Ships 2018
Made in Germany

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VSM
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Contents

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Shipbuilding can be eye-candy, here a picture of Meyer Werft

Shipyard Abeking & Rasmussen is still a very recognized address for building of mega yacht

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

German shipbuilding industry continues on course

Dear Readers, despite a global shipbuilding market that is still heavily suffering from overcapacities and weak demand, the German shipbuilding industry has been able to maintain its successful path. On the basis of a robust order backlog and ever more efficient production methods, German shipyards continue to develop positively and grow. The specialization of the shipbuilding industry in Germany as well Europe on healthy high-tech niche markets is paying off.

The production of unique large-scale projects that meet the highest costumer requirements is daily business in German shipbuilding. Amazing ships, with many innovative features and impressive performance are the result. Some examples can be found in this publication. Such masterpieces are realized by the shipyards in close cooperation with hundreds of highly specialized companies supplying everything from excellent components to complete turn-key systems. Together with first-class system integration competence the customer can rely on perfection made in Germany. The chain of expertise is the essential feature that makes our industry competitive and resilient.

The rise of China into the high-tech segments of the shipbuilding and marine technology industry, the necessity of a massive reduction in ship emissions, the advancing digitalisation but also new dynamism in European naval shipbuilding constitute the great challenges of our times.

Therefore and more than ever, maritime players need to create new solutions, invest in new technologies, research, development and innovation and develop new forms of cooperation. To us, all these challenges offer great opportunities. Most obvious and urgent is the need to implement environmentally friendly technologies. German companies have a long tradition in offering optimal solutions for clear and efficient operation. New international requirements will give a boost to their market success.

At the same time, shipping companies struggle with growing uncertainty and increasingly complex technology applications: Which fuel type, which propulsion system, when is the right time to implement new technologies? More and more it becomes evident that such questions need individual answers depending on the specific operational needs. German yards, for newbuilding as well as repair & conversion, equipment makers and service providers are the ideal partners for all shipping companies that want to secure their competitive future.

The list of newbuildings delivered in 2018 in this year's special edition shows many impressive examples of the innovative impetus and versatility of the German shipbuilding and maritime technology industry.

Enjoy reading!

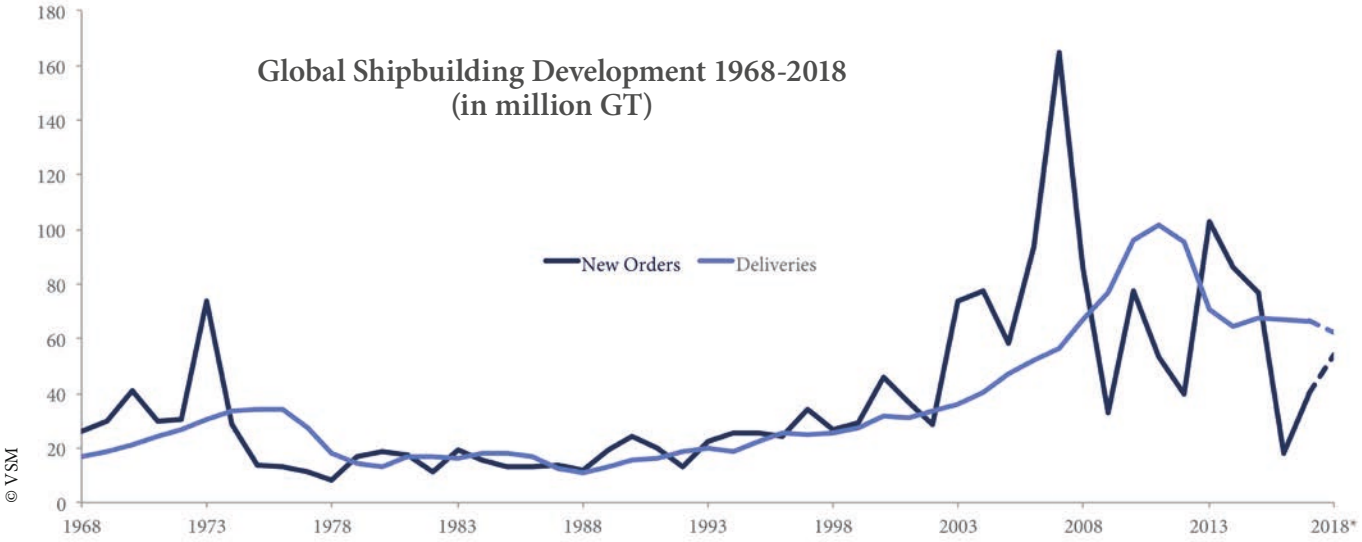
New challenges in a difficult environment

The demand situation in global shipbuilding remains tense. While the recovery in terms of new orders continues for the second year following the 30-year record low in 2016, the volume of newbuilding orders remains at a low level

Compared with the previous year, the total tonnage of newbuilding orders rose by more than 60 % during the first three quarters of 2018, however the number of orders received remains below global deliveries.

As a consequence the global order book continues to shrink, and the production capacities of many shipyards are underutilised. A clear change in trend is not yet visible. Despite a painful consolidation phase in the shipping industry and scrapping activities continuing at a high level, some overcapacities are expected to remain across the cargo shipping segments. The reason for the slow drop in overcapacities is the hesitant growth in the cargo sector. The British consultancy firm Drewry's therefore had to correct its forecast for container demand over the next five years. Contrary to the previous expectation that supply and demand would gradually strike a balance by 2022, allowing the industry to find its equilibrium again after struggling for a long time, the dull prospects for the world economy amid growing international trade tensions have prompted the forecast-

© Wägener



* Extrapolation based on Jan-Sep 2018

ers to modify their predictions. The current overcapacities are now expected to persist for several more years. Similarly, the International Monetary Fund has lowered its forecast of global economic growth to 3.7 %, and of trade volume growth to 4.2 and 4.0 %, respectively, for the years 2018 and 2019. Therefore the troubles for the shipyards are likely to persist.

On a more positive note, several international regulations particularly related to emission reduction are about to enter into force. To fulfil the new requirements, investments in better and cleaner technology are necessary. For newer tonnage this will trigger retrofits. However, for older tonnage this might not be an economically viable option. Most experts agree that the rule changes will call for early replacements. Therefore, a stimulus also for the newbuilding market can be expected.

Because of the sluggish situation in the cargo ship newbuilding market, some yards have begun offering their products at dumping prices to remain in the market. In some cases, the prices offered are known to be too

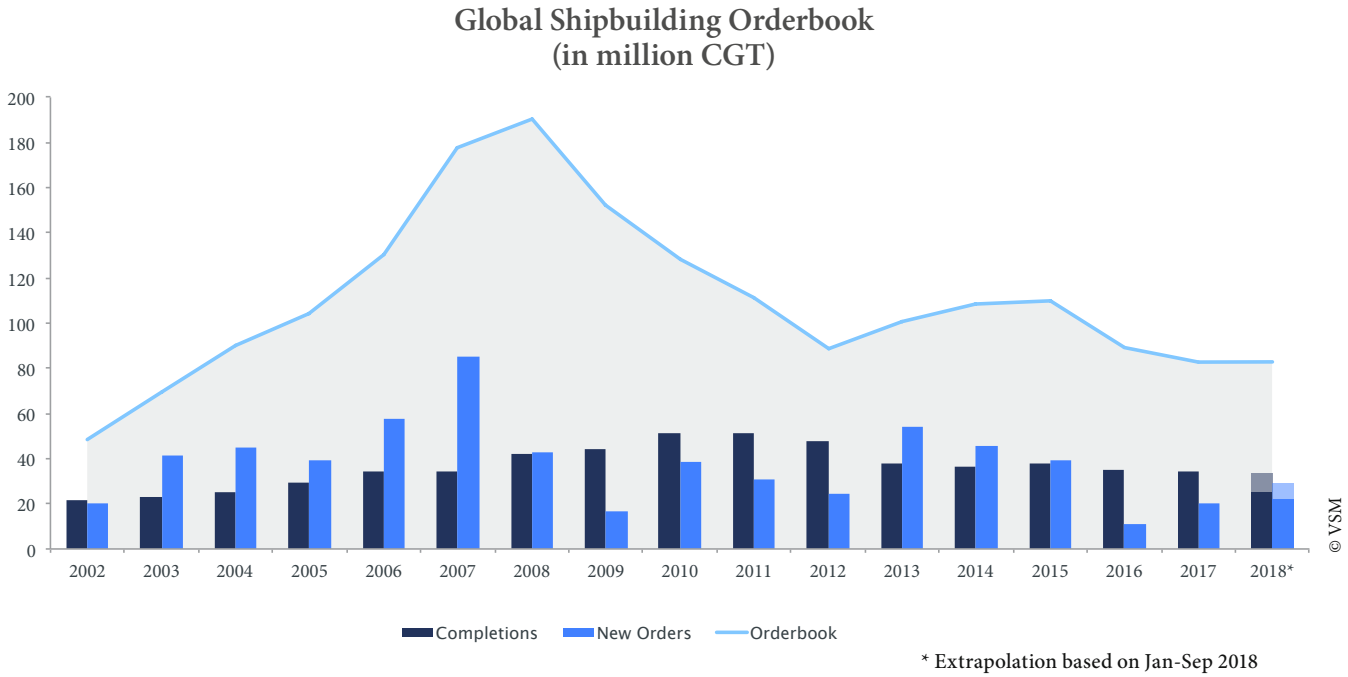
Together with two other banks German KfW Ipex is providing a loan of 149 mill. $ to the Russian state shipping company Sofcomflot (SCF). The funds will be used to finance a 174,000 m³ LNG tanker of the new type »Atlanticmax«. Last year the Russians launched the »Gagarin Prospect«, the first Aframax tanker with gas propulsion, which has now been followed by two sisters

low to even cover the expected material costs, a fact that will prevent a rapid return of a lasting market balance. At the end of September 2018 the Clarkson Research Newbuilding Price Index stood at 130 points (2008: 178 points), remaining at a low level for the 10 th consecutive year. Protectionism and a distorted competitive environment due to government subsidies and bailouts have been on the rise in many shipbuilding countries. A level playing field for the global shipbuilding industry is thus a long way off.

