

# SMM insights 2017



**SMM**

the leading  
international maritime  
trade fair • hamburg

4-7 sept 2018  
smm-hamburg.com

## Trends in SMMart Shipping



Hamburg Messe  
und Congress

**Claus Ulrich Selbach**  
 Business Unit Director  
 Maritime and Technology Fairs  
 Hamburg Messe und  
 Congress GmbH



Photo: U. Tabasa Marten, fotografia

## Dear Readers, Dear Friends and Partners of SMM,

The global maritime industry has been on an emotional rollercoaster. While it experienced yet another low point last year as new orders dropped to just eleven million Compensated Gross Tons (CGT), the lowest level in twenty years, there was at the same time a sense of new excitement, inspired by concepts such as digitalisation, green propulsion and autonomous shipping. SMM, the leading international trade fair of the maritime industry, has always been the culmination point for this persistent innovative spirit. So in September 2018, more than 2,200 exhibitors from around the world will once again gather in Hamburg to deliver a demonstration of technology superlatives; and once again, the fair is almost fully booked far in advance!

But how are the decision-makers from shipowning companies, shipyards and suppliers currently assessing the future of their industry? What are the issues they are most concerned about? To find out, we conducted a comprehensive survey among our exhibitors and visitors. The resulting, first-ever "SMM Maritime Industry Report" draws a detailed picture of the moods and trends in the maritime sector.

Meet our SMM staff: whether technical director, exhibitor services or project management, our highly motivated team is working hard to make sure the next SMM is another full success for all participants, and an impressive demonstration of the capabilities of a dynamic industry.

**SEE YOU AT SMM 2018!**

A handwritten signature in blue ink, appearing to read "C. Selbach".



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## Light at the end of the tunnel

**STUDY** In the first-ever SMM Maritime Industry Report (MIR) the organisers of the leading international trade event of the maritime industry wanted to gauge the mood of the sector. Having gone through difficult times, the majority of responding executives are looking ahead with renewed optimism, ready to address the challenges of the future.

Expressing the views of more than 2,500 participants from 69 countries, including many senior executives, the SMM Maritime Industry Report, prepared jointly by Hamburg Messe & Congress GmbH (HMC) as the organiser of SMM, and the market research institute mindline, reflects the prevailing sentiments in the maritime industry.

“We asked our exhibitors and visitors about the top items on their agendas and how they gauge their economic perspectives,” says Claus Ulrich Selbach, Business Unit Director – Maritime and Technology Fairs & Exhibitions at HMC. Shipowners, shipbuilders and suppliers from

around the world responded. Apart from the economic and technological development the survey also addressed planned investments. “I haven’t heard of any other study covering the industry in such breadth,” said Hauke Schlegel, Managing Director of the Marine Equipment and Systems Section at the VDMA (Mechanical Engineering Industry Association). “Our main innovative trends are clearly confirmed by this study: maritime digitalisation, efficient propulsion, LNG and alternative fuels.”

The survey covered the SMM roster of companies, the Who’s Who of the shipping, shipbuilding and supply segments (refer to fact box). →



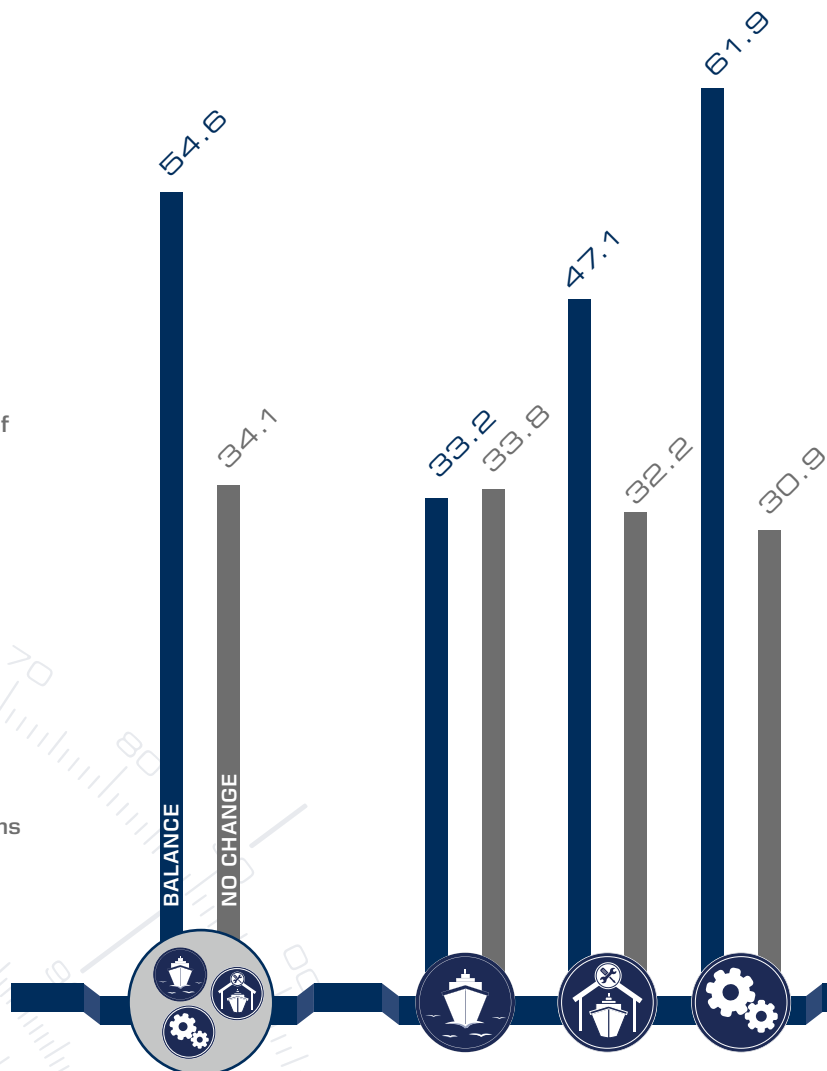
## Maritime Industry Score

This score is calculated as an approximation of the general business climate in the maritime industry. Based on all responses on business and growth potential from the different industry sectors, a balance of the shares of positive and negative forecasts is calculated.

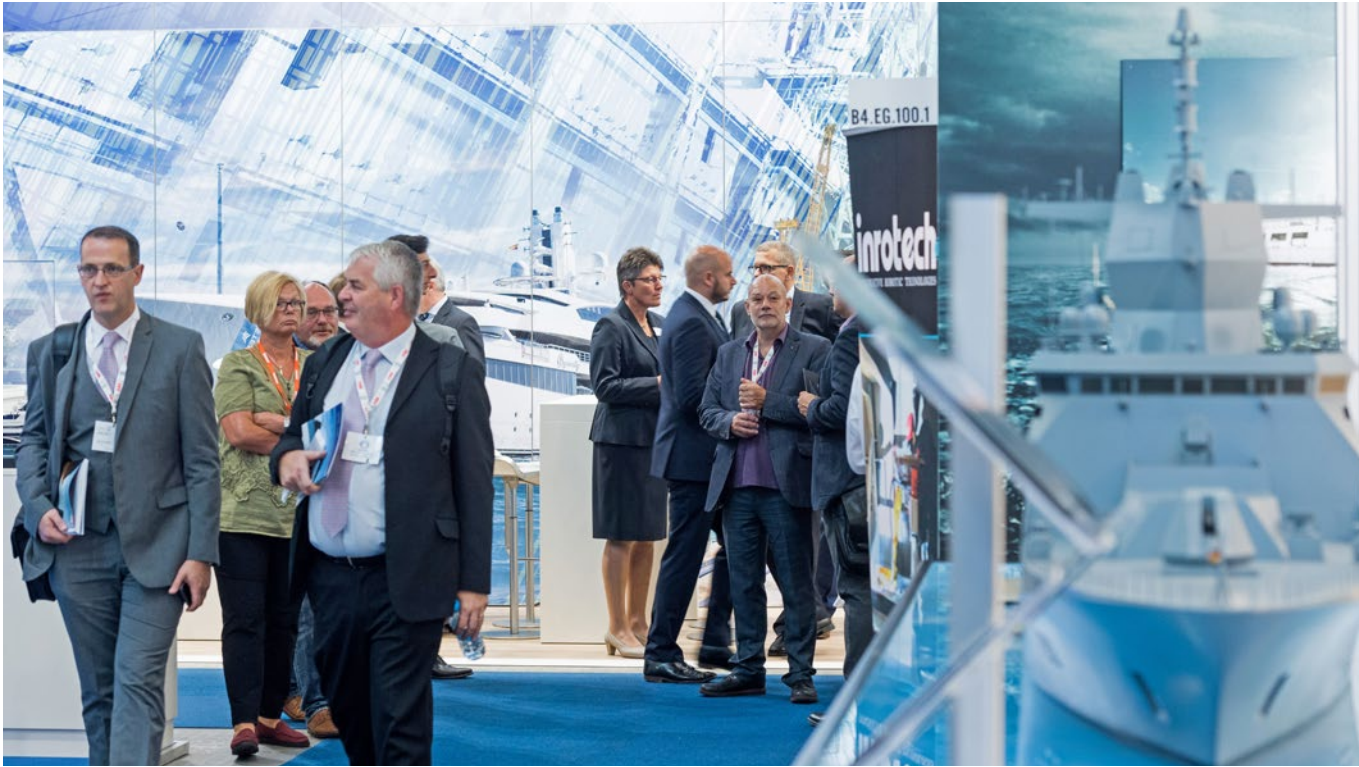
-  SHIPPING
-  SHIPYARDS
-  SUPPLIERS

### Balance reading example

The positive expectations regarding growth and sales opportunities across shipping, shipyards and suppliers are 54.6 percentage points above negative expectations.

