Ships 2019
Made in Germany

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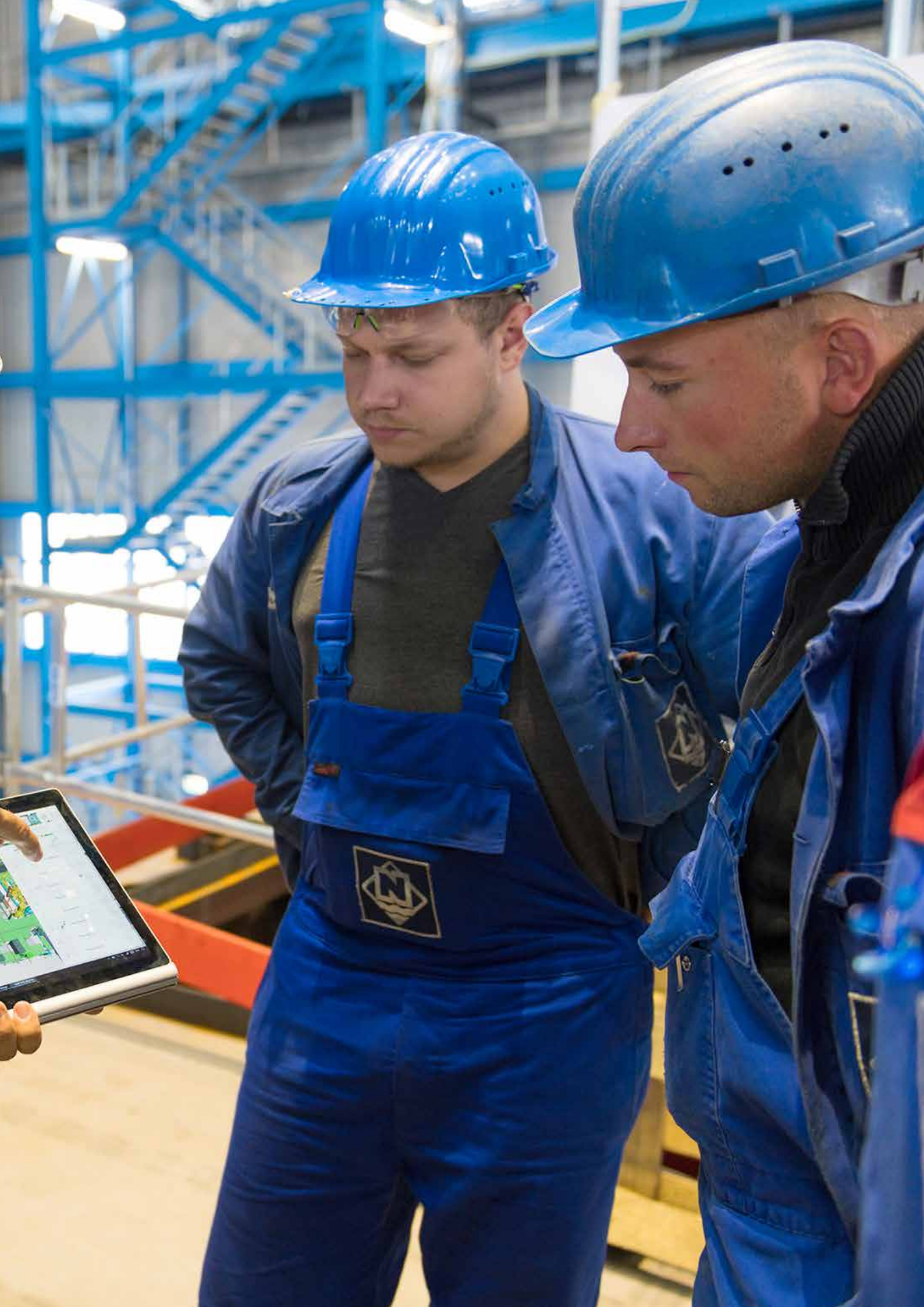


FSG is famous
for it's roro vessels

Reinhard Lüken,
General Managing Director
German Shipbuilding and Ocean
Industries Association (VSM)

Great Ships and Clean Seas

The specialisation of the German shipbuilding industry in healthy high-tech niche markets is paying off

While today's global shipbuilding output is roughly 40 % below the 2010 peak, the order book for new ships continues to melt. The Asian-dominated volume markets are recovering only slowly and their new orders remained below production volume for the sixth consecutive year.

The good news is, the German shipbuilding industry has largely been able to decouple itself from this development: in seven of the last eight years, more orders were acquired than ships delivered. Healthy orderbooks allow sound forward planning for innovative products and further optimised production processes. In 2018, German shipbuilders generated a turnover of around EUR 5 billion, which is destined almost fully for export markets. Also the large array of specialised producers in the shipbuilding and offshore supply chain are popular among shipping companies and shipyards around the world. They contribute more than EUR 12 billion to Germanys maritime economy.

Demanding customers, that drive the innovation agenda in shipping turn their eyes to Germany. German shipyards focus on building sophisticated vessels. In 2019, their order intake mainly comprised cruise ships, mega yachts, research and specialised ships for the public sector, and various types of naval vessels.

This is a high-value-market-segment whose customers are prepared to make sustainable investments, not least in climate and environmental protection, and demand correspondingly high-quality and future-oriented solutions.

Due to its outstanding position in research, development and innovation, the German shipbuilding industry is able to meet these technological requirements and to offer tailor-made solutions for transport and environmental challenges in close cooperation with its customers. Its companies offer a wide range of services and products from engineering to the construction of highly specialised electrical, electronic and mechanical systems.

One outstanding example is this year's »Ship of the Year«, the research vessel ATAIR, which encompasses a whole range of innovative solutions to optimise her research performance.

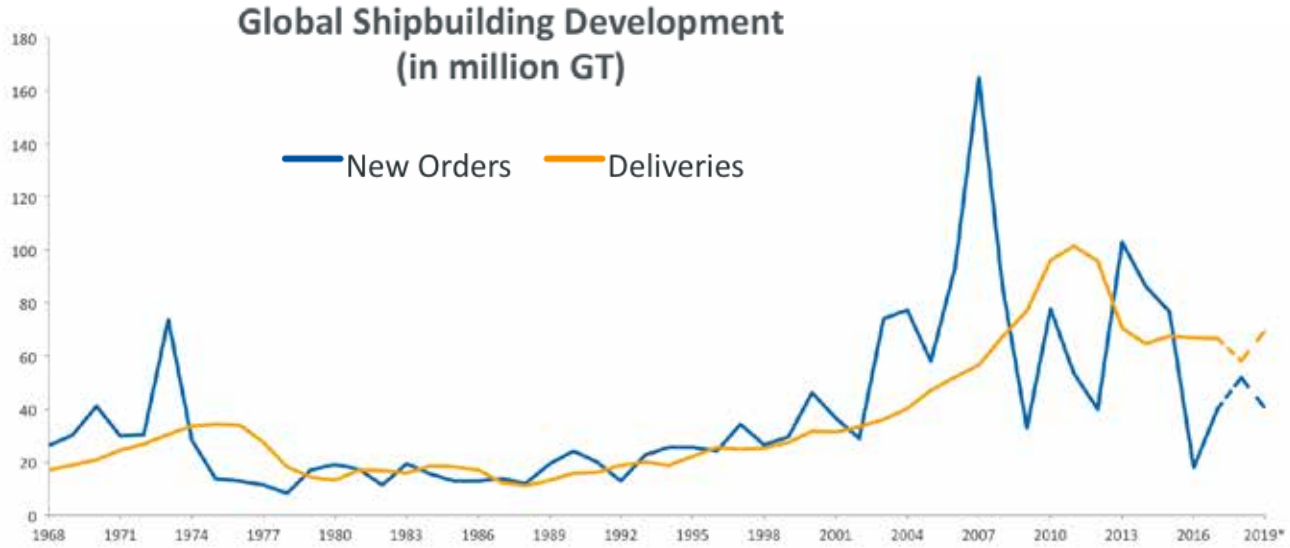
There are currently only 175 confirmed LNG fuelled ships in operation worldwide. This authority vessel is among the first ships in the world for special tasks to be powered by LNG, which drastically reduces air pollution and offers additionally advantages with regard CO_2 emissions.

Further impressive examples of the innovative strength and versatility of the German shipbuilding and marine technology industry can be found in this special issue of Ships 2019.

Let us inspire you! We hope you enjoy reading and discovering!

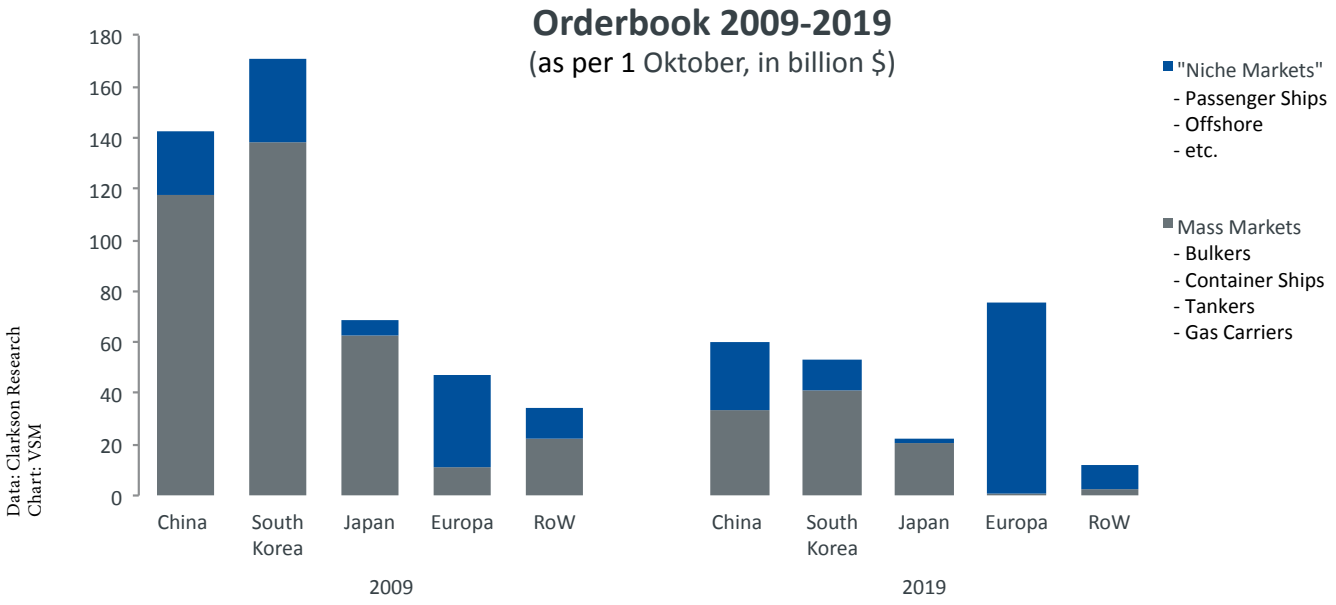
German shipbuilding defies global slump

German shipbuilders are busy! Well-filled orderbooks are creating new jobs, and some shipbuilders are fully booked until the middle of the next decade. However, this positive trend in the German and wider European shipbuilding industry is the great exception within the global shipbuilding market which continues to suffer from poor demand



Data: IHS Fairplay
Chart: VSM
* 2019: Extrapolation based on Jan–Sep 2019

During the first three quarters of 2019, orders received by shipyards globally amounted to 16.7 mill. Compensated Gross Tonnes (CGT), 23 % below last year's figure. The volume of new orders received was even 38 % below the total volume of deliveries, further accelerating the shrinkage of the global orderbook. The weak demand spells trouble for shipyards and suppliers around the world. The difficult position of the industry is reflected by statistics. According to industry associations, shipyard payrolls have shrunken by roughly 350,000 employees in China and South Korea alone since 2011. Facing these tough challenges, restructuring and consolidation have become a constant topic for the industry. According to Clarksons Research, the world's ten largest shipyard groups now control nearly two thirds of the global orderbook, compared to only one third in 2007 – and this does not yet take into account the merger of China's two leading shipbuilding groups, China Shipbuilding Industry Corporation (CSIC) and China State Shipbuilding Corporation (CSSC), which took place in late 2019. The formation of the new China Shipbuilding Group aims at increasing the competitive power of the Chinese maritime industry on the global stage, especially in more sophisticated, high-value segments. Similarly, South Korea's largest shipbuilder, Hyundai Heavy Industries (HHI), is pursuing the acquisition of compatriot Daewoo Shipbuilding & Marine Engineering (DSME), strongly supported by their largest shareholder, state-owned Korean Development Bank. This would create a giant controlling roughly 18 % of the new orders in CGT.



