMO, have questioned the effectiveness of LNG as a greenhouse gas emissions reduction strategy.

The question has certainly been on the minds of delegates at the show, said Tom Strang, Carnival SVP Maritime Affairs: "What we've seen is a lot of stories out there: 'the amount of methane is massive'… 'we lose a bunch of it whenever we bunker'…"

A group comprising Maran Gas Maritime, Mediterranean Shipping Company (MSC), Carnival Corporation & Plc, Seaspan, Shell, Lloyd's Register and Knutsen Group, aims to develop globally recognised standards and procedures for measuring methane slip. So cloudy is the issue that estimates are divided on just how many times worse methane leakage is than CO2 for the earth's atmosphere.

"There are a lot of things you can do about methane slip, but unless you can measure it and quantify it, you can't do anything about it," Strang declared.

Advocates of LNG point out that it burns cleaner than other maritime fuels, with 20% less CO2, less NOx, and negligible sulphur and particulate matter.

Strang said there were various myths and misconceptions surrounding LNG. "I think the myth is that there is no benefit from LNG. We are all invested in decarbonisation as a company – we've got our targets and aspirations, and we believe that LNG has a significant role to play. It's not going to be the solution for every ship in the world, but we've got a fleet, and we have invested."

Peter Jackson, Seaspan, commented: "We are intolerant of methane slip, because this can harm perceptions.

"We are doing similar work on ammonia. There is a lot of hype around ammonia, but ammonia has a similar problem – nitrous oxide (NOx). So it is not as if the problem is all on the LNG side. LNG is here now, you get some good advantages in terms of CO_2 reduction."

Lloyd's Register at SMM:
Hall B4.EG / Stand 107

Cloud-based fleet management

Hanseaticsoft GmbH, part of Lloyd's Register's Maritime Performance Services division, drives digital transformation in fleet management. The company's Cloud Fleet Manager (CFM) is a cloud-based all-in-one software package for shipping companies. It will be presented and demonstrated at this year's SMM.

Source: Hanseaticsoft GmbH

User interface of the Cloud Fleet Manager

The system is web-based and can be used without any installation. It centralises all information by removing data silos and makes insights available for all employees ashore as well as for the crews at sea. The application's cloud-based design allows employees to use it anytime, anywhere, and browser-independently. According to Hanseaticsoft, access to the most important information is secured even on smart phones. Cloud Fleet Manager offers applications that are optimised for all departments of shipping companies and increases collaboration, streamlines processes, and can be used intuitively. With Cloud Fleet Manager, staff can work in interactive teams to simplify crew management or seamlessly share, manage and resolve service requests, for example. From payroll to purchasing, Cloud Fleet Manager promotes higher productivity and economies at fleet rather than vessel level. Whether finding relevant data on vessels, crew members or employees, or scheduling maintenance, all can be done with just a few clicks. Thanks to powerful APIs, it is simple to integrate existing systems. Enhanced reporting and analytics options complement the software.

Hanseaticsoft GmbH at SMM:
Hall B4.EG / Stand 112

Hempel launches new carbon impact service

Denmark's Hempel has launched a new service to support shipowners and operators seeking to optimise their energy efficiency existing ship index (EEXI) and carbon intensity indicator (CII) assessments. There are now less than four months until the IMO's new carbon efficiency regulations enter force in January.

Philippos Sfiris, head of Go-to-Market Strategy, Marine, at Hempel, reveals that by using the company's new CII & EEXI Impact Analysis Tool, a report can be generated for any vessel in the world fleet. The tool can also compare and contrast the impact of Hempel's entire range of coatings on a specific vessel's CII and EEXI outcomes.

"We recommend that two or three paint systems are analysed," Sfiris said yesterday, "including the existing system already applied to the vessel, so that accurate comparisons can be drawn."

He went on to explain that only a few steps can be taken that have an immediately positive impact on a ship's CII rating. One of these is choice of hull coating. He cited high-end products such as Hempaguard, the company's reduced friction range of silicone-based coatings.

"As a marine coatings provider, our role in shipping's shift to reduce emissions is as a trusted industry advisor and partner. We recommend that owners and operators should consider a number of criteria before committing to a new hull coating product," he said.

He said that the likely impact of new coating system or options should be assessed in light of various factors, including surface preparation scenarios and potential impact on ship speed for the purpose of EEXI. The total cost of ownership should be carefully considered, including factors such as coating choice itself, shipyard costs for surface preparation and coating application, cost of in-service cleaning, fuel cost over the ship's service life, and overall return on investment.

Other benefits for the shipowner or operator should also be considered, Sfiris continued. These include fuel savings over a specific charter period and any potential increase in earnings in timecharter equivalent terms.

Phillipos Sfiris, Head of Go-To-Market Strategy, Marine, Hempel Source: Hempel

The company has noted a marked increase in the number of clients seeking advice, including those who are developing strategies for keeping their ships in operation in the years ahead. Hempel's analysis of data indicates that as much as 80% of the world fleet will need to take steps to ensure a good CII rating. Furthermore, since the CII is a dynamic measure and tightens steadily over the second half of the decade, a ship that may initially be assessed in one of three acceptable CII categories – A, B, or C – could subsequently fall into an unacceptable one – D or E – where remedial measures would be required either immediately or following three successive annual D ratings.