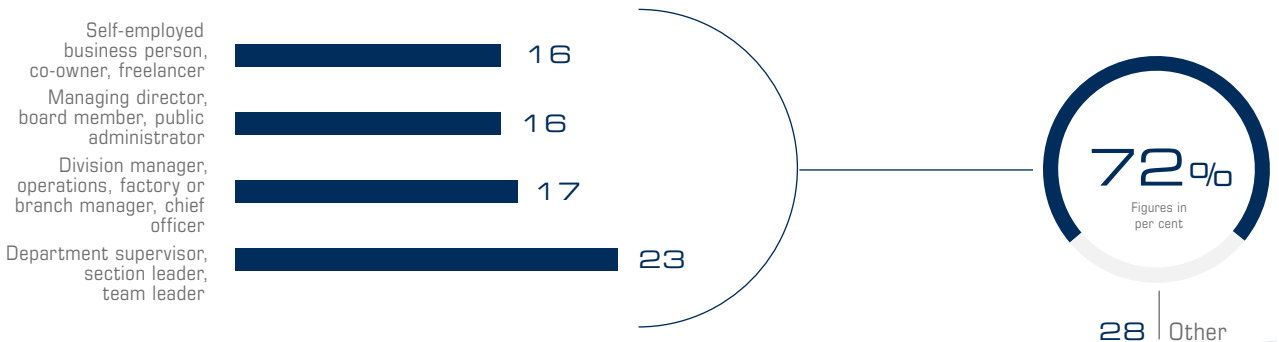






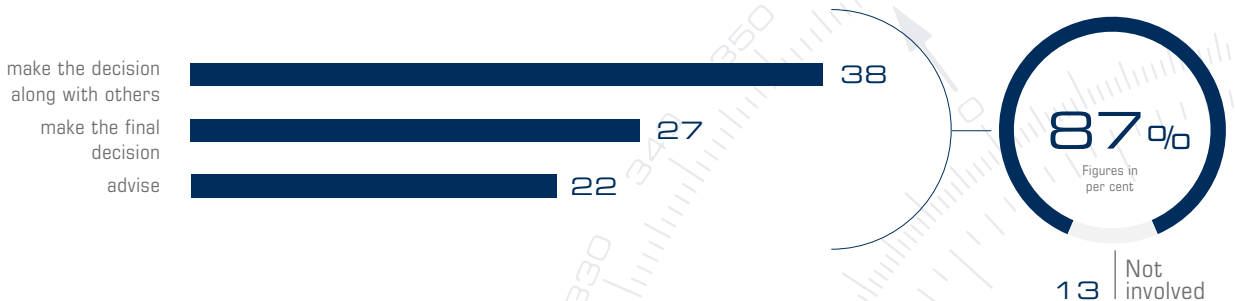
## Position of participants

What position do you hold in your company? About 2/3 of participants are in a decision-making position. Overall, Sales and Company Management are the most common areas of work.



## Purchasing responsibility

In which area do you work? About 2/3 of participants hold a discretionary position. Overall, Sales and Company Management are the most common areas of responsibility.



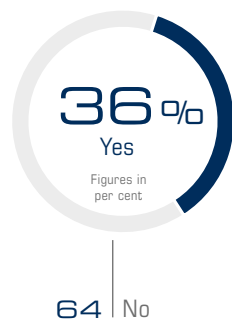
## Choice of fuel

LNG is a very important fuel option for the future. Still, MDO and HFO/MFO together make up for a noticeably larger share.

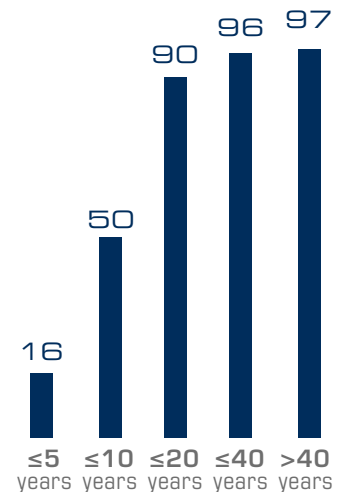


## Unmanned commercial shipping

Can you imagine using unmanned shipping commercially? About 1/3 see unmanned shipping as a viable commercial option, with 20 years as a realistic time frame to establish the technology.



How long do you think it will take that to happen?



**“We have seen an enormous shift in public opinion”**

**Dr Max Johns**  
Managing Director  
German Shipowners' Association

→ For the first time a “Maritime Industry Score” was computed based on the outcome of the survey. This score reflects the business expectations of shipowning companies, shipyards and suppliers. “We want to hold regular business climate surveys in future to determine the mood in the industry,” says Claus Ulrich Selbach.

### CAUTIOUS OPTIMISM

In the wake of an economic lull that lasted nine years, the results of the current survey betray a certain basic optimism across the maritime sector, in spite of expectations of a continuing consolidation process. The overall Maritime Industry Score was 54.6 points, with the shipping segment's 33.2 points clearly lagging behind shipbuilding (47.1) and the supply industry (61.9). These figures represent the ratio of positive versus negative growth expectations. The surprisingly positive outcome proves that the industry is beginning to see light at the end of the tunnel.

This even includes the shipowner segment, after years of suffering from the crisis, as another result of the survey shows: 20 per cent of responding decision-makers consider it as “very likely”, and an additional 12 per cent as “likely” that they will order new ships within the next 12 months. “This is especially surprising if you consider the fact that this value is far above the typical fleet rejuvenation rate,” comments Dr Max Johns, Managing Director of the German Shipowners' Association VDR. Some of the players clearly view the growth prospects as positive, indicating an increasing willingness to invest.

In at least one respect investments are unavoidable: following the entry into force of the Ballast Water Convention of the International Maritime Organisation (IMO) in early September 2017, 54 per cent of responding shipowner CEOs announced their intention to retrofit their ships accordingly.

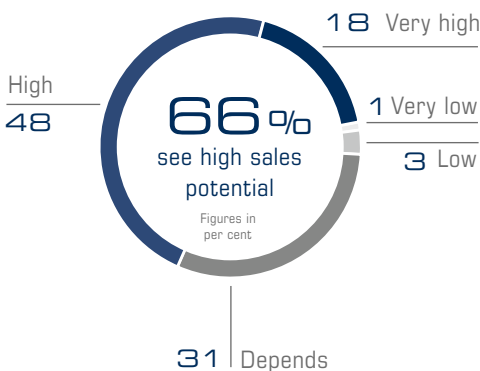
Stricter environmental regulations are also causing a stir in the ship propulsion segment. The industry is homing in on LNG as an al- →





## Sales opportunities in shipbuilding

The business climate in the supply industry is positive: 2 out of 3 participants see high or even very high sales potential for their products in the market – same for suppliers of engines / drive systems



→ alternative fuel. 44 per cent of respondents said LNG is their first choice when contemplating newbuilding projects. Hybrid solutions based on marine diesel are also popular. "There is no way around the energy transition in the maritime sector. The increasing number of newbuilding orders and retrofits shows that LNG is gaining ground. The future of low-emission shipping has long begun," says Dr Reinhard Lüken, General Manager, German Shipbuilding and Ocean Industries Association (VSM). The supply industry agrees, with 49 per cent of respondents championing LNG.

### KEY TOPICS FOR SMM

The vision of autonomous shipping has captivated the sector. 36 per cent of shipowner executives believe it to be the future of merchant shipping. 90 per cent of supporters believe the use of unmanned ships will be routine in as little as 20 years. "We have seen an enormous shift in public opinion here," says VDR managing director Johns. The two-decade horizon is not far-fetched, considering the average service life of a ship, he adds.