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Great demand in niche markets

By September 2019, the global shipbuilding orderbook was at a low 79.6 mill. CGT, 6% less than at the end of 2018. China continues to lead the pack, holding a 34% share in the global orderbook by CGT, followed by South Korea (26%), Japan (16%), and Europe (EU 28 + Norway) (15%). The aggregated orderbook of German shipyards reached a volume of about 2 mill. CGT at the end of the third quarter 2019. The structure and product range of the German shipbuilding industry has changed significantly since the beginning of the economic and financial crisis in 2008. Apart from a number of consolidations, the industry has largely turned away from building standard ships, focusing on niche markets instead, especially cruise ships, ferries, yachts and other specialised tonnage. By the end of September 2019, these technically highly sophisticated passenger ships accounted for about 97% of the German orderbook. Just 15 years ago, that figure was less than 30%.

For decades the global shipbuilding market has been suffering from overcapacities and poor prices. With competition intensifying, safeguarding a level playing field internationally is a matter of growing urgency for the industry. To make matters worse, a weakening global economy leaves little hope for a recovery any time soon. Trade conflicts and political tensions have caused experts to revise downward their global economical and trade forecasts. For 2019, the Organization for Economic Cooperation and Development (OECD) now estimates the growth rate of the global gross domestic product at no more than 2.9%, the weakest since the financial crisis. The forecast for the next two years likewise remains stagnant around 3%. The assessment of global trade does not look any better: As the year progressed, the World Trade Organisation (WTO) revised its prediction for 2019 downward by more than 50% to a mere 1.2%. Expectations for 2020 are likewise lower than previously forecasted, assuming a trade growth by no more than 2.7%.

Increasing investments in green shipping

For decades the maritime industry has made a significant contribution to growing global trade and wealth. One of the key global challenges it now faces is green shipping as an important measure to support climate

and environment protection. Under the current conditions in most freight markets, which are characterised by overcapacities, weak prices and poor profitability, it is extremely difficult for the industry to make the enormous investments necessary to fulfil the green shipping promise to society. Therefore, it may not come as a surprise that cruise lines with their healthy earnings are often pioneering the implementation of clean ship technologies. In fact, emerging technologies and the smart use of digitalisation harbour great potential for growth, progress and more effective environment protection. Meanwhile, stricter international environmental standards and emission limits leave no other option than to reduce the industry's ecological footprint.

On 1 January 2020, a new regulation by the International Maritime Organisation (IMO) took effect that lowers the permissible sulphur content of fuel for oceangoing ships from 3.5% to 0.5%. There are several ways to comply with this regulation: Ships may use low-sulphur fuel or marine gas oil instead of the conventional HFO, or install exhaust gas cleaning systems (so-called scrubbers). According to DNV GL, 3,756 ships equipped with scrubbers were in service or on order globally by September 2019. Three quarters of these scrubber installations where retrofits of vessels in service. Using LNG as an alternative fuel is another way to reduce sulphur emissions. 354 LNG-powered ships were in operation or on order. Another 141 ships were designed for conversion to LNG and have »LNG ready« status. The number of orders of LNG-fuelled vessels grew substantially during the year 2019. Battery power is currently used by 369 vessels (in service or on order). Other promising alternative fuels, some of which are being used by several ships already, include LPG, methanol, hydrogen and ammonia. Flexibility and innovation are key to an efficient and sustainable future for the maritime industry. ■

»SHIP OF THE YEAR 2019«

And the winner is … Fassmer

»Ship of the Year« 1982 – 2019			
Year	**Type of ship**	**Name**	**Building yard**
1982	Polar research vessel	»Polarstern«	HDW / WN
1983	Reefer vessel	»Helene Jacob«	Flender Werft
1984	Railway wagon ferry	»Railship I«	SSW
1985	Container vessel	»Norasia Susan«	HDW
1986	Cruise ship	»Homeric«	Meyer Werft
1987	Conversion cruise ship	»Queen Elizabeth II«	Lloyd Werft
1988	Container vessel	»President Truman«	HDW
1989	Yacht cruiser	»Seabourn Spirit«	SSW
1990	Mega yacht	»Lady Moura«	Blohm + Voss
1991	Mega yacht	»Eco«	Blohm + Voss
1992	Container vessel	»DSR Baltic«	Bremer Vulkan (BV)
1993	Baltic Sea ferry	»Silja Europa«	Meyer Werft
1994	Container vessel	»Norasia Fribourg«	HDW
1995	Cruise ship	»Century«	Meyer Werft
1996	Cruise ship	»Costa Victoria«	BV / Lloyd Werft
1997	General cargo ship	»Cathrin Oldendorff«	FSG
1998	Cruise ship	»Superstar Leo«	Meyer Werft
1999	Reefer container ship	»Dole Chile«	HDW
2000	Fast cruise ship	»Olympic Voyager«	Blohm + Voss
2001	Cruise ship	»Radiance of the Seas«	Meyer Werft
2002	Frigate	»Sachsen«	Blohm + Voss
2003	Freight ferry	»Tor Magnolia«	FSG
2004	Navy research ship	»Planet«	Nordseewerke
2005	Cruise ship	»Pride of America«	Lloyd Werft
2006	ConRo ferry	»Pauline«	FSG
2007	Cruise ship	»Aida Diva«	Meyer Werft
2008	Cruise ship	»Celebrity Solstice«	Meyer Werft
2009	SWATH pilot vessel	»Elbe«	A & R
2010	Mega yacht	»Eclipse«	Blohm + Voss
2011	Freight ferry	»Seatruck Progress«	FSG
2012	LNG tanker	»Coral Energy«	Meyer Werft
2013	Mega yacht	»Azzam«	Lürssen
2014	Research vessel	»Sonne«	Meyer Werft
2015	Multipurpose rescue vessel	»Murman«	Nordic Yards
2016	RoRo vessel	»Searoad Mersey II«	FSG
2017	Mega yacht	»Aviva«	A & R
2018	Cruise ship	»AIDAnova«	Meyer Werft
2019	**Research vessel**	**»Atair«**	**Fr. Fassmer**

Now in the 35th year, HANSA again has awarded a German shipyard for an outstanding shipbuilding project. For 2019, the traditional award goes to the Fassmer Group

The company with headquarters in Berne at the river Weser and several national and international subsidiaries is honoured for the »Atair«, a federal research vessel built for Germany. As the worlds first public authority vessel, the 75 m long »Atair« is powered by a low-emission natural gas propulsion system and fitted with an LNG tank capacity of 130 m³.

Contracted at 113,8 mill. €, it replaces the 1987-built »Atair«. Now, the newbuild is the largest ship in the fleet of the German Federal Maritime and Hydrographic Agency BSH (»Bundesamt für Seeschifffahrt und Hydrographie«). The ship has the capacity to accommodate a crew of 18 plus 15 scientists.

The »central floating research platform«, like some observers call it, was developed as an economical and, above all, environmentally friendly ship design – on the basis of a 3D-numerical ship model. One of the challenges was to ensure the design meets all environmental and safety requirements and satisfies the professional demands of scientists on board.

With this award, Fassmer follows the shipbuilding group Meyer Werft, which was honoured last year for building the »AIDAnova«. Of note, that was another project with LNG technology on board – a segment to which several German shipyards are paying a lot of attention. It was also the Meyer Group, which was the last shipyard to receive an award from HANSA for the construction of a research vessel. In 2015, the »Sonne« won the prestigious award. ■

»Atair« was a special challenge

Fassmer's CEO Harald Fassmer on risks and opportunities in niche markets, rising competition and the advantage of having one's own design department

Harald Fassmer

How proud are you, having built the world's first research vessel running on LNG?
Harald Fassmer: »Atair« was a special challenge, not only regarding the specific LNG fuel requirement, but also due to the advanced and complex technology built in the vessel and her systems. Projects like »Atair« run for years, from requirements definition until the vessel is successfully operating, with many people being involved. In this case, the strong qualifications and the cooperation achieved with our customer the Bundesanstalt für Wasserbau (BAW) and the end user, the Bundesamt für Seeschifffahrt und Hydrographie (BSH), have been critical to the overall success of the project. We are very proud that we were able to master this project together. We are confident to deliver the vessel on time and fully compliant with all requirements.

What were the lessons learnt for the follow-up projects?
Fassmer: The new »Atair« has a gas-electric propulsion plant not only to cover the different operating conditions and energy consumption, but also with regard to the silent-R classification. It has been a big challenge to comply with the very low underwater-radiated noise levels that are applicable for state of the art research vessels. The experiences that we gained during the design and construction phase regarding the implementation of the propulsion concept are very valuable and we will certainly be able to apply what we learned to future projects.

The BSH plans similar survey and research vessels. Certainly, these will be built on this basis. Beyond that, »Atair« surely gave direction for future research vessels in regard to propulsion engineering and hull design. The noise reduction technologies that were utilized are especially interesting for vessels that have to accomplish similar requirements.

Will LNG become the first choice for vessels of this kind?
Fassmer: I am convinced that LNG will be one of the preferred choices in the near future. Nonetheless, other environment-friendly fuels and propulsion technologies will further emerge as CO_2 reduction goals settle in. Power-to-X, for example, can have a big influence in the use of hydrogen as propulsion fuel for ships. Fassmer is working on ship designs based on several emerging energy and propulsion technologies to meet these challenges.

How do you assess Fassmer's position in global competition – what are your future markets?
Fassmer: Fassmer is working in a niche market of specialized and complex vessels. In this market we are facing strong competition from other shipyards around the globe. The pressure in other markets is also driving companies to try to enter our niche. This is a dangerous situation, as it drives prices down.

As we need to continuously improve to face off competition, it is very important for us to strengthen and enhance our broad-ranging portfolio. We offer vessels of very different construction types and for diverse purposes such as work boats, ferries, naval vessels, crossover yachts, multi-purpose vessels or search and rescue ships. We believe that this is the best market for us in the future.

How would you describe Fassmer's competitive advantage in this environment?
Fassmer: We are proud of our strong and skilled development and design departments, which can assess the increased technical risks that we face in the early stages of new projects. These risks would be many times higher if we relied on external design offices. Together with our customers, we are able to develop special purpose vessels from A to Z, considering a broad range of operational and logistics demands.

Fassmer has a highly motivated workforce in all phases of the shipbuilding process. This allows us to react quickly and in a flexible way to customers' requirements. Our production facilities are state of the art and our technological partners provide high quality system solutions. Altogether, that is what makes us successful. ■


ATAIR
ES

»Atair« kicks off federal fleet renewal

The recent christening of »Atair« at Fassmer marks the start of LNG-fuelled operations on federal research vessels. The newbuilding features a sophisticated propulsion system and high-tech laboratories. Other federal fleet newbuildings are to follow. By *Krischan Förster*

The »Atair« will be the new flagship of the Bundesamt für Seeschifffahrt und Hydrografie (BSH), Germany's federal mritime and hydrographic agency in Hamburg. The vessel has a length of 74 m, a beam of 17 m and a draught of 5 m. It will be the biggest vessel in the BSH fleet.

The 75 m newbuilding comes at a cost of about 114 mill. €. The new »Atair«, which replaces a 30-year-old predecessor, is scheduled to enter service in 2020. The original »Atair« was introduced into service in 1987.

It is the world's first LNG-powered survey vessel owned by a governmental authority. The »Atair« will conduct hydrographic surveys and wreck search operations, as well as marine environmental observations in the North Sea and the Baltic Sea. It will also perform technical testing of navigation and radar equipment. The shipyard's CEO, Harald Fassmer, emphasizes: »With this newbuilding, we were once again able to demonstrate our competence in designing and building sophisticated vessels«. Back in 2016, Fassmer was awarded the contract by the BSH. With a displacement of 2,775 tons, the newbuilding was too large for Fassmer's shipyard in Berne. Therefore, German Naval Yards in Kiel acted as subcontractor and assembled the hull. In March 2019, the half-finished vessel was transferred to Berne for completion.

Designed to be environment-friendly, the ship will have negligible impact on the marine environment and offer ideal conditions for the scientific work on-board. It will provide accommodation for 18 crew and 15 research personnel.

The »Atair« reaches a speed of around 13 knots and will be sailing in the North Sea, the Baltic Sea and the North-East Atlantic. It will also undertake cruises to col-

© Förster

Shipyard's CEO Harald Fassmer expresses his thanks to the godmother Elke Ferlemann, wife of State Secretary Enak Ferlemann, after the successful christening

A large work deck offers 200 m² of space to accommodate a range of equipment and systems, including laboratories, an air pollution measurement station, a working crane and a scrollbar for geological activities on the seabed

ATAIR

Costs	€ 114 m
Shipyard	Fr. Fassmer
Hull No	7070
Length	75,00 m
Beam	16,80 m
Side heigth	6,80 m
Draught cwL	5,00 m
Gross tonnage	2.775 t
Deadweight	3.357 t
Max. Speed	13,0 kn
Propulsion	diesel-gas-electric drive
Power	1000 kW + 330 kW for bowjet and bow thruster + 200 kW for stern radiator
Engines	2x Wärtsilä Dual-Fuel 6L20 DF, 1x Wärtsilä 6L20
LNG tank capacity	130 m³
Crew	18
Scientific staff	15

lect oceanographic measurements. New technologies, for example in the field of e-navigation and »smart shipping«, will also be developed and tested on board.