"With our CII & EEXI Impact Analysis Tool," Sfiris said, "vessel owners and operators can get full visibility of not only the efficiency improvements available, both operation for CII and technical for EEXI, but also the commercial advantages available to them."

Hempel is inviting shipowners and operators to visit its stand, B5.216, for an assessment of how their ship may perform in relation to the regulations and the impact that a high-end coating might have.

Hempel at SMM: Hall B5 / Stand 216M

The 18.28m-long racing yacht was built in France and will compete in the Vendée Globe in 2024 Source: Team Malizia

Malizia - Seaexplorer christened in Hamburg

The Team Malizia around German skipper Boris Herrmann arrived in Hamburg on September 6 with the new racing yacht *Malizia - Seaexplorer*. After reaching the Traditionsschiffhafen in Hamburg's Hafencity, the 18.28m-long ship was officially christened directly opposite the famous Elbphilharmonie.

The ceremony took place as part of the Malizia Ocean Festival, where interested parties can visit the racing yacht until this evening and inform themselves about sustainability, climate change and marine conservation. Admission is free.

The *Malizia - Seaexplorer* is expected to participate in The Ocean Race 2022/2023 and then again in the fall of 2024 in the Vendée Globe, a solo round-the-world race that takes place every four years.

Team Malizia's mission is to advance scientific ocean research. Data collected during the voyages in often difficult marine areas will be made available to the scientific community to monitor CO_2 levels, temperature, salinity and pH levels to understand the impact of climate change on our oceans.

Source: Mediaserver Hamburg/ Andreas Vallbracht

Need a little time out? The large park areas of "Planten un Blomen" are located right next to the SMM exhibition grounds

Hamburg basics - Part 2

Perhaps you have already found the time after the exciting first day of the SMM fair to get a first impression of Hamburg's sightseeing highlights. If not, we have a few more suggestions here:

Chill and relax

Did you know that Hamburg is one of the greenest cities in the world? Measured by the size of the green spaces available to every inhabitant, the Hanseatic city ranks ninth worldwidely far ahead of Berlin (18th) or Munich (24th).

Planten un Blomen

Directly opposite the central and the east entrance to SMM you will find Hamburg Central's green lung "Planten un Blomen" (Low German for "Plants and Flowers") with manicured flower beds, herb gardens and vast lawns. One of the highlights: the Japanese gardens. With their exotic plants and trees, intriguing rock formations, small ponds and picturesque tea house, they offer a temporary respite from an intense day at SMM.

Alster

An iconic walk is the 7-km tour around the banks of the Outer Alster Lake. Whenever the sun is out, the path fills up with joggers, sailors, paddlers and rowers. There are plenty of cafés along the way or you can jump on one of the water taxis (alstertouristik.de, daytime only).

Shopping and Nightlife

Around the Inner Alster Lake you will find Hamburg's main shopping area. Chanel, Prada and Alsterhaus, but also traditional shops such as the tailor Ladage&Oelke or the Felix Jud bookshop. If you want to shop like Hamburg's high society, head for Neuer Wall, Jungfernstieg and Neue Bleichen. Spitalerstrasse and Mönckebergstrasse – these streets are the main commercial arteries with H&M, Karstadt & Co. The Europa-Passage designed by Hadi Teherani shines with 120 shops and a fantastic view of the Inner Alster Lake.

Just opposite SMM, fashion fans browse the designer boutiques and second-hand stores of Marktstraße in trendy Karolinenviertel a good place for a sundowner before exploring neighbouring nightlife areas such as Schanzenviertel and the famous Reeperbahn of St. Pauli.

The Jungfernstieg beside the Inner Alster belongs to Hamburg's main shopping areas

Source: Mediaserver Hamburg/Julia Schwendner

› HOW TO GET AROUND

Hamburg offers many different ways to get from one place to another.

HVV (hvv.de): Hamburg's public transport system sells day and weekly tickets to explore the city by bus, underground and suburban train, and ferry. The 9am group ticket is particularly worthwhile: up to five people can use it. Price: from EUR 12.90.

Bike rental (stadtrad.hamburg.de): Hamburg has a well-developed network of cycle paths and is best explored by bike, for example with StadtRAD Hamburg, with stations located all over Hamburg. Price: The first 30 minutes of each ride are free, then EUR 0.10 per minute.

Car-sharing: There is a large variety of car-sharing providers in town. Free floating providers – where the vehicles can be rented spontaneously and flexibly parked - include ShareNow (share-now.com), Miles (miles-mobility.com), SixtShare (sixt.de/share) and WeShare (weshare.io) with varying price models.

Ride-sharing (moia.io): The MOIA shuttle serves requests from different people who are traveling in the same direction – a shared taxi optimised by algorithm. Prices range between a taxi ride and public transport.

e-Scooter: There are several providers of e-scooters available to cover short distances individually, for example Lime (li.me), Tier (tier.app), VOI (voiscooters.com), Bird (bird.co) and Bolt (bolt.eu). Make sure only to use cycle paths or the street – riding on sideways is prohibited.

The Inner and Outer Alster are located in the heart of Hamburg. With their walking paths, cafés and opportunities for water sports, the two lakes form an important local recreation area for the city.

Source: Mediaserver Hamburg/ Andreas Vallbracht, Julia Schwendner

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