There is great interest in remote monitoring of ships and ways to protect ships against cybercrime. "The opportunities and challenges of digitalisation

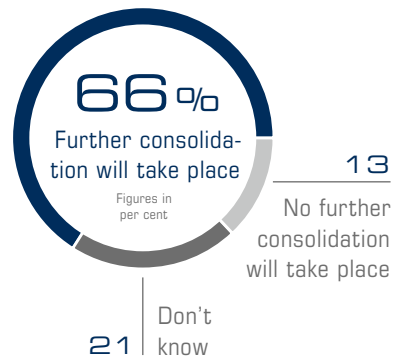
## Consolidation processes

Nevertheless, further consolidation processes are expected. The positive growth prognosis does not guarantee the survival of individual companies.



**"There is no way around the maritime energy transition"**

**Dr Reinhard Lüken**  
General Manager,  
German  
Shipbuilding and  
Ocean Industries  
Association  
(VSM)

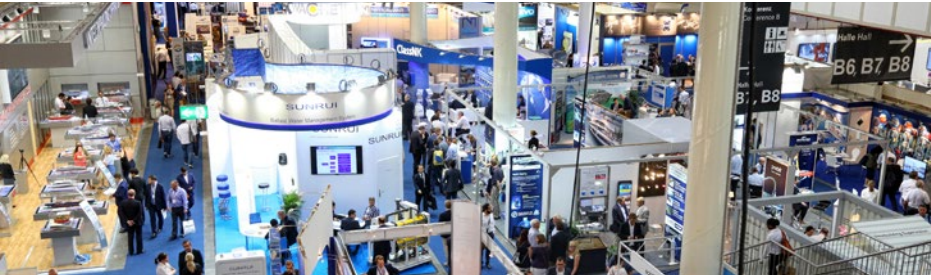


are on everybody's mind in this industry. Therefore, this topic will play a key role at SMM 2018, for example during the Maritime Future Summit," says HMC Business Unit Director Selbach.

New technologies that can help optimise processes and increase efficiency are in demand. Accordingly, 66 per cent of respondents from supply companies see "high" or "very high" sales potential for their products in the market, and three out of four (74 per cent) confirm that innovative technology is being welcomed by customers. The responding suppliers believe that the German, Chinese and US markets have the highest growth potential.

"With its broad coverage our first comprehensive industry survey is an important source of inspiration for the next SMM in September 2018," says Bernd Aufderheide, President and CEO, Hamburg Messe und Congress GmbH. Initial indications are positive: the maritime sector, after challenging times, is looking to the future with cautious optimism. "The results of the SMM Maritime Industry Report are a very valuable source of information for us in aligning the SMM itself and the accompanying conferences with the needs of the industry."

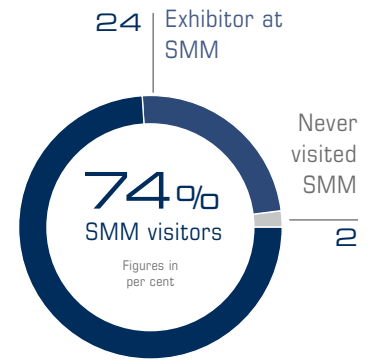




## Comprehensive study includes top-flight respondents

Overall, nearly 70,000 global contacts were utilised in the online survey for the SMM Maritime Industry Report. The questionnaire was available in German, English, Mandarin, Japanese and Russian. More than 2,500 respondents answered every single question. "This is a better response than what many comparable surveys have been able to achieve," says project lead Jörg Kunath from mindline. The participation profile is a representative cross-section of the industry:

- Roughly three quarters (74 per cent) of respondents were SMM visitors, and one fourth (24 per cent) were exhibitors,
- Nearly one fifth of respondents work in the shipping sector (19 per cent); 13 per cent are employed by a shipyard, and the majority (67 per cent) work for a supplier.
- 72 per cent of respondents hold a senior position at their company, and approximately two thirds (65 per cent) make purchasing or investment decisions, either alone or in a team.



## Categorisation

About ¾ of participants are SMM visitors, almost everybody else attended as exhibitors. Regarding industry sectors, suppliers are by far the biggest group. One out of every two participants is not from Germany.

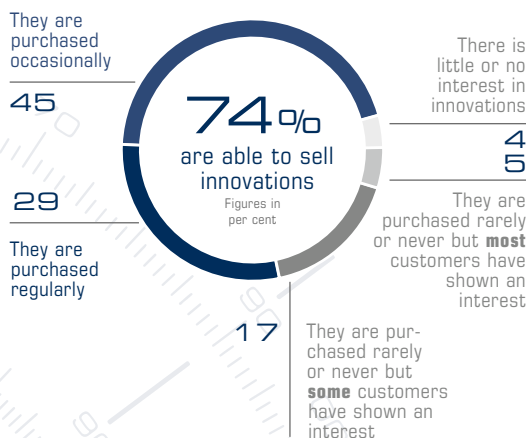


**“Our main innovative trends are clearly confirmed by this study”**

**Hauke Schlegel**  
 Managing Director,  
 Marine Equipment  
 and Systems  
 Section,  
 VDMA  
 (Mechanical  
 Engineering Industry  
 Association)

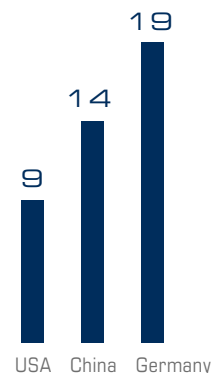
## Attitude towards innovation

Product innovations are well accepted among customers: 74% of participating suppliers say they can sell their innovations.



## Countries with increased demand

About half of participants see an increased demand from specific countries, mostly EU member countries, with Germany topping the list.



# opinion

## Breaking new ground

It seems like a paradox: for more than nine years the maritime industry has been plagued by a crisis marked by overcapacities, sluggish investments and consolidation. Nevertheless, SMM, the leading international maritime trade fair in Hamburg, has been hugely successful. The available exhibition space will be fully booked again by the end of this year. How does this fit together? In my opinion the reason is twofold:

- In difficult economic times company executives must make a special effort to pursue new trends and seek to intensify their customer and supplier relationships. Even in the digital age, meeting up face-to-face, sharing expert views and studying innovative technology first hand are invaluable means to maintain contact with market reality. Doing all this in a global context is possible only at SMM.
- SMM reflects the pulse of the industry. Since its beginnings in 1963 this fair has evolved steadily, and so have the exhibiting companies. What began as a social occasion for Hamburg-based ship engineers is today the most important event for the maritime industry – globally. A varied conference programme with top-level expert panels, along with steady improvements to our exhibitor services, have made SMM a highly attractive trade fair and an important source of inspiration for the industry. Examples include the clustering of exhibitor groups in the halls, or the theme routes introduced at the last SMM which guide visitors to the stands they are most interested in. As a novelty, the 2018 fair will host the TradeWinds Shipowners Forum (see information to the right) where insiders with practical experience will discuss financing and other essential maritime issues.

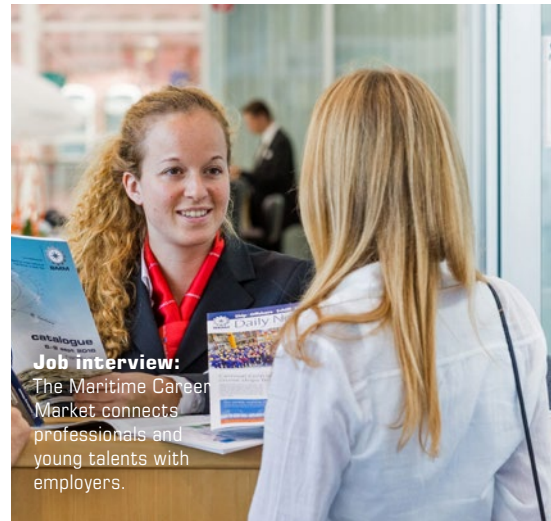
Jointly with our exhibitors and visitors we have turned SMM into a successful brand that uniquely reflects the evolution of the maritime industry.

I am looking forward to an exciting SMM 2018 with all of you!

**Bernd Aufderheide,**  
President and  
CEO, Hamburg  
Messe und  
Congress GmbH



Photos: HMC/Zarif, ROMANUS FUHRMANN, KENNY HICKEY PHOTOGRAPHY, deepak@deepakdevia.com



**Job interview:**  
The Maritime Career  
Market connects  
professionals and  
young talents with  
employers.

### TradeWinds Shipowners Forum

#### A Debut at SMM

**After its successful forerunner** in Hamburg in October 2017, the TradeWinds Shipowners Forum will enter the stage at SMM 2018 for the very first time. On 4 September, the interactive forum, led by a panel of industry experts, will include a market overview for the panel to tackle the most hotly debated issues in shipping today. These will be trends to watch in design, construction and newbuilding, sector overviews and



**Handshake:** Many business deals were made at INMEX SMM India in Mumbai.

## Maritime Career Market: Networking for your career

**Innovative enterprises, exciting high-tech:** At SMM the fascination of the maritime industry can be experienced more vividly than anywhere else. The exhibitors are successful entrepreneurs offering job opportunities for many different skill sets. To help overcome the increasing shortage of qualified professionals, the Maritime Career Market (MCM) provides a platform where high-performing companies can meet up with talented jobseekers. The MCM will take place for the

third time on Friday 7 September 2018. It is a popular job exchange where interested professionals and young talents can get in touch with employers and educational institutions.