Stricter environmental standards

Oceangoing ships transport substantially more cargo than land and air transport. In terms of transport capacity, they are by far the most energy-efficient means of transport. In spite of these facts the shipping industry has come under enormous pressure to reduce its environmental footprint in recent years: Conventional fuels cause significant pollution by emitting sulphur oxides, nitrous oxides and particulate matter. Furthermore, the introduction of invasive marine species into new sea regions, especially through ballast water carried on board or organisms growing on ship hulls, threatens the integrity of marine ecosystems. Uniform, compulsory international regulations aiming to make shipping safer, cleaner and more efficient are therefore of critical importance. The International Maritime Organization (IMO) is steadily working to refine its regulatory measures. In addition to establishing Emission Control Areas (ECAs) and passing the ballast water convention which took effect in September 2017, the IMO has defined global emission limits that will enter into force in the near future. The 2020 effective date for the new sulphur emission limits in international waters is rapidly drawing nearer. The climate protection roadmap passed by the IMO in April 2018 aims to reduce greenhouse gas emissions from shipping by 50 % by the year 2050 compared to 2008 levels, and to achieve entirely climate-neutral ship operations by the end of the century at the latest.

The stricter environmental regulations are lending new impetus to the market. By developing innovative technologies and operational strategies, the German maritime industry is making a significant contribution



* Extrapolation based on Jan-Sep 2018

to a more eco-friendly shipping industry. Many of these young technologies are helping reduce the industry's ecological footprint.

Green technology and retrofits from Germany

Apart from developing alternative fuels and propulsion systems, the industry is working on propulsion optimisation measures and innovative approaches to ship design. Other environmental technologies include scrubbers, ballast water treatment systems and alternative hull coatings as well as software and hardware enabling more efficient ship operation. In 2018 new orders in Germany mainly included cruise ships, ferries and mega yachts. In addition, offshore supply vessels, specialised government craft, research vessels and various types of naval vessels supplement the orderbook of German shipbuilders. All these niche markets outside the standard cargo ship types require individual solution concepts accommodating unique and complex operational needs that must often be implemented in one-off projects. One of the German maritime industry's key strengths is the development of innovative green technologies. For example, the world's first LNG-powered cruise ship was delivered in Germany in 2018. Additional cruise ships with LNG-based propulsion systems are on order at German shipyards. Similarly, the ferries ordered in 2018 will be equipped with eco-friendly LNG or hybrid propulsion systems. Apart from yards building new ships that set new ecological standards, the ship conversion and retrofitting business should not be underestimated. From exhaust gas cleaning equipment to ballast water system installations, shipowners depend on state-of-the-art repair and conversion yards along with a reliable supplier network to ready their fleets for the future. Customers not only look at the mere costs involved in these retrofits but also consider factors such as compelling servicing and maintenance concepts and the quality of after-sales services being offered.

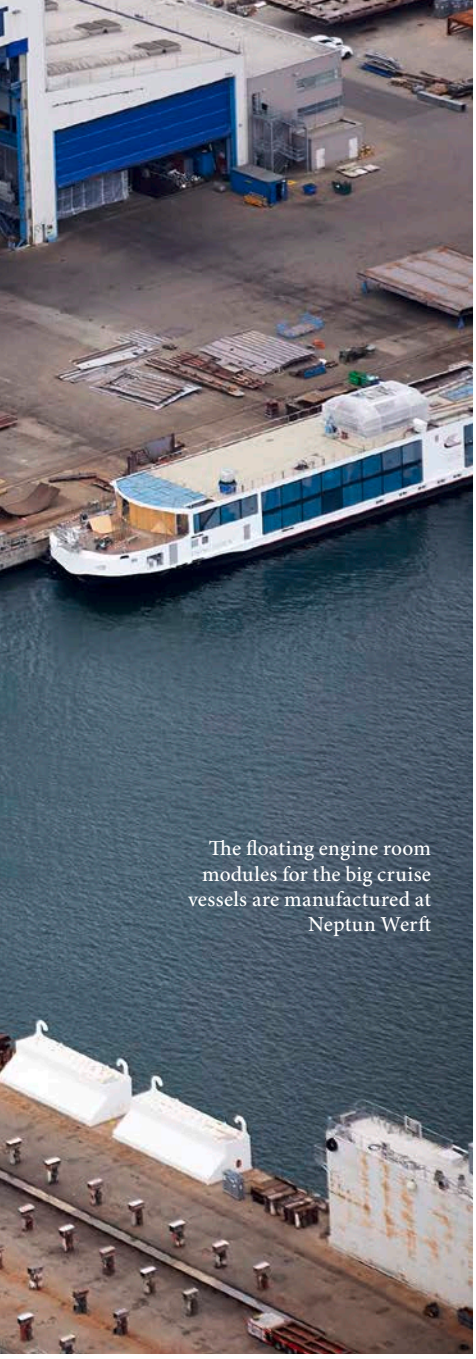
It takes a strong industry to meet both, the tougher technical requirements and the high expectations of the general public. A healthy market and fair market conditions are key enablers. ■

Shipyard cooperation trend continues

The core competency of German shipbuilders is still the construction of specialized vessels, but the number of deliveries decreased again in 2018. Shipyard cooperations, on the other hand, continue. By *Thomas Wägener*

Modern vessels become more and more complex – for the present and future. One trend is LNG as fuel especially for cruise ships. For example, all vessels in the Meyer Group order book will rely on this kind of more environmentally friendly fuel.

Because of growing complexity, ships tend to pass through more than one shipyard location more frequently while under construction. In the past that was especially noticeable for naval vessels. The new frigates for the German Navy built by Lürssen and ThyssenKrupp Marine Systems (TKMS) bear witness to this evolution. After the bow section had been built by Lürssen, the vessels were shipped to TKMS Hamburg. The first two of four units will be delivered this year, with the remaining two to follow in 2020.



The floating engine room modules for the big cruise vessels are manufactured at Neptun Werft

© Neptun Werft

Now this trend has become clear in the construction of cruise vessels also with Meyer Group as an example. The engine component sections for seagoing cruisers are constructed by Neptun shipyard in Rostock-Warnemünde, an affiliate. All propulsion and supply systems for big seagoing cruisers are accommodated in the complex modules on four decks. That includes everything from the ship's engines to power generators, heating and air-conditioning technology to tanks for liquefied natural gas (LNG).

In August last year the first floating engine room module (FERU) of 140 m length and 42 m width was build in the new production hall. The facility of 180 m x 65 m x 58 m (length, width, height) started operation in spring 2018.

The floating engine room module was transferred by sea to Meyer shipyard in Papenburg. It was installed on the cruise ship »Norwegian Encore« which is planned to be handed over in autumn this year.

Yards strengthen the capacity

»The hall offers all the structural and technical prerequisites to deliver four FERUs per year in the recent future and even six beyond. In addition, we are significantly increasing our productivity,« says Manfred Ossevorth, Managing Director of Neptun Werft. Both FERUs for »Norwegian Bliss« and »AIDAnova«, two cruisers delivered last year, were manufactured at Neptun shipyard.

Prospective FERUs for big cruise vessels from Papenburg and Turku will be built there. The Meyer Group order book lists a total of 23 new cruise ships. Such utilization secures employment until the end of 2023, the company stated. All of these units will be manufactured at the shipyards in Papenburg, Rostock and Turku by 2024. Rostock will predominantly build river cruisers for long-term customer Viking River Cruises. Six of them will be delivered soon. All belong to the famous Longship class of which the yard has constructed more than 50 units in the past.

From 2019 on, Meyer Group plans to deliver three seagoing cruise vessels a year. In the past usually two ships were handed over to customers year by year. To deal with this increase, the number of employees in Germany grew by 400 last year. But the company is still looking for further employees, both in the commercial sector as well as IT specialists, says CEO Tim Meyer.

MV Werften with locations in Wismar, Stralsund and Rostock-Warnemünde is another shipbuilding company that prepares for a more effective production. To achieve this objective, the company also initiates several strategic steps. The most recent one is the acquisition of Neptun Ship Design headquartered in Rostock. As a result of the purchase, the shipyard group will be joined by 120 experts, MV Werften announced.

The company owned by Genting Group from Hong Kong is currently preparing the construction of the »Global Class« cruise ships, which will be the biggest cruisers build in Germany to date, and the expedi-

tion ship »Crystal Endeavor«, which was laid on keel in Mid-January. The new constructing engineers and designers will mainly be employed for the design of new ship projects.

»It is time to take on the challenges of engineering the world's most modern passenger ships as well as for the entire current and future product portfolio,« comments Stephan Merkel, CEO of Neptun Ship Design. Current projects will also be continued under the new owner.

The purchase agreement has already been signed, but antitrust approval is still pending. The parties have agreed not to disclose the structure of the transaction or the purchase price.

Last year MV Werften delivered the river cruisers »Crystal Debussy« and »Crystal Ravel«, the last two of four units for Crystal River Cruises. There is some evidence that it will be the last ships of this type for a long time, as in 2018 the shipyard announced to concentrate on building seagoing vessels in the future.

Another competence of German shipbuilders is to manufacture mega yachts. Lürssen Group delivered one unit in 2018. At 136 m length the ship bears the project name »Thunder«. Research has shown that it has entered service as »Crescent«. In addition there are several projects in the order books, some of them have passed seatrails. In contrast, project »Sassi« is no longer pending, as the vessel was damaged in a fire in September it is due to be scrapped in Hamburg including the floating dock.

In addition to the naval orders with TKMS, Lürssen also cooperates with German Naval Yards for an explorer yacht. The construction should start at Peenewerft in Wolgast this year, later on the vessel will be transferred to Kleven Verft in Norway, now fully owned by KVE Holding, a subsidiary of Hurtigruten.

Abeking and Rasmussen (A&R) has its competences also in manufacturing mega yachts. The company handed over one mega yacht last year, the 74.5 m »Elandess« in May. In November A&R had announced a new project, a 118 m unit scheduled for delivery in 2021. For the yacht specialist it is the biggest ship in history. Currently two yachts are under construction. The bow sections are manufactured in Poland at Szczecin Shipyard. Later on the vessels will be towed to A&R in Lemwerder where they will get the superstructure.

© Eckardt

The project »Redwood« build at Lürssen was already launched and is scheduled for delivery in 2020

New yacht projects for Nobiskrug

Nobiskrug, part of German Naval Yards, has secured three new yacht projects in 2018, one of 62 m and another of 77 m length. The third project is a fully electric yacht with the LOHC (Liquid Organic Hydrogen Carrier) power storage technology on board operated with hydrogen. It will be implemented with H2-Industries.

»We believe that hydrogen is the energy of the future. The advantage is that LOHC can be stored and transported similarly to diesel. This technology is a breakthrough on the way to a cleaner environment,« says Holger Kahl, Managing Director of Nobiskrug.

Although the order situation is not bad, there are serious austerity plans for Nobiskrug in Rendsburg, the company announced last summer. Up to 190 employees are affected. For the future, only mega yachts will be built at the Rendsburg site (Nobiskrug) and only naval vessels at Kiel. All steel work and the naval repair business will be concentrated in Kiel, while the offshore business will be discontinued. This results in the end of the Lindenau shipyard in Kiel-Friedrichsort, a repair yard that belongs to German Naval Yards and dates back to 1919.

Cooperation with Fassmer

A further reason for cooperation with another yard is that capacities are scarce at the own facility. If this is the case, companies look for a partner. An example for that is Fassmer shipyard, which is teaming up with German Naval Yards to built the research vessel »Atair« for the Federal Maritime and Hydrographic Agency of Germany (BSH) scheduled for delivery next year.

One important customer for the German shipbuilding industry is The German Maritime Search and Rescue Association (DGzRS). In the past they placed orders for several rescue boats, especially with Fassmer and Tamsen Maritim. Both shipbuilding companies have still newbuildings for

© FSG

FSG's key business are ferries, RoRo and ConRo vessels

DGzRS in its order books. Also important for German shipbuilding is FSG from Flensburg. This shipyard is specialized in the construction of RoRo and RoPax vessels and it is one of the few companies in Germany that still manufactures merchant ships.

However, long-standing customers and authorities are now also looking abroad, a fact which is rather bad news for the German shipbuilding cluster. TUI Cruises, a long-standing customer of the Meyer Group, has ordered two new LNG-powered cruise ships at the Italian shipbuilding group Fincantieri in July 2018. This illustrates the competitive character of the market, especially for the construction of cruise ships. For years, TUI has ordered its luxury liners at Meyer shipyard group. Most recently, they were manufactured exclusively by Meyer Turku in Finland. »Mein Schiff 2«, was just delivered, »Mein Schiff 7« will follow in 2023.

The Hamburg Port Authority (HPA) has awarded a contract abroad, too. Last year the authority received the fire fighting vessel »Branddirektor Westphal« from Fassmer. Two smaller vessels of the same type will be built by Damen shipyard group from the Netherlands. The same company will also build a diving bell ship for the German Waterways and Shipping Administration. Three new ferries for the Kiel Canal are manufactured in Estonia.

Another bad news: In mid January the former Nordseewerke shipyard in Emden filed for bankruptcy again. The reason for this is a dispute between shareholders of the company. According to reports, the approximately 85 employees have been waiting for their wages since the end of 2018. The State of Lower Saxony has announced its intention to preserve the Emden shipyard location – also in order to secure 85 jobs in the long term. No further details were announced until this report went to press. For the shipyard, this is the second bankruptcy within half a year and the fourth in total.

In addition, the German shipping industry is confronted with an accusation of corruption. It is about the refurbishment of the sailing training ship »Gorch Fock« for the German Navy. The suspicion of corruption is directed against an employee of the naval arsenal Wilhelmshaven, who is said to have received money from the shipyard and from one of the companies involved in the maintenance. In response to the corruption investigations and exploding costs, the Ministry of Defence has stopped all payments for the ship's overhaul for the time being. ■

Deliveries & contracts of German shipyards in 2018

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**
6502	Yacht	Elandess		2,065		74.50	12.80			2 x Caterpillar 3516B		05 / 2018
6505	Yacht *					80.00						2019
6506	Yacht *					68.00						2020
6507	Yacht					118.00						2021

*Hull built by Szczecin Shipyard

Schiffswerft Hermann Barthel GmbH, Derben												**www.barthel-werft.de**
198	Work boat	Elera	WSA Verden	32.5		15.60	4.80	0.90	220	Iveco FPT 2004 / 26 / EC	17.5*	01 / 2018
199	Work boat	Friedrichsfeld	WSA Duisburg	32		15.60	4.80	0.90	220	Iveco FPT 2004 / 26 / EC	17.5*	02 / 2018
200	Dredger	Wittenberg	WSA Dresden	250		36.40	9.75	0.90	2 x 279	2 x MAN D2866 LXE40	12*	09 / 2018
201	Work boat	Driever	WSA Emden	100		21.00	6.00	1.20	2 x 221	2 X Volvo Penta D9	15*	03 / 2019
202	Work boat / dive support	Rán	WSA Berlin	82		29.10	5.10	0.90	210	Iveco N67ENMT45.10	15*	02 / 2019
203	Push boat		WSA Vreden			14.00	7.00	1.45		Without engine		08 / 2019

Schiffswerft Bolle GmbH, Derben, Neuderben												**www.schiffswerft-bolle.de**
205	Passenger ship / AquaCabrio	Grand Bohemia	Prague Boats	550 pass.		73.00	9.50	0.95	2 x 265	2 x Deutz		04 / 2018
206	Pram	OP 4283	WSA Freiburg			19.08	6.27			Without engine		05 / 2018
207	Pram	OP 4287	WSA Bingen			20.00	6.27			Without engine		05 / 2018
208	Pram	Alsace	WSA Koblenz			16.67	6.40			Without engine		06 / 2018
209	Passenger ship	Schwielowsee	Weisse Flotte Potsdam	250 pass.		41.00	6.50					2019
210	Work boat	Milan	Gewässerunterhaltungsverband			11.67	3.88	0.62				08 / 2018
211	Passenger ship (hybrid)			250 pass.								2019
212	Pram		WSA Meppen			7.80	7.80					2019

Theodor Buschmann GmbH & Co. KG, Hamburg												**www.theodor-buschmann.com**
	Tug *	Multratug 32	Multraship Towage & Salvage			32.00			5,300	2 x ABC	14.0	02 / 2018
	Tug *	Multratug 33	Multraship Towage & Salvage			32.00			5,300	2 x ABC	14.0	05 / 2018

*Only hull, subcontract from Maaskant SY, to be completed in the Netherlands, in co-operation with Damen Shipyards

Erlenbacher Schiffswerft Maschinen und Stahlbau GmbH, Erlenbach am Main												**www.die-schiffswerft.de**
	No projects known											

Fr. Fassmer GmbH & Co. KG, Berne / Motzen												**www.fassmer.de**
6080	Rescue boat	Fritz Thieme	German Maritime Search and Rescue Association (DGzRS)	8		10.10	3.61	0.96			18.5	04 / 2018
6044	6 x CPV44 (Design and material package)		Destini Shipbuilding Berhad / MMEA Coastguard Malaysia			44.00					24.0	2018

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.
7021	Rescue vessel	Fritz Knack	German Maritime Search and Rescue Association (DGzRS)	40		20.00	5.05	1.30	1.232	Caterpillar C32	22.0	11 / 2018
7030	Fire fighting vessel	Branddirektor Westphal	Hamburg Port Authority (HPA)	1,231		43.50	9.80	2.80	2 x 447	2 x Caterpillar C18	12.0	11 / 2018
7040	Patrol vessel	Potsdam	German Federal Police	1,980		86.00	13.00				21.0	12 / 2018
7050	Patrol vessel	Bamberg	German Federal Police			86.00	13.00				21.0	2019
7060	Patrol vessel	Bad Düben	German Federal Police			86.00	13.00				21.0	2019
7070	Sounding and scientific research vessel *	Atair	Federal Maritime and Hydrographic Agency of Germany (BSH)			76.00					13.0	I / 2020
7080	Rescue vessel		German Maritime Search and Rescue Association (DGzRS)			28.00					24.0	2020
7090	Rescue vessel		German Maritime Search and Rescue Association (DGzRS)			28.00					24.0	2020

* In cooperation with German Naval Yards

Ferus Smit Leer GmbH, Leer — **www.ferus-smit.nl**

422	Multipurpose	Symphony Space	Symphony Shipping	7,000	10,500	122.50	17.00	7.95	3.000	MaK 6M 32	13.5	02 / 2018

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**

771	RoPax	W. B. Yeats	Irish Ferries	55,000	7,445	194.80	31.60	6.70	4 x 8,400	4 x MaK 8M43C	22.5	12 / 2018
774	RoPax	Honfleur	Brittany Ferries	42,500	6,080				29,770	Dual fuel	22.0	05 / 2019
775	RoRo *	Alf Pollak	Siem RoRo Carriers	32,770	11,820	209.79	26.00		2 x 9,600	2 x MAN 8L48 / 60CR	21.3	10 / 2018
776	RoRo *	Maria Grazia Onorato	Siem RoRo Carriers	32,770	11,820	209.79	26.00	6.80	2 x 9,600	2 x MAN 8L48 / 60CR	21.3	05 / 2019
	2 x RoPax		TT-Line Company			212.00	31.50			LNG		2021

* Chartered by Onorato Armatori

German Naval Yards GmbH, Kiel — **www.german-naval.com**

	2 x Frigate*		Algerian Navy	3,700		121.00				Combined diesel and gas		2016 / 2018
	4 x Corvette*		Israeli Navy	2,000		90.00						2019
7070	Sounding and scientific research vessel **	Atair	Federal Maritime and Hydrographic Agency of Germany (BSH)			76.00					13.0	I / 2020
	5 X Corvette K130 ***		German Navy									2022–2025

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

Nobiskrug GmbH, Rendsburg — **www.nobiskrug.com**

790	Yacht	Artefact		5,000		80.00						2019
793	Yacht					77.00						Q1 / 2021

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.
	Yacht					62.00						Q1 / 2021
	Yacht									Fully electric		

* 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

Kiebitzberg Schiffswerft GmbH & Co. KG, Havelberg — **www.kiebitzberg.de / werft**

28	Solar ferry	Island	Straumhvarf	40 pass.		12.00	4.50	0.66	2 x 66	Torqueedo	25*	03 / 2019
283	Solar catamaran		SolarCicleLine UG / Stern & Kreis	180 pass.		36.50	7.00	0.86	2 x 45	Kräutler	14*	10 / 2019
284	Solar catamaran		SolarCicleLine UG / Stern & Kreis	180 pass.		36.50	7.00	0.86	2 x 45	Kräutler	14*	05 / 2020

Lloyd Werft Bremerhaven GmbH, Bremerhaven — **www.lloydwerft.com**

	Yacht	Solaris	Roman Abramowitsch									2020+

Lloyd Werft is owned by Genting Group

Lübecker Yacht Trave Schiff GmbH, Lübeck — **www.luebeckyacht.de**

245	Dive boat					8.00	2.50	0.50	90			09 / 2018
246	Work boat					8.00	2.50	0.50	100			06 / 2018
247	Survey boat					8.00	2.50	0.50	2 x30			05 / 2019

Fr. Lürssen Group — **www.luerssen.com**

Fr. Lürssen Werft GmbH & Co. KG, Bremen-Vegesack

13693	Yacht	Thunder			9,194	136.00						09 / 2018
	Yacht	Shu				136.00						2019
	Yacht	Sassi **				146.00						
	Yacht	Sherasheda				130.00						2019
	Yacht	Redwood				139.00						2020
13703	Yacht	Lightning				135.00						2019
	5 x Corvette K130 *		German Navy									2022–2025

* In cooperation with TKMS and German Naval Yards, aft ships constructed at Peenewerft,
** Destroyed by a fire in September 2018

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.
Lürssen-Kröger Werft GmbH & Co. KG, Schacht-Audorf												
	Yacht	Tis / Palo Alto				111.00	16.85					2019
	Yacht	Fiji				95.00						2019
Peenewerft, Wolgast												
	Several patrol boats (IPV60)		Saudi Arabian Coast Guard									2016–2019
	Explorer Yacht *					100.00						

* In cooperation with Kleven Verft

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	Q1 / 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	Q3 / 2019
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

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

Lux Werft und Schiffahrt GmbH, Niederkassel-Mondorf												**www.lux-werft.de**
214	Passenger ship	St. Nikolaus	Rursee Schifffahrt Heuken		250 pass.	30.00	7.20		174			02 / 2018
215	Passenger ship	Delphin	SGH Schifffahrts-gesellschaft Hallwillersee		200 pass.	34.20	6.50		182			03 / 2018
216	Passenger ship	Störmthal	Wilfried Meyer		120 pass.	21.90	4.90		174			05 / 2018
217	Electro boat		Pletna Boats Bled Slowenia		18. pass.	8.50	2.60		10			12 / 2018
218	Passenger ship *		Bayerische Seeschifffahrt		120 pass.	22.00	3.90					11 / 2018
219	Passenger ship	Rostocker 7	Personenschifffahrt Olaf Schütt		400 pass.	38.00	9.00		2 x 182			Q2 / 2019

* Hull only

Werftgruppe Meyer												**www.meyerwerft.de**
Meyer Werft, Papenburg												
696	Cruise ship	AIDAnova	Aida Cruises	183,900		337.00	42.00	8.60	61,760	MaK	17.0	12 / 2018
700	Cruise ship	Spectrum of the Seas	Royal Caribbean Cruise Line	168,600	10,500 (4,180 pass)	348.00	41.40	8.50	67,200	2 x Wärtsilä 12V46DE 2 x Wärtsilä 16V46F	22.0	Q1 / 2019
705	Cruise ship		Disney Cruise Line	139,300								2021
706	Cruise ship		Disney Cruise Line	139,300								2023
707	Cruise ship	Norwegian Bliss	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	04 / 2018
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	Q3 / 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.
709	Cruise ship		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		Royal Caribbean Cruise Line	168,600	10,500 (4,180 pass.)	348.00	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	2019
	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

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

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.
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
575	LNG tanker	Coral Energice	Anthony Veder		190 pass. 95 cabins	163.90	24.50	7.60		MaK 8M46DF	15.5	01 / 2018
578	Ferry	Norderaue	Wyker Dampfschiffs-Reederei		1.200 pass.	75.88	16.40	1.85			12.0	04 / 2018
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		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
582	River cruiser	Viking Radgrid	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
583	River cruiser	Viking Skaga	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
584	River cruiser	Viking Fjogyn	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
700	Section		Royal Caribbean Cruise Line			140.00						2018
1394	Section		Costa Crociere (Turku)			140.00	42.00					2018
708	Section		NCL			140.00	42.00					08 / 2018
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

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.
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

Meyer Turku Shipyard Oy, Turku — **www.meyerturku.com**

	Cruise ship	Mein Schiff 1 (ex Mein Schiff 7)	TUI Cruises	111,500	7,900, 3,132 pass.	315.70	35.80	7.90	45,200	4 x Wärtsilä		04 / 2018
	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	10 / 2019
	Cruise ship		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								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

MV Werften — **www.mv-werften.com**

MV Werften Rostock-Warnemünde GmbH

MV Werften Stralsund GmbH

	3 x Yacht	Endeavor Class	Crystal Yacht Expedition Cruises	20,000								2019-2021
125	Cruise ship		Star Cruises	201,000	5,000+pass.	340.00	45.00	9.20	96,000	MAN		2020
126	Cruise ship		Star Cruises	201,000	5,000+pass.	340.00	45.00	9.20	96,000	MAN		2021

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.
MV Werften Wismar GmbH												
128	River cruiser	Crystal Debussy	Crystal River Cruises	3,100	110 pass.	135.00	11.50	1.65	3,080			03 / 2018
129	River cruiser	Crystal Ravel	Crystal River Cruises	3,100	110 pass.	135.00	11.50	1.65	3,080			04 / 2018
MV Werften owned by Genting Group												
Neckar Bootsbau Ebert GmbH, Neckarsteinach												**www.nebo.de**
2020 b	Assistance fire-fighting boat	HLB Hanau	Fire department Hanau			15.00	5.10	0.80	2 x 588	2 x MAN D2676LE423		05 / 2018
2035	Police boat	SPB 11	River police Heilbronn			13.60	3.45	1.00	2 x 294	2 x MAN D2866LXE40		01 / 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		01 / 2019
2020 d	Assistance fire-fighting boat		Department of the Interior Rheinland-Pfalz			15.00	5.10	0.80	2 x 588	2 x MAN D2676LE423		Q2 / 2019
2073	Work boat for fisheries control		Regional Council Tübingen			7.80	2.45	0.80	260 HP	Mercury-Diesel		Q2 / 2019
Neue Oderwerft Gmbh, Eisenhüttenstadt												**www.neue-oderwerft.de**
4112	Pram	DP 50 t	WSA Eberswalde			20.00	4.20					04 / 2018
4111	Pram	DP 50 t	WSA Eberswalde			23.00	6.50					09 / 2018
4115	Hopper barge		WSA Dresden	70 m^3		30.00	5.00					10 / 2018
4116	Swimming grab		WSA Minden			18.00	6.50					09 / 2018
4118	Warschaufloß		WSA Duisburg-Meiderich			13.10	4.00					02 / 2019
4119	Warschaufloß		WSA Duisburg-Meiderich			13.10	4.00					02 / 2019
4120	Warschaufloß		WSA Nürnberg			13.10	4.00					04 / 2019
4121	Warschaufloß		WSA Nürnberg			13.10	4.00					04 / 2019
4122	Warschaufloß		WSA Bingen			13.10	4.00					04 / 2019
4123	Warschaufloß		WSA Bingen			13.10	4.00					04 / 2019
4124	Warschaufloß		WSA Köln			13.10	4.00					06 / 2019
4125	Warschaufloß		WSA Köln			13.10	4.00					06 / 2019
4126	Warschaufloß		WSA Duisburg-Rhein			13.10	4.00					06 / 2019
4127	Warschaufloß		WSA Duisburg-Rhein			13.10	4.00					06 / 2019
4128	Smelter boat		WSA Berlin			13.10	4.00					10 / 2019
4129	Hopper barge		WSA Lauenburg	170 m^3		35.00	8.00					12 / 2019
Neue Ruhrorter Schiffswerft Gmbh, Duisburg												**www.nrsw.de**
854	Push boat	Veerhaven 101	ThyssenKrupp Veerhaven			70.51	11.46	4.02		Kooiman bug rudder		05 / 2018
855	Push boat	Veerhaven 102	ThyssenKrupp Veerhaven			70.52	11.47	4.02		Kooiman bug rudder		07 / 2018
856	Push boat	Veerhaven 103	ThyssenKrupp Veerhaven			70.53	11.48	4.02		Kooiman bug rudder		12 / 2018
861	Tanker *	Rain Empress	Reederei Jaegers			66.90	7.20					12 / 2018

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.
857	Push boat	Veerhaven 104	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		02 / 2019
858	Push boat	Veerhaven 105	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		05 / 2019
859	Push boat	Veerhaven 106	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		08 / 2019
860	Push boat	Veerhaven 107	ThyssenKrupp Veerhaven			70.50	11.48			Kooiman bug rudder		11 / 2019

* Hull only

Ostseestaal GmbH & Co. KG, Stralsund — **www.ostseestaal.de**

Currently no newbuilding projects

Pella Sietas GmbH, Hamburg-Neuenfelde — **www.pellasietas.com**

	Unknown number of sections		Aida Cruises (Meyer Werft)									2017-2018
1315	Port ferry	Kehrwieder	Hadag		400 pass.	29.98	8.40	1.70	2 x 368	Diesel-electric Siemens	12.0	11 / 2018
1316	Trailing suction hopper dredger		GDWS			132.00	23.40	6.90	14,000	Diesel-electric	13.0	12 / 2018
1317	Passenger ship		Stadtwerke Konstanz		700 pass, 60 cars					2 x MTU 4000 (LNG)		02 / 2020
1318	Double-ended ferry		Norden Frisia		325 t	74.30	13.40	1.75		Voith Schneider Propeller	11.0	05 / 2020

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

Currently no newbuilding projects, active in repair and refit

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

198	Double ended ferry	Farge	Fähren Bremen Stedingen		249 pass.	60.00	14.00	1.29	4 x 295	4 x Scania DI13(diesel-electric), Baumüller	13*	02 / 2018
199	Shallow water ship	Hooge	LKNSH		130 t	22.50	6.90	0.92	2 x 221	2 x Volvo Penta D13	19*	06 / 2018
201	Dredger	Krabbe	WSA Magdeburg			36.00	9.60	1.00	2 x 294	2 x Volvo Penta D13	13*	05 / 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.
202	Tug boat	Trischen	LKNSH		127 t	22.50	7.50	1.10	2 x 225	Scania DI13 (diesel-electric), Baumüller	19*	11 / 2018
203	Hydraulic floating dredger		WSA Bremen			44.05	10.70	1.30	2 x 323	Scania DI13 (diesel-electric), Ramme	16*	03 / 2020
204	Surveillance vessel	Neptun	National fisheries office Bremerhaven		252 t	30.70	7.80	2.00	2 x 375	Scania DI13 (diesel-electric), Ramme	26*	05 / 2020
Stahlbau Müller, Spessart												**www.stahlbaumueller.de**
14	Passenger ship	Renate	Reederei Schweiger		120 pass.	50.00	10.25	0.70	2 x 380	Diesel-electric Schottel		08 / 2018
15	Car ferry	Posching	for Mariaposching			33.00	7.50	0.80	2 x 90	Diesel-electric Kalkman		01 / 2019
	Tug *		Shiptec, end customer unknown			12.00	3.50					07 / 2018

* Hull only

Tamsen Maritim GmbH, Rostock												**www.tamsen-maritim.de**
1602	Rescue boat	Wolfgang Wiese	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	02 / 2018
1603	Rescue boat	Ursula Dettmann	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	08 / 2018
1604	Rescue boat	Mervi	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	10 / 2018
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	SRB 74	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	SRB 75	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	08 / 2019
1801	Rescue boat	SRB 76	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 77	German Maritime Search and Rescue Association (DGzRS)		8 t	10.10	3.20	0.96	280	Cummins QSB 6.7	34.0	05 / 2020
ThyssenKrupp Marine Systems GmbH												**www.thyssenkrupp-marinesystems.com**
TKMS, Kiel												
	4 x Submarine HDW class 218SG		Singapore Navy			72.00						2023 / 2024
	4 x Submarine*		Norwegian Navy									2025
	4 x Corvette**		Israeli Navy		2,000	90.00						2019
	2 x Submarine		Egyptian Navy			62.00	6.25					
ARGE	5 x Corvette K130***		German Navy									2022-2025

* Order is expected for 2019, the vessels will be build in partnership with Norwegian companies,
** Leadership in design and construction of submarines within the German Submarine Consortium (GSC)
*** In cooperation with Lürssen Group and 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.
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	Q1 / 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	Q3 / 2019
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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Innovation made in Germany

The new cruise ship »AIDAnova« not only features the biggest kissing lips of all times. Meyer Werft's newbuilding is going to set new standards in environmental protection, propulsion and ship management, writes *Frank Behling*

Technische Daten »AIDAnova«:

Shipyard:	Meyer Werft (Germany)
Length:	337 m
Beam:	42 m
Draught max:	8,80 m
Gross tonnage:	183.900 GT
Decks:	20
Cabins:	2.626
Restaurants:	17
Bars:	23
Crew:	ca 1.500

Refuelling of »AIDAnova« with LNG at Tenerife

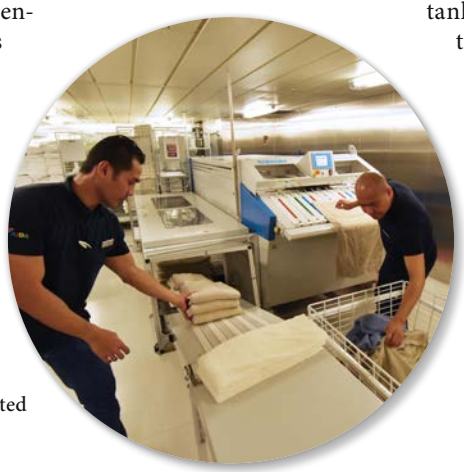
The Meyer newbuilding »AIDAnova« sets a whole series of records in shipbuilding. With a capacity of 183.900 GT, it is the largest passenger ship ever built in Germany. This cruise ship, 337 m long with a beam of 42 m, is the first cruise vessel of the all new Helios class, which was specifically designed by Meyer for Carnival Corp. The contract value of all nine ships on order for four of Carnival's ten brands amounts to almost 9 bn €, which is by far the largest order of a US company at a European shipyard.

The vessels will be built at Meyer's shipyards in Papenburg and Turku, Neptun Werft in Rostock will contribute by building the engine room and tank sections. This is the first time that the shipyard has standardized a ship type. Two newbuildings each will go to P&O, Costa and Carnival Cruise Line by 2023. Rostock-based Aida Cruises puts three new ships into service.

The »AIDAnova« was officially handed over in Bremerhaven on 12 December 2018. Ten days later, she sailed from Tenerife with the first passengers – although this was not the initial schedule. The maiden cruise has had to be postponed following a cabin fire at the shipyard's facility shortly before the final sea trials and due to some problems in the outfitting process.

Four main engines from Caterpillar are the centrepiece of »AIDAnova«. The dual-fuel engines of the MaK M46DF series were supplied by the long-standing partner Zeppelin Power Systems. Since 2007, all ships of the Rostock-based company have been equipped exclusively by MaK. They generate 61.7 MW of electric power and have a weight of more than 200t per unit. The M46DF produces 15,440 kW at 514 rpm and, according to Zeppelin, complies with the new IMO III emissions regulations.

Two redundant electrical systems have been installed to provide both power for the ship and for the propulsion system consisting of two Azipod drives from ABB. In addition, Caterpillar's scope of supply includes two CAT 3516 gensets and the entire LNG processing plant. The fuel is stored in three tanks built by Neptun in Rostock. With a capacity of 3.500 m³, the »AIDAnova« carries almost as much gas as a small LNG tanker. During the first two weeks after the christening, almost 2.000 m³ were needed for propulsion.



The laundry runs largely automated

More than 100 regional suppliers from Germany and abroad were involved in the construction, among others Raytheon Anschütz (bridge equipment), Zöllner (typhon and acoustics), Hatecke (lifeboats) and Otis (lifts). The 2,626 passenger cabins and 700 crew cabins were built in 21 different versions by Ems PreCab in Papenburg. From


© Behling

Captain Boris Becker and crew

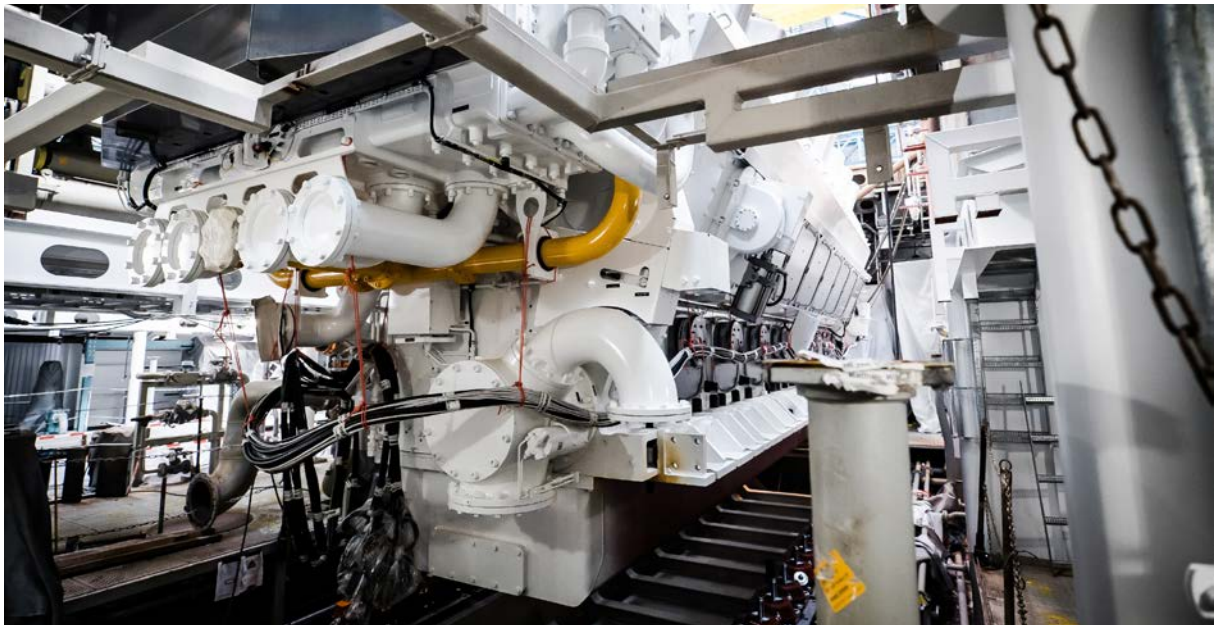
Harsum in Lower Saxony comes the gigantic washing facility for more than 200,000 pieces of laundry. For the first time, the laundry runs as a largely automated system by using a tunnel washer. This saves a lot of water compared to previous systems. Deerberg Systems from Oldenburg delivered a state-of-the-art wastewater treatment system.

The »AIDAnova« will predominantly run on liquefied natural gas (LNG). During the first refuelling in Tenerife 2.188 m³ were taken from Dutch bunker tanker »Cardissa«. Later, the »Cardissa«, designed for ice voyages in Northern Europe, was replaced by Anthony Veder's »Coral Methane«. LNG is brought from Rotterdam or Zeebrugge to Tenerife and is refilled every two weeks during a bunker stop. In addition to its LNG tanks, »AIDAnova« can also store up to 3.000 m³ of MGO (marine gas oil). This capacity is needed in times of full load, when all four bow thrusters and both Azipods are in use, e.g. during berthing.

Aida's new flagship is the first cruise ship worldwide that will operate completely without heavy fuel oil. »We don't even have any tanks for HFO on board,« says Boris Becker, captain of the ship.

»We are very proud to operate what is currently the most environmentally friendly cruise ship,« says AIDA-President Felix Eichhorn. »And we will continue along this path«. Two sister ships of the »AIDAnova« will follow in 2021 and 2023. The second newbuild will probably be deployed in Northern Europe. Until then and unlike today, ship-to-ship refuelling should also be possible in German ports.

The interior design, developed by Partnership Design, is quite similiar to the proven elements of the Mitsubishi-built »AIDAprima« and »AIDAperla«. But in contrast, the layout of the foredeck was changed. The spray bar with balcony was preplaced by an enlarged fitness and wellness area. The Beach Club and the adventure park »4 Elements« have also been extended. A second pool area on the upper pool deck has been added, quite similar to the popular Sphinx ships. ■


© Zeppelin

Zeppelin Power Systems supplied four MaK dual-fuel engines as well as the entire LNG processing plant

»Years of research led to success«

Stephan Schmees, Director Project Management at Meyer Werft, on challenges and lessons learned during the construction of the first LNG cruise ship

HANSA: How proud are you to have built the world's first cruise ship that can consistently run on LNG?
Stephan Schmees: We are of course very proud, because our years of research have finally led to success. With regard to environmental technology, we have set new technology standards in the industry – the first LNG cruise ship comes from Meyer!

What would you call the biggest challenge? What did you learn for the follow-up projects?
Schmees: First of all, we were able to convince a customer to go this way with us. Please keep in mind that neither the final technology, nor the infrastructure, nor any regulations were in place at the beginning of our project. We had to find the right partners such as classification and engine supplier, etc. Furthermore, ports had to be persuaded to allow the bunkering of the ship. Technical solutions for the control of the gas system and engines had to be developed. A large number of challenges can be seen. We have learned a lot and have already optimized our approach, which we will use for the next ships.

Will LNG become the first choice for the cruise industry?
Schmees: LNG will certainly be the best fuel for the time to come. The Meyer Group has nine LNG-operated ships in its order books for the Carnival Group. However, we are already working on other innovative concepts such as the fuel cell – but it will take many more years before a cruise ship can be operated on hydrogen. In the meantime, we are working on how to use this technology for individual applications.

How do you assess the Meyer Werft Group's position in global competition – what are your future markets?
Schmees: The Meyer Group has specialised in passenger ships and we believe that this is exactly the right market for us. This is also clearly reflected in our well-filled order book, as our orders extend into the year 2024. Whatever the customer will need – we are able to build small, medium-sized but also very large ships. In addition, our portfolio comprises river cruise ships and RoPax ferries.

You have always refused to get involved in China. Fincantieri, on the other hand, is pushing into this growth market – will you remain your reservations?
Schmees: We are also watching this market very closely. However, we remain cautious, because we want to protect our know-how and rely on our high quality and reliability, which will enable us to hold our own against the competition. Within the Meyer Group, we are very closely integrated and can respond very flexibly.

There are a number of new suppliers that have emerged, in particular in the explorer yacht segment. Will this kind of ships also become interesting for Meyer?
Schmees: Until 2024, the Meyer Group will be operating at full capacity in our current market segment. So, we are concentrating on completing our projects. But yes, in principle it could become interesting.

What are the future trends in cruise ship construction?
Schmees: The ships themselves are increasingly being designed as destinations themselves. That's why everyone is contantly looking for new features to attract passengers. As a shipyard, we support our customers the best way we can with innovative ideas. We are very much focused on the development of technical innovations, e.g. hydrodynamic optimization, highest energy efficiency, alternative fuels and propulsion systems.

Interview: Krischan Förster

»Ship of the year award 2018« for Meyer Werft

For the 34th time, HANSA has awarded a German shipyard for its outstanding work on a specific newbuilding project. This year, Papenburg-based Meyer Werft is honoured for »AIDAnova«

The 183,000 gt ship follows the megayacht »Aviva« of Lemwerder-based shipbuilder Abeking & Rasmussen, which received HANSA's award for 2017. It is the first ever cruise vessel driven only by LNG and was delivered in late 2018 to AIDA Cruises from Rostock, part of the global cruise group Carnival Corp.

Notwithstanding the slight delay in delivery, the »AIDAnova« shows the extensive expertise of the German shipbuilding industry – especially as this is a pioneering project, for which various technical and logistical aspects had to be taken into account.

It is not the first time, Meyer Werft was awarded by HANSA. It was in 2014, when the shipyard was honoured for the last time so far. However, four years ago, it was not a cruise ship – the segment for which Meyer is known best nowadays, which was chosen, but a research vessel: the »Sonne«. The same applies to 2012, when the shipyard from the Northwest received the award for the LNG tanker »Coral Energy«. The previous tributes where for cruise vessels in fact, for example – amongst others – »Celebrity Solstice« in 2008, »AIDAdiva« in 2007 and »Radiance of the seas« in 2001. ■

»Ship of the Year« 1982 - 2018

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 I«	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**

Setting out for new horizons

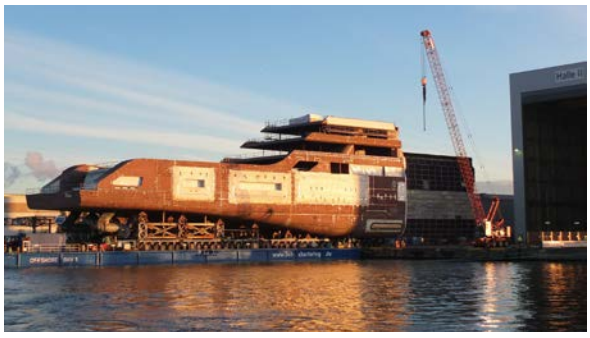
For decades, the Lloyd Werft was regarded as a high-profile conversion and repair shipyard. This business segment will not be abandoned. But the focus will be quite more on the construction of luxury yachts. There is also hope to win the contract for the new »Polarstern«. By *Krischan Förster*

The Bremerhaven shipyard is working flat out on the »Solaris« yacht project. As usual, only a few details are known about such luxury projects, all those involved have committed themselves to the strictest confidentiality. Therefore only the current name is known and the length of 140 m. »We won't and shouldn't reveal more,« says Rüdiger Pallentin, Managing Director of Lloyd Werft.

This mysterious ship is being built in floating dock 3, rumours say it has been ordered by the Russian oligarch Roman Abramovich. He had already had his 115 m long »Luna« built in Bremerhaven. What is for sure is that this project is currently providing enough work for all employees. The »Solaris« is to be delivered next year.

Lloyd Werft has been through turbulent times since it was taken over by the Genting Group (Hong Kong). Now it's time to look ahead, according to Pallentin. There are good reasons to be optimistic. The shipyard has providently made a financial contribution to the rebuilding of the West Quay in Bremerhaven's Kaiserhafen. Upon completion, cruise ships can be outfitted at the 500 m quay next to the shipyard. The total costs have been calculated at € 30 million.

In the meantime, however, the company has repositioned itself. The design centre on the site has become an engineering office with 70 own employees to date plus about 30 designers from subcontracted companies. They



© Eckhardt; Wider Yards

Section of »Solaris« (left) and cooperation partner Wider Yards' »Cecilia«

© Eckhardt

not only advance Lloyd Werft's own projects such as »Solaris«, but also handles orders from other customers.

Lloyd Werft, on the other hand, has given up the repair business for merchant ships, but not for the conversion and modernisation of cruise ships, including offshore and special ships. The shipyard has been specializing in this segment for a long time and enjoys an excellent reputation. »This year, too, we are striving for some orders for passenger ships,« says Pallentin. Although the business has changed in the recent past. The shipyard is increasingly becoming a logistics service provider for the client rather than carrying out all the work, »2/3 of the work is organised by the shipping company itself«.

The still extensive area with its numerous dock and shipyard facilities is thus also available to other providers such as the neighbouring German Dry Docks. In Bremerhaven the capacities are shared – an advantage for all sides. Within the Genting Group, the shipyard is responsible for third-party business, i.e. external orders. In view of the good order backlog, Pallentin is willing to hire a further 30 to 40 employees in the near future.

© Lloyd Werft

Rüdiger Pallentin

After the »Solaris« new yacht orders could follow, three projects are currently being negotiated, »but nothing is ready for decision yet«. The market is fierce, especially at the Weser. The closest competitors, the market leaders Lürssen and Abeking&Rasmussen, are located only a few kilometres upstream on the Weser, and there are also international suppliers such as Amels and Damen. »We are the ›new kids on the block‹,« says Pallentin, »but we want to hold our ground.«

In addition, Lloyd Werft has submitted a bid for the construction of the new research icebreaker vessel »Polarstern 2«. After a few delays, the contract is expected to be awarded this year by the Federal Ministry of Research. Now the yard is hoping for the attractive and prestigious contract. The state of Bremen has promised a bail to secure the bid. ■

Peters Werft plans further investments

The Wewelsfleth-based Peters Werft considers itself well prepared for the future with its specialisation course. Investments in infrastructure and equipment have always been and will continue to be the focus of attention. By *Michael Meyer*

Like many other German shipyards, Peters Werft has tried to establish itself in niches in recent years, primarily in the repair market – with some success. The company attaches great importance to the tailor-made processing of orders, »tailor made in Germany«.

Currently, the shipyard repairs and restores a wide variety of ship types. The docks and the equipment quay are packed with vessels: the historic freighter »Peking«, the »Eschwege« of the Federal Police, the submarine tender »Main« of the German Navy, the fishing protection boat »Seefalke« and the mega yacht »Forever One«. Some projects involve cooperation with steel construction companies or other shipyards, but Peters also relies heavily on its own resources: »We have approx. 120 employees, of whom approx. 10 % are trainees and interns. We believe that our team is well equipped for the future with the coaching of young talent, qualified training and numerous advanced training measures,« Managing Partner Mark Dethlefs tells HANSA.

It is important for those responsible that they have competitive equipment for which they can take the corresponding amount of money in their hands. In the recent past, »numerous investments« have been made, according to the manager. For both dry docks (135 m and 115 m length as well as 12,000 and 10,000 tdw), flexible weather shelters as well as modern facilities and equipment have been erected according to the shipyard. In addition, the quay wall was modernised and the sheet pile wall renewed, a new welding machine was purchased as well as a new crane system with higher capacity.

However, this should not be the end of the story. »Further investments in the assembly halls, in machinery and equipment and in the administration building are planned for the near future,« Dethlefs confirms.

Peters Werft has over 145 years of experience in shipbuilding. It is located in south-western Schleswig-Holstein, at the intersection of the interna-

The restoration of the historical »Peking« (at the quay) is a very prestigious project for the shipyar

tional shipping routes Elbe and Nord-Ostsee-Kanal (NOK). Since its foundation more than 690 newbuildings have been delivered, including container ships up to 900 TEU, multi-purpose, special and passenger ships or mega yachts. Ships up to 22 m width can be repaired. Five berths and two slipways are available in addition to the docks.

In the eyes of the management, changing market requirements and increasing competition in shipping increasingly require the conversion of ships. From consulting to completion, the aim is to support potential customers and benefit from their projects.

A special and at the same time prestigious project is currently the renovation of the historic four-masted barque »Peking«, which was rediscovered in the USA and brought to Germany on board a heavy-lift ship. The work is scheduled to take two to three years, after which she will take up her new berth in Hamburg. The historic freighter will be restored for the Hamburg Maritim Foundation. The basis of the contract – in which some top-class competitors could be left behind – is the restoration and partial reconstruction of the ailing hull. »Since this is a 100-year-old ship that has been neglected for many years, we must pay special attention to the professional handling of the ailing structure,« Dethlefs continues. The federal government is providing a total of 26 mill. € for the return of the vessel and repair of the structure.

The experts at the estuary of the Stör are to restore the rust-eaten freighter to its original condition of 1927 – including the wooden deck and the original holds in which saltpetre and bulk cargo were sailed. The ravages of time have gnawed at the hull in particular. The steel plates were partly only 4 mm thick instead of the original 15 mm, it was said after the contract was awarded. Therefore, the entire underwater hull has to be rebuilt, as well as the rig. ■

»Room for manoeuvering within EU regulation«

German shipyard Fassmer wants to grow in different segments. Speaking to HANSA, Managing Director Harald Fassmer talks about chances and challenges and criticizes the public procurement in Germany

Managing Director Harald Fassmer

What is your review of 2018 and what is the outlook for 2019?
Harald Fassmer: For us, 2018 was a year of high capacity utilization in all product areas. In shipbuilding, we delivered the new fire-fighting boat for Hamburg and a further newbuilding to DGzRS. In December, the first of three ships for the German Federal Police was christened. We are working on the LNG-powered research vessel »Atair«, had a yacht refit and were busy delivering a material and design package for the Malaysian Destiny shipyard. The existing orders ensure sufficient capacity utilisation this year as well. At the same time we are working on various projects.

How do you assess the political conditions in Germany?
Fassmer: The global framework conditions have changed drastically in recent years and politicians have recognised this and described various fields of action in the Maritime Agenda 2025, for example. This is where we should start and implement concrete measures at short notice within the framework of an ambitious industrial policy. For example, the promotion of innovation through the division between the Federal Government and the Bundesländer is too complicated. Naval shipbuilding must be strengthened as a key technology and in exports we need reliability and transparency when it comes to issuing export licences. We see further room for manoeuvre with regard to competitive financing and guarantee instruments as well as in the field of training, research and development.

The foundation of the German Maritime Center (DMZ) was a good step, that holds a lot of potential. Particularly important are also improvements in public procurement. If projects are put out to tender, but cancelled later, it costs us time and money. In addition, in 2018 various public contracts were again awarded to foreign suppliers, because in many tenders only the price is decisive. If the public client included technical aspects, reliability and cost-effectiveness in addition to the price, our chances would be much better. In other countries it is seen much more as an industrial policy. Within the EU regulation, room for manoeuvre is used intelligently, unlike in Germany.

You have cooperations abroad, for example in Malaysia and Colombia. Are further cooperations an option?
Fassmer: Projects in which we cooperate with foreign partners or shipyards as customers are very interesting for us. This is important when a customer specifies in a tender that production must take place in their own country. We offer ship types, proven designs, construction documentation, material packages and technical assistance. We have been successful with this in recent years and we are working on other interesting projects and are in contact with potential customers. On the production side, we are also internationally positioned with facilities in Poland and China.

In addition, you also have your own wind power division. What are your plans in this segment?
Fassmer: In recent years, our wind power area has developed into a major source of sales. Nevertheless, we take a very critical view of developments in the political environment, especially in Germany. In order to meet climate protection targets and to maintain and safeguard technology and jobs, the industry needs a reliable planning bases. This includes, among other things, raising the expansion corridors for onshore and offshore wind turbines.

In the future, we will continue to support our customers in their wind projects and, in addition to prototype and series production of nacelles, will increasingly offer services in the areas of consulting, development and optimization of products and processes. In addition, we are concentrating on expanding our service activities and further internationalizing production.

Are you interested in entering further new markets?
Fassmer: A completely new product area is not planned at present. It is important to primarily strengthen our market position in the five existing areas. In addition, we want to strengthen our position in the naval segment and to merge our activities here under the »Fassmer Defence« brand. We also intend to expand the development of complex and environmentally friendly multi-purpose and research vessels. The entry into the construction of explorer yachts could also be interesting.

Interview: Michael Meyer

Fire boat sets new benchmarks

»Flotte Hamburg« has received innovative fireboat »Branddirektor Westphal«. Built at Fassmer shipyard as a European first, the vessel constitutes a quantum leap for its homeport Hamburg. *Thomas Wägener* reports on its technical features

About 30 years after the last firefighting vessel entered service in Hamburg, the city now has a new, modern ship, no longer to be compared with the other units. The newly built vessel is part of the urban fleet management which has been in charge of the Hamburg fleet since July 2017, a wholly-owned subsidiary of the Hamburg Port Authority (HPA).

At 43.5 m length and 10 m width with a draught of 2.8 m it is the largest in the history of the Hamburg fire brigade and according to HPA boss Jens Meier the most modern of its kind in Europe. Thus not only the dimensions define a new class of its own, but also the equipment:

The unit operating at up to 12 kn provides three Fire Fighting Systems (FFS) fire monitors, which can spray up to 180 m ahead and 110 m high. That corresponds to a three to four times performance increase compared to previous fire boat designs. The novel design can pump up to 120,000 l of forge water per minute – twelve times more than before. As a result, fires as aboard container ship »CCNI Arauco«, which burst into flames at the pier in 2016, could be controlled better and faster. According to the fire department Hamburg, it took almost 72 hours until the fire could be extinguished. It certainly would not have taken so long with the new vessel, they say.

The output of the eight engines of »Branddirektor Westphal« totals around 5.5 MW. The two main engines with about 500 kW each as well as the generators have been delivered by Caterpillar. In addition, the newbie features two rudder propellers and two bow thrusters from Schottel. The new unit has a self-protection system for the action force of up to 32 and a medical room. The bridge can be used as a protective air system (citadel). It can withstand up to 30 minutes if dangerous substances are discovered out-

side. With a side-scan sonar, objects in the water can be located and classified. The side-scan sonar has been ordered from Humminbird. As a tribute to most precise navigation it is equipped with a dynamic positioning system (DP2 system) provided by Navis Engineering. Siemens furnished various panels of the Simatic HMI series, all of which have a touch screen, for easy visualization of the various systems on board.

In order to meet the increasing environmental requirements, an exhaust aftertreatment system from Hug Engineering has been installed, including diesel particulate filter and catalytic converter. Therefore, the ship had to be extended by 3 m compared to the original design. Like all units of the Hamburg fleet, the vessel is fuelled with Shell's GTL (Gas-to-Liquids). Consistent bunkering is a clear signal towards sustainability, says Meier.

Dräger is responsible for the sewage system, the company Willibrord Lösing for the filter technology. Pollrich delivered the fans and Atlas Copco provided compressors. Möhring Marine Service, a Heinen & Hopman Company, provided the heating, ventilation, air conditioning (HVAC) and cooling systems. Also suppliers in HVAC, Kampmann and Alre provided air conditioning technology.

Safety has a high priority on Hamburg's new fire-fighting ship. Podszuck delivered the fire doors, the fire alarm systems are from Hochiki. Deckma has been contracted an alarm system and a fire alarm panel. Sm electrics is responsible for the light signal alarm system, while luminescent signs and license plates from Luxolight are intended to provide better orientation. Field and process indicators from Endress + Hauser will be used to monitor limit values. The life rafts were supplied by the Survitec Group. The FLIR camera technology is also intended to increase safety.

Seematz has been awarded the searchlights while the LED spotlights are provided by the company Karl Dose. Aqua Signal supplies LED lights. The devices for communication and navigation have been supplied by JRC / Alphatron. A working crane with articulated boom by Palfinger has been mounted to the aft deck with the designation PK 65002M. The capacity enables to safely handle loads of up to 2,500 kg at a boom length of 4.5 m.

To reinforce the fleet, the vessel was handed over to the owner in Hamburg by Fassmer Werft at the end of November. Godmother is Eva Maria Tschentscher, wife of Hamburg's first mayor Peter Tschentscher. Before the official christening, the traditional flag change was arranged. The Fassmer flag was replaced by those of the Hamburg fleet. As a symbol of the vessel transfer, shipyard boss Harald Fassmer handed over the coin that had been placed under the first part of the ship during keel laying to the Hamburg fire brigade. The launching ceremony is to be followed by crew training aboard in the Port of Hamburg. Early this year, the vessel will enter active operation.

The unit has its mooring at a newly installed pontoon next to the tug station below the St. Pauli fish market. At the establishment of which the company Aug. Prien was instrumental.

The handing over of »Branddirektor Westphal« is the prelude for the modernization of the Hamburg fleet ship pool. Recently, the fleet commissioned two smaller multi-functional fire boats. In a Europe-wide tender, Damen shipyard from the Netherlands prevailed. These ships will be delivered in 2020.

In addition, new police boats are to be purchased. This should complete the security concept of the Port of Hamburg for the coming years. »Preparing for the future, it is important to us that we set up not only our landbased security architecture, but also the concept for everything afloat,« said Hamburg Senator Andy Grote. ■

© Wägener

Blohm+Voss all set for the future

The Hamburg-based shipyard is still in the process of being integrated into the Lürssen group. Important investments have been made and steps have been taken to position the shipyard for the future

Since the acquisition by the Lürssen Group in November 2016, Blohm+Voss is in a process of change. In April 2018, the management of Blohm+Voss reported the steps already taken a success. In 2018, the shipyard was positioned significantly better than at the time of the takeover. In 2017 and 2018, the shipyard laid off 300 workers to reach a workforce of 700. As part of the reorganization storage areas were cleaned from several thousand tons of scrap metal, the material flow was improved and a new plasma cutting machine was installed.

© Selzer

Splitting the shipyard business in three divisions stands at the centre of Blohm+Voss' reorganization process. The newbuilding division will focus on naval surface vessels while the repair and refit unit services cruise ships and commercial vessels. The yacht refit unit concentrates on large yacht conversion projects. In fact, the Lürssen Group concentrates all such work on yachts of Lürssen and other makes in Hamburg. Meanwhile, yacht newbuilding has been discontinued in Hamburg. Lürssen clearly wants to fully integrate Blohm+Voss into the Group.

Facing an increasing skills shortage in Germany, the Group wants to stay attractive for young talents. The shipyard opened up a new education and training centre in May 2018. The 700 m² facility houses electro-technical, mechanical and shipbuilding workshops and a seminar room that offer a new and upgraded learning environment to the 30 apprentices and students. The new facility is part of Lürssen's concept to make Blohm+Voss ready for the future. All in all, the shipyard invested 500.000 € of its 10 mill. € investment package into the new workshops.

In July 2018, Blohm+Voss sold its 51 % share in French shipyard La Ciotat, that is home to a 200 m x 60 m drydock, to Marina Barcelona 92 (MB92) for an undisclosed price. B+V had partnered with SEMIDEP-Ciotat in August 2016. At the same time, MB92 confirmed its intentions to work closely together with the Lürssen Group in the future. MB92 had already acquired Compositeworks SAS in La Ciotat and plans to integrate the two enterprises and to expand La Ciotat's position as a superyacht repair hub in the Mediterranean.

Blohm+Voss shipyard is also still in the race for the order of Germany's new multi-role combat ship MKS 180, at present the country's largest navy project. A consortium of B+V's new owner Lürssen and TKMS has already been excluded from the tendering process, but Blohm+Voss in a consortium with Dutch Damen Shipyards Group competes against German Naval Yards / TKMS. The 170 m MKS 180 will be the most modern and most expensive ship of the German Navy that will have six of these ships. The first four units will come at a price of more than 5 bn €. The first ship is expected to be operational in 2026. *fs*

An old lady rejuvenated

The »Meteor«, Germany's »Ambassador of Science« on all seven seas, is restored to former glory after docking at Norderwerft

Fact sheet »Meteor«

Length:	97,5 m
Width:	16,5 m
Draught:	5,61 m
Cruising speed:	11,5 kn
Operating range:	10,000 nm
Crew:	34
Scientists:	28
German Weather Service:	2
Manager:	*www.briese-research.de*
Virtual tour:	*https://www.ldf.uni-hamburg.de/meteor/meteor-virtuell.html*

The research vessel has covered more than 1.4 million nautical miles since its commissioning in 1986. At the end of last year, the »Meteor« headed for its home port of Hamburg. Time for extensive conservation of the underwater hull and for work impossible during the research voyages.

After 160,000 operating hours, the four diesel engines were fitted with new cylinder heads and pistons. The steering gear was overhauled and the shaft seal renewed. All the ship's refrigeration systems have been converted to an environmentally friendly refrigerant. Portholes had to be sealed, ballast tanks checked and preserved and the markings on the two anchor chains renewed. Cabins, mess room and work spaces were partly equipped with new floors and new inventory.

After five weeks of hard work both for the crew and shipyard wherein workers had applied 1,200l of fresh paint, the »Meteor« featured a brilliant new look when it passed over to the »Open Ship« at Hamburg's Überseebrücke. Captain Rainer Hammacher: »The ›Meteor‹ is a special ship due to its tradition. This could be felt even during docking time.«

The Meteor's history including numerous expeditions is currently presented in the International Maritime Museum. Among the exhibits are the wooden mast foot of the first »Meteor« and the bell of the second.

The third »Meteor«, built at the Schlichting shipyard in Travemünde, is operated on behalf of the German Research Foundation (DFG) and the Federal Ministry of Education and Research (BMBF). The missions are coordinated by the »Leitstelle Deutsche Forschungsschiffe« at the University of Hamburg. Briese Research provides the crew and the technical management of the research vessel (98m, 4,280 gt). It can accomodate 30 crew members and 32 scientists. ■

© Holger von Neuhoff (all pics)

Online shops going maritime

Procurement is a significant cost factor in shipping. New online platforms are being set up in hope for profitable business opportunities. One of them: Germany's Roobeo, a kind of maritime ebay

Michél-Philipp Maruhn

Founded last summer by Michél-Philipp Maruhn, Roobeo was initially conceived as an online sales platform for building materials of all kinds, covering the needs of more than 15 trades – for agriculture and forestry, civil engineering and road construction, or joineries: Through the integration of around 500 suppliers, more than 500,000 articles are available in this virtual shop – whether for large companies or medium-sized businesses.

Roobeo is the interface between seller and buyer, an intermediary like ebay. Sorted by categories, articles or goods are presented according to availability and price, while the name of the potential supplier does not appear in this »hidden« marketplace at all. Everything is handled via a single customer account, which is best known from ebay or Amazon.

»We don't set the prices, but provide an overview of all products and information such as data sheets and thus ensure transparency,« says Maruhn. It's all about tools, clothing, electrical and sanitary products, materials for dry or metal construction and many more items. »These are all things that are needed in shipbuilding or on board as well,« says Maruhn.

The young entrepreneur has had little contact with the maritime world before, apart from his sailing hobby. But now he is going to expand his business to the oceans.

Today procurement in many mid-sized shipping companies is largely transactional (purchasing). Staff deals with material requirement coordination, logistics arrangement (many urgent deliveries), contract management and purchase-to-pay processes. Already the tactical level of procurement with category management for the main spend items, tendering, negotiation strategies, performance management etc. receives too little attention. The only way, some of them deal with, is by using buying consortia and/or e-procurement platforms.

It is estimated that the buyers in the companies spend up to 30 % of their time sending enquiries, comparing offers and placing orders. Maruhn promises that Roobeo can significantly shorten this process, make it cheaper and automate it.

Compared to purchasing from stationary wholesalers, 94 % of the time and 87 % of the costs could be saved if deliveries would come »just in time« and without any additional effort. A size and quantity calculator is also provided. With Roobeo, recurring orders can be stored – the products will be automatically delivered to the company when required. The logistics behind is again with the supplier, even if the customer triggers the transport via Roobeo. The portal provides the database and interfaces and ensures data exchange.

So far, Maruhn has 30 employees in Berlin and sees his company still in the start-up phase. »It will take two years to open up the market,« he says. ■

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The activities of MV Werften under the roof of the new mother company from Hong Kong is attracting a lot of attention, even in the highest political circles, as a visit by German Chancellor Angela Merkel showed