The research vessel will feature a large working deck offering 200 m² of space to accommodate a range of equipment and systems, including laboratories, an air pollution measurement station, a working crane and a scrollbar for geological activities on the seabed. The work deck will also house containers and extensive diving equipment, as well as a diving chamber to support the research activities. The ship will also be equipped with multi/single-beam echo sounders, a sonar, a side-scan sonar and a sub-bottom profiler for conducting hydrographic survey and wreck search.

The propulsion system will integrate two six-cylinder Wärtsilä 6L20DF dual-fuel engines, a six-cylinder Wärtsilä 20 engine, two exhaust cleaning systems, and a Wärtsilä LNGPac fuel storage, supply and control system.

The gas engines can burn either conventional liquid marine fuels such as light fuel oil (LFO), heavy fuel oil (HFO) and liquid biofuel or LNG. They can switch between fuels without loss of power and speed. Both engines will generate a maximum power output of 960 kW.

Wärtsilä also provided a third, pure diesel engine 6L20 of 1,200 kW.

The engines are elastically mounted to minimize underwater noise. The seven-bladed propeller from Schaffran was also designed to reduce noise emissions. It is driven by an electric engine with 1,600 kW of power. The ship is also fitted with one electrically powered bow thruster of 330 kW, one stern thruster of 200 kW and a Schottel pumpjet. For the first time, a DP system has been installed on a federal government ship.

The LNG tanks with a storage volume of 130 m³ will ensure LNG-fuelled operational endurance for ten days. Only high-quality gas oil with a sulphur content less than 0.1% will be used. For diesel operation an additional 200 t tank has been installed to extend operations to 30 days. At a later stage a switch to synthetic and low-emission diesel fuel GtL (Gas-to-Liquid) will be considered.

The engines comply with the stringent International Maritime Organisation (IMO) Tier III and the US Tier IV emission regulations. They will also meet the requirements of the German »Blauer Engel« standards for eco-friendly ship design. »We are responsible for monitoring marine environmental protection regulations,« said Karin Kammann-Klippstein, president of BSH – »so we are committed to be in the forefront ourselves.

The »Atair« marks just the beginning of further investments by federal authorities. Two multi-purpose vessels will be built to replace »Deneb« and »Wega«. Initial talks about the technical requirements for these newbuildings have already started. ■

Two Wärstilä 20DF dual-fuel engines will run on LNG

The working deck houses extensive equipment

A seven-bladed propeller helps to reduce underwater noise

The »Atair« features state-of-the-art technology

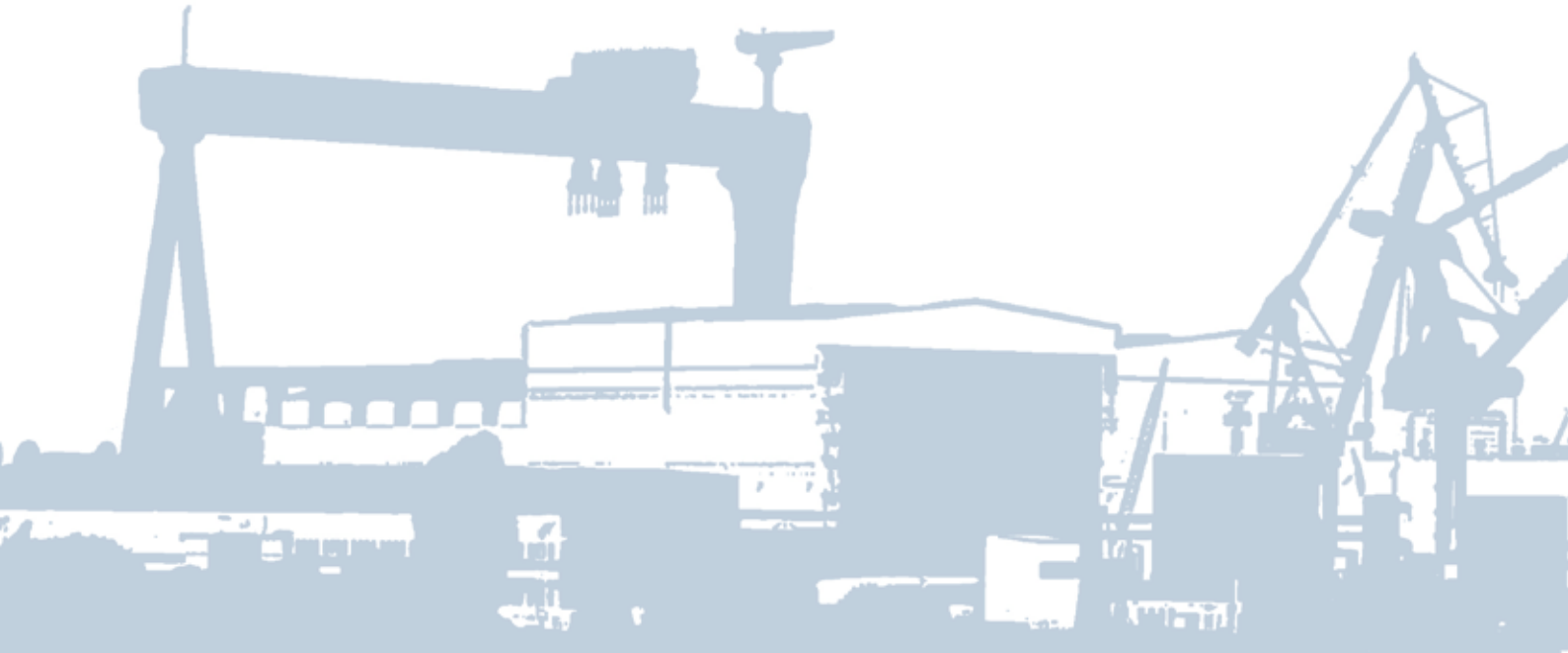
© Förster

»A global level playing field for shipbuilding«

The German shipbuilding industry demands more effective political support in global competition and the »maritime energy transition«. Exclusively for HANSA, the Federal Ministry of Economics and Technology (BMWi) takes a stand on the most pressing issues

Shipbuilding policy & coalition agreement

The Maritime Agenda 2025 will be worked through consistently. One announced measure was the examination of a classification of surface shipbuilding as a key defence industrial technology. A decision on this will be made with the Cabinet's decision on the new version of the strategy paper for strengthening the security defence industry. We aim to have the Cabinet discuss this in due course. The classification would increasingly offer the opportunity to retain and further develop maritime knowledge in Germany. This is the prerequisite for remaining competitive as a high-tech location in the long term and thus for maintaining and expanding value and jobs in Germany.

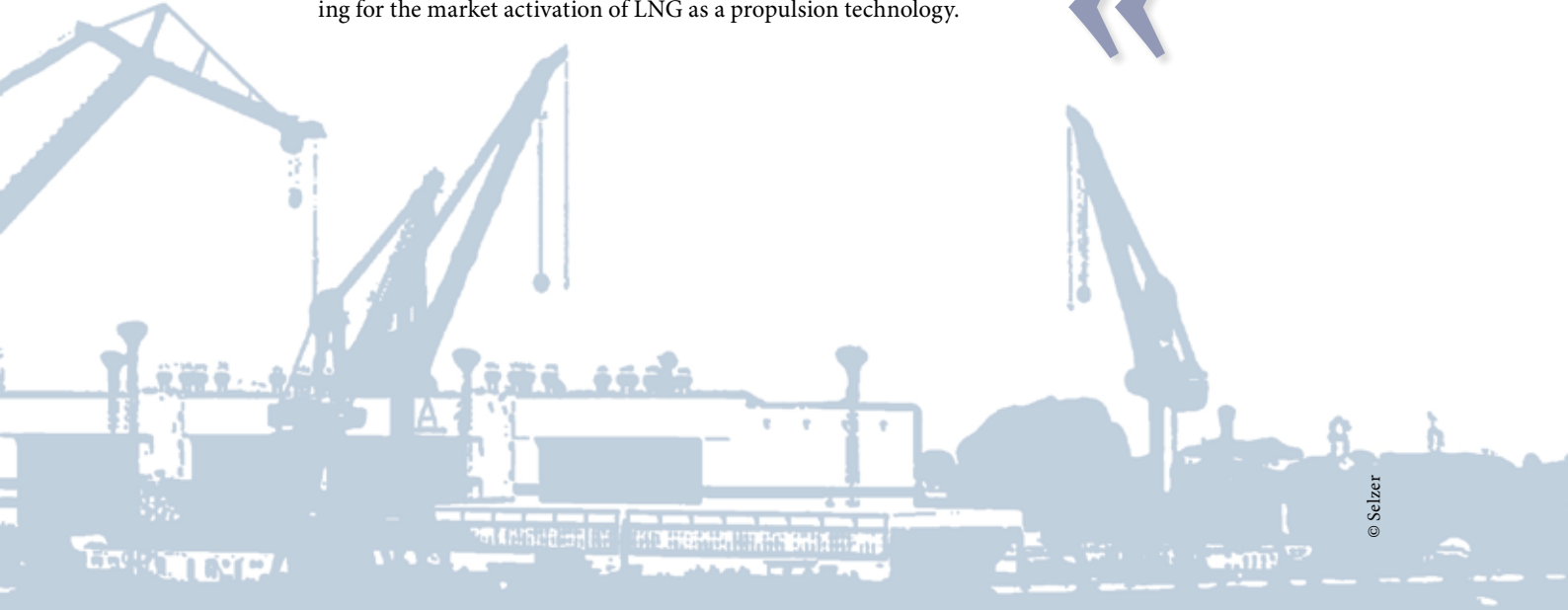


Current funding instruments

The BMWi's maritime funding programmes lead to pioneering technological innovations. The procedures ensure that the funding is used in a targeted and efficient manner. Further simplifications are expected in the course of the further digitalisation of funding procedures. With the programme »Innovative shipbuilding secures competitive jobs«, the Federal Government supports shipyards in the first industrial application of product and process innovations with 25 million € per year. The Federal Government supports shipyards in exporting their ships, in particular with export credit guarantees and the so-called CIRR interest compensation guarantees. Numerous export transactions were and are only made possible by these guarantees. With its export promotion measures the Government always pursues the goal of creating internationally comparable competitive conditions for German shipyards and thus a level playing field. With the state guarantees for shipbuilding, the federal states also provide another important instrument for support in the context of construction phase financing. In 2018, Federal export credit guarantees covered civil shipbuilding transactions with a volume of around 3.2 billion €. Since the introduction of the ship CIRR interest rate equalisation system in 2008, under which the Federal Government gives ship financing banks a fixed interest rate option already at the time the construction contract is concluded, interest rate equalisation guarantees for a total of 147 newbuildings with an order volume of around 28.3 billion € have been positively decided by the end of 2018.

Funding instruments in progress

The BMWi's Maritime Research Programme addresses, for example, pre-competitive research projects in which future-oriented technologies are developed and tested in concrete application environments. One focus is on environmentally friendly propulsion technologies. The BMWi will provide a total of around 191 million € in funding until 2022 as part of its Maritime Research Strategy. The Federal Ministry of Transport provides further funding for the market activation of LNG as a propulsion technology.



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Number of shipyards & foreign takeovers

Germany is one of the most open investment locations in the world, and this should continue to be so in the future. It is our concern that the technology researched and brought to market in Germany is applied internationally. The exports of the maritime industry and its global interdependence secure our maritime location and jobs throughout Germany. The takeovers of shipyards – some of which are financially distressed – by foreign investors also contribute to securing employment and value creation in Germany. The Federal Government, and in particular the Ministry of Economics, is committed to free and fair international trade and competition and to fair and equal conditions for all market participants – also with regard to investments and takeovers.

WTO reform

The BMWi supports the reform and upgrading of the WTO in all its functions. Among other things, within the framework of the so-called trilateral cooperation with the USA and Japan, there is a joint working group on WTO modernisation which meets regularly.

Tendering for public contracts

Germany has a modern and flexible legal framework for public procurement, which was comprehensively reformed in 2016 and made even more user-friendly. Within this framework, modern, efficient and lean procurement is possible. This applies both above and below the EU thresholds. The contracting authorities and companies have a wide scope of action in award procedures. For example, German public procurement law allows the awarding authorities to use the award of contracts to support strategic objectives. These include above all qualitative, social, ecological and innovative aspects. At the end of October, the Federal Government presented the BMWi's draft bill to simplify and accelerate procurement procedures in the defence and security sector. It also aims in particular at accelerating procedures in the shipbuilding sector. The draft is currently under parliamentary discussion.