What is more, the MCM offers visitors up-to-date information on many different training and educational programmes as well as job profiles in the maritime sector. Jobseekers can get professional advice on how to complete a job application and communicate successfully in the

workplace. Admission to the MCM is free for students and trainees. Exhibitors participating in the MCM will receive 50 free invitations for the last day of the fair. In spring 2018 the "Job Route" will go online, allowing aspiring professionals to plan their visits to promising career opportunities at SMM.



Read more at:  
[smm-hamburg.com/mcm](http://smm-hamburg.com/mcm)

game changers, investor sentiment and sources of finance, vessel valuations, digitalisation and the opportunities and risks of technology and the "connected ship".

"We are excited about TradeWinds' strategic partnership with SMM. Together, we will provide the ideal platform to hear a fascinating debate how leading shipowners are taking advantage of improving markets and the more optimistic outlook despite continued questions about sourcing finance," says Julian Bray, Editor in Chief, Tradewinds.

Based on the successful Shipowner Forums held in Athens, Hong Kong and Singapore, SMM welcomes

shipowners from all around the world to Hamburg from 4-7 September 2018. Hereby, the leading international maritime tradefair not only functions as a host for the exclusive Shipowner Forum but as a huge exhibition area where visitors find all the latest trends and product innovations in the maritime industry.

The programme of TradeWinds Shipowners Forum will be announced in spring 2018. Places are limited and early registration is advised.

Read more at:  
[smm-hamburg.com/sof](http://smm-hamburg.com/sof)

### Facilitator:

Julian Bray,  
Editor in Chief,  
Tradewinds will  
chair the  
Shipowners  
Forum.



## INMEX SMM India: South Asia's No.1

**Alternating with the "big" SMM** in Hamburg, INMEX SMM India, in cooperation with Informa Exhibitions, takes place every two years in Mumbai. It is the biggest international trade fair for shipping and the maritime industry on the subcontinent. In early October 2017, nearly 300 leading manufacturers and suppliers from 23 countries presented their innovations in Mumbai. The exhibition was accompanied by a conference programme with top-level lecturers and discussion panels. INMEX SMM India 2017 offered

visitors three days of power-packed business discussions, networking opportunities, and technical seminars. The INMEX SMM India Conference sent a clear message: there is new momentum in the Indian maritime community, driven by the Indian Navy's needs, progress in inland waterway development, a growing demand for coastal vessels, and a push towards collaborative, data-based maritime communities that can compete internationally.

For the first time in India, the conference hosted the CIMAC Circle

where a dozen industry leaders discussed ways to meet Tier III and other emission requirements. The event was attended by more than 6,300 visitors, 97 per cent of whom said the fair was important for their business. The next INMEX SMM India will take place from 3 to 5 October 2019 at the Bombay Convention and Exhibition Centre.



Read more at:  
[inmex-smm-india.com](http://inmex-smm-india.com)





**Visions:** At SMM 2018 visitors can study the latest technology for greener shipping.

## The future is green

**PROGRESS** Eco-friendly propulsion systems will receive broad coverage at SMM 2018. In Hall A5, which will once again be dedicated to “Green Propulsion”, Liquefied Natural Gas (LNG) will be a featured technology.

Things are beginning to move: for a long time LNG was not much more than a potential ray of hope for a greener future of shipping. But now the industry is rolling up its sleeves. One of the early adopters was the US container ship owner TOTE which is now operating two LNG-powered ships between the United States and Puerto Rico to comply with the strict rules of the North American Emission Control Areas.

The technology has obvious benefits: compared with conventional fuels, burning liquefied natural gas reduces CO<sub>2</sub> emissions by up to 25 per cent, and nitrous oxide emissions by as much as 80 per cent. What is more, LNG hardly emits any sulphur or particulate matter. The Marlin-class vessels “Isla Bella” and “Perla del Caribe”, built by DSME in South Korea with support from the classification society ABS, are the world’s

### Green Route

**Find your way:**  
Follow the arrows  
and discover...

first ships equipped with the new MAN Diesel & Turbo ME-GI Dual-Fuel engine. LNG propulsion is gaining ground: according to the recent SMM Maritime Industry Report (MIR), 44 per cent of responding ship managers would prefer LNG as a fuel when investing in new ships (see page 4).

LNG is sure to be one of the leading topics at SMM: following its successful inauguration during the 2017 SMM, Hall A5 will again be the centre of attention for all visitors interested in Green Propulsion at the 2018 event.

### MAJOR INVESTMENTS

However, retrofitting or building ships for LNG fuel has its price. Compared to conventional ships, LNG engines, fuel tanks and supply lines raise building costs by 20 to 30 per cent – money

Photos: HMC/Stephan Wallocher, Haldenline, Naessco/TOTE

shipowning companies cannot easily come up with in the wake of the shipping crisis. This is an issue that has not gone unnoticed by politicians.

For example, the German Federal Ministry of Transport now provides subsidies for building or retrofitting ocean-going vessels to burn LNG.

**SUBSTANTIAL PROGRESS**

Several German shipowners have opted in favour of LNG fuel recently: in a major project Reederei AG Ems retrofitted its ferry "Ostfriesland" for LNG operation; its subsidiary Cassen Eils has already commissioned its new LNG-operated ferry "Helgoland". The two current flagships of AIDA Cruises, "AIDAprima" and "AIDAprera", are able to switch to low-emission LNG operation in port. But that is just the beginning: AIDA has ordered two cruise ships from Meyer Werft in Papenburg that will be the world's first of their kind to operate exclusively on LNG. They are scheduled for delivery in late 2018. The classification society DNV GL, again the main sponsor of SMM, is supporting these projects.



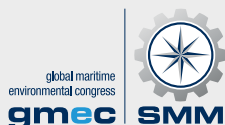
Further achievements are reported from the merchant shipping segment: in early November CMA CGM, one of the world's biggest shipowners, said it will equip all nine 22,000 TEU mega box carriers ordered from China with LNG propulsion, a 1.4 billion dollar project. CMA CGM is the first owner to opt for LNG for ships of this size.

The LNG bunkering infrastructure is likewise taking shape, with many ports taking action. Last August Shell took delivery of a state-of-the-art LNG bunkering vessel. The Rotterdam-based "Cardissa" can carry up to 6,500 cubic metres of LNG and supply customers at various locations in Europe. "LNG will play a key role as a fuel in the future energy mix," said Steve Hill, Executive Vice President of Shell Energy. In the Belgian port of Zeebrugge, the 5,000 cubic metre LNG bunkering barge "Engie Zeebrugge" was commissioned in June to provide the world's first ship-to-ship LNG bunkering service to vessels such as the car carriers "Auto Eco" and "Auto Energy" of the Norwegian owner UECC.

**LNG Supply:**

The state-of-the-art bunker vessel "Cardissa" can carry 3,000 cubic metres of LNG.

**Pioneer:** The US shipowner TOTE is operating two container ships on LNG fuel.



**gmecc to examine ways to better protect the environment**

LNG will be just one of several focal topics featured at the global maritime environmental congress (gmecc) on 5 September 2018, as well as in Hall A5 of SMM where numerous other "Green Propulsion" innovations will be presented. "The 'Green Route' through the fair was very well received by the visitors of SMM 2016," said Carin Steinbach, deputy project director of SMM. This route will help visitors identify stands where marine environmental protection plays a major role, from ballast water management to eco-friendly antifouling coatings through to smart fleet management systems. Green technologies will also be discussed at gmecc where highly respected international experts will share their thoughts on the challenges and perspectives of eco-friendly shipping.

In partnership with **Seatrade**

Read more at: [smm-hamburg.com/gmecc](http://smm-hamburg.com/gmecc)

# Security requires awareness

**CYBERDEFENCE** Digitalisation holds many benefits for the shipping industry. But it also increases the risk of falling victim to cybercrime — a main topic at SMM 2018.

**M**aersk got hit last June: anonymous criminals disabled several IT systems of the world's largest container shipping company for hours using malicious encryption software. "We can confirm that Maersk IT systems are down across multiple sites and business units," the company reported via Twitter on 27 June 2017. It was a major attack with ransomware, a "trojan horse" secretly installed in the computers that encrypts the data and offers to decrypt them once a certain amount is paid as ransom.

A.P. Møller-Mærsk Group later estimated the damage resulting from the incident to be 200 to 300 million dollars. This massive cyberattack continued to cause disruption in container logistics for weeks.

