

LNG Fuelling

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BHP issues tender for world's first LNG-fuelled iron ore freighter

Mining giant BHP has launched a tender for the construction of the world's first LNG-powered iron ore freight vessel.

The proposed vessel will have capacity to transport up to 27 million tonnes of iron ore, making it one of the most powerful LNG-fuelled vessels in operation.

"Through this tender, we are seeking potential partners who share our ambition of lowering emissions to the maritime supply chain," Rashpal Bhatti, Vice President of Maritime and Supply Chain Excellence at BHP, explained.

Busiest bulk transport route

The proposed ship will be deployed along "the busiest bulk transport route globally" and is expected to significantly cut CO2 emissions while all but eliminating nitrogen oxide (NOx) and sulphur oxide (SOx) emissions.

"We recognise we have a stewardship role, working with our customers, suppliers and others to influence emissions reductions across the full life cycle of our products," Bhatti commented.

The addition of LNG in BHP's distribution supply chain is expected to tackle a "material



Rashpal Bhatti

source" of emissions, with the firm aiming to ramp up usage across its fleet and carry up to ten per cent of its iron ore via LNG-fuelled transport.

"While LNG may not be the sustainable homogenous fuel of choice for a zero carbon future, we are not prepared to wait for a 100% compliant solution if we know that, together with our partners, we can make significant progress now," Bhatti added.

Select group of tenders

The new tender will be open to "a select group" of industry leaders, including ship owners, banks and LNG fuel network providers. The group is also soliciting bids for alternative solutions that "can lower greenhouse gas emissions and increase productivity".

"This new tender adds to the work BHP is doing with customers, suppliers and parties along our value chain to influence emissions reductions from the transport and use of our products," Mr Bhatti said, adding that the firm was "fully supportive of the International Maritime Organisation's (IMO) decision to impose lower limits on sulphur levels in marine fuels".

The initiative is part of a global strategy by the group to build the resilience of communities, strengthen policy and encourage market response to the physical impacts of climate change.



Iron ore vessel

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McDermott to develop Sohar LNG bunkering hub

Engineering services firm McDermott has been awarded a “sizeable” contract to develop an LNG bunkering hub in Oman.

The proposed facility in the port of Sohar, in the north of the Emirate, will be developed on behalf of Total Oman E&P Development. McDermott will provide front-end engineering design (FEED) services.

“This award is a reflection of McDermott’s 60-year history of delivering innovative LNG solutions worldwide, beginning with our tank storage solutions in the 1950s, to our liquefaction capabilities today,” Linh Austin, Senior Vice President, Middle East and North Africa at McDermott, said.

Rapid growth period

The scope of work includes fully defining the onshore mid-scale

LNG facilities and preparing a competitive tender for the project. Under these terms McDermott will prepare documentation for engineering, procurement, supply, construction and commissioning phase work.

“The global LNG bunkering market is entering a rapid growth period driven largely by the International Maritime Organization’s legislation to significantly limit sulphur emissions,” a spokesperson for McDermott commented.

Headquartered in Texas, McDermott is one of the largest integrated onshore-offshore EPC companies in the world following its \$6 billion merger with Chicago Bridge & Iron.



McDermott worker

Regional LNG bunkering hub

McDermott declined to specify the value of the deal, stating it was expected to be worth up to US\$50 million, and noting that the FEED project will be reflected in McDermott’s second quarter 2019 backlog.

“This project is intended to

establish Oman as a regional LNG bunkering hub capable of supplying LNG as a fuel to marine vessels,” Austin added.

The contract with McDermott is one of three awarded by total with rival contractor JGC announcing it had also secured an agreement for the LNG Bunkering Hub at Sohar.

Port of Riga begins LNG bunkering

Officials at the Port of Riga in Latvia have commenced LNG bunkering operations at the port, with the arrival of the LNG-powered vessel *Containerships Polar*.

The vessel is part of a new service, operated by owner CMA CGM group, that will see the *Polar* and sister vessel *Containerships Nord* call at the port three times per week.

“Some European markets shipments of Containerships customers are already delivered by LNG powered vehicles. Together with the first LNG-powered container vessels, they will form a complete

cycle of green logistics,” Kristaps Jakovļevs, manager of Containerships in Latvia and Estonia, said.

Expanding LNG use for container traffic

The new LNG vessels are not only lower emission but are also amongst the largest container ships to call at the Port of Riga, delivering larger tonnage and allowing Latvian exporters to

“better plan their supply chains and cargo volumes” to the UK, Benelux countries, Ireland, Italy, Spain and Portugal.”

“One of our development priorities requires use of environmentally-friendly technologies, and the other - significant increase in the number of handled containers. The development programme adopted last year sets an ambitious goal: increasing the volume of container cargo to 1 million handled TEU units per year in 10 years. As this volume keeps growing annually, we believe that this goal is achievable,” Mārtiņš Ziemāns, Deputy CEO of the Freeport of Riga, said.

Authorities at the Port of Riga reported that turnover reached a record-high for the first six

months of the year, handling 238.2 TEU units, an increase of 5.6% on the previous year.

LNG-fuelled car fleet

Alongside the use of LNG to fuel CMA CGM’s containership fleet, the firm is also considering the switch to cleaner burning LNG for other assets in its portfolio.

“In the nearest future, we also plan to introduce an LNG car fleet in Latvia, reducing the environmental impact and shifting towards 100% green logistics,” Jakovļevs added.

Headquartered in Marseille, France, CMA CGM is the fourth largest container shipping line in the world, operating 200 shipping routes between 420 ports in 150 different countries.



Containerships Polar

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Signum, Shell present world first STS system

Equipment developer Signum Technology Group has tested a new ship-to-ship hose LNG transfer system in partnership with Royal Dutch Shell at the Port of Rotterdam in the Netherlands.

The technology was developed by Signum subsidiary KLAU LNG and certified as compact level 2 Safety Integrity Level and Safety Instrumented System (SILSIS). The system was tested on-board Shell's bunker vessel *Cardissa*.

"The question of safety is always the main driver of technology in LNG transfer and ship-to-ship bunkering is innately challenging due to the need to factor in adverse tide and weather conditions and the unpredictable movement of the two vessels," Jeff Vile, sales and compliance director at Signum, said.

automated Programme Logic Controlled (PLC) Safety Instrumented System, which allows for continuous monitoring and diagnosis.

"At a very early stage in the project we took the view that it was necessary to innovate and drive the technology forward, not just to meet the rigorous safety standard but also to achieve a level of operational efficiency that far exceeds any other," Vile explained.

The novel design allows for almost completely automated operation, vastly reducing the potential for human error.

World first HTS system

The new system is the first SIL2 compliant Ship-to-Ship bunkering HTS system, thanks to a fully-

Two-stage ESD

An integral two-stage ESD emergency shutdown system also provides an escalated response on



LAW LNG research facility



KLAU LNG system

demand. This ensures shut down of cargo transfer pumps and transfer lines in the first stage, followed by emergency release couplings and complete separation of the transfer system in the second stage.

"In choosing to work with us on this truly ground-breaking technology Shell demonstrates that it prioritises ultimate levels of safety and is prepared to make an appropriate investment to achieve what is unquestionably the highest standard in the industry," Vile concluded.

Trelleborg acquisition

Engineering group Signum is based in Wiltshire in the UK and

delivers safety critical solutions for flow control applications. The successful testing of the new system attracted interest from Swedish engineering group Trelleborg, with the firm announcing it had acquired Signum Technology in July via its Trelleborg Industrial Solutions unit.

"We are very pleased to announce the acquisition of Signum. Combined, we are creating a very attractive offering of integrated packages and safety critical systems for both LNG ship-to-ship and ship-to-shore transfer in demanding industries," Jean-Paul Mindermann, president of Trelleborg Industrial Solutions, commented.

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Jereh to build Russian LNG fuelling network

Chinese energy group Jereh has signed a contract to install a network of 10 LNG fuelling stations across Russia.

The deal was hailed as the “biggest order for LNG fuelling within Russian market till now” and will cement use of LNG for transport in the gas-rich country.

“Equipped with leading modular manufacturing capability, global sourcing platform and international project management system, Jereh guarantees our client a truly turnkey engineering pro-

ject,” Wang Fei, manager at Jereh, said.

Modular design

To meet strict requirements for metering accuracy, reliable quality and steady performance Jereh conducted customized design to ensure that each fuelling station and control room can be integrated into two 20-foot containers

respectively, leaving it more compact and more convenient for transportation.

“We own a self-developed process that targets integrated design and are able to provide shorter delivery period, lower financial input with less space occupation,” Fei explained.

Due to this modular design, the project is scheduled to complete rapidly with construction begin in September and the final station is set to be in operation by the end of October.

500 million litre capacity

Total fuelling capacity across the 10 stations is expected to reach 500 million litre per year and “strongly bolster” local LNG supply. Jereh notes that “almost 90%” of Russian natural gas is currently exported to customers in Europe

via pipeline while civilian use of LNG in the country is “relatively lagging” due to high financial input brought by natural gas pipeline infrastructure.

“Market demand and government policy is certain to spark a breaking-out LNG market in the near future... ferry and train will make it way cheaper and more flexible to transport LNG [and] for heavy truck owners, LNG is more affordable compared with diesel fuel by saving almost half of the cost. However, limited number of fuelling stations in local areas has constrained the development of LNG industry,” Fei said.