A level playing field

The German government aims to establish a level playing field internationally in shipbuilding. To this end, talks are being held with international partners. The Federal Government is committed to a forward-looking policy for German shipbuilding that focuses on research and innovation. It has therefore decided to establish a new DLR Institute of Maritime Energy Systems in addition to the existing maritime funding instruments.

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»Iona« from P&O
at Meyer Werft

»Made in Germany« always in demand

German yards successfully continue to take a stand in the global shipbuilding market. The players invest in personnel and infrastructure

© Meyer Werft

The 95 m yacht »Madsummer« was build by Lürssen-Kröger shipyard

© Jeff Brown

There is no doubt that the challenges in global shipbuilding competition have not necessarily diminished for German shipyards. The markets for special purpose ships and other niches are increasingly being targeted by others, especially from Asia, but also by European competitors. Nevertheless, the German industry is still able to assert itself, the label »Made in Germany« still carries weight. According to the German Shipbuilding and Ocean Industries Association (VSM), in seven of the last eight years, domestic yards acquired more orders than newbuildings were delivered.

The German shipbuilding business continues to be dominated by cruise ships, yachts, RoRo freighters and naval units. They are joined in the order book by other special ships such as an icebreaker for Russia to be built by Pella Sietas in Hamburg or two multipurpose vessels to be delivered by Abeking & Rasmussen. The »Spotlights on German Shipbuilding Projects« on the following pages provide evidence of this portfolio.

Investments on the agenda

As a matter of fact, all yard managers are aware of the fact that these niche markets are not reserved for them – there is a continued need to take action. The Industry is highly dependent on its own investments, including research and development, although additional federal innovation and financing programmes exist. Modern facilities, logistics centres (Meyer Werft), innovative production methods – one example being a 3D printing facility at Abeking & Rasmussen – and last but not least investment in personnel are high on the agenda.

The Meyer Group with its German locations in Papenburg and Warnemünde (Neptun shipyard) is continuously looking for qualified personnel and hiring new employees, hundreds of new jobs have been created. The MV Werften Group with sites in Wismar, Warnemünde, Stralsund and Bremerhaven has also been expanding its workforce since its takeover by the Asian Genting Group, thus creating lots of jobs in the respective regions.

The focus of all these initiatives and projects is clearly on maintaining a strong position in the global market with innovations, high-quality products and modern approaches. Despite all the prophecies of doom, the German industry continues to succeed in defending its market share.

Consolidation creates and maintains jobs

In a comprehensive review, the structural changes in the industry should not be disregarded. With takeovers and changes of ownership, consolidation continues. Such developments have also left their mark on German shipbuilding in the past year.

At the beginning of October, Tennor Holding, a globally active investment company of German investor Lars Windhorst based in the Netherlands, took over the all shares of crisis-ridden Flensburger Schiffbau-Gesellschaft (FSG) from the Norwegian group Siem. Over the past five years, the Scandinavians have been the main customers for the shipyard. However, Siem intends to continue working closely with Tennor.

Another transaction typical for the change in the German shipbuilding industry was the sale of the operational shipyard business by the Bremerhaven entrepreneur Dieter Petram to the Rönner Group, also based in the port city. The transaction comprises the Bremerhaven-based dock company Bredo (Bredo Dry Docks), German Dry Docks (GDD) and German Ship Repair (GSR) with around 400 employees. In announcing the sale, the Petram family emphasised that for the sake in the interests of the employees and the future of all companies, they had decided »to give the shares in a trustworthy hand rather than selling them to any bigger corporation.«

The Lürssen Group continued to pursue its expansion course in 2019. It acquired the insolvent Elsfleth shipyard, which went through huge difficulties in the wake of misconducts surrounding the refurbishment of the German navy's sail training ship »Gorch Fock«. The Lürssen Group takes over all of the approximately 130 employees.

All in all, the German shipyards see themselves »on track« despite some obvious challenges. Facing tough competition especially from China, the shipbuilders are demanding more political commitment and an aligned European strategy. One point of criticism is that public clients are turning to foreign shipyards instead of promoting the domestic industry as recently seen with orders given to Dutch yards. These comprise ferries, fire fighting boats and four new navy vessels. However, the Federal Government considers itself to be on the right track with its support policy, as it is explained in more detail to HANSA (pages 16-19). ■

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MV WERFTEN

Final outfitting for »Crystal Endeavor«

A few days before Christmas 2019, another milestone was reached at MV Werften. At the facilities in Stralsund »Crystal Endeavor« has left the drydock. The luxury yacht is now lying on the quay for final outfitting. It is the first expedition yacht in a series of three. They are all build for Crystal Yacht Expedition Cruises, part of Genting Group Hong Kong. All vessels have the ice-class P6 and could carry up to 200 passengers. With a length of 164 m the vessels of Endeavor-class are the largest of that kind worldwide it's said. »Crystal Endevor« is scheduled to go into operation in the polar regions and tropical waters from 2020 on. Two sister vessels are to follow in 2021 and 2022. Wärtsilä has been selected as engine supplier. Four 6-cylinder Wärtsilä 32 engines combined with Wärtsilä NO_x Reducer (NOR) systems will provide the electrical power for each vessel. According to the Finnish manufacturer, the system is fully compliant with the IMO Tier III exhaust emission regulations set out in Annex VI of the MARPOL 73/78 convention. »This is an exciting newbuild project and we are proud to have been selected as a supplier,« says Lars Anderson, Vice President, Engine Sales, Wärtsilä Marine Solutions.

FASSMER

German Federal Police takes delivery of three Patrol Vessels

In 2019 Fassmer has delivered all of the three patrol vessels for the German Federal Police. The sister ships have a length of 86 m and a width of 13 m. Christened with the name »Potsdam« (photo) in 2018 at Fassmer shipyard, the first vessel of this new series was delivered in May. It was followd by »Bamberg« and »Bad Düben«. All vessels replace older ones. The main propulsion system consists of two Wärtsilä diesel engines type 12V 26F with a power output of 4,080 kW each, which transmit their torque to a controllable-pitch propeller via a ZF transmission. Two on-board units from Caterpillar, each with an output of 820 kW, increase the propulsion power via electric traction motors flanged to the transmissions of the main engines, which can also operate as generators. For better controllability, each ship also has two thrusters. Furthermore the newbuildings have a helicopter landing deck on board. In addition, the ships offer stowage facilities for containers with power and water connections, including special equipment. The vessels are deployed on control and patrol missions on the North and Baltic Seas and support international police missions in cooperation with special forces worldwide.

© Fassmer

© AIDA Cruises

NEPTUN WERFT

Keel laying for AIDA's next LNG cruiser

At Neptun shipyard in Rostock-Warnemünde, part of Meyer Shipyard Group, the first building block for the second LNG cruise ship of AIDA Cruises was laid in mid-October 2019. On the occasion of the keel laying, the name of the newbuilding was announced. The ship will be called »AIDAcosma«. With a size of 183,900 gt it will have 20 decks,. At 337 m the newbuilding offers space for 2,600 cabins. It will follow »AIDAnova«, which is already operating with LNG. »AIDAnova« is powered by Caterpillar main engines (dual-fuel) of the MaK M46DF series, supplied by Zeppelin Power Systems. »AIDAcosma« is the second ship of the Helios class and is scheduled for delivery in 2021. Another LNG cruise ship for AIDA Cruises is to follow in 2023.

ABEKING & RASMUSSEN

Investing in 3 D system

The shipyard Abeking & Rasmussen (A&R) will produce ship segments with a newly developed 3 D laser welding system in the future. This robot system welds three-dimensionally shaped ship structures – an innovation in European shipbuilding. With the new process, the shipyard A&R will be able to produce lighter ships with lower fuel consumption in the future. The Federal Government is subsidising the investment costs for the introduction of the process with a quarter of the costs from the »Innovative shipbuilding secures competitive jobs« support programme. For the medium-sized shipyard, which currently employs 470 dockers, the start of production is an important step, because it will facilitate high-quality hull assembly with less material consumption.

© A&R

»The achievable production quality will enable us to further improve the quality of our newbuilding orders, shorten production times and remain successful in international competition,« emphasized A&R-CEO Hans Schaedla. The production of laser-welded hull components, which has started in Dezember 2019, is destined for the largest newbuilding of the traditional shipyard, a novel mega-yacht measuring over 100 m in length.

HERMANN BARTHEL

DGzRS adds first training boat to its SAR fleet

The new training ship of the German Maritime Search and Rescue Association (DGzRS) takes shape. Keel laying at the Hermann Barthel shipyard took place in December after the order had been placed in the summer of 2019. With this project, DGzRS is intensifying the decentralised approach to training of maritime rescue personnel at its stations between Borkum in the West and Ueckermünde in the East of the German coast.

© Jörg Sarbach

On board of the new vessel, standard procedures and capabilities such as safety and seamanship, manoeuvring, towing, technical navigation, radar training, collision/encounter operations, but also the rescue of injured persons will be trained. The approximately 22 m long and 6 m wide ship with a draught of 1.60 m is going to be powered by two Cummins engines for a speed of 11 nm. It will be manned by three crew members. In addition, there will be capacities on board for eight trainees or volunteers, who will undergo training on the ship.

TKMS

Stealth design for Israeli missile corvettes

In May 2019, the world's most modern corvette was named INS »Magen« at a ceremony in Kiel. This event marked another important milestone in the ongoing programme of thyssenkrupp Marine Systems (TKMS) as general contractor for building four next-generation SA'AR-6 class missile corvettes for the Israeli Navy. The ship – 90 m in length and 13 m in width – was named by Eti Sharvit, wife of Vice Admiral Eli Sharvit, Chief of the Israeli Navy, in presence of high-level representatives from the Israeli Government and Navy as well as high-ranking German Navy officials. The ships have the stealthy design of a low-signature missile corvette with tailor-made solutions and numerous new technologies on board. INS »Magen« is planned to be delivered in this spring after completion and testing. The other three ships will follow subsequently in intervals of just a few months. The corvettes will feature a anti-missile system, close and far-reaching attack capability, long-term survivability, sea and air detection capabilities, and the ability to carry a Seahawk helicopter.

© TKMS

MEYER TURKU

A further boost to LNG

© Meyer Turku

In December 2019, Meyer Turku shipyard has delivered cruise liner »Costa Smeralda«. The 337 m long and 42 m wide 182,700 gt vessel is one of the most innovative ships ever built in Turku. »The newbuilding will be a further boost to the use of LNG in cruise ships, a technology we were the first to believe in, setting a new course in the cruise sector,« said Neil Palomba, President of Costa Cruises. Costa Group has invested in the construction of five new LNG ships. Palomba considers the decision »an innovation in the cruise and overall shipping industries, destined to mark a step change as it guarantees a significant reduction in our environmental impact without compromising the safety aspects that are an essential priority for us«. Apart from the major innovation of LNG, the ship incorporates a series of technological innovations designed to further reduce environmental impact. The daily water demand can be directly covered from sea water thanks to the ship's desalination systems. Energy consumption is reduced to a minimum by using LED lights, recovering the heat from the engines, the particular shape of the hull designed to significantly reduce drag in the water, and new-generation elevators that recover energy by re-introducing it into the electricity system.

LÜRSSEN

Covered floating dock enhances construction capabilities

After investing around about 20 mill. € in the shipyard Blohm+Voss, Lürssen plans the next major investment in Hamburg: The 287 m long and 44 m wide Dock 10 will get a roof over a length of at least 200 m. The conversion will cost approximately 15 mill. € and take about six months. The work is scheduled to begin in the course of this year. The dock is expected to be towed to Bremen to put the roof on. The reason for this investment is a new order for a yacht. The construction starts at Blohm+Voss in Hamburg and will be completed at Fr. Lürssen shipyard in Bremen. »The newly roofed dock enables us to efficiently distribute the extensive yacht project over several locations and also offers our employees significantly improved working conditions,« Peter Lürssen, Managing Partner of the Lürssen Group, explains. »The conversion will fit Blohm+Voss with one of the largest covered floating docks in Europe. On the one hand, this provides new opportunities for existing and potential customers in the field of repairs and refits of yachts, naval and cruise ships; on the other hand, it creates an even better infrastructure for potential new naval construction orders,« adds Klaus Borgschulte, Chairman of the Supervisory Board of Blohm+Voss.