## MAJOR SECURITY GAPS

The Maersk example reveals the downside of digitalisation: while the technology enables the industry to transmit ship data in real time,

## Security Route

**Find your way:**  
Follow the arrows and discover...



**Cyberattack:**  
Hacker disabled parts of Maersk's IT systems.

perform remote diagnostics or operate ships more efficiently, having more and more IT systems on board heightens the threat of cyberattacks. Hackers can severely compromise IT systems, manipulate them, steal cargo data, tamper with navigation data, encrypt information, or even disable entire ship control systems. There is no lack of potential vulnerabilities. Dietmar Hilke, Director Cybersecurity at the technology company Thales, who gave a lecture during the MS&D conference at the last SMM, warns: "It is principally possible to attack nearly all electronic systems on board a ship. Online interfaces are especially vulnerable."

The greatest potential damage can be inflicted upon a company by disabling its business processes and rendering any transactions impossible. As in the case of Maersk, this will result in substantial loss of time. In a worst-case scenario a company could lose valuable data that have not been backed up.

## Navies are investing

**F**acing new threats and responsibilities, navies in many countries are investing heavily in new equipment. In mid-September Germany ordered five Corvettes from a consortium of companies including Lürssen-Werft, Thyssen Krupp Marine Systems (TKMS) and German Naval Yards, a deal worth nearly 2 billion euros. The Type KI 30 vessels are to be delivered between 2022 and 2025.

Cochin Shipyard (CSL) in Kerala, India has received a 700 million euro order from the Indian Navy for eight anti-submarine units for coastal

deployment, and the US Navy has ordered 29 Freedom and Independence-class vessels which will be built by Austal USA (Alabama) and Marinette Marine (Wisconsin).

## INNOVATIVE TECHNOLOGY

The British Royal Navy is likewise pursuing an ambitious growth strategy: by 2025 it wants to commission eight new frigates of the new Type XXVI generation to protect its aircraft carriers and nuclear submarines. The order for the first three of these vessels, worth 3.7 billion pounds,





Photos: Maresk Line; zapp2photo - Fotolia.com; British Royal Navy

But executives of the shipping industry have recognised the problem: 80 per cent of respondents consider cybersecurity as an “important” or “very important” issue, as the current SMM Maritime Industry Report concludes.

In addition to using specialised antivirus software, the respondents employ IT security experts to protect their systems at all times. At SMM 2018 software developers and other

stakeholders will present the latest defence technology against cybercrime. The exhibition area in hall B8 will be dedicated specifically to maritime security and defence and, within this context, address the topic of Cyber Security. Identifying effective means to combat system manipulation, including cybercrime with a terrorist background, will also be one of the top items on the agenda of the two-day MS&D conference.

**Self-protection:**

Shipowners install specialised software and hire IT experts to fend off cybercriminals.



International conference on  
maritime security and defence  
**MS&D SMM**

In partnership with  
**NAVAL FORCES**  
INTERNATIONAL FORUM FOR MARINE POWER

## Setting the pace for security

MS&D, the international conference on maritime security and defence, will take place on 6 and 7 September 2018 in Hamburg. Its media corporation partner will be “Naval Forces” magazine. The topical question for the event will be: “Are navies and the naval industry prepared for future challenges?”

Read more at: [smm-hamburg.com/msd](http://smm-hamburg.com/msd)



has already been signed. These examples show that naval shipbuilding is becoming more attractive for shipyards and suppliers around the world. At the MS&D conference during SMM 2018, high-level naval delegations and security experts from all over the world will discuss military strategies; the exhibition will provide them with a great opportunity to study new ship types and technical innovations. The “Security Route” will help them identify exhibitors of particular interest.

**Growth:** The Royal Navy plans to commission eight “Type 26” next-generation frigates by 2025.

From short trips in the Mediterranean to holidays in Norwegian Fjords or expeditions to the Antarctic, cruises have never been more popular. The Cruise Lines International Association (CLIA) has forecasted as many as 26 million cruise passengers for 2017. "One of the many reasons the cruise industry continues to thrive is the personalisation it offers to its guests from around the world," said Cindy D'Aoust, President and CEO at CLIA. "Never before have I seen an industry that is so good at listening to what its customers want."

To accommodate the rising demand and be able to offer a cabin to every passenger-to-be, the industry is investing heavily in new assets; 97 newbuilds are expected to be completed by 2026. Good news for shipbuilders and suppliers whose order books are full to the brim.

#### WORKING AT CAPACITY

Trying to outdo each other with bigger, more eco-friendly, more spectacular ships, owners are competing for market share. STX France in St. Nazaire is building Royal Caribbean's new flagship "Symphony of the Seas": designed for 6,800 passengers, the 230,000-tonne colossus will be the biggest cruise vessel ever built. She will surpass the current record holder, her sister

ship "Harmony of the Seas", by roughly 3,000 tonnes, and be packed with exclusive features: musical theatres, restaurants, a laser tag arena, and unique two-deck family suites with a slide between floors.

STX is also building two mega cruise ships for MSC Cruises. Both will be equipped with 2,760 cabins and accommodate up to 6,850 passengers. They are scheduled for delivery in 2022 and 2024, respectively. What sets them apart are next-generation LNG-fuelled propulsion engines. While the container shipping segment is still rather hesitant when it comes to embracing alternative propulsion technologies, the cruise sector has taken the lead.

#### SUSTAINABLY INTO THE FUTURE

A total of 13 cruise ships currently on order will operate on liquefied natural gas. The German cruise ship owner AIDA Cruises is no exception: two of the company's mega liners will rely on green power. "Making cruises sustainable is one of the current core objectives of AIDA Cruises," says CEO Felix Eichhorn. "With AIDAnova and her sister vessel we are once again doing pioneering work, and we will stick to this course unwaveringly." AIDA Cruises has entrusted the newbuilding projects to the expertise of Meyer Werft, one of

Photos: AIDA Cruises; Hapag-Lloyd Cruises; CLIA

# Steaming ahead

**MARKET OVERVIEW** The business figures reported for the cruise industry seem to know only one way to go: up. With order books full to the brim, owners, yards and suppliers are radiating optimism. SMM 2018 will showcase the latest in green cruise technology.







**Scenery:** From 2019 "Hanseatic Nature" of Hapag-Lloyd Cruises will explore the world's most remote regions – breathtaking panoramas guaranteed!



**Fun for kids:** "Symphony of the Seas" will entice passengers with deluxe features, such as unique, two-deck family suites with a slide between floors.



**"Never before have I seen an industry that is so good at listening to what its customers want"**

**Cindy D'Aoust**  
President and CEO,  
CLIA

the top players in the market. "We thank Carnival Corporation and AIDA Cruises very much for their trust and their pioneering decision to implement LNG technology on board," said Bernard Meyer, CEO of Meyer Werft. "Carnival has made a decision in favour of the environment that is highly important for the cruise industry."

While the new expedition cruise ships "Hanseatic Nature" and "Hanseatic Inspiration" of Hapag-Lloyd Cruises will not run on LNG, they will make use of many other options to ensure sustainable operation: an SCR catalyst will filter out 95 per cent of noxious emissions; a Promas rudder and custom-designed propeller will cut fuel consumption; and the state-of-the-art "E-Zodiacs" will run on electric power.

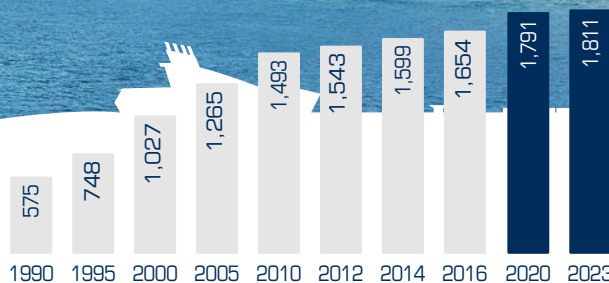
In addition, the new vessels are being built to the highest ice class, a challenge for the Norwegian builder Vard shipyard, a subsidiary of Fincantieri. "The tightened regulations ensure a higher level of safety while at the same time making the ship roughly 200 tonnes heavier, costing plenty of precious space and raising the costs. All these factors have to be compensated for by enhancing efficiency in other places," explains Dr Henning Brauer, Head of Newbuilds at HLC. The

luxury liners are expected to cruise the Amazon, the Arctic and the Antarctic from 2019.

**THE PLACE TO BE: SMM 2018**

What makes building cruise ships so complex is mainly the "cargo" they are expected to carry: people. These floating hotels must meet stringent safety requirements, and passenger comfort is becoming more and more sophisticated. This forces the shipyard, its suppliers and the shipowner to coordinate and cooperate extremely well. Thanks to its excellent system expertise the European shipbuilding industry is definitely in the pole position in this respect: from propulsion systems to interior design and entertainment electronics, there is a network of qualified suppliers who can ensure high quality and reliable delivery.

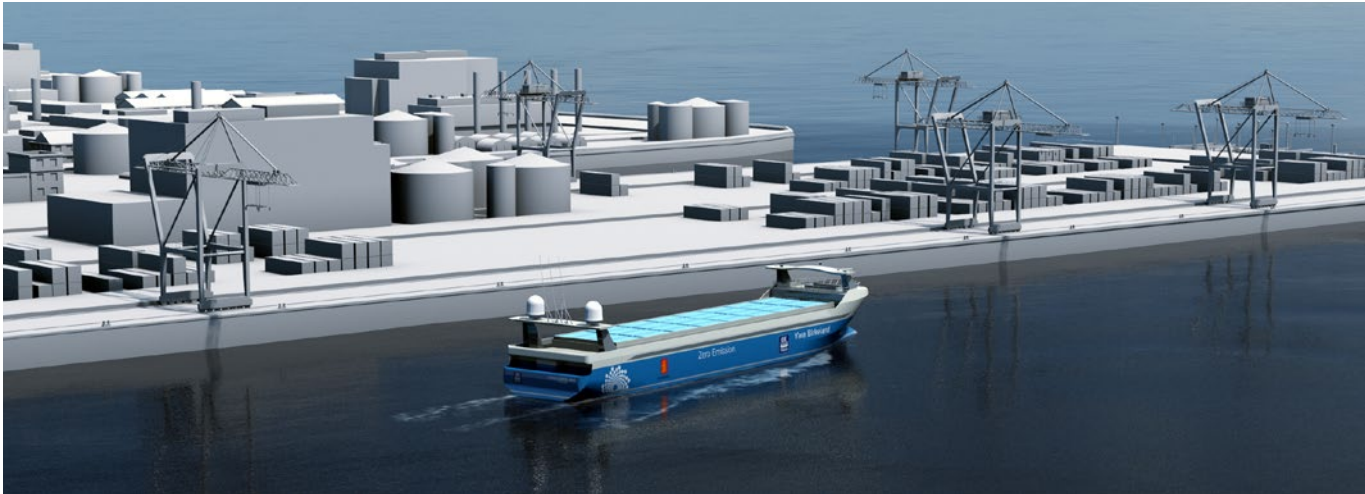
SMM 2018 will highlight the entire value chain of cruise ship building. At the end of SMM, the industry is sure to look to Hamburg eagerly for news on newly formed or expanded business relationships.



**Development of average size**

Existing cruise fleet, in pax numbers





# Embarking on the digital voyage

**UP-TO-DATE** Digitalisation is a megatrend that has truly gripped the maritime industry. Smart, efficiency-enhancing solutions are in demand – up to and including remote-controlled or even autonomous, unmanned ships.

They are at home on the seven seas: the staff at Carnival Cruise Line's Fleet Operations Centers (FOC) supervise the group's fleet around the clock. Route and fuel consumption data from roughly 100 cruise ships are gathered by the FOCs located in Hamburg, Seattle and Miami. Following a cloud-based analysis of 28 parameters, including weather and wave information, each FOC issues recommendations to the crews on board. The main purpose is to ensure the highest possible levels of safety and operational efficiency. "Our teams have raised safety management to an entirely new level," says Bill Burke, Chief Maritime Officer at Carnival.

The cruise segment is increasing its use of data networks. Since fuel is the biggest operational expense item, companies like the container ship operator E.R. Schiffahrt process efficiency-related data transmitted by hundreds of on-board sensors to headquarters by satellite. With the help of integrated solutions provided by classification societies or software developers, ship-

## **D** Digital Route

**Find your way:**  
Follow the arrows and discover...

owners can evaluate the data to enhance their ships' performance.

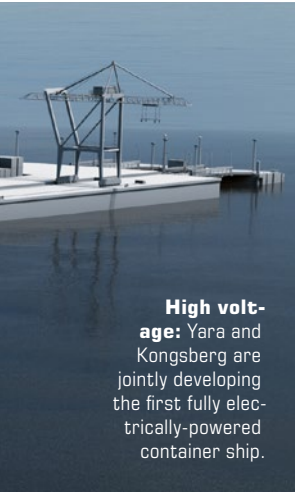
Progress has also been made towards easing the burden of surveys. Hard-to-reach places on board, such as tanks,

can now be inspected using drones, and surveyors can create and transmit inspection logs, including documentation, using a tablet.

## **AUTONOMOUS SHIPPING AHEAD**

On its "Digital Journey", the Norwegian ship-owning company Wilhelmsen can count on support from its classification society DNV GL whose new platform "Veracity" is very helpful in collecting and evaluating the huge amounts of ship data for purposes such as predictive maintenance.

In one of the first pilot projects with a major port state authority (PSA), relevant data is aggregated in a secure environment and then submitted to the PSA electronically, avoiding tedious paper handling. "What we are trying to achieve is a streamlined, much more efficient port entry



**High voltage:** Yara and Kongsberg are jointly developing the first fully electrically-powered container ship.

Photos: Kongsberg, Rolls-Royce, Carnival Corporation/jeason myers



**Remote control:** Rolls-Royce is considered as one of the pioneers in autonomous shipping.



**“Our teams have raised safety management to an entirely new level”**

**Bill Burke**

Chief Maritime Officer,  
Carnival

procedure,” explains Wilhelmsen Chief Digital Officer Andre Sandvik.

It will be a while before ships will be able to sail entirely without a crew on board. According to the SMM Maritime Industry Report (see page 4), 36 per cent of responding ship managers expect autonomous ships to be a reality in the foreseeable future. Technology companies and research institutions such as the Fraunhofer Center for Maritime Logistics and Services are driving the development.

Rolls-Royce is one of the leading players in this field. “We are excited to be the first to take concrete steps towards making remote-controlled and autonomous ship applications a reality,” says Esa Jokioinen who heads the “Blue Ocean” team at Rolls-Royce. Equipped with infrared technology, high-resolution cameras and laser detection equipment, these ships could lower transport costs by around 20 per cent, he estimates. Shipowners would save on crew costs as well as on-board accommodations and installations.

A first potential implementation could be ferries operating on fixed routes over short distances. Tests with ships controlled from land with the master standing by have been successful. The Norwegian fertiliser manufacturer Yara has teamed up with the maritime technology company Kongsberg to develop the world’s first electric, autonomous container ship. It is intended to transport the company’s products from the production site in Porsgrunn to the neighbouring towns of Brevik and Larvik instead of using lorries. The 120-TEU vessel will at first operate with a crew on board. In 2019 Yaras wants to switch to remote control, and from 2020 the 80 metre-long ship is expected to run entirely in autonomous mode. “The development of autonomous systems is a decisive and natural step for Kongsberg,” CEO Geir Håøy stresses.

## Kick-off event

Digitalisation, network integration, smart shipping, unmanned ships: at SMM 2018 the “Digital Route” will take visitors to all the exhibitor stands relating to these topics. Even before the festive opening of SMM on the evening of 3 September, scientists and industry experts will gather for the Maritime Future Summit (MFS) to discuss where the industry should be heading. They will examine questions such as what Digitalisation can mean for shipping, or what specific, mature solutions suppliers might be able to offer towards making this concept a reality. Further details to follow in spring 2018!

Maritime  
Future  
Summit



Read more at:  
[smm-hamburg.com/mfs](http://smm-hamburg.com/mfs)

In partnership with  
**HANSA**  
INTERNATIONAL MARITIME JOURNAL



**Robust:** The British research vessel "Sir David Attenborough" is ideally suited for Arctic waters.

## High-tech at high sea

**KNOW-HOW** The offshore industry must fulfil stringent technical requirements. Specialised shipyards and suppliers make sure it does so by providing superior system expertise. The same level of know-how is in demand when building research vessels or mining the seafloor.

The market researchers from IHS Markit are predicting an increasing demand for offshore drillships and drilling platforms. Yet, despite a recent upswing, oil and gas prices have remained at a low level which has caused orderbooks to shrink. The interest in converter platforms and service vessels for the offshore wind segment has likewise waned.

Exceptions prove the rule: ambitious projects such as the grid intertie installations for the "Dolwin 6" windfarm, or the innovative offshore supply vessels "Windea La Cour" and "Windea Leibniz" built by the Norwegian Ulstein shipyard for Bernhard Schulte Offshore, demonstrate the impressive expertise of the participating yards and suppliers. The two Windea ships are flexible all-rounders offering comfortable accommodation for up to 40 technicians from Siemens Wind Power, including an exercise gym and an on-board cinema with a popcorn machine.