Based in Yantai, China, Jereh is one of the largest domestic oilfield equipment and service providers in the country and controls around 50% of the domestic market shale drilling equipment market. ■



Signing ceremony

Sovcomflot secures award for LNG-fuelled tanker

Russian shipping line Sovcomflot (SCF Group) has received an award for the design of its LNG-fuelled Aframax crude oil tanker, *Gagarin Prospect*.

The Next Generation Ship Award 2019 was bestowed for the “most promising design for ships that will be at sea in the coming decade” according to award organiser Nor-Shipping.

“Today, the shipping industry steadily transforms itself to become increasingly more sustainable, and we are proud that Sovcomflot is amongst those who lead this process. The switch to using LNG as a fuel could significantly contribute to reducing anthropogenic impact on environment. We firmly believe that adopting LNG as a primary fuel for large-capacity tankers is the right move,” Sergey Frank, CEO of Sovcomflot, said.

The award was presented to Frank at the Nor-Shipping 2019 conference by Norwegian Minister of Trade and Industry Torbjørn Røe Isaksen, in the presence of His Majesty King Harald V of Norway.

“When ordered, LNG fuelling infrastructure was in its infancy with

no guarantee it would improve at the rate it has. The ship was also ordered without a long-term charter in place, making the decision a pioneering one which many of the jury felt fully reflected the ethos of the Next Generation Award criteria,” jury chairman Malcolm Latache explained.

Green Funnel

The award was partly in response to Sovcomflot’s Green Funnel concept which is closely integrated into the design of the *Gagarin Prospect* and will lead to a series of sister vessels hitting the waves as part of a fleet-wide switch to cleaner-burning fuel.

The 114,000-deadweight-tonne Aframax tanker will primarily operate in high-traffic areas such as the Baltic and North Seas. Currently six ‘Green Funnel’ Aframax are in operation with a further five under construction, comprising two similar Aframax tankers and three 51,000-deadweight-



Nor-Shipping ceremony

tonne MR product carriers.

“We are grateful to Nor-Shipping for this recognition of our ‘Green Funnel’ initiative... We’ve been working on the [initiative] for several years in close collaboration with our partners, Shell, Hyundai Heavy Industries, and DNV GL. Today, I want to share the honour of receiving this prestigious award with them all and express my gratitude for their support of the “Green Funnel” initiative and their contribution to making these tankers a reality,” Frank commented.

SCF Group is wholly-owned

by the Russian government and specialises in the transportation of crude oil, petroleum products, and liquefied gas. The group has a global fleet of 146 vessels, including 80 ice class vessels and also provides servicing of offshore oil and gas facilities linked to LNG production.

This fuel transport involves bulk services for some of the largest LNG projects in the world, including the Sakhalin-1 and Sakhalin-2 upstream developments in the Piltun-Astokhskoye field, the Varandey, Prirazlomnoye, Novy Port and Yamal LNG in Russia and the Tangguh project in Indonesia. ■

Kasi launches LNG bunkering simulator in Malaysia

Maritime consultancy Kasi Group is to launch an LNG bunkering simulator in Sabah, Malaysia, marking a first for LNG training in the country.

The simulator has been designed to provide port staff and marine services employees with a range of skills necessary to identify risk and safely manage LNG bunkering operations in the country.

"In our business, we can't stand still or rest on our laurels. We have to keep pushing no matter how crazy it is. It's always about riding the next wave because technology is always changing," Benjamin Nair, executive director of Kasi, said.

Kasi has announced plans to roll-out the technology worldwide following successful testing at its site in Kota Kinabalu, in the north of the Sabah region of Malaysian Borneo.

"The (simulator) developer will be flying in to Sabah and we will do the global release of the LNG bunkering simulator here - believe it or not - here in Kota Kinabalu," Nair added.

Simulation development

Established by Nair in 1979, Kasi has grown into a specialist simulator firm following development of a simulator programme for bridge

operations in the shipping industry in the early 2000s. Since then the firm has conducted extensive research in core markets, including Denmark, Russia and Sweden, to identify the major challenges for emergent industries such as LNG fuelling.

"Having the bridge simulator meant we could project the image on screen... it was something quite revolutionary. People couldn't believe we had this facility in KK [but now] people actually like to come to KK to do simulation (training) because they see our city as a place for relaxation as well," he said.

LNG potential

Peninsular Malaysia has a longer history of LNG development thanks to more developed infrastructure and proximity to Singapore which acts as a trading hub. Authorities at the port of Johor recently signed a deal with Petronas LNG (PLL) to deliver marine services and improve vessel tariffs for LNG handling services at PLL's Regasification Terminal Pengerang (RGTP).



Kasi simulator

Earlier this year, Thai firm PTT Exploration and Production announced its largest discovery to date, estimated at roughly 2 trillion cubic feet, in offshore Malaysia. The giant gas reserve in the offshore Sarawak region was reported to be the seventh largest global discovery of the year.

"We expect Lang Lebah to have a high chance of commercialisation as feedgas into the Malaysia LNG (MLNG) complex. The plant is in urgent need of new supply as existing sources have only met 85 percent of its requirements in 2018," Huang Tra Ho, senior analyst at research analyst firm Wood Mackenzie, said. ■

NEWS NUDGES

Affinity facilitates first LNG freight swap

Trading specialist Affinity has facilitated the first LNG freight swap settled against the Baltic Exchange LNG spot assessments.

"With liquidity increasing in the LNG market in recent years, freight has come under the spotlight as participants look to manage their exposure to vessel spot rates. Using the Baltic Exchange's rate assessments, we are able to help clients benchmark their freight exposure and develop a forward market for hedging price risk," Benjamin Gibson, Head of LNG Derivatives at Affinity, said.

The move is expected to bolster the case for LNG fuelling as it "represents an important milestone in the development of an LNG forward freight market".

"Initial trades are all about testing the settlement mechanism. Now is the time to try things and see how they work. We have lots of interest in the Baltic's forthcoming Atlantic routes and a weighted average of routes to give a global LNG freight benchmark," added Gibson. ■



Kasi simulation room



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Zhang Jia-Hua, Operations Team Leader
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ENN books China's first seagoing LNG bunker vessel

Chinese clean energy specialist ENN Energy has signed a contract for the construction of China's first seagoing LNG bunker vessel.

The deal will see the 8,500-cubic-metre-capacity vessel constructed by the Dalian Shipbuilding Industry Corporation (DSIC) at its shipyard in mainland China.

"This project is China's first LNG bunkering vessel with a C type tank and is another milestone for DSIC in the gas carrier market. It follows the successful delivery of a VLEC with a capacity of 85,000 cubic metres - the world's largest C type tank. These outstanding projects and more than 10 years R&D on large scale LNG carriers, DSIC is ready for the arrival of the LNG era," Richard Hu, Marketing Director at DSIC, said.

Zhoushan terminal

The pioneering vessel is scheduled to start operations in 2020 and will be based at ENN's new Zhoushan LNG receiving and bunkering terminal in eastern Zhejiang province.

The new Zhoushan site will be one of the first LNG refuelling hubs built and operated by a Chinese private company and is predicted to deliver receiving capacity of 3 million tons of LNG.

Alongside daily LNG bunkering operations ENN's new vessel will



ENN rendition of LNG bunker site

also conduct gas testing services for LNG carriers and other LNG-fuelled vessels. Listed in Hong Kong, ENN Energy is part of consolidated holding company ENN Group, one of the largest private energy groups in China.

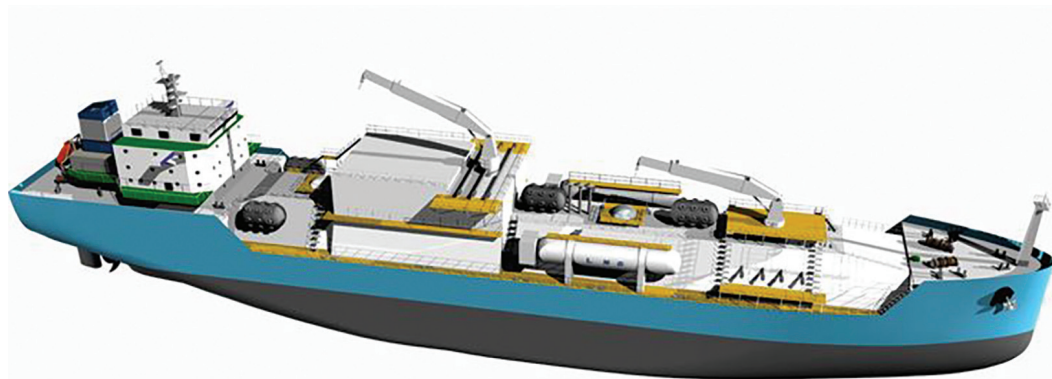
CSDRC design

Designs for the bunker vessel have been developed by China Ship Design & Research Center, including input from Finnish equipment manufacturer Wärtsilä.

Wärtsilä will also supply the vessel's cargo handling system, a 34DF dual-fuel main engine, gearbox, controlled pitch propeller

(CPP), shaft generator, two 20DF dual-fuel auxiliary engines, and an onboard sewage treatment plant.

"Being the first vessel of its kind built and owned by Chinese companies, makes this an important and exciting project. The experience and well-established track record that Wärtsilä has in LNG shipping applications is again endorsed with this latest order. Our ability as a single-source supplier to offer the full and integrated package of solutions brings real value to both the owners and the yard," Scott Oh, Area Sales Director, Middle East & Asia, Wärtsilä Marine, commented. ■



The first Chinese owned LNG bunker vessel

NEWS NUDGE

Clarksons: LNG demand driving global fleet growth

Rapid growth in LNG infrastructure is fuelling an increase in the global fleet of LNG carriers, according to the latest data from consultancy Clarksons Research.

The firm predicts that the global LNG carrier fleet will expand by 5.6% and 6.9% in 2019 and 2020 respectively, rising from a base of 570 vessels as at the end of June 2019.

"Global trade in LNG continues its strong growth phase, with an expected 8.4% growth in 2019 and 7.4% in 2020... With 93 million tonnes per annum of export capacity under construction, and a further 313 mtpa of capacity at FEED, growth potential remains strong," Steve Gordon, managing director at Clarksons Research, said.

Longer term modelling by Clarksons also suggests that the LNG fleet will outnumber the VLCC fleet by 2026, with growing interest in small scale LNG, FSRU, FLNG and LNG as a marine fuel.

"This trade expansion, combined with high day rates for vessels trading on the short term market over the past twelve months, has supported newbuilding orders totalling US\$17 billion since start 2018 and helped build a total newbuilding orderbook of 25% of the fleet (US\$24.5 billion)," he said.

Clarksons forecasts that between three and four percent of world tonnage will be "LNG fuel capable through 2020", with the majority still in LNG carrier sector. LNG infrastructure is also set to continue growing, with number of ports equipped with LNG bunkering having increased from approximately 20 to 100 in the past five years. ■

Gasum plans Nordic LNG fuelling station network

Finnish gas supplier Gasum has announced ambitious plans to create a network of 50 LNG refuelling stations across the Nordic region by next year.

With two facilities on the ground already, the firm expects the new network of stations to cater primarily to heavy haulage firms and logistic companies. The station will all be equipped to supply LNG as well as liquefied biogas (LBG).

"This development will accelerate the growth of gas-based hauling in the Nordics and at the

same time offer logistic companies sustainable fuel options that will help them reach their environmental targets. As an added bonus, they will also make significant savings in fuel costs," Mikael Antonsson, Director for Traffic at Gasum Sweden, said.

The first LNG filling station in the country was opened in Västerås, near Lake Mälaren in

Västmanland province, in May and the second in Norrköping, in Östergötland province, in June. Finland has already commissioned six stations.

LNG 'a necessity'

The rapid roll-out of the new stations is seen as "a necessity in the transition to a cleaner future", according to Gasum as it also sees a

steep increase in demand for LNG.

"Climate change affects all of us and we need to solve it together. Based on market demand, Gasum is building a network of filling stations in the Nordics in close co-operation with several partners," Antonsson commented.

High traffic areas

The new filling stations are scheduled to be built in high traffic areas, such as the E4 route where the new Norrköping station is located, making it easy for HDVs to access it and refuel. Gasum is also working with partners such as logistics firm Alfredsson Transport to identify new growth areas.

"We wanted to update our vehicle fleet from diesel to liquefied gas since the economic and environmental benefits are significant for us as a logistics company. In cooperation with Gasum we have worked tirelessly on this initiative to have station here in Norrköping, and it is great to see that our hard work finally has paid off," Erik Alfredsson, CEO of Alfredsson Transport, said.

The new LNG network will complement more than 30 existing gas filling stations Gasum operates for different vehicle segments in Sweden and Finland. ■



LNG tank

Chart completes Sweden's first LNG fuelling station

Cryogenic storage specialist Chart Ferroxx has commissioned the first LNG filling station in Sweden as it aims to meet growing demand from the regional haulage industry.

The station was designed, built and commissioned by Chart on behalf of fuel supplier Gasum and features capacity to fill two cold and warm LNG vehicles at the same time.

"LNG and Liquefied Bio-Gas (LBG) are fast becoming accepted as the future fuel for heavy haulage vehicles in the region and Chart will deliver a further 17 stations across Scandinavia before the year end, mainly in Finland, Sweden and Norway," a spokesperson for the firm said.

Saturation on the Fly

The firm will deploy its proprietary Saturation on the Fly (SoF) vaporization technology in the build and estimates that each dispenser will be capable of filling one truck every six minutes.

"As the market evolves, so has Chart's design, and these latest stations are equipped with proprietary Saturation on the Fly (SoF) technology, which recognizes both spark ignited and compression engines, improves the station's overall energy management and provides a total refuelling time consistent with equivalent diesel engine vehicles," the firm notes.

The station will be compatible with all types of LNG-fuelled trucks as well as buses and coaches.

Turnkey solution

The project is set to be delivered on a compact turnkey basis and will include detail calibration and MID certification. The station is designed to have capacity for 89 cubic metres of fuel.

Based in the Czech Republic,

Chart Ferroxx is a subsidiary of Luxembourg-based Chart industries which operates international engineering and manufacturing facilities in Australia, China, the Czech Republic, Germany and the United Kingdom as well as eight U.S. states.

The firm's filling station solution has expanded rapidly in recent years, with new sites developed throughout the Baltics as well as branching out to the Adriatic where Chart Ferroxx completed Croatia's first LNG vehicle fuelling station last year. ■



Birdseye view of Chart LNG compact station

Coralius completes first ARA bunker operations

Finnish energy group Gasum has announced the successful first bunkering of its vessel *Coralius* at the refining area of the port of Rotterdam.

The arrival of the ship marked a “milestone” for the bunker vessel as it completed LNG transfer to the vessel *Bit Viking*, the first ship-to-ship transfer by the vessel in the Amsterdam-Rotterdam-Antwerp (ARA) area.

“It’s time to celebrate. Finally, being able to bunker our clients in the ARA area increases LNG availability and security for the LNG fuelled fleet. The amount of LNG driven vessels is growing rapidly globally, and we will definitely be part of the growth in being present where LNG is needed,” Kimmo Rahkamo, Vice President for natural gas and LNG at Gasum, commented.

Making LNG more accessible

The *Coralius* has capacity for 5,800 cubic meters of LNG and is operated on a time charter contract by Gasum with the owners Anthony Veder and Sirius Shipping. Measuring 100 meters in length and equipped with the latest fast transfer technology the vessel can handle larger volumes of LNG and transfer at high rates.

“We are happy with this opportunity to get LNG by ship-to-ship bunkering also in the Port of Rotterdam. Our vessel *Bit Viking* converted to LNG already in 2011. Since then we have operated on LNG about 97% of the time, mainly supported by Gasum.



Coralius bunkering *Bit Viking* in Rotterdam

We would like to continue on this path and consequently we are depending on reliable and flexible LNG supplies,” says Anders Hermansson, Technical Manager of Tarbit Shipping.

100th operation in 18 months

The vessel is also designed to carry out LNG refuelling operations either in port or at sea and holds a Finnish/Swedish Ice Class 1A classification making it equally capable of accessing the remote areas of Norway as the industrial heartlands of Northern Germany.

“*Coralius* has her main operation area in the North Sea and the Skagerrak area,” a spokesperson for Gasum explained. “End of February she celebrated another milestone as she completed her 100th bunkering operation in just

18 months. *Coralius* delivers LNG through ship-to-ship bunkering at sea and in port. This has significantly increased Gasum’s flexibility and responsiveness to vessels that require LNG but are unable to visit a terminal or a port. By making LNG more accessible to vessels, ship-to-ship bunkering also boosts efficiency.”

Headquartered in Espoo, Finland, Gasum is 26% owned by the Finnish government and provides integrated gas services across the Nordic region and northern

Europe. The firm is also the transmission system operator of the natural gas grid of Finland, a natural gas importer and seller and biogas refiner in Finland and Sweden.

Gasum now foresees an increase in the average amount of delivered stem, stating it will “perform bunkerings on shuttle tankers and other bigger vessels” as the *Coralius* has increased its efficiency making it “now nearly as quick as conventional oil bunkerings”.

NEWS NUDGES

Virginia first U.S. port to join SEA/LNG

The U.S. Port of Virginia is the latest to join the SEA/LNG consortium as it plans to scale up LNG bunkering operations.

The port is the first in the U.S. to join the multi-sector industry coalition and in March established a working group to examine the benefit and scalability of LNG bunkers for maritime trade.

“We’re very pleased to welcome the Port of Virginia as our first US port member. The US has vastly increased its LNG export capacity since the industry really took flight in early 2016, inspiring development in LNG bunkering capabilities on the East and West Coasts. The addi-

tion of the Port of Virginia to the coalition marks the climbing interest in LNG as a commercially viable, environmentally sustainable fuel for US domestic and international shipping,” Peter Keller, Chairman, SEA\LNG, said.

SEA\LNG’s mission is to address the key barriers to the adoption of LNG; advocating for collaboration, demonstration, and communication amongst industry players. The coalition includes ABS, Carnival Corporation, DNV GL, Eagle LNG Partners, ENGIE, ENN Group, GE, GTT, JAX LNG, Keppel Gas Technology, Lloyd’s Register, Mitsubishi, NYK Line, Port of Rotterdam, Qatar-gas, Shell, Total, TOTE, Toyota Tsusho, YKIP, Marubeni, and Wärtsilä.



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Q-LNG prepares to launch world first bunker ATB

Fuel transport specialist Quality Liquefied Natural Gas Transport (Q-LNG) is set to launch the world's first LNG bunker articulated tug barge (ATB) in 2020.

The pioneering vessel is currently under construction at shipbuilder VT Halter Marine's facilities in Pascagoula, Mississippi, and is set to have capacity for 4,000 cubic meters of LNG once complete.

"The ATB will be an integral part of the LNG infrastructure development in the cruise entertainment industry and designed to provide ship-to-ship transfers of LNG to vessels utilizing LNG as a fuel source, and also ship-to-shore transfers to small scale marine distribution infrastructure in the U.S. Gulf of Mexico and abroad," a spokesperson for Q-LNG said.

100-metre barge

The complete vessel will comprise a 100-metre-long barge with a powerful tug positioned in a notch in the stern. The vessel will be

chartered by energy major Shell to bunker four internationally flagged dual-fuel ships from 2020 onwards.

"The ATB Tug will have 5,100 horsepower, GE 6L250 MDC EPA Tier 4 main engines, with Z-drives. It is designed to meet the requirements of American Bureau of Shipbuilding (ABS) and the International Gas Carrier (IGC) code," a spokesperson for VT Halter said.

Wärtsilä to supply NACOS system

The ship will be equipped by Finnish technology developer Wärtsilä, which will supply LNG cargo storage, handling and control systems as well as main propulsion steerable thrusters, shaft lines, barge automation, power management, ballast water management



Artist's rendition of ATB vessel

and bow thruster. The tug will also utilise Wärtsilä's NACOS Platinum dynamic positioning system and supporting navigation and communication equipment.

"The favourable cost differential plus the superior environmental factors will lead to increased demand for LNG in the North

American market space. It's a practically sulphur-free, clean, well-proven technology, easy to burn, and can lower engine maintenance costs. All of these factors make LNG much more viable as a marine fuel," Bill Amundsen, Sales Manager for Marine Solutions at Wärtsilä, said. ■

Brittany Ferries expands LNG-fuelled fleet

French shipping line Brittany Ferries is to expand its LNG-fuelled fleet with the addition of three new vessels from this year onward.

The acquisitions come as part of a fleet renewal programme that is expected to drive investment of €550M in sustainable development across the company.

"Despite the significant investment made in scrubber technology for our ships, we know that the best way to respect the environments in which we operate, and to exceed emissions reduction targets, is to commit to LNG. This is what we have done with an investment worth half a billion euros," Frédéric Pouget, Brittany

Ferries director of fleet and port operations commented.

Round trip reduction

The ambitious fleet renewal programme aims to significantly cut carbon emissions per passenger due to improvements in passenger capacity and freight space which have meant that the firm can reduce round trips from the UK to Spain by 20% per week.

"That is because *Cap Finistère* and *Baie de Seine* are less efficient vessels with much smaller

passenger and freight capacities than the LNG E-Flexer class ships that will replace them," Pouget notes.

Each of the new E-Flexer class ships will be 215 metres in length and have capacity for around 1,000 passengers and 3,000 garage lane metres of freight vehicles.

Total, Repsol to bunker

The first vessel to arrive under this programme is set to be the one-year charter vessel *Kerry*, which is scheduled to enter opera-

tions in November 2019. Sister vessels *Santoña* and *Salamanca* are scheduled to enter service later, with *Salamanca* joining the fleet in 2022 and *Santoña* in 2023 under charter from Stena.

A further LNG vessel, *Honfleur*, has already been secured and is set to be operational in 2020 when it will serve the Portsmouth to Caen route. The *Honfleur* is currently under construction in Germany.

Bunkering for this vessel when it is in dock in France will be carried out in partnership with energy firm Total using containerised LNG. This will be trucked to dock and then lifted onboard using deck cranes. For Spanish operations, fuelling specialist Repsol will deliver LNG via its storage facilities at ports in northern Spain.

Brittany Ferries is the trading name of BAI Bretagne Angleterre Irlande and operates a fleet of ferries between France, the UK, Ireland, and Spain. ■



Brittany Ferries vessel

Brunsbuettel tender to create LNG fuelling hub

A consortium of European fuelling specialists has launched plans to develop a new LNG terminal in Northern Germany that will act as a regional bunkering hub.

The German LNG Terminal partnership launched pre-qualification for tenders in June, calling for bids to construct a facility at a site in Brunsbuettel. The proposed plant will have capacity for 8 billion cubic meter of fuel per annum.

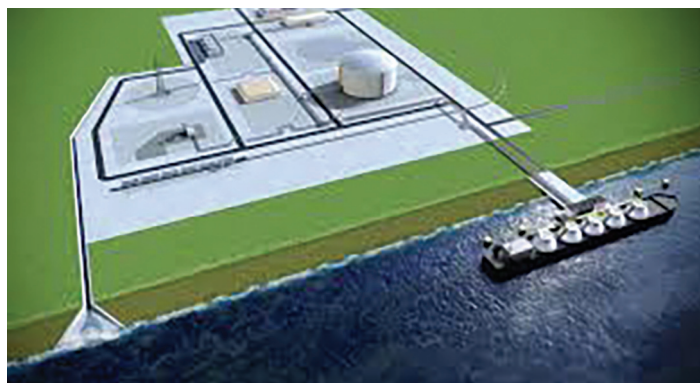
"Binding (lump-sum) offers will have to be prepared and submitted by pre-qualified bidders between August and October 2019. The winning bidder(s) will be announced during the first quarter of 2020," a spokesperson for the venture said.

Vopak, Gasunie, Oiltanking

German LNG Terminal is a partnership of Dutch companies Vopak and Gasunie, with participation from German company Oiltanking, part of Marquard & Bahls AG.

Under the proposals floated by the joint venture, the consortium will build, own and operate a combined import and distribution LNG terminal, combining the partners' "considerable expertise" in the LNG fuel handling.

"The market's reaction to the



Artist's rendition of LNG facility

Brunsbuettel terminal project has been positive with interest from future customers reflected in the execution of several Heads of Agreements. The application for exemption from regulated third party access and the permit application are based on 8 bcma terminal capacity," the partners noted.

Multi-purpose hub

The new hub is expected to strengthen the region's bunkering capacity and provide "multi-purpose services" as well as open access to LNG fuel.

Brunsbuettel was chosen as the location for the new facility due to its proximity to the North Sea, the Kiel Canal, the port of Hamburg and ChemCoast Park, which

are expected to give it easy access to markets in North-West Europe, Scandinavia and the Baltics and according LNG bunker potential.

"In addition, the German federal government supports an LNG terminal as it contributes to gas supply diversification and provides efficient supply chains for LNG as an alternative fuel," a spokesperson for the partners said.

The winning EPC entities or consortium will receive a full notice to proceed 6 months after ENTP. They will receive a further 3 years to complete the base scope terminal, inclusive site preparation, waterfront with new jetty, LNG storage and all normal process equipment and supporting infrastructure for an LNG terminal. ■



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WORLD SMALL SCALE LNG FLEET*

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
1974	Seagas	187	LNG	Sweden	Yes	AGA
1988	Kayoh Maru	1,517	LNG	Japan	Yes	Daiichi
1993	Aman Bintulu	18,928	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
1996	Surya Aki	19,475	LNG	Indonesia - Japan	Yes	MCGC
1997	Aman Sendai	18,928	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
1998	Pelita Energy	18,800	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
2000	Triputra	23,096	LNG	Indonesia - Japan	Yes	MCGC
2003	Pioneer Knutsen	1,100	LNG	Norway	Yes	Knutsen
2003	Shinju Maru No.1	2,540	LNG	Japan	Yes	Shinwa
2005	North Pioneer	2,500	LNG	Japan	Yes	Japan Liquid Gas
2007	Sun Arrows	19,531	LNG	Malaysia - Russia - Japan	Yes	Mitsui
2008	Kakurei Maru	2,536	LNG	Japan	Yes	Hogaki Zosen
2008	Shinju Maru No.2	2,540	LNG	Japan	Yes	Shinwa
2009	Coral Methane	7,551	LNG/LPG/Ethylene	Northwest Europe/Baltics	Yes, sometimes	Anthony Veder
2010	Coral Favia	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2010	Coral Fraseri	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2011	Akebono Maru	3,556	LNG	Japan	Yes	Chuo Kaiun
2011	Coral Furcata	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2011	Coral Fungia	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2011	Vision Spirit	12,000	LNG/LPG/Ethylene	Worldwide	No	Teekay
2011	Unikum Spirit	12,000	LNG/LPG/Ethylene	Worldwide	No	Teekay
2012	Coral Energy	15,600	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2013	JX Energy TBN	2,500	LNG	Japan	Yes	JX Energy
2013	Kakuyu Maru	2,500	LNG	Japan	Yes	Tsurumi Sunmarine
2013	Coral Anthelia	6,500	LNG/Ethylene			Anthony Veder
2014	LNG-Oil combi**	2,000	LNG	Germany	Yes	Veka
2014	Short Sea LNG Tanker **	4,000	LNG	Germany	Yes	Veka
2015	LNG Inland bunker**	800	LNG	Germany	Yes	Veka
2015	LNG bunker barge 1†	2,250	LNG	China	Yes	Anhui Huaqiang Natural Gas
2015	LNG bunker barge 2†	2,250	LNG	China	Yes	Anhui Huaqiang Natural Gas
2015	LNG bunker barge 3†	2,250	LNG	China	Yes	Anhui Huaqiang Natural Gas
2015	LNG Barge TBN	3,000	LNG	US Coast	Yes	LNG America
2015	10 small carriers TBN**	5,000	LNG			Bimantara Group
2015	Jahre TBN**	6,200	LNG	Norway	Yes	Donsotank/Jahre Marine
2015	Norgas TBN**	17,000	LNG/LPG/Ethylene	Worldwide		Norgas Carriers
2015	Norgas TBN**	17,000	LNG/LPG/Ethylene	Worldwide		Norgas Carriers
2015	JS Ineos Ingenuity	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	JS Ineos Insight	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	JS Ineos Intrepid	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	TBN 1	27,500	LNG	China?		Danyang?
2015	TBN 2	27,500	LNG	China?		Danyang?
2015	TBN 3	27,500	LNG	China?		Danyang?
2015	PetroChina TBN	30,000	LNG	China		PetroChina
2016	Clean Jacksonville	2,200	LNG	US Coast	Yes	CME
2016	LNG Prime	2,250	LNG	Northwest Europe	Yes	Veka Deen LNG
2016	JS Ineos Indepence	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Innvation	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Inspiration	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	Hai Yang Shi You 301	30,000	LNG	Bali FSU	Yes	CETS (CNOOC)
2016	Navigator Aurora	35,000	Ethane/Ethylene	Markus Hood - Stenungsund	Ethane, for Borealis	Navigator
2016	Gaschem Beluga	36,000	Ethane/Ethylene	US - Teeside	Ethane, for Sabic	Gaschem Services
2016	Gaschem Orca	36,000	Ethane/Ethylene	US - Teeside	Ethane, for Sabic	Gaschem Services

For more information please visit <http://small-lng.com>

*Includes multi-gas, ethylene and LNG bunker ships with 40,000 cubic metres LNG cargo capacity or less

TBN = To Be Nominated indicates ships are still at construction/planning stage

** = project shelved † = Data to be verified Data last updated = 29th July 2019

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
2016	Ocean Yield TBN**	36,000	Ethane/Ethylene	US - Teeside	Ethane, for Sabic	Gaschem Services
2017	Oizmendi	600	LNG	Bilbao	Yes	Itsas Gas
2017	CME TBN†	2,200	LNG	US Coast	Yes	CME
2017	CME TBN†	2,200	LNG	US Coast	Yes	CME
2017	ENGIE Zeebrugge	5,000	LNG	Northwest Europe	Yes	NYK
2017	Coralius	5,800	LNG	Northwest Europe/Baltics	Yes, for Skangas	Anthony Veder
2017	Cardissa	6,500	LNG	Northwest Europe	Yes	Shell
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	Coral EnergiCE	18,000	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2017	JS Ineos Invention	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	JS Ineos Intuition	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	Yuan He 1	30,000	LNG	China	Yes	CSR
2017	Navigator Eclipse	35,000	Ethane/Ethylene	US	Ethane	Navigator
2017	Navigator Nova	35,000	Ethane/Ethylene	US	Ethane	Navigator
2017	Navigator Prominence	35,000	Ethane/Ethylene	US	Ethane	Navigator
2018	HUA XIANG 8	13,720	LNG	China	Yes	Zhejiang Huaxiang
2018	CME TBN†	2,200	LNG	US Coast	Yes	CME
2018	LNG London	3,000	LNG	Northwest Europe	Yes	Shell
2018	Shell Bunker Barge TBN 2	6,500	LNG	Northwest Europe	Yes	Shell
2018	Shell Bunker Barge TBN 3	6,500	LNG	Northwest Europe	Yes	Shell
2018	Kairos	7,500	LNG	Baltic	Yes	Bernhard Schulte
2018	Qi Yuan	28,000	LNG	China	Yes	Dalian Inteh Group
2018	Evergas TBN	32,000	Ethane/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2018	Evergas TBN	32,000	Ethane/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2018	Evergas TBN	32,000	Ethane/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2018	Evergas TBN	32,000	Ethane/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2018	Bunker Breeze	0	LNG	Barcelona	Yes	Suardiaz Energy Shipping
2019	KLine TBN	7,500	LNG	Korea	Yes	Korea Line
2019	KLine TBN	7,500	LNG	Korea	Yes	Korea Line
2019	Stolt TBN	7,500	LNG	Mediterranean	Yes	Stolt-Nielsen Gas
2019	Stolt TBN	7,500	LNG	Mediterranean	Yes	Stolt-Nielsen Gas
2020	Shell Bunker Barge	4,000	LNG	US Coast	Yes	Q-LNG Transport / Harvey Gulf
2020	Stolt TBN (option) **	7,500	LNG		Yes	Stolt-Nielsen Gas
2020	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2020	Total TBN	18,600	LNG	NWE	Yes	MOL
2020	FuelLNG TBN	7,500	LNG	Singapore	Yes	FuelLNG
2020	CLS TBN	3,500	LNG	Japan	Yes	CLS
2020	Elenger TBN	6,000	LNG	NWE	Yes	Elenger
2020	ENN TBN	8,500	LNG	China	Yes	ENN
2021	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2021	Knutsen TBN	30,000	LNG	Mediterranean	Yes	Knutsen OAS
2021	Gazprom Neft TBN	5,800	LNG	Russia	Yes	Gazprom Neft
2021	PE TBN	12,000	LNG	Singapore	Yes	MOL
2021	JMU TBN	2,500	LNG	Japan	Yes	JMU
2022	Stolt TBN	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2022	Stolt TBN	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2024	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2024	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2026	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2026	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas

For more information please visit <http://small-lng.com>

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TBN = To Be Nominated indicates ships are still at construction/planning stage

** = project shelved † = Data to be verified Data last updated = 29th July 2019

LNG-FUELLED SHIPS IN OPERATION WORLDWIDE + NEW ORDERS

Year of delivery	Project type	Ship name	Ship type	Shipowner	Area of operation	Class
2000	Newbuild	Glutra	Car/Passenger ferries	Fjord1	Norway	DNV GL
2003	Newbuild	Viking Energy	Offshore supply ships	Eidesvik Shipping	Norway	DNV GL
2003	Newbuild	Stril Pioneer	Offshore supply ships	Simon Møkster	Norway	DNV GL
2006	Newbuild	Bergensfjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2007	Newbuild	Stavangerfjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2007	Newbuild	Raunefjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2007	Newbuild	Mastrafjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2007	Newbuild	Fanafjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2008	Newbuild	Viking Queen	Offshore supply ships	Eidesvik Shipping	Norway	DNV GL
2009	Newbuild	Viking Lady	Offshore supply ships	Eidesvik Shipping	Norway	DNV GL
2009	Newbuild	Prinsen	Car/Passenger ferries	Norled	Norway	DNV GL
2009	Newbuild	Moldefjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2009	Newbuild	Kongen	Car/Passenger ferries	Norled	Norway	DNV GL
2009	Newbuild	Dronningen	Car/Passenger ferries	Norled	Norway	DNV GL
2009	Newbuild	Barentshav	Other activities	Remøy Management	Norway	DNV GL
2010	Newbuild	Sortland	Other activities	Remøy Management	Norway	DNV GL
2010	Newbuild	Selbjørnsfjord	Car/Passenger ferries	Fosen Namsos Sjø	Norway	DNV GL
2010	Newbuild	Romsdalsfjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2010	Newbuild	Korsfjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2010	Newbuild	Fannefjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2010	Newbuild	Bergen	Other activities	Remøy Management	Norway	DNV GL
2011	Retrofit	Bit Viking	Oil/Chemical tankers	Tarbit Shipping	Norway	DNV GL
2011	Newbuild	Skandi Gamma	Offshore supply ships	DOF	Norway	DNV GL
2011	Newbuild	Normand Arctic	Offshore supply ships	Solstad Rederi	Norway	DNV GL
2011	Newbuild	Boknafjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2012	Retrofit	Tresfjord	Car/Passenger ferries	Fjord1	Norway	DNV GL
2012	Newbuild	Viking Princess	Offshore supply ships	Eidesvik Shipping	Norway	DNV GL
2012	Newbuild	Viking Prince	Offshore supply ships	Eidesvik Shipping	Norway	DNV GL
2012	Newbuild	Værøy	Car/Passenger ferries	Torghatten Nord	Norway	DNV GL
2012	Newbuild	Olympic Energy	Offshore supply ships	Olympic Shipping	Norway	DNV GL
2012	Newbuild	Landegode	Car/Passenger ferries	Torghatten Nord	Norway	DNV GL
2012	Newbuild	Island Crusader	Offshore supply ships	Island Offshore	Norway	DNV GL
2012	Newbuild	Island Contender	Offshore supply ships	Island Offshore	Norway	DNV GL
2012	Newbuild	Høydal	General cargo ships	Nordnorsk Shipping	Norway	DNV GL
2012	Newbuild	Barøy	Car/Passenger ferries	Torghatten Nord	Norway	DNV GL
2013	Newbuild	Viking Grace	RoPax	Viking Line	Europe	LR
2013	Newbuild	Stavangerfjord	RoPax	Fjordline	Norway	DNV GL
2013	Newbuild	Ryfylke	Car/Passenger ferries	Norled	Norway	DNV GL
2013	Newbuild	REM Leader	Offshore supply ships	REM	Norway	DNV GL
2013	Newbuild	Lødingen	Car/Passenger ferries	Torghatten Nord	Norway	DNV GL
2013	Newbuild	Hardanger	Car/Passenger ferries	Norled	Norway	DNV GL
2013	Newbuild	Hai Yang Shi You 522	Tugs	CNOOC	Asia	CCS
2013	Newbuild	Hai Yang Shi You 521	Tugs	CNOOC	Asia	CCS
2013	Newbuild	Francisco	Car/Passenger ferries	Buquebus	America	DNV GL
2013	Newbuild	Eidsvaag Pioneer	General cargo ships	Eidsvaag	Norway	DNV GL
2013	Newbuild	Econuri	Other activities	Incheon Port Authority	Asia	KR
2014	Newbuild	With Marine	General cargo ships	Egil Ulvan Rederi	Norway	DNV GL
2014	Newbuild	With Harvest	General cargo ships	Egil Ulvan Rederi	Norway	DNV GL
2014	Newbuild	Turva	Other activities	Finnish Border Guard	Europe	DNV GL

Year of delivery	Project type	Ship name	Ship type	Shipowner	Area of operation	Class
2014	Newbuild	Siem Symphony	Offshore supply ships	Siem Offshore	Norway	DNV GL
2014	Newbuild	Rem Eir	Offshore supply ships	Remøy Shipping	Norway	DNV GL
2014	Newbuild	Coral Sticho	Gas tankers	Anthony Veder	Europe	BV
2014	Newbuild	Coral Star	Gas tankers	Anthony Veder	Europe	BV
2014	Newbuild	Borgøy	Tugs	Buksér & Berging	Norway	DNV GL
2014	Newbuild	Bokn	Tugs	Buksér & Berging	Norway	DNV GL
2014	Newbuild	Bergensfjord	RoPax	Fjordline	Norway	DNV GL
2015	Retrofit	Ostfriesland	Car/Passenger ferries	AG EMS	Europe	DNV GL
2015	Retrofit	Fure West	Oil/Chemical tankers	Furetank Rederi	Europe	BV
2015	Retrofit	Bergen Viking	Oil/Chemical tankers	Bergen Tankers	Norway	LR
2015	Newbuild	Stril Barents	Offshore supply ships	Simon Møkster Shipping	Norway	DNV GL
2015	Newbuild	Siem Pride	Offshore supply ships	Siem Offshore	Norway	DNV GL
2015	Newbuild	Sefarina	Gas tankers	Chemgas Shipping	Europe	BV
2015	Newbuild	Sakigake	Tugs	NYK	Asia	NK
2015	Newbuild	Prinsesse Isabella	Car/Passenger ferries	Samsøe municipality	Europe	DNV GL
2015	Newbuild	Perla del Caribe	Container ships	TOTE Shipholdings	America	ABS
2015	Newbuild	Kvitnos	Ro-Ro cargo ships	Nor Lines	Norway	DNV GL
2015	Newbuild	Kvitbjørn	Ro-Ro cargo ships	Nor Lines	Norway	DNV GL
2015	Newbuild	JS Ineos Intrepid	Gas tankers	Evergas	Global	BV
2015	Newbuild	JS Ineos Insight	Gas tankers	Evergas	Global	BV
2015	Newbuild	JS Ineos Ingenuity	Gas tankers	Evergas	Global	BV
2015	Newbuild	Helgoland	Car/Passenger ferries	AG EMS	Europe	DNV GL
2015	Newbuild	Harvey Power	Offshore supply ships	Harvey Gulf International Marine	America	ABS
2015	Newbuild	Harvey Energy	Offshore supply ships	Harvey Gulf International Marine	America	ABS
2015	Newbuild	Hai Yang Shi You 525	Tugs	CNOOC	Asia	CCS
2015	Newbuild	Greenland	Bulk carriers	Erik Thun	Europe	LR
2015	Newbuild	F.A. Gauthier	Car/Passenger ferries	Society of Quebec ferries	America	LR
2016	Newbuild	Ternsund	Oil/Chemical tankers	Terntank	Norway	BV
2016	Newbuild	Ternfjord	Oil/Chemical tankers	Terntank	Norway	BV
2016	Newbuild	Tern Sea	Oil/Chemical tankers	Terntank	Europe	BV
2016	Newbuild	Sundowner	Gas tankers	Chemgas Shipping	Europe	BV
2016	Newbuild	Siem Thiima	Offshore supply ships	Siem Offshore	Oceania	DNV GL
2016	Newbuild	Seaspan Swift	Car/Passenger ferries	Seaspan Ferries Corporation	America	BV
2016	Newbuild	Searoad Mersey II	Ro-Ro cargo ships	Searoad Holdings	Oceania	DNV GL
2016	Newbuild	Salish Orca	Car/Passenger ferries	BC Ferries	America	LR
2016	Newbuild	Polaris	Other activities	Arctia Shipping	Europe	LR
2016	Newbuild	Navigator Eclipse	Gas tankers	Navigator Gas	Global	ABS
2016	Newbuild	JS Ineos Inspiration	Gas tankers	Evergas	Global	BV
2016	Newbuild	Js Ineos Innovation	Gas tankers	Evergas	Global	BV
2016	Newbuild	Isla Bella	Container ships	TOTE Shipholdings	America	ABS
2016	Newbuild	Ireland	Bulk carriers	Erik Thun	Europe	LR
2016	Newbuild	Hasvik	Car/Passenger ferries	Boreal Transport Nord	Norway	DNV GL
2016	Newbuild	Harvey Liberty	Offshore supply ships	Harvey Gulf International Marine	America	ABS
2016	Newbuild	Hai Yang Shi You 526	Tugs	CNOOC	Asia	CCS
2016	Newbuild	Bergsfjord	Car/Passenger ferries	Boreal Transport Nord	Norway	DNV GL
2016	Newbuild	Auto Energy	Car carriers	UECC	Europe	DNV GL
2016	Newbuild	Auto Eco	Car carriers	UECC	Europe	DNV GL
2017	Retrofit	Wes Amelie	Container ships	Wessels Reederei	Europe	BV
2017	Retrofit	Abel Matutes	RoPax	Baleària	Europe	BV

Year of delivery	Project type	Ship name	Ship type	Shipowner	Area of operation	Class
2017	Newbuild	Tern Ocean	Oil/Chemical tankers	Terntank	Europe	BV
2017	Newbuild	Seaspan Reliant	Car/Passenger ferries	Seaspan Ferries Corporation	America	BV
2017	Newbuild	Scheldt River	Other activities	DEME	Europe	BV
2017	Newbuild	Salish Raven	Car/Passenger ferries	BC Ferries	America	LR
2017	Newbuild	Salish Eagle	Car/Passenger ferries	BC Ferries	America	LR
2017	Newbuild	Pax	Tugs	Østensjø Rederi	Norway	BV
2017	Newbuild	Navigator Prominence	Gas tankers	Navigator Gas	Global	ABS
2017	Newbuild	Navigator Nova	Gas tankers	Navigator Gas	Global	ABS
2017	Newbuild	Minerva	Other activities	DEME	Europe	BV
2017	Newbuild	Mia Desgagnés	Oil/Chemical tankers	Groupe Desgagnés	America	BV
2017	Newbuild	Megastar	RoPax	Tallink	Europe	BV
2017	Newbuild	JS Ineos Invention	Gas tankers	Evergas	Global	BV
2017	Newbuild	JS Ineos Intuition	Gas tankers	Evergas	Global	BV
2017	Newbuild	Js Ineos Independence	Gas tankers	Evergas	Global	BV
2017	Newbuild	Harvey Freedom	Offshore supply ships	Harvey Gulf International Marine	America	ABS
2017	Newbuild	Gaschem Orca	Gas tankers	Ocean Yield	Global	DNV GL
2017	Newbuild	Gaschem Beluga	Gas tankers	Ocean Yield	Global	DNV GL
2017	Newbuild	Dux	Tugs	Østensjø Rederi	Norway	BV
2017	Newbuild	Damia Desgagnés	Oil/Chemical tankers	Groupe Desgagnés	Global	BV
2017	Newbuild	Audax	Tugs	Østensjø Rederi	Norway	BV
2018	Retrofit	Spirit of British Columbia	Car/Passenger ferries	BC Ferries	America	ABS
2018	Newbuild	Visborg	RoPax	Rederi AB Gotland	Europe	DNV GL
2018	Newbuild	Viikki	Bulk carriers	ESL Shipping	Europe	DNV GL
2018	Newbuild	Thun Venern	Oil/Chemical tankers	Thun Tankers	Europe	BV
2018	Newbuild	Thun Eos	Oil/Chemical tankers	Thun Tankers	Europe	BV
2018	Newbuild	Taíno	Container ships	Crowley Maritime Corporation	America	DNV GL
2018	Newbuild	Paul A. Desgagnés	Oil/Chemical tankers	Groupe Desgagnés	America	BV
2018	Newbuild	Nyksund	General cargo ships	Nordnorsk Shipping	Norway	DNV GL
2018	Newbuild	Mendeleev Prospect	Crude oil tankers	SCF	Europe	DNV GL
2018	Newbuild	Maju Loyalty	Tugs	Maju Maritime (Boskalis)	Asia	ABS
2018	Newbuild	Lomonosov Prospect	Crude oil tankers	SCF	Europe	DNV GL
2018	Newbuild	Livingstone	Other activities	DEME Tideway	Europe	DNV GL
2018	Newbuild	KST Liberty	Tugs	Keppel Smit Towage (Boskalis)	Asia	ABS
2018	Newbuild	Ilshin Green Iris	Bulk carriers	Ilshin	Asia	LR
2018	Newbuild	Harvey America	Offshore supply ships	Harvey Gulf International Marine	America	ABS
2018	Newbuild	Haaga	Bulk carriers	ESL Shipping	Europe	DNV GL
2018	Newbuild	Gaia Desgagnés	Oil/Chemical tankers	Groupe Desgagnés	America	BV
2018	Newbuild	Gagarin Prospect	Crude oil tankers	SCF	Europe	DNV GL
2018	Newbuild	Fure Valö	Oil/Chemical tankers	Furetank Rederi	Europe	BV
2018	Newbuild	Elio	Car/Passenger ferries	Caronte & Tourist	Europe	RINA
2018	Newbuild	El Coquí	Container ships	Crowley Maritime Corporation	America	DNV GL
2018	Newbuild	Ecodelta	Other activities	van der Kamp	Europe	DNV GL
2018	Newbuild	Containerships Nord	Container ships	Containerships	Europe	ABS
2018	Newbuild	Armand-Imbeau II	Car/Passenger ferries	Society of Quebec ferries	America	LR
2018	Newbuild	Aidanova	Cruise ships	Aida Cruises	Global	RINA
2019	Retrofit	Spirit of Vancouver Island	Car/Passenger ferries	BC Ferries	America	ABS
2019	Retrofit	Sicilia	RoPax	Baleària	Europe	RINA
2019	Retrofit	Samuel de Champlain	Other activities	Dragages-Ports	Europe	BV
2019	Retrofit	Sajir	Container ships	UASC	Global	DNV GL

Year of delivery	Project type	Ship name	Ship type	Shipowner	Area of operation	Class
2019	Retrofit	Napoles	RoPax	Baleària	Europe	RINA
2019	Retrofit	Bencomo Express	Car/Passenger ferries	Fred. Olsen	Europe	DNV GL
2019	Newbuild	Willem De Vlamingh	Car/Passenger ferries	Royal Doeksen	Europe	LR
2019	Newbuild	Willem Barentsz	Car/Passenger ferries	Royal Doeksen	Europe	LR
2019	Newbuild	Vernadsky Prospect	Crude oil tankers	SCF	Europe	DNV GL
2019	Newbuild	Thun Evolve	Oil/Chemical tankers	Thun Tankers	Europe	BV
2019	Newbuild	Thjelvar	RoPax	Rederi AB Gotland	Europe	DNV GL
2019	Newbuild	TBN 4	Container ships	CMA CGM	Global	BV
2019	Newbuild	TBN 2	Other activities	German Transport Ministry	Europe	Unknown
2019	Newbuild	TBN 2	Car/Passenger ferries	Clyde and Hebrides Ferry Service	Europe	LR
2019	Newbuild	TBN 1	Tugs	Ningbo Zhoushan Port Co.	Asia	CSS
2019	Newbuild	TBN 1	Other activities	German Transport Ministry	Europe	Unknown
2019	Newbuild	TBN 1	Car carriers	Siem Car Carriers	Global	ABS
2019	Newbuild	TBN	Oil/Chemical tankers	Sinanju Tankers	Asia	BV
2019	Newbuild	TBN	General cargo ships	SeOil Agency/Gas Entec	Global	Unknown
2019	Newbuild	Spartacus	Other activities	DEME	Europe	BV
2019	Newbuild	Sleipnir	General cargo ships	Heerema Offshore Services	Global	LR
2019	Newbuild	Siem Rhapsody	Offshore supply ships	Siem Offshore	Norway	DNV GL
2019	Newbuild	Siem Melody	Offshore supply ships	Siem Offshore	Norway	DNV GL
2019	Newbuild	Siem Confucius	Car carriers	Siem Car Carriers	Global	ABS
2019	Newbuild	Shetland	Bulk carriers	Erik Thun	Europe	LR
2019	Newbuild	Samuel Prospect	Crude oil tankers	SCF	Europe	DNV GL
2019	Newbuild	Samsung 2237	Crude oil tankers	AET	Global	DNV GL
2019	Newbuild	Samnøy	Car/Passenger ferries	Torghatten	Norway	DNV GL
2019	Newbuild	Rossi A. Desgagnés	Oil/Chemical tankers	Groupe Desgagnés	America	BV
2019	Newbuild	Ramelia	Oil/Chemical tankers	Ålvtank	Europe	BV
2019	Newbuild	Ramanda	Oil/Chemical tankers	Ålvtank	Europe	BV
2019	Newbuild	PX 1098	Tugs	PSA Marine	Asia	BV
2019	Newbuild	Orion	Other activities	DEME	Europe	DNV GL
2019	Newbuild	Marie Curie	RoPax	Baleària	Europe	Unknown
2019	Newbuild	Lysøy	Car/Passenger ferries	Torghatten	Norway	DNV GL
2019	Newbuild	Libas	Fishing vessels	Liegruppen	Norway	Unknown
2019	Newbuild	L'Ostrea	Other activities	Dragages-Ports	Europe	BV
2019	Newbuild	Korolev Prospect	Crude oil tankers	SCF	Europe	DNV GL
2019	Newbuild	Jos-Deschenes II	Car/Passenger ferries	Society of Quebec ferries	America	LR
2019	Newbuild	Ishin	Tugs	Mitsui O.S.K. Lines	Asia	Not classed
2019	Newbuild	Hypatia de Alejandria	RoPax	Baleària	Europe	RINA
2019	Newbuild	Huftarøy	Car/Passenger ferries	Torghatten	Norway	DNV GL
2019	Newbuild	Harvey Patriot	Offshore supply ships	Harvey Gulf International Marine	America	ABS
2019	Newbuild	Honfleur	RoPax	Brittany Ferries	Europe	BV
2019	Newbuild	Greenports 1	Other activities	Bremenports	Europe	DNV GL
2019	Newbuild	Glen Sannox	Car/Passenger ferries	Clyde and Hebrides Ferry Service	Europe	LR
2019	Newbuild	Fure Ven	Oil/Chemical tankers	Furetank Rederi	Europe	BV
2019	Newbuild	Flatøy	Car/Passenger ferries	Torghatten	Norway	DNV GL
2019	Newbuild	Ferus smit 452	Oil/Chemical tankers	Thun Tankers	Europe	BV
2019	Newbuild	Ferus smit 451	Oil/Chemical tankers	Thun Tankers	Europe	BV
2019	Newbuild	Færøy	Car/Passenger ferries	Torghatten	Norway	DNV GL
2019	Newbuild	Elamarateyah	Tugs	Drydocks World	Middle East	Tasneef
2019	Newbuild	Eagle Brasilia	Crude oil tankers	AET	Global	ABS

Year of delivery	Project type	Ship name	Ship type	Shipowner	Area of operation	Class
2019	Newbuild	Eagle Blane	Crude oil tankers	AET	Global	DNV GL
2019	Newbuild	Eagle Bintulu	Crude oil tankers	AET	Global	ABS
2019	Newbuild	Costa Smeralda	Cruise ships	Costa Crociere	Global	RINA
2019	Newbuild	Containerships Polar	Container ships	Containerships	Europe	ABS
2019	Newbuild	Containerships Balt	Container ships	Containerships	Europe	ABS
2019	Newbuild	Containerships Aurora	Container ships	Containerships	Europe	ABS
2019	Newbuild	Aurora Spirit	Crude oil tankers	Teekay	Global	DNV GL
2019	Newbuild	AIDA	Cruise ships	Aida Cruises	Global	RINA
2020	Retrofit	Nordnorge	Cruise ships	Hurtigruten	Norway	DNV GL
2020	Retrofit	Nordkapp	Cruise ships	Hurtigruten	Norway	DNV GL
2020	Retrofit	Kong Harald	Cruise ships	Hurtigruten	Norway	DNV GL
2020	Newbuild	Viking Glory	RoPax	Viking Line	Europe	DNV GL
2020	Newbuild	Tide Spirit	Crude oil tankers	Teekay	Global	DNV GL
2020	Newbuild	TBN High Speed Catamaran	Car/Passenger ferries	Baleària	Europe	BV
2020	Newbuild	TBN 9	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 8	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 7	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 6	Container ships	Containerships	Europe	ABS
2020	Newbuild	TBN 6	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 5	Container ships	Containerships	Europe	ABS
2020	Newbuild	TBN 3	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 2	Container ships	Eastern Pacific Shipping	Global	LR
2020	Newbuild	TBN 2	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 2	Container ships	Brodosplit Shipping Company	Europe	DNV GL
2020	Newbuild	TBN 14	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 13	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 12	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 11	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 10	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 1	Oil/Chemical tankers	Furetank Rederi	Europe	--
2020	Newbuild	TBN 1	Fishing vessels	Nordlaks	Norway	DNV GL
2020	Newbuild	TBN 1	Cruise ships	P&O Cruises	Global	RINA
2020	Newbuild	TBN 1	Container ships	Eastern Pacific Shipping	Global	LR
2020	Newbuild	TBN 1	Container ships	CMA CGM	Global	BV
2020	Newbuild	TBN 1	Container ships	Brodosplit Shipping Company	Europe	DNV GL
2020	Newbuild	TBN 1	Car carriers	NYK	Global	DNV GL/NK
2020	Newbuild	TBN 1	Car carriers	K Line	Global	DNV GL
2020	Newbuild	Samsung 2286	Crude oil tankers	Teekay	Global	DNV GL
2020	Newbuild	Rainbow Spirit	Crude oil tankers	Teekay	Global	DNV GL
2020	Newbuild	Oddrun With	General cargo ships	Egil Ulvan Rederi	Norway	--
2020	Newbuild	Janet Marie	Container ships	Pasha Hawaii	America	ABS
2020	Newbuild	George III	Container ships	Pasha Hawaii	America	ABS
2020	Newbuild	Current Spirit	Crude oil tankers	Teekay	Global	DNV GL
2020	Newbuild	Carnival Mardi Gras	Cruise ships	Carnival Corporation	Global	RINA
2020	Newbuild	Brodosplit 477	Container ships	Brodosplit Shipping Company	Europe	DNV GL
2020	Newbuild	Brodosplit 476	Container ships	Brodosplit Shipping Company	Europe	DNV GL
2020	Newbuild	Atair	Other activities	German Transport Ministry	Europe	DNV GL
2021	Retrofit	Polarlys	Cruise ships	Hurtigruten	Norway	DNV GL
2021	Retrofit	Richard With	Cruise ships	Hurtigruten	Norway	DNV GL

Year of delivery	Project type	Ship name	Ship type	Shipowner	Area of operation	Class
2021	Retrofit	North Star	Ro-Ro cargo ships	TOTE Shipholdings	America	ABS
2021	Retrofit	Nordlys	Cruise ships	Hurtigruten	Norway	DNV GL
2021	Retrofit	Midnight Sun	Ro-Ro cargo ships	TOTE Shipholdings	America	ABS
2021	Newbuild	TBN1	RoPax	Wasaline	Europe	--
2021	Newbuild	TBN 9	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 8	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 7	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 6	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 5	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 5	Crude oil tankers	Rosneft	Europe	RS
2021	Newbuild	TBN 5	Container ships	CMA CGM	Global	BV
2021	Newbuild	TBN 4	Ro-Ro cargo ships	Wallenius SOL	Europe	LR
2021	Newbuild	TBN 4	Oil/Chemical tankers	JP Morgan/Shell	Europe	LR
2021	Newbuild	TBN 4	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 4	Crude oil tankers	Rosneft	Europe	RS
2021	Newbuild	TBN 4	Container ships	Eastern Pacific Shipping	Global	DNV GL
2021	Newbuild	TBN 3	Ro-Ro cargo ships	Wallenius SOL	Europe	LR
2021	Newbuild	TBN 3	Oil/Chemical tankers	JP Morgan/Shell	Europe	LR
2021	Newbuild	TBN 3	Crude oil tankers	Rosneft	Europe	RS
2021	Newbuild	TBN 3	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 3	Container ships	Eastern Pacific Shipping	Global	LR
2021	Newbuild	TBN 2	Ro-Ro cargo ships	Wallenius SOL	Europe	LR
2021	Newbuild	TBN 2	RoPax	TT Line Co Pty Ltd	Oceania	LR
2021	Newbuild	TBN 2	Other activities	Van Oord	Global	BV
2021	Newbuild	TBN 2	Oil/Chemical tankers	JP Morgan/Shell	Europe	LR
2021	Newbuild	TBN 2	Oil/Chemical tankers	Donsötank	Global	--
2021	Newbuild	TBN 2	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 2	Fishing vessels	Nordlaks	Norway	--
2021	Newbuild	TBN 2	Cruise ships	Havila Kystruten	Norway	DNV GL
2021	Newbuild	TBN 2	Crude oil tankers	Rosneft	Europe	RS
2021	Newbuild	TBN 2	Car/Passenger ferries	Seaspan Ferries	America	BV
2021	Newbuild	TBN 2	Car carriers	UECC	Global	DNV GL
2021	Newbuild	TBN 2	Bulk carriers	H-Line	Global	DNV GL/KR
2021	Newbuild	TBN 12	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 11	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 10	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 1	Ro-Ro cargo ships	Wallenius SOL	Europe	LR
2021	Newbuild	TBN 1	RoPax	TT Line Co Pty Ltd	Oceania	LR
2021	Newbuild	TBN 1	Other activities	Van Oord	Global	BV
2021	Newbuild	TBN 1	Oil/Chemical tankers	JP Morgan/Shell	Europe	LR
2021	Newbuild	TBN 1	Oil/Chemical tankers	Donsötank	Global	--
2021	Newbuild	TBN 1	Offshore supply ships	COSL	Asia	CSS
2021	Newbuild	TBN 1	Cruise ships	Havila Kystruten	Norway	DNV GL
2021	Newbuild	TBN 1	Cruise ships	Disney Cruise Lines	Global	LR
2021	Newbuild	TBN 1	Crude oil tankers	Rosneft	Europe	RS
2021	Newbuild	TBN 1	Car/Passenger ferries	Seaspan Ferries	America	BV
2021	Newbuild	TBN 1	Car carriers	UECC	Global	DNV GL
2021	Newbuild	TBN 1	Bulk carriers	H-Line	Global	DNV GL/KR
2021	Newbuild	Samsung 2287	Crude oil tankers	Teekay	Global	DNV GL

Year of delivery	Project type	Ship name	Ship type	Shipowner	Area of operation	Class
2021	Newbuild	Salamanca	RoPax	Brittany Ferries	Europe	DNV GL
2021	Newbuild	Le Commandant Charcot	Cruise ships	Ponant	Global	BV
2021	Newbuild	Havila Pollux	Cruise ships	Havila Kyststruten	Norway	--
2021	Newbuild	Havila Polaris	Cruise ships	Havila Kyststruten	Norway	DNV GL
2021	Newbuild	Costa	Cruise ships	Costa Crociere	Global	RINA
2022	Newbuild	TBN 6	Container ships	Eastern Pacific Shipping	Global	DNV GL
2022	Newbuild	TBN 5	Container ships	Eastern Pacific Shipping	Global	DNV GL
2022	Newbuild	TBN 4	Bulk carriers	H-Line	Global	DNV GL/KR
2022	Newbuild	TBN 3	Oil/Chemical tankers	SCF	Global	RS
2022	Newbuild	TBN 3	Bulk carriers	H-Line	Global	DNV GL/KR
2022	Newbuild	TBN 2	Oil/Chemical tankers	SCF	Global	RS
2022	Newbuild	TBN 2	Cruise ships	P&O Cruises	Global	RINA
2022	Newbuild	TBN 2	Cruise ships	Disney Cruise Lines	Global	LR
2022	Newbuild	TBN 2	Cruise ships	Carnival Corporation	Global	RINA
2022	Newbuild	TBN 1	RoPax	Polish Baltic Shipping Company	Europe	Unknown
2022	Newbuild	TBN 1	Oil/Chemical tankers	SCF	Global	RS
2022	Newbuild	TBN 1	Cruise ships	MSC Cruises	Global	BV
2022	Newbuild	TBN	RoPax	TT-Line GmbH	Europe	--
2022	Newbuild	TBN	RoPax	Tallink	Europe	--
2022	Newbuild	Icon of the Seas	Cruise ships	RCCL	Global	DNV GL
2023	Newbuild	TBN 3	Cruise ships	Disney Cruise Lines	Global	LR
2023	Newbuild	TBN 1	Cruise ships	Princess Cruises	Global	LR
2023	Newbuild	Santona	RoPax	Brittany Ferries	Europe	DNV GL
2023	Newbuild	Atlantique Chantiers I34	Cruise ships	MSC Cruises	Global	BV
2023	Newbuild		Cruise ships	Aida Cruises	Global	RINA
2024	Newbuild	TBN 2	Cruise ships	MSC Cruises	Global	BV
2024	Newbuild	TBN 1	Cruise ships	TUI Cruises	Global	DNV GL
2024	Newbuild	TBN	Cruise ships	RCCL	Global	DNV GL
2025	Newbuild	TBN 2	Cruise ships	RCCL	Global	DNV GL
2025	Newbuild	TBN 2	Cruise ships	Princess Cruises	Global	LR
2026	Newbuild	TBN 2	Cruise ships	TUI Cruises	Global	DNV GL

TOTAL NUMBER OF SHIPS (IN OPERATION AND ON ORDER)