© Lürssen

NOBISKRUG

Project »Black Shark« features top amenities

© Nibiskrug

Progress on Nobiskrug's highly-anticipated 77 m Project »Black Shark« has taken an exciting step, with the arrival of the custom newbuild's hull at the shipyard's Rendsburg facility in mid December 2019. The towing of a hull from Kiel to Rendsburg always marks a significant milestone in any newbuild project. It took the power of two tugs to haul the hull from the Kiel facility along the shores of the Baltic Sea, setting off in the direction of Rendsburg. According to the shipyard, »Black Shark«'s hull passed through locks before entering the Kiel Canal where it spent three hours travelling at a speed of 8 kn. The hull completed the landmark journey on the River Eider, arriving at the facility in Rendsburg, where it will be painted matt black to mimic the texture of the skin of a black shark. In contrast to this look, the superstructure of the new vessel will wear a sporty, metallic silver colour to complement the mast, which is cleverly designed to resemble a shark fin. The dark exterior colour will wrap three decks which have been specifically designed by British studio Winch Design to emphasise the yacht's voluminous 2,080 gt.

MV WERFTEN

Steel cut for second Global class newbuild

In mid September 2019 the production of the second Global class ship for Star Cruises commenced at MV Werften in Rostock-Warnemünde, almost exactly a year after the keel laying of the flagship of the series. Genting Hong Kong's Chairman and CEO Tan Sri Lim Kok Thay initiated at the press of a button the first steel cutting for the 342 m long, 46 m wide cruise vessel of 208,000 gt.

© MV Werften

Global 2 is identical in construction to her sister ship Global 1, which is due to enter operation under the name »Global Dream« in 2021. With 2,500 passenger cabins accommodating up to 9,500 guests and a crew of 2,200, the »Global Dream« and Global 2 are the first vessels worldwide that are capable of carrying more than 10,000 persons. In terms of size and passenger capacity, they are the largest ships ever built in Germany. They are equipped with digital technologies, such as face and speech recognition, climate control, mood lighting, etc. via app or voice, and are thus optimally designed to meet the advanced digital requirements of the Asian cruise market. The standard cabins are the most spacious in the sector – at 20 m² about 15 % larger than those offered on other cruise ships.

ABEKING & RASMUSSEN

»Excellence« shines with disrupting design

The stylish curves of the 80m long newbuilding »Excellence«, a megayacht with a size of 2,060 gt, are dominated by generous glass surfaces. According to Abeking & Rasmussen, with her striking bow and her visionary, industry disrupting layout, »Excellence« brings forward a new era for superyacht design. Responsible for that is the renowned Studio Winch Design. According to the shipyard, the team at Winch Design have dreamt up a superstructure so unique that she promises to be unlike anything that has ever come before. Her striking and angular reverse bow cuts assertively through the ocean waters, offering a silhouette comparable to a spaceship. Her exterior lines draw the eye up to the bridge and owner's decks which are surrounded on all sides by curved floor-to-ceiling mirrored glass. The experienced in-house engineering team of Abeking & Rasmussen has succeeded in installing these glass panels without disturbing this unique view through disruptive structures. The hull was manufactured in Szczecin before Abeking & Rasmussen in Lemwerder took over for the outfitting process. »Excellence« has a swimming pool on board, Jacuzzi and a spacious bathing platform. The delivery of the new megayacht took place in September last year. »We are very proud of this extraordinary yacht. Never before have glass windows of this size been installed,« says Hans Schaedla, Managing Director of Abeking & Rasmussen.

© A&R

© Meyer Turku

MEYER TURKU

Benefitting from a new plasma cutter line

The steel cutting ceremony of the second Costa Cruises ship build at Meyer Turku has startet at the end of July 2019. The brand new plasma cutter line was used for the first time in a production start ceremony. According to the shipyard, »Costa Toscana« will be the first ship benefitting fully from the new panel line of Meyer Turku. The panel line is just one of the major over 100 mill. € investments inside the steel construction halls. The whole shipyard is going through an investment programme of 200 mill. €. »Costa Toscana« is slated for delivery in 2021. As its sister ship »Costa Smeralda«, that has been delivered in October 2019, it uses LNG for propulsion. Neptun Werft, sister company of Meyer Werft, manufactured the engine room module. It is 140 m long, 42 m wide and was towed to Turku at the end of 2019. With a gross tonnage of over 180,000, »Costa Toscana« and its sister ship »Costa Smeralda«, are part of the Costa Group's fleet expansion plan, with seven new ships scheduled to enter service by 2023.

FSG

Siem orders three more roro vessels

In 2019 Norwegian shipping company Siem Europe has taken delivery of two 32,887 gt RoRo vessels built by Flensburger Schiffbau-Gesellschaft (FSG), owned by the global investment company Tennor Holding. »Maria Grazia Onorato« and »Leevsten« are the 6th and 7th newbuildings in a series for Siem. »Liekut« will follow in March 2020. The vessels have a length of 209.79 m, a width of 26 m and a draught of 6.80 m. The load capacity is 11,900 t at 4,076 lane meters. The ships are able to carry 283 trailers and have a speed of 21.3 kn. Two MAN 8L48/60CR engines serve as main engines. »Liekut« was christened by Jana Schüler, wife of Wolfgang Schüler, who masterminded this successful RoRo design during his long tenure at FSG, at the end of October. Earlier in 2019, »Leevsten« and »Maria Grazia Onorato« have been delivered. »Maria Grazia Onorato« was chartered by Moby Lines Europe and deployed in the Mediterranean area on the routes to and from Sardinia and Sicily.

© FSG

MEYER WERFT

»Norwegian Encore« comes with new attractions

At the end of October 2019, Meyer Werft has delivered the 169,145 gt cruise ship »Norwegian Encore« in Bremerhaven to the shipping company Norwegian Cruise Line (NCL). The highlight on board the newbuilding, which is 334 m in length and 41.40 m in width, is the longest go-kart track at sea – 350 m in length. In addition, »Norwegian Encore« features several water slides and a laser tag arena. Ensuring that a beautiful and time ecologically responsible holiday can be spent on board, Ethe ship uses extensive technical measures to protect the environment. The electric pod drive, improved hydrodynamics, many energy-saving devices such as heat recovery and extensive water treatment systems are just a few examples. Three MAN B&W 12V48/60CR and two 16 V48/60CR engines provide for a total output 76,800 kW. The »Norwegian Encore« is equipped with scrubbers and a SCR catalytic converter to reduce emissions. The maiden voyage of the vessel led from Southampton, UK, to New York in the US. The ship was christened at 21 November in Miami by the singer and presenter Kelly Clarkson. »Norwegian Encore« belongs to the Breakaway Plus-class. Her sister ships are »Norwegian Bliss«, »Norwegian Escape« and »Norwegian Joy«.

TAMSEN MARITIM

14 newbuildings in a row

Rostock-based shipyard Tamsen Maritim laid the keel of a rescue boat ordered by the German Maritime Search and Rescue Association (DGzRS). The unit marks the end of a newbuilding series at Tamsen Maritime. DGzRS announced that a »very generous donation« from a 76-year-old woman is the basis for the realization of the 10.10m newbuilding with the working title SRB 80. The final name chosen by the donor will traditionally be published on the occasion of the christening. »We are very grateful. The very generous donation enables us to fully finance the newbuilding,« said DGzRS Managing Director Nicolaus Stadeler. The newbuilding is expected to replace the »Hans Ingwersen« at the station in Travemünde this autumn. »Hans Ingwersen« will then operate at alternating stations on the North and Baltic Seas occasionally. For the time being, SRB 80 is the last of 14 newbuildings of the same type. The special purpose ships will replace older units in the course of the regular modernisation of the SAR fleet. Last year, Tamsen Maritim delivered further newbuild vessels of that series: »Gerhard Elsner« (vessel shown in the photo above), »Peter Habig« and »Wolfgang Paul Lorenz«.

©DGzRS

LLOYD WERFT

Details for new megayacht project revealed

Bremerhaven based Lloyd Werft, owned by Genting Group, has published details of yacht project »Diva«. With a length of 96.5 m and six decks, »Diva« will have a tonnage measurement of almost 3,000 gt. »Her dynamic and sporty lines with a vertical bow, the stern area and a sail-like mast are similar to those of regatta yachts,« the shipyard said in statement. The ship has a diesel-electric power plant featuring four generators (951 kW each), which drive two pods, ensuring high manoeuvrability and fuel efficiency at optimised underwater hull shape. Owner and guest areas feature floor-to-ceiling window fronts. Two terraces in the rear spa area, private balconies for the guest cabins and the front lounge, which can be converted into a cinema. The helicopter landing pad on the large foredeck is designed for a six-seater helicopter. The amenities include an 8.5 m x 4.0 m x 1.2 m infinity pool at the rear of the main deck, a wellness and entertainment oasis of 300 m² and two 18 m² terraces, intended to provide an »open sea beach club feeling.« For the interior Judel/Vrolijk opted for an »Asian-Scandinavian« look. Five cabins, almost all with folding balconies on the main deck, accommodate up to ten guests. Construction may start in summer 2020, with an estimated delivery in summer 2023.

© Lloyd Werft

LÜRSSEN/TKMS

German Navy commissions new lead F 125 frigate

In mid-June 2019, the German Navy put F222 »Baden-Württemberg« into service, the first of a total of four F125 class frigates. The lead ship of the Baden-Württemberg class is currently the most modern ship in the fleet. It is the first frigate to be operated with a multi-crew concept instead of having a permanent crew on board. The modern and robust technology allows intensive use with up to two years' time in the operational area without a scheduled shipyard stay, the German Navy informs. Thanks to the high degree of automation, the ships can also be operated with a crew of only 120 men and women. By comparison: the »older« frigates of the German Navy still require almost twice as much crew. With the four so-called Buster boats and the on-board helicopters, each frigate has not only an extended reconnaissance and weapon range, but also extensive means of transport, enabling it to deploy its own special forces for rescue and evacuation, armed repatriation and operations against enemy forces. The contractor for Baden-Württemberg and its three sister vessels »Nordrhein-Westfalen« (F223), »Sachsen-Anhalt« (F224) and »Rheinland-Pfalz« (F225) is a consortium of Thyssenkrupp Marine Systems (TKMS) and Lürssen.

© Bundesmarine

MEYER WERFT

RCI takes delivery of first Quantum-class vessel

Meyer Werft has delivered »Spectrum of the Seas« to cruise shipping company Royal Caribbean International (RCI). The first cruise ship of the Quantum Ultra class is 347.10 m long and 41.40 m wide. Two Wärtsilä 12V46DE and two Wärtsilä 16V46F work as main engines. Like its sister ships »Quantum of the Seas«, »Anthem of the Seas« and »Ovation of the Seas«, the latest newbuilding of Meyer Werft features the glass gondola North Star, the surf simulator Flow Rider and the skydiving simulator Rip Cord. A new feature is the Sky Pad,

© Meyer Werft

a bungee trampoline at the stern on which passengers wear a virtual reality headset to immerse themselves in different worlds. As a further development of the Quantum class, the »Spectrum of the Seas« like its three sister ships is equipped with state-of-the-art exhaust gas purification systems such as hybrid scrubbers. Highly energy-efficient technical systems, optimized hydrodynamics, heat recovery as well as an effective underwater paint system and an energy-saving lighting system with LED lights lead to considerable energy savings. A diesel-electric podded drive, extensive alarm and security systems, interactive communication systems and latest stage technology guarantee safety and entertainment on board according to the highest technical standards. The ship has a total of 18 decks and offers room for 4,246 guets.

© Neptun Werft

NEPTUN WERFT

Lucky coin for »Odyssey of the Seas«

At the beginning of May 2019 the keel laying ceremony for the first block of Royal Caribbean's new cruise ship »Odyssey of the Seas« was held at Neptun Werft, sister company of Meyer Werft, where the ship's engine room unit is produced. »Odyssey of the Seas« is scheduled to be delivered in Papenburg in autumn 2020. Representatives from Royal Caribbean International and Stephan Schmees, Executive Board Member Project Management at Meyer Werft, placed the lucky coin under the block of the new ship before it was lowered into position. The building of the next cruise ship for Royal Caribbean starts only a few weeks after delivery of the »Spectrum of the Seas«. This block is one of a total of 79 blocks for the new luxury cruise liner and weighs 970 t. The keel laying ceremony marks the official start of construction for »Odyssey of the Seas«. The ship will be one of the five largest cruise ships in the world with a gross tonnage of about 169,000.

ABEKING & RASMUSSEN

Two multipurpose vessels ordered to join the federal fleet

The German Waterways and Shipping Administration (WSV) has ordered two new multipurpose coast guard vessels. They will be built by Abeking & Rasmussen. The two identical newbuildings replace »Scharhörn« (built in 1974) and »Mellum« (built in 1984). The replacement vessels are powered entirely by LNG and will have a large helicopter landing deck in the forward section. The special equipment of these innovative newbuildings will significantly improve the operational capabilities of the fleet. Among other things, chemical tanks with a volume of approx. 1,000 m³, an explosion-proof safety and container loading room as well as oil recovery equipment such as skimmers, oil collection tanks and a separation room, will be installed. In addition, the newbuildings have emergency towing capabilities with a bollard pull of 1,450 kN (145 t). The new vessels have room for a crew of 16 plus 34 – specially trained fire-fighting personnel – who are on board in case of an accident. The Federal Waterways Engineering and Research Institute (BAW), Ship Technology Division, was responsible for the planning and design of the new ships as well as the tendering and construction development processes. The first new multi-purpose ship will be commissioned in 2023, the second one is expected in 2024. The total contract value for the two newbuildings is around 404 mill. €. The order also includes an option for a third identical ship. The decision on this will be made in the course of 2020.

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© TKMS

TKMS

»S 43« – third submarine for Egyptian Navy

The third of four 209/1400mod class submarines for the navy of the Arab Republic of Egypt was christened at the thyssenkrupp Marine Systems (TKMS) shipyard in Kiel in the beginning of May 2019. At the ceremony, Vice Admiral Ahmed Khaled, commander in chief of the Egyptian Navy, officially named the boat »S43«. »This significant milestone in the construction programme for the Egyptian Navy is based on an open and trusting dialogue with our customer as well as the competence of our employees and suppliers. These are key factors on our successful way to become Europe's most modern naval company«, said Rolf Wirtz, Chief Executive Office of TKMS. The contract for the first two 209/1400mod class submarines for the Arab Republic of Egypt was signed in 2011. In 2015, Egypt decided to use the option for two additional units of the most recent version of the class 209 »family«: The first submarine named »S41« was handed over by TKMS in December 2016, the second boat named »S42« followed in August 2017. The programme is to end with the handover of the fourth boat, scheduled for 2021.

MEYER TURKU

»Mein Schiff 2« features a refreshed design

At the beginning of 2019, German cruise company Tui Cruises has taken delivery of the new »Mein Schiff 2« by Meyer Turku shipyard. With »Mein Schiff 2« measuring 315 m in length and 36 m in width Meyer Turku and Tui Cruises have continued taking into account the feedback from the passengers of Tui Cruises' previous ships and have further improved and refreshed the design of the ship. The 111,500 gt newbuilding has 1,437 cabins and can carry 3,132 passengers. »For us, it has been a thrill working with TUI Cruises on the design and construction of this ship. The passengers will surely notice and hopefully like the differences to the previous ships. We have redesigned many of the areas of the ship, for example the Schau Bar and the restaurant area in front of the aft diamond structure,« CEO Jan Meyer says. »The commissioning of our new ›Mein Schiff 2‹ marks the successful end of our first expansion phase. Our sixth newbuild by Meyer Turku not only impresses with its design, its inner values are equally convincing: With the use of modern technologies we are setting standards for environmental protection,« adds Tui Cruises CEO Wybcke Meier.

© Meyer Turku

LÜRSSEN

»Flying Fox«, »Madsummer«, »Tis« – three yachts launched

Last year, Lürssen Group has delivered three new megayachts. As usual in the luxury yacht sector, the customers were not disclosed. The first vessel that was handed over in March 2019 was the 136 m yacht »Flying Fox«, also known under project name »Shu«. It was built at the main site of Lürssen in Bremen-Vegesack. The two other vessels were built at Lürssen-Kröger Werft in Schacht-Audorf in the Kiel Canal. First one here was the 111 m »Tis« (photo) in June. The yacht, powered by two MTU diesel engines and capable of speeds of up to 18 kn, was designed by the British designer Andrew Winch and painted in the Explorer design. Eleven cabins are available for a maximum of 22 guests on the four decks. They can use a 12 m pool on the main deck in the aft. In addition, the yacht feature two helicopter landing pads, a submarine and two 13 m tender boats that can transfer guests and crew to shore. According to media reports, 63-year-old Russian businessman Alexei Fedorychev is to be the owner of the newbuilding, which will costs around 250 mill. €. Only one month later, the 95 m long »Madsummer«, also known under its project name »Fiji«, followed from Lürssen-Kröger Werft. Her sweeping exterior curves were penned by Harrison Eidsgaard, her colourful and personality-filled interior by Studio Laura Sessa.

© Klaus Jordan

© Meyer Werft

MEYER WERFT

Saga newbuild is tailored to the English market

The 58,250 gt »Spirit of Discovery«, the first of two new cruise ships for Saga Cruises, was delivered by Meyer Werft to the British shipping company in Emden in June 2019. In the beginning of July it was christened in Dover, UK. Her Godmother was Duchess Camilla, wife of the Prince of Wales. According to the shipyard, »Spirit of Discovery« is characterized by an environmentally friendly and resource-saving design. An eSiPod drive from Siemens was used for the first time in the newbuilding. With a length of 236 m and a width of 31.20 m, the »Spirit of Discovery« is one of the smaller and more exclusive cruise ships. It can take nearly 1,000 passengers on board. Shortly before delivery, the keel of the second newbuilding for Saga Cruises was laid at Meyer Werft in Papenburg. The »Spirit of Adventure« is scheduled for completion this summer. Both ships have a completely new design tailored to the English market. They are expected to set new standards in terms of interior design and also in terms of technology.

Deliveries & orders of German shipyards in 2019

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
Abeking & Rasmussen Schiffs- und Yachtwerft Aktiengesellschaft, Lemwerder												**www.abeking.com**
6505	Yacht *	Excellence		2,115		80.00						09 / 2019
6506	Yacht *	Soaring		1,500		68.00						04 / 2020
6507	Yacht **					118.00						2021
	2 x Multi-purpose ***	Federal Waterways and Shipping Administration				95.00				LNG		2023 / 24
*Hull built by Szczecin Shipyard, ** steel construction by Pella Sietas, *** option of a third vessel												
Schiffswerft Hermann Barthel GmbH, Derben												**www.barthel-werft.de**
200	Floating dredger	Wittenberg	WSA Dresden			36.40	9.75	0.90	2 x 280	2 x MAN	12*	2019
201	Work boat	Driever	WSA Emden	100		21.00	6.00	1.20	2 x 221	2 X Volvo Penta D9	15*	2020
202	Work boat / dive support	Rán	WSP Berlin	82		29.00	5.00	0.90	257	FPT	30*	2019
203	Push boat		WSA Vreden			14.00	7.30	1.45	2 x 280	FPT	16*	2020
205	Police boat	Schwanenwerder	WSP Berlin			13.50	3.80	0.80	2 x 169	FPT		2020
206	Folding pram		WSA Meppen			36.50	6.80	2.00	301	FPT		2020
207	Police boat		WSP Magdeburg			13.00	3.60	0.80	279	MAN		2020
208	Police boat		WSP Magdeburg			13.00	3.60	0.80	279	MAN		2020
209	Training ship		German Mritime Search and Rescue Association (DGzRS)			22.00	6.16	1.60	2 x 224	Cummins		2020
210	Push boat	Elektra	Behala			20.00	8.20	1.25		Fuel cell		2020
211	Police boat					13.00	3.60	0.80	279	MAN		2020
Schiffswerft Bolle GmbH, Derben, Neuderben												**www.schiffswerft-bolle.de**
209	Passenger ship	Schwielowsee	Weisse Flotte Potsdam	250 pass.		41.00	6.50	1.20		Hybrid		04 / 2019
210	Push boat											01 / 2019
211	Open pram	OP 4315	WSA Koblenz			16.26	7.86					1Q / 2019
212	Passenger ship	Bella Bohemia	Prague Boats	250 pass.		25.00	9.60	0.70	2 x 55			3Q / 2019
213	Work boat	Emmerich	WNA Datteln			31.00	7.20	0.95				2Q / 2020
214	Living boat											3Q / 2019
215	Deck pram	DP 4323	WSA Berlin									01 / 2020
216	Folding pram		WSA Hann. Münden									08 / 2020
217	Open pram		WSA Meppen									2020
218	Deck pram		WSA Meppen									2020
219	Deck pram		WSA Meppen									2020
220	Deck pram		WSA Meppen									2020
221	Deck pram		WSA Meppen									2021
222	Open pram		WSA Meppen									2021
223	Passenger ship			250 pass.		30.00	9.60	1.00				2021
Theodor Buschmann GmbH & Co. KG, Hamburg												**www.theodor-buschmann.com**
	No projects known											
Erlenbacher Schiffswerft Maschinen und Stahlbau GmbH, Erlenbach am Main												**www.die-schiffswerft.de**
	No projects known											

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
Fr. Fassmer GmbH & Co. KG, Berne / Motzen												**www.fassmer.de**
7040	Patrol vessel	Potsdam	German Federal Police	2,092	1,860	86.20	13.40	6.60	2 x 4,080	Wärtsila 12V26 / 2 x 600 kW electric motor	21.0	05 / 2019
7050	Patrol vessel	Bamberg	German Federal Police	2,092	1,860	86.20	13.40	6.60	2 x 4,080	Wärtsila 12V26 / 2 x 600 kW electric motor	21.0	08 / 2019
7060	Patrol vessel	Bad Düben	German Federal Police	2,092	1,860	86.20	13.40	6.60	2 x 4,080	Wärtsila 12V26 / 2 x 600 kW electric motor	21.0	11 / 2019
7070	Survey, wrech-search and res-cue vessel *	Atair	Federal Maritime and Hydrographic Agency of Germany (BSH)			76.00	16.80	5.00	1,600	Wärtsilä 2 x 6L20DF; 1 x 6L20	13.0	03 / 2020
7080	Rescue vessel	Hamburg	German Maritime Search and Rescue Association (DGzRS)			28.00	6.20	1.95	2 x 1,440	2 x MTU 16V 2000 M72	24.0	04 / 2020
7090	Rescue vessel		German Maritime Search and Rescue Association (DGzRS)			28.00	6.20	1.95	2 x 1,440	2 x MTU 16V 2000 M72	24.0	12 / 2020
7100	Rescue vessel		German Maritime Search and Rescue Association (DGzRS)			28.00	6.20	1.95	2 x 1,440	2 x MTU 16V 2000 M72	24.0	09 / 2021

* In cooperation with German Naval Yards

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
Feltz-Werft GmbH, Hamburg												**www.feltz-werft.de**
	Passenger ship	Ennstal	Barkassen-Meyer			24.77	6.00					2019
Ferus Smit Leer GmbH, Leer												**www.ferus-smit.nl**
448	Cargo vessel	Arklow Wind	Arklow Shipping	16,500		149.50	19.25	8.59	3,840			04 / 2019
449	Cargo vessel	Arklow Willow	Arklow Shipping	16,500		149.50	19.25	8.59	3,840			2020
450	Cargo vessel	Arklow Wood	Arklow Shipping	16,500		149.50	19.25	8.59	3,840			2020

The facility in Leer is a subsidiary of Ferus Smit in Westerbroek, NL. Newbuildings are shared between these two yards.

Schiffswerft Fischer, Könnern — **www.schiffswerft-fischer.de**

Currently no newbuilding projects

Flensburger Schiffbau-Gesellschaft mbH & Co. KG, Flensburg												**www.fsg-ship.de**
774	RoPax	Honfleur	Brittany Ferries	42,500	6,080	187.00	31.00	6.60	29,770	Dual fuel	22.0	
776	RoRo *	Maria Grazia Onorato	Siem RoRo Carriers	32,770	11,820	209.79	26.00	6.45	2 x 9,600	2 x MAN 8L48 / 60CR	21.3	03 / 2019
780	RoRo	Leevsten	Siem RoRo Carriers	32,770	11,820	209.79	26.00	6.45	2 x 9,600	2 x MAN 8L48 / 60CR	21.3	08 / 2019
781	RoRo	Liekut	Siem RoRo Carriers	32,770	11,820	209.79	26.00	6.45	2 x 9,600	2 x MAN 8L48 / 60CR	21.3	03 / 2020
	RoPax		TT-Line Company			212.00	31.50			LNG		2021
	RoPax		TT-Line Company			212.00	31.50			LNG		2021

* Chartered by Onorato Armatori

German Naval Yards GmbH, Kiel												**www.german-naval.com**
	Corvette*	Magen	Israeli Navy	2,000		90.00						Q1 / 2020
	Corvette*	Oz	Israeli Navy	2,000		90.00						
	Corvette*	Atzmaut	Israeli Navy	2,000		90.00						
	Corvette*	Nitzachon	Israeli Navy	2,000		90.00						
7070	Sounding and scientific re-search vessel **	Atair	Federal Maritime and Hydrographic Agency of Germany (BSH)			76.00	16.80	5.00	1,600	Wärtsilä 2 x 6L20DF; 1 x 6L20	13.0	03 / 2020
	3 x Corvette K130 ***		German Navy									2022–2025

* Only bow section, subcontract from TKMS, **In cooperation with Fassmer, *** together with Lürssen Group and TKMS, only bow section

Nobiskrug GmbH, Rendsburg												**www.nobiskrug.com**
790	Yacht	Artefact		2,990		80.00	14.60			Diesel electric		2019
793	Yacht	Black Shark		2,080		77.00						Q1 / 2021
794	Yacht					62.00						Q1 / 2021
	Yacht									Fully electric		
796	Yacht	Pheonix				100+						

* Built at German Naval Yards, Kiel

Hegemann GmbH, Berlin — **www.hegemann-gruppe.de**

Currently no newbuilding projects

Hitzler Werft GmbH, Lauenburg — **www.hitzler-werft.de**

Currently no newbuilding projects

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
Kiebitzberg Schiffswerft GmbH & Co. KG, Havelberg												**www.kiebitzberg.de / werft**
282	Solar ferry	E-Ferry	Arctic Sea Tours	44 pass.		11.85	4.60	0.66	2 x 40	2 x Torqueedo Deep Blue 80 XRL	14*	03 / 2019
283	Solar catamaran	SunCat 120	SolarCicleLine	180 pass.		36.70	7.00	0.86	2 x 45	2 x Kräutler	15*	12 / 2019
284	Solar catamaran	SunCat 121	SolarCicleLine	180 pass.		36.70	7.00	0.86	2 x 45	2 x Kräutler	15*	04 / 2020
Lloyd Werft Bremerhaven GmbH, Bremerhaven												**www.lloydwerft.com**
	Yacht	Solaris	Roman Abramowitsch									2020
	Yacht	Diva		3,000		96.50			4 x 951	Diesel electric		2023
	Yacht *	Rev Ocean				183.00						
Lübecker Yacht Trave Schiff GmbH, Lübeck												**www.luebeckyacht.de**
247	Survey boat	DVocean	Hamburg City University			8.00	2.50	0.50	2 x30			05 / 2019
	Work boat		Regional council Tübingen			13.00						Q3 / 2020
	Garbage collection ship	SeeKuh 2	One Earth – One Ocean			12.00	8.00					Q2 / 2020
	Houseboat		Private			13.50	4.50					Q1 / 2020
	Houseboat		Private			13.50	4.50					Q2 / 2020

* Final outfitting
Lloyd Werft is owned by Genting Group

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
Fr. Lürssen Group												**www.luerssen.com**
Fr. Lürssen Werft GmbH & Co. KG, Bremen-Vegesack												
	Yacht	Flying Fox (Shu)				136.00						03 / 2019
	Yacht	Sherasheda				130.00						2020
	Yacht	Opus / Redwood				142.00						2020
13703	Yacht	Lightning				135.00						2020
	Yacht	Kali				110.00						2021
	Yacht	Moon Sand				54.00						2021
	Yacht	Jag				125.00	18.50					2023
	5 x Corvette K130 *		German Navy									2022–2025
Lürssen-Kröger Werft GmbH & Co. KG, Schacht-Audorf												
	Yacht	Tis				111.00	16.85					06 / 2019
	Yacht	Madsummer (Fiji)				95.00						07 / 2019
	Yacht	Enzo / Testarossa				116.00	17.80					2021
Peenewerft, Wolgast												
	Several patrol boats (IPV60)		Saudi Arabian Coast Guard									2016–2019
	Explorer Yacht *	Icecap				107.00	18.30			Hybrid		2021
Blohm + Voss Shipyards, Hamburg												**www.blohmvoss.com**
ARGE	Frigate F 125*	F 222 Baden-Württemberg	German Navy			149.52	18.80	5.00	31,600	MTU 20V4000 plus gas turbine MTU GE LM 2500 (29,000 kW)	26.0	06 / 2019
ARGE	Frigate F 125*	F 223 Nordrhein-Westfalen	German Navy			149.52	18.80	5.00	31,600	MTU 20V4000 plus gas turbine MTU GE LM 2500 (29,000 kW)	26.0	01 / 2020
ARGE	Frigate F 125*	F 224 Sachsen-Anhalt	German Navy			149.52	18.80	5.00	31,600	MTU 20V4000 plus gas turbine MTU GE LM 2500 (29,000 kW)	26.0	2020
ARGE	Frigate F 125*	F 225 Rheinland-Pfalz	German Navy			149.52	18.80	5.00	31,600	MTU 20V4000 plus gas turbine MTU GE LM 2500 (29,000 kW)	26.0	2020
	4 x Multi-purpose fightin ship MKS 180 **		German Navy			>150.0						
Lux Werft und Schiffahrt GmbH, Niederkassel-Mondorf												**www.lux-werft.de**
219	Passenger ship	Rostocker 7	Personenschifffahrt Olaf Schütt		400 pass.	38.00	9.80		2 x 182	2 x Volvo Penta D7		04 / 2019
220	Passenger ship	Staffelseerin	Staffelsee Motorschifffahrt OHG		70 pass.	17.00	400		50			06 / 2019

* In cooperation with TKMS and German Naval Yards, aft ships constructed at Peenewerft, 2 bow sections in Lemwerder, 3 bow sections at German Naval Yards, Assembly of bow and stern of all vessels and final out fitting at Blom+Voss in Hamburg

* In cooperation with Kleven Verft, bow section built by G + K SteelCon

* Subcontract from TKMS; bow section to be built by Lürssen and to be shipped to TKMS Hamburg

** Main contractor Damen Group

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
221	Work boat	Viking Orvar	Personenschifffahrt Olaf Schütt			27.30	6.00		2 x 280	2 x Caterpillar C9.3		10 / 2019
	Passenger ship		Personenschifffahrt Olaf Schütt		200 pass.	34.00	9.00					2020
Werftgruppe Meyer												**www.meyerwerft.de**
Meyer Werft, Papenburg												
700	Cruise ship	Spectrum of the Seas	Royal Caribbean Cruise Line	168,600	10,500 (4,180 pass)	347.10	41.40	8.50	67,200	2 x Wärtsilä 12V46DE 2 x Wärtsilä 16V46F	22.0	04 / 2019
705	Cruise ship	Disney Wish	Disney Cruise Line	139,300								2021
706	Cruise ship		Disney Cruise Line	139,300								2023
708	Cruise ship	Norwegian Encore	Norwegian Cruise Line	167,800		334.00	41.40	8.40	76,800	3 x MAN B&W 12V48 / 60CR + 2 x16 V48 / 60CR	23.2	10 / 2019
709	Cruise ship	AIDAcosma	Aida Cruises	183,900		337.00	42.00	8.60	61,760	MaK	17.0	2021
710	Cruise ship	Iona	P&O Cruises	184,000	5,200 pass.							Q1 / 2020
713	Cruise ship	Odyssey of the Seas	Royal Caribbean Cruise Line	168,600	10,500 (4,180 pass.)	347.10	41.40	8.50	67,200	2 x Wärtsilä 12V46DE 2 x Wärtsilä 16V46F	22.0	2020
714	Cruise ship	Spirit of Discovery	Saga Cruises	55,900		236.00	31.20	7.30	21,600	MAN	18.0	06 / 2019
715	Cruise ship	Spirit of Adventure	Saga Cruises	55,900		234.24	30.80	7.30	21,600	MAN	18.0	2020
716	Cruise ship		P&O Cruises	184,000	5.200 pass.							Q1 / 2022
717	Cruise ship		Aida Cruises	183,900		337.00	42.00	8.60	61,760	MaK		2023
718	Cruise ship		Disney Cruise Line	139,300								2022
	Cruise Ship		Silversea Cruises									2022
	Cruise Ship		Silversea Cruises									
	Cruise Ship		Disney Cruise Line	144,000								
	Cruise Ship		Disney Cruise Line	144,000								
	Cruise Ship		Disney Cruise Line	144,000								
Neptun Werft, Rostock												**www.neptunwerft.de**
569	River cruiser	Viking Sigrun	Viking River Cruises		190 pass. 95 cabins	134.90	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2019
570	River cruiser	Viking Einar	Viking River Cruises		190 pass. 95 cabins	134.90	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2019
571	River cruiser	Viking Tir	Viking River Cruises		190 pass. 95 cabins	134.90	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2019
572	River cruiser	Viking Vali	Viking River Cruises		190 pass. 95 cabins	134.90	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2019
576	River cruiser	Viking Ullur	Viking River Cruises		190 pass. 95 cabins	134.90	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2019
577	River cruiser	Viking Sigyn	Viking River Cruises		190 pass. 95 cabins	134.90	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2019
579	River cruiser	Viking Hervor	Viking River Cruises		190 pass. 95 cabins	134.90	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2020
580	River cruiser	Viking Gersrmi	Viking River Cruises		190 pass. 95 cabins	134.90	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2020
581	River cruiser	Viking Kari	Viking River Cruises		168 pass. 84 cabins	125.00	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2020

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
582	River cruiser	Viking Radgrid	Viking River Cruises		168 pass. 84 cabins	125.00	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2020
583	River cruiser	Viking Skaga	Viking River Cruises		168 pass. 84 cabins	125.00	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2020
584	River cruiser	Viking Fjogyn	Viking River Cruises		168 pass. 84 cabins	125.00	11.45	1.60	2 x 994 2 x 492	2 x CAT32 ACERT 2 x CAT18 ACERT	20.0*	2020
710	Section	Iona	P&O			140.00	42.00					2019
1396	Section		Carnival			140.00	42.00					2019
713	Section		Royal Caribbean Cruise Line			140.00						2019
709	Section		Aida Cruises			140.00	42.00					2020
705	Section		Dinsney Cruise Line			140.00						2020
1395	Section		Royal Caribbean Cruise Line									2020
1400	Section		Royal Caribbean International									2021
716	Section		P&O									2021
718	Section		Disney Cruise Line									2021
397	Section		Carnival									2021
717	Section		Aida Cruises									2022
706	Section		P&O									2022
1404	Section		TUI Cruises									2022
	Section		N.N. (Turku)									2022
1401	Section		Royal Caribbean International			140.00						2023
	Section		N.N.			140.00						2023
	Section		N.N.			140.00						2023
	Section		N.N.			140.00						2023

Neptun Werft builds self-floating engine room units (FERUs) for several seagoing cruise ships

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
Meyer Turku Shipyard Oy, Turku												**www.meyerturku.com**
	Cruise ship	Mein Schiff 2 (ex Mein chiff 8)	TUI Cruises	111,500	7,900, 3,132 pass.	315.70	35.80	7.90		4 x Wärtsilä		01 / 2019
1394	Cruise ship	Costa Smeralda	Costa Crociere	182,700	6,518 pass.	337.00	42.00	8.80		4 x	17.0	12 / 2019
	Cruise ship	Costa Toscana	Costa Crociere	182,700	6,518 pass.	337.00	42.00	8.80		4 x	17.0	2021
	Cruise ship	Mardi Gras	Carnival Cruise Lines	183,200								10 / 2020
	Cruise ship		Carnival Cruise Lines	183,200								2022
	Cruise ship		Royal Caribbean International	200,000								2022
	Cruise ship	Mein Schiff 7	TUI Cruises									2023
	Cruise ship		Royal Caribbean International	200,000								2024
	Cruise ship		Royal Caribbean International	200,000								2025
MV Werften												**www.mv-werften.com**
MV Werften Rostock-Warnemünde GmbH												
MV Werften Stralsund GmbH												
	Expedition Yacht	Crystal Endeavor	Crystal Yacht Expedition Cruises	20,000	200 pass.	164.00						2020
	Expedition Yacht				200 pass.	164.00						2020
	Expedition Yacht				200 pass.	164.00						2021
125	Cruise ship	Global Dream	Star Cruises	201,000	5,000+pass.	340.00	45.00	9.20	96,000	MAN		2021
126	Cruise ship		Star Cruises	201,000	5,000+pass.	340.00	45.00	9.20	96,000	MAN		2021
	Cruise ship		Genting Hong Kong	88,000	2,000 pass.							IV / 2022
	Cruise ship		Genting Hong Kong	88,000	2,000 pass.							
MV Werften Wismar GmbH												
MV Werften owned by Genting Group												
Neckar Bootsbau Ebert GmbH, Neckarsteinach												**www.nebo.de**
2035	Police boat	SPB 11	River police Heilbronn			13.60	3.45	1.00	2 x 294	2 x MAN D2866LXE40		03 / 2019
2020 c	Assistance fire-fighting boat	HLB Loreley	Fire department St. Goarshausen			15.00	5.10	0.80	2 x 588	2 x MAN D2676LE423		02 / 2019
2020 d	Assistance fire-fighting boat	HLB Rhein-Ahr	Department of the Interior Rheinland-Pfalz			15.00	5.10	0.80	2 x 588	2 x MAN D2676LE423		12 / 2019
2073	Work boat for fisheries control	Schnuppe*	Regional Council Tübingen			7.80	2.45	0.80	260 HP	Mercury-Diesel		02 / 2020
2020 e	Assistance fire-fighting boat	HLB Bingen	Department of the Interior Rheinland-Pfalz			15.00	5.10	0.80	2 x 588	2 x MAN D2626LE423		2021
2085	Police boat	WSP 1	River police St. Goar			15.60	3.75	0.96	2 x 412	2 x MAN D2676 LE432		Q4 / 2020
2090	Police boat	SPB 6	River police Baden-Württemberg			17.40	4.10	1.00	2 x 412	2 x MAN D2676 LE432		Q4 / 2020

* Project name

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
Neue Oderwerft Gmbh, Eisenhüttenstadt												**www.neue-oderwerft.de**
4116	Floating grab		WSA Minden			18.00	6.50					04 / 2020
4118	Navigation buoy		WSA Duisburg-Meiderich			13.10	4.00					07 / 2019
4119	Navigation buoy		WSA Duisburg-Meiderich			13.10	4.00					07 / 2019
4120	Navigation buoy		WSA Bingen			13.10	4.00					08 / 2019
4121	Navigation buoy		WSA Bingen			13.10	4.00					08 / 2019
4122	Navigation buoy		WSA Nürnberg			13.10	4.00					09 / 2019
4123	Navigation buoy		WSA Nürnberg			13.10	4.00					09 / 2019
4124	Navigation buoy		WSA Köln			13.10	4.00					10 / 2019
4125	Navigation buoy		WSA Köln			13.10	4.00					10 / 2019
4126	Navigation buoy		WSA Duisburg-Rhein			13.10	4.00					10 / 2019
4127	Navigation buoy		WSA Duisburg-Rhein			13.10	4.00					10 / 2019
4128	Smelter boat		WSA Berlin			13.10	4.00					05 / 2020
1141	Flap barge		WSA Lauenburg	170 m^3		35.00	8.00					09 / 2020
Neue Ruhrorter Schiffswerft Gmbh, Duisburg												**www.nrsw.de**
857	Push boat	Veerhaven 104	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		Q1 / 2019
858	Push boat	Veerhaven 105	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		Q2 / 2019
859	Push boat	Veerhaven 106	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		Q3 / 2019
860	Push boat	Veerhaven 107	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		Q4 / 2019
861	Push boat	Veerhaven 108	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		Q1 / 2020
862	Push boat	Veerhaven 109	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		Q2 / 2020
863	Push boat	Veerhaven 110	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		Q3 / 2020
864	Push boat	Veerhaven 111	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		Q4 / 2020
Ostseestaal GmbH & Co. KG, Stralsund												**www.ostseestaal.de**
Currently no newbuilding projects												
Pella Sietas GmbH, Hamburg-Neuenfelde												**www.pellasietas.com**
1316	Trailing suction hopper dredger		WSA Cuxhaven			132.00	23.40	6.90	14,000	Diesel-electric	13.0	06 / 2020
1317	Passenger ship *		Stadtwerke Konstanz		700 pass, 60 cars				2 x 746	2 x MTU 4000 (LNG)	13.0	02 / 2020

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
1318	Double-ended ferry		Norden Frisia		325 t	74.30	13.40	1.75	640	Mitsubishi	11.0	05 / 2020
	Yacht **					118.00						
1320	Ice breaking vessel		Russia			120.00	27.50					

Several sections for cruise vessels from Meyer Werft

* Built at Fußach, Austria, ** only steel construction, order placed with Abeking & Rasmussen

Peters Werft GmbH, Wewelsfleth — **www.peters-werft.de**

Currently no newbuilding projects, active in repair and refit

Heinrich Rönner Group GmbH, Bremerhaven — **www.hr-gruppe.de**

Bredo Dockgesellschaft mbH , Bremerhaven — **www.bredo.de**

German Dry Docks AG , Bremerhaven — **www.germandrydocks.com**

	3 x Frigate*		Egyptian Navy			120.00					29.0	-2024

* Only hulls, main contract to TKMS

GSR German Ship Repair GmbH , Bremerhaven — **www.germanshiprepair.com**

SET Schiffbau- und Entwicklungsgesellschaft Tangermünde mbH, Tangermünde / Genthin — **www.set-schiffbau.de**

201	Hydraulic floating dredger	Krabbe	WSA Magdeburg			36.40	9.60	0.95	2 x 294	2 x Volvo Penta D13	13*	03 / 2020
202	Work boat	Trischen	LKNSH		127 t	22.50	7.50	1.05	2 x 225	Baumüller (electric engines)	19*	05 / 2019
203	Hydraulic floating dredger	Wesergrund	WSA Bremen			47.05	10.50	1.30	2 x 323	Hydro-Armor (hydraulic engines)	16*	11 / 2020
204	Surveillance vessel	Neptun	National fisheries office Bremerhaven		238 t	30.70	7.80	2.00	2 x 375	Ramme (electric engines)	26*	05 / 2020

Stahlbau Müller, Spessart — **www.stahlbaumueller.de**

15	Car ferry	Posching	for Mariaposching			33.00	7.50	0.80	2 x 90	Diesel-electric Kalkman		02 / 2019

Tamsen Maritim GmbH, Rostock — **www.tamsen-maritim.de**

1605	Rescue boat	Gerhard Elsner	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	01 / 2019
1606	Rescue boat	Peter Habig	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	05 / 2019
1607	Rescue boat	Wolfgang Paul Lorenz	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	10 / 2019
1801	Rescue boat	SRB 77	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	01 / 2020
1802	Rescue boat	SRB 78	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	05 / 2020
1901	Rescue boat	SRB 80	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	III / 2020

Yard-No.	Newbuilding Type	Name	Owner	GT	tdw t	Loa / Lpp m	Bmld m	D m	kW / HP	Engine Type	kn km / h*	Delivery M./Y.
ThyssenKrupp Marine Systems GmbH												**www.thyssenkrupp-marinesystems.com**
TKMS, Kiel												
	Submarine HDW class 218SG	Invincible	Singapore Navy		2,400	72.00				Diesel-electric plus AIP		2021
	Submarine HDW class 218SG		Singapore Navy		2,400	72.00				Diesel-electric plus AIP		2022
	2 x Submarine HDW class 218SG		Singapore Navy		2,400	72.00				Diesel-electric plus AIP		2024+
	Corvette**	Magen	Israeli Navy	1,900	2,000	90.00	13.00					Q1 / 2020
	Corvette**	Oz	Israeli Navy		2,000	90.00	13.00					2020
	Corvette**	Atzmaut	Israeli Navy		2,000	90.00	13.00					
	Corvette**	Nitzachon	Israeli Navy		2,000	90.00	13.00					
	Submarine	S43	Egyptian Navy		1,450	62.00	6.25					2019
	Submarine		Egyptian Navy		1,450	62.00	6.25					2021
	4 x Frigate*****		Egyptian Navy			120.00					29.0	-2024
ARGE	5 x Corvette K130***		German Navy									2022-2025
	4 x Corvette****		Brasilan Navy									2024–2028
	4 x Submarine*		Norwegian Navy							Fuel cells		2026
	2 x Submarine*		German Navy							Fuel cells		

* Order is expected for 2020, the vessels will be build in partnership with Norwegian companies,
** Leadership in design and construction of submarines within the German Submarine Consortium (GSC), bow section built by German Naval Yards
*** In cooperation with Lürssen Group and German Naval Yards
****In cooperation with Embraer Defense & Security and Atech
***** 3 vessels (hulls) built with Rönner Group in Bremerhaven

TKMS Hamburg												
ARGE	Frigate F 125*	F 222 Baden-Württemberg	German Navy			149.52	18.80	5.00	31,600	MTU 20V4000 plus gas turbine MTU GE LM 2500 (29,000 kW)	26.0	06 / 2019
ARGE	Frigate F 125*	F 223 Nordrhein-Westfalen	German Navy			149.52	18.80	5.00	31,600	MTU 20V4000 plus gas turbine MTU GE LM 2500 (29,000 kW)	26.0	01 / 2020
ARGE	Frigate F 125*	F 224 Sachsen-Anhalt	German Navy			149.52	18.80	5.00	31,600	MTU 20V4000 plus gas turbine MTU GE LM 2500 (29,000 kW)	26.0	2020
ARGE	Frigate F 125*	F 225 Rheinland-Pfalz	German Navy			149.52	18.80	5.00	31,600	MTU 20V4000 plus gas turbine MTU GE LM 2500 (29,000 kW)	26.0	2020

* Subcontracted to B + V Shipyards; bow section to be built by Lürssen and shipped to TKMS Hamburg,
In cooperation with Lürssen and German Naval Yards

Triton Werft Jacobs Formstahl GmbH, Duisburg **www.triton-jfs.de**

Currently no newbuilding projects

All information without guarantee, no claim for being complete


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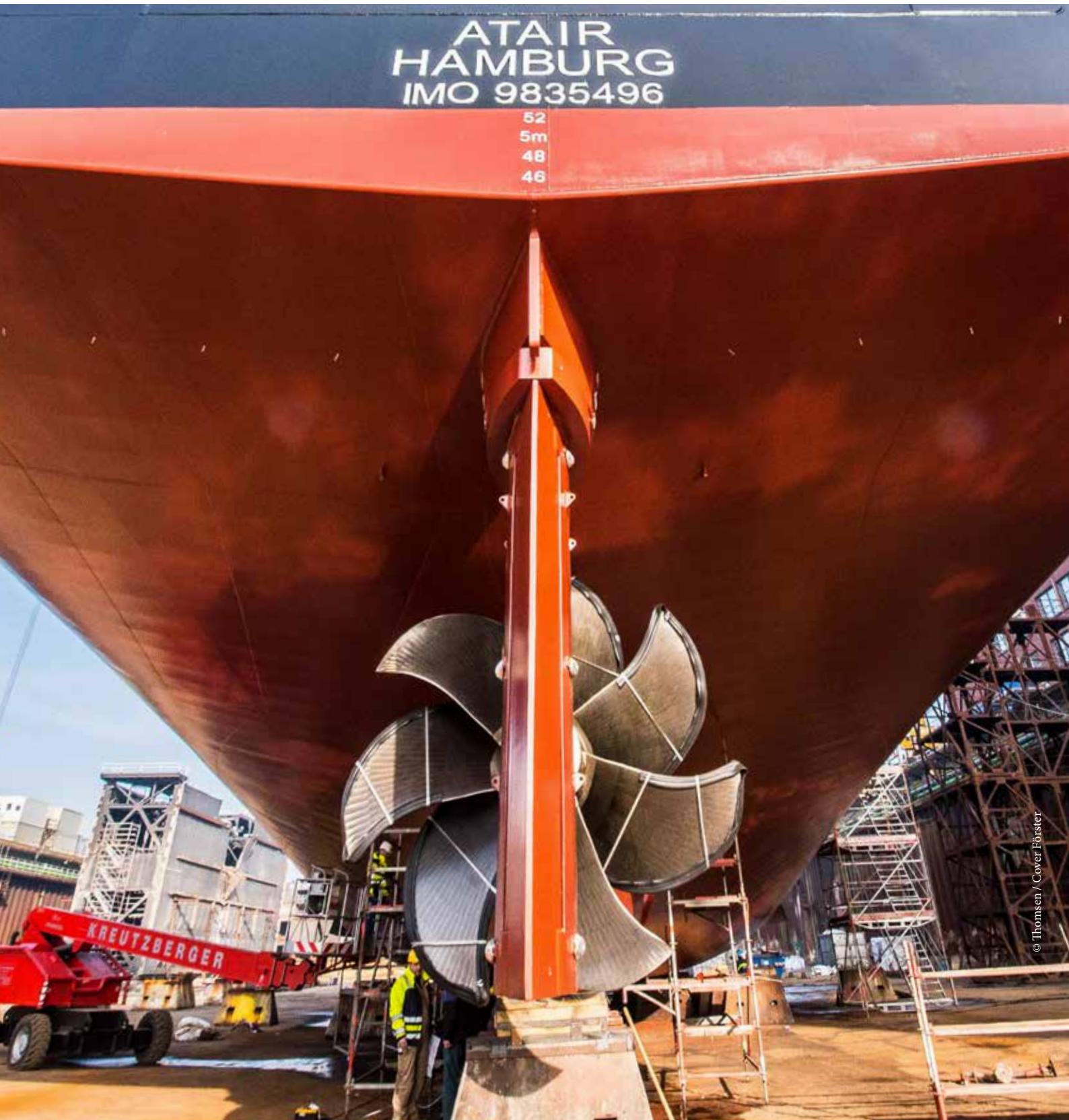

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