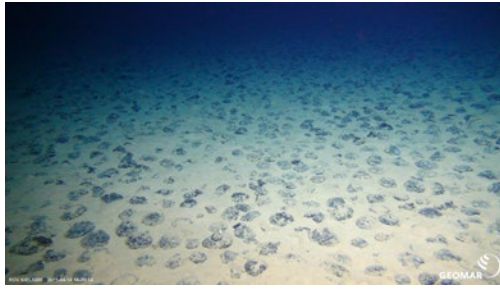
The unique ship design and state-of-the-art Dynamic Positioning system ensure safe transit between vessel and platform even in high waves. Advanced technology is also the hallmark of a series of newbuilds of the Stingray Class ordered by Maersk Supply Service from Cosco Dalian Shipyard. All four vessels will be equipped with remotely-operated vehicles (ROV) capable of operating at depths of up to 3,000 metres. The first unit, which was delivered recently, will be used for oil platform maintenance in the Gulf of Mexico.

### FOCUS ON RESEARCH

Research vessels operate in similarly complex environments and often have to meet special requirements. A good example is a vessel ordered by the Faroe Islands' Marine Research Institute: the 54-metre ship, which will be deployed to study the maritime resources around the archipelago from 2020 onwards, will feature an



Photos: Rolls-Royce, RDV Team, GEDMAR, Peter Linke, GEDMAR (CC BY 4.0), RDV Kiel 6000, GEDMAR (CC BY 4.0)



#### **Coveted:**

Manganese nodules, found at sea at depths of around 5,000 metres, could become an important resource.



#### **Versatile:**

Specialised ships like Germany's "Sonne" carry state-of-the-art equipment for operation in extreme sea regions.

extremely low-noise Wärtsilä propulsion system and an SCR catalyst. Keeping noxious gas and noise emissions to an absolute minimum is also a key requirement for Norway's new icebreaker "Kronprins Haakon", scheduled to enter service in 2018 to conduct research in fields such as fish and marine mammals. This 177 million dollar project is being realised by the Italian shipbuilder Fincantieri.

A new Chinese icebreaker now under construction at Jiangnan shipyard in Shanghai based on a design by Aker Arctic will be able to operate in ice up to 1.5 metres thick. 90 scientists will be able to live on board. The Polar Research Institute of China (PRIC) plans to commission the vessel in 2019.

The following year Fassmer shipyard is to deliver Germany's first LNG-fuelled research

vessel, "Atair II", which will feature Kongsberg's "Integrated Vessel Concept" combining hydrographical and energy management functions. The newbuilding order for the British research vessel "Sir David Attenborough", scheduled to launch in 2019, is worth roughly 260 million dollars. Designed by Rolls-Royce, the high-tech ship is being built at Cammell Laird shipyard to Polar Code 4 ice class. With a huge range of 19,000 nautical miles, she will be ideally suited for arctic waters.

Extreme sea regions, utmost precision, the lowest possible environmental impact – shipyards and suppliers involved in these sophisticated shipbuilding projects are the pinnacle of maritime know-how. Their innovative technologies are sure to attract the attention of many visitors at SMM 2018 in Hamburg.

**Convenience:** The "Windea La Cour" accommodates up to 40 technicians comfortably.



Photo: www.siemens.com/press

## Research and support

On 6 September 2018, leading industry representatives will again meet for the Offshore Dialogue to share ideas and views on topics such as the economic and environmental challenges of deep sea mining, an area in which robots play a key role.

Offshore  
Dialogue



SMM

Read more at: [smm-hamburg.com/od](http://smm-hamburg.com/od)

# The faces of SMM

**PORTRAIT** With more than 2,200 exhibitors, about 50,000 visitors and 13 exhibition halls, SMM is Hamburg's biggest industry event. But who are the people behind the scenes who make sure that this biennial international gathering of the maritime sector runs smoothly? Meet the SMM Team!



## The SMM Managers

**W**e are the command centre," says deputy project director **Carin Steinbach**. An experienced SMM expert since 2001, she knows what matters when preparing SMM. She coordinates the team, ensures that everybody works hand in hand, and always strives to bring the project to a successful close.

She makes sure the international key players of the industry are always up-to-date, and they rely on her expertise. Staying in touch with the maritime market at all times while cooperating closely with the business unit director, Carin Steinbach is dedicated to driving the strategic development and further optimisation of the leading international maritime trade fair.

### AN EYE FOR THE BIG PICTURE

One of the people supporting Carin Steinbach is **Julia Glawe**. A business school graduate, she joined the project management team in February 2017 after having spent many years in Event Marketing where she was in charge of domestic and international trade fairs as Product Manager International, among other roles.

"Apart from acquiring new customers and planning the hall layouts, we must keep an eye on

budget planning and the strategic development of SMM," Julia explains. "During SMM, we are also in charge of customer care." Keeping track of all these responsibilities takes good organisational talent, she adds.

### COLLABORATION MAKES THE DIFFERENCE

Project management requires flexibility in handling daily chores: "The only thing that never changes in my workday is my cup of coffee in the morning," says **Christoph Lücke**, Project Manager for SMM Hamburg and INMEX SMM India. After breakfast he must either focus on organising INMEX SMM India or on managing the SMM halls and the outdoor exhibition area. "It depends which fair is next in line," Christoph says.

He has been on the team since 2016. His responsibilities include planning hall occupancy, acquiring exhibitors and advising and managing the SMM sponsors. Right now SMM is the event in focus: "SMM is the leading international trade fair of the maritime industry. Making sure it maintains its top position is our daily challenge."



## The Enabler

**W**ith many years of SMM-specific experience, **Christel Greiner** has been involved in exhibitor services at Hamburg Messe since 1996. “The 1998 SMM was my very first one,” she recalls. “Since then it has been my job to fulfil our exhibitors’ every wish in connection with their fair stands and fair operations.”

Whether furnishings, flowers, decoration, waste disposal, stand cleaning or providing running water, Christel and her team will make sure everything is in place at the fair stand and operational in time. “But advising and supporting our exhibitors in planning and executing their fair activities is only one aspect of what we do,” she explains. “We also work with external service partners to develop individual fair stand concepts, for example.”

Once the fair is on, Christel will spend much of her time at the service counter and in the halls “making sure the final touches are spot on,” the seasoned HMC expert says.

### SMM EXPERT

During her 21 years in the trade fair business Christel has never felt bored: “From answering customer requests and attending meetings to liaising with other departments or service partners, my workdays are never the same,” the business economist says. “The greatest challenge is always that everything needs to be in place and ready to go by the first day of the fair.” Not an easy task when you deal with more than 2,200 exhibitors. But with her team spirit, service mentality and professionalism, Christel Greiner meets the challenge every single time.



## The Coordinator

**F**lexibility, great communication skills, an understanding of technical matters – those are personality traits enabling **Neele Grieger**, a technical director at the Hamburg Messe fair complex, to excel in her job. After her trainee years she graduated as a Master Event Technician. The Hamburg fair halls have been her home turf since 2009. Today she knows them like the back of her hand: “I am familiar with every technical detail related to the SMM,” says Neele. No wonder her expertise is in great demand: “I advise exhibitors during set-up and tear-down, I do the planning for special exhibition and activity spaces, and I support all technical coordination-related tasks for SMM,” she says.

### A TALENT FOR COORDINATION

There is no such thing as a daily routine for her, she continues. “From answering emails and advising exhibitors to scheduling meetings, during the preparatory stages I spend a lot of time planning and taking care of things from my desk,” she says. This is followed by hall demonstrations and meetings with external service providers. “During this stage I am usually down in the halls, checking stalls and making sure the safety standards are upheld,” Neele reports.

The critical phase of the SMM cycle begins once the plans are finalised. “The final leg of the journey starts when the exhibitors arrive with their stands, and big exhibition items are delivered,” says Neele.



## The Networker

**N**ext year SMM will take place for the 28th time. But for **Nora Ebbinghaus** it will be a debut: She joined HMC in April 2017. As press spokeswoman, she is now in charge of further raising public awareness of SMM on the international stage:

“From texting and making phone calls to developing concepts, in my job you definitely have to be a communicator and a passionate writer who enjoys working with people,” Nora points out. Writing press releases and meeting with journalists are part of her daily activities. “We also have to keep in close touch with our exhibitors,” she says. “They can provide me with information about their product highlights at SMM. If they meet all the criteria, I will include them in the SMM press materials. Ideally this will help exhibiting companies expand their media coverage.”

### NEW TO THE MARITIME WORLD

The experience she gained while working as a PR consultant in several agencies for seven years is certainly an asset for Nora in her new position. At first the maritime world was all new to her. “I learn something new about this fascinating industry every day, and I really enjoy doing PR work for the biggest, most international industry fair hosted by HMC,” she says. In her private life she loves spending time above and below the waterline, she adds. Last year she fulfilled her biggest wish, travelling South-East Asia for three months. A region of great importance for the maritime industry, by the way!





# “The wind energy sector harbours enormous potential“

**INTERVIEW** with Claus Ulrich Selbach, Business Unit Director – Maritime and Technology Fairs & Exhibitions at Hamburg Messe und Congress (HMC).

**Mr Selbach, the third WindEnergy Hamburg will begin on 25 September 2018. How has this trade fair developed since its inception in 2014?**

**Claus Ulrich Selbach:** Its development has been brilliant, there is no other way to put it: WindEnergy Hamburg is the world's biggest trade fair for wind energy. It reinforced its leading position as a global business platform in 2016 and will do so again in 2018. We are expecting some 1,400 exhibitors covering the entire value chain for both the onshore and offshore segments, from leading international turbine manufacturers to highly specialised suppliers.

Well over 80 per cent of our nine exhibition halls are booked, an excellent outcome at this early time. What is more, in 2018 the world's leading expo for wind energy and the globally recognised conference WindEurope will jointly hold the Global Wind Summit, the only comprehensive,

international business interaction, networking and information-sharing convention for the entire wind industry, and the biggest of its kind. Both of these top events will take place in parallel at the Hamburg Messe fair site from 25 to 28 September 2018.

**There are only two weeks between SMM and WindEnergy. How can exhibitors and visitors benefit from that?**

**Claus Ulrich Selbach:** There are many synergies between these two leading international trade fairs, and they intersect in many disciplines along their respective value chains. More than 100 exhibitors are actually present at both events.

**Where do you see the most pressing challenges for the industry?**

**Claus Ulrich Selbach:** The greatest challenge is definitely the radical changes occurring in the market environment. The industry is seeing an unprecedented surge in innovation, which is good news. However, it is currently quite difficult to make the required investments in things like machinery to benefit from these innovations. On the one hand, new markets often appear quite suddenly, putting a strain on the local value chain. On the other hand, market systems develop faster and faster, causing customer structures to change.

Project developers, operators and manufacturers have to contend with enormous competitive and price pressures. It remains to be seen whether the market will be able to reach a certain balance in due time. However, our assessment of the overall situation remains very positive. This industry harbours enormous potential, and we want to use WindEnergy 2018 to develop it further.

## Meeting place:

The WindEnergy Hamburg fair showcases the entire value chain of the wind industry.



Photo: HMC

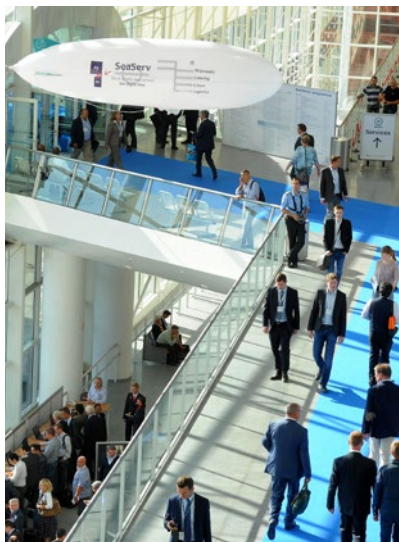


Photo: HMMZapf

## Hamburg Messe und Congress: Professional trade fair services

**In 2018, SMM will take place for the 28th time** – and once again all our experience in organising and hosting trade fairs and conferences of an international scope will be at your disposal. From registration and sponsorship to designing and decorating your fair stand, our highly skilled and motivated team will gladly support you with any question you may have. We offer:

- Convention halls, conference rooms and meeting rooms seating from 35 to 800 attendants

- Comprehensive fair stall service, including decoration, monitors, plants, etc.
- High-quality audio-visual equipment and WI-FI services
- Exquisite food service, including furnishings for serving food at your fair stall
- Great variety of catering services in the exhibition halls
- Press folders and information for journalists

### THE SMM PROGRAMME AT A GLANCE

#### Maritime

#### Future Summit

3 September 2018

#### TradeWinds

#### Shipowners Forum

4 September 2018

#### gmec –

#### global maritime environmental congress

5 September 2018

#### Offshore Dialogue

6 September 2018

#### MS&D – international conference on maritime security and defence

6 and 7  
September 2018

#### Maritime Career Market

7 September 2018



## Exhibitor registration: Welcome on board

**Join us for SMM from 3 to 7 September 2018** at the Hamburg fair complex to showcase “Trends in SMMart Shipping”. Register via our website in a quick and easy process. Much of the available exhibition space has already been booked!

If you are a returning SMM exhibitor, your valid user information is already in our system. Simply log on using the information you received by email or post.

If you are booking fair stall space for the first time, please create a new user account – it's easy! We will promptly email a confirmation whereupon you can complete the process in a matter of minutes.

New: at SMM 2018 our “Panel Tickets” will allow exhibitors to

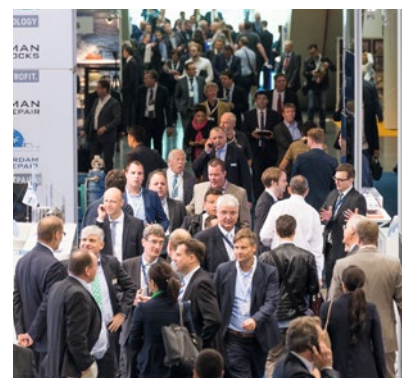


Photo: HMM/C

assume visitor status and participate in selected conferences and panel discussions.



**SMM**

Read more at:  
[smm-hamburg.com/exhibit](http://smm-hamburg.com/exhibit)

## Sponsoring: Enhance your visibility at the fair and beyond!

**Use SMM as a platform** to highlight your brand by becoming a trade fair sponsor. Present your company, promote your products and communicate your capabilities to boost recognition of your brand. You will find it easier to establish new contacts and attract business. Take advantage of this opportunity to present your

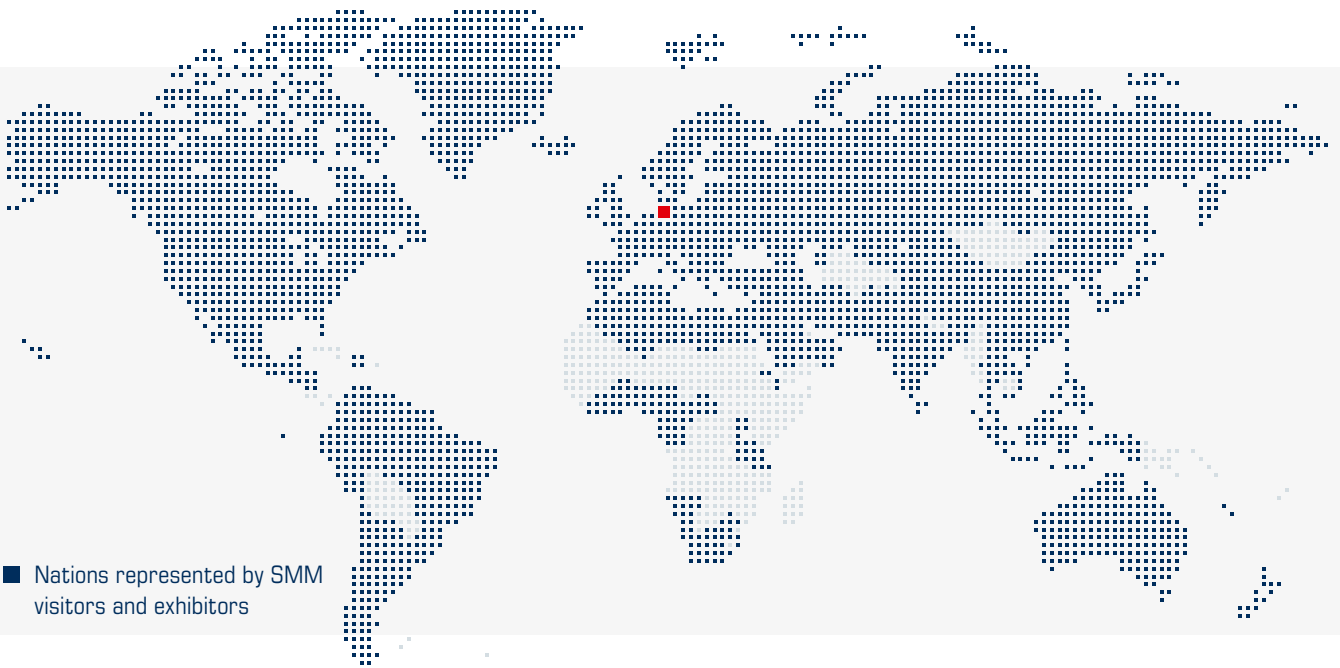
products and services to the industry audience and experts from around the world. To learn about available sponsorship options, please visit:



**SMM**

Read more at:  
[smm-hamburg.com/sponsoring](http://smm-hamburg.com/sponsoring)

# Meet the world at SMM



■ Nations represented by SMM visitors and exhibitors

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Association of Marine Engineers, Hamburg

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