

LNG Shipping News

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14 September 2017

'Pacific Breeze' to ship Ichthys LNG to Taiwan

A naming ceremony was held on 1st September for the LNGC 'Pacific Breeze'.

She was built to supply LNG from the INPEX-operated Ichthys LNG Project to CPC Corp, Taiwan.

The ceremony took place at Kawasaki Heavy Industries' (KHI) Sakaide Works in Japan, where the LNGC's construction was recently completed. The vessel will transport the 1.75 mill tonnes of Ichthys-produced LNG per year allocated to CPC under a sales and purchase agreement.

The LNGC was built based on a construction agreement between Pacific Breeze LNG Transport (PBLT), a subsidiary of Kawasaki Kisen Kaisha (K-Line) as the owner, and KHI. She is scheduled to be deployed in conjunction with the production startup of the Ichthys LNG Project.

Through its subsidiary INPEX Shipping, INPEX jointly established IT Marine Transport on 8th May, 2013 with TOTAL Marine Transport, a subsidiary of Ichthys LNG Project partner TOTAL, at an ownership ratio of 68.77% (INPEX



The Ichthys LNG Project's central processing facility – Ichthys Explorer – arrives in Australian waters following a 5600 kilometre tow from South Korea

Shipping) and 31.23% (TOTAL Marine Transport).

Through ITMT, INPEX entered into a timecharter agreement for 'Pacific Breeze' with PBLT.

MOSS type

The 182,000 cu m capacity LNGC is around 300 m in length with a beam of about 52 m. It is claimed to be the world's first MOSS-type LNGC to adopt an electric propulsion system that features a diesel engine fuelled by both natural gas and bunker fuel and provides high fuel efficiency.

In addition, through INPEX Shipping, INPEX jointly established

Oceanic Breeze LNG Transport (OBLT) on 4th April, 2013 with K-Line at an ownership ratio of 70% (K-Line) to 30% (INPEX Shipping), and has contracted Mitsubishi Heavy Industries (MHI) to construct an LNGC through OBLT.

INPEX and K-Line will jointly own this LNGC, which will transport INPEX's own LNG offtake from the Ichthys LNG Project—0.9 mill tonnes per year—to INPEX's Naoetsu LNG Terminal in Joetsu, Niigata Prefecture, Japan. The vessel is currently undergoing the final stages of construction at MHI's Nagasaki Shipyard in Japan. ■

Croatian import terminal opts for FSRU

Croatian company, LNG Hrvatska, has called for tenders to operate and service an FSRU, to form part of an LNG import terminal project.

The terminal will be located at Krk Island, Croatia.

Bids were also invited for EPC procurement, including the design and construction of jetty, connecting gas pipeline and high-pressure installations for the FSRU. These include a pigging station, water and drainage, auxiliary facilities and buildings.

The deadline for the submission

of bids is 1400 CET, 29th September, 2017, the company said.

LNG Hrvatska is the developer of the delayed LNG import terminal originally designed to be located on the island.

The FSRU's capacity will depend on its technical characteristics, however, the maximum annual delivery of natural gas is expected to be 2.6 bill cu m in the first stage of the project, local sources said.

The call for bids comes on the back of seabed investigation work, which started last month.

The European Investment Bank (EIB) is considering financing around €339 mill, of the total cost of about €678 mill.

Last June, the developer announced that it was planning to start a market consultation as the first step of the 'Open Season Binding Phase' procedure.

It is envisaged that the phase will be performed in three stages: 1st stage: Market consultation; 2nd stage: Preliminary Open Season; 3rd stage: Final Open Season. ■

SHIPPING NEWS AGENDA

BUSINESS

MOL joins Indian project **2**

Puerto Rico terminal to expand **2**

MARKETING

Angola LNG signs agreements **4**

US agrees small-scale exports **4**

FINANCE

Dynagas hit by expenses **3**



Exmar sees red **4**

Awilco still a loss maker **4**

TECHNOLOGY

Wärtsilä wins equipment contract **6**

Cryostar installs compressor on LNGC **6**



AiP for FLNG project **7**

LNG ORDERBOOK

LNG carrier orderbook **8**

LNG small scale fleet **10**

MOL to participate in Indian receiving terminal project

Mitsui OSK Lines (MOL) has signed agreements with Swan LNG for the long-term operation/maintenance of an FSRU plus an FSU.

The units will serve as the core receiving facilities at an LNG terminal to be developed by Swan Energy in Gujarat, India.

The FSRU has been ordered and will be owned by Swan Energy through a subsidiary. MOL has an option to participate in the FSRU joint ownership. The option is exercisable any time before the delivery of the unit from the shipyard.

In addition, MOL will invest in Swan LNG and participate in many project areas as technical partner. The terminal is scheduled to start operations in early 2020.

MOL will also promote the use of FSRUs, as one of world's largest LNGC operators and the only Japanese FSRU owner and

operator, thus far.

This will be India's first new-building FSRU and will be part of MOL's initiatives to "pursue vertically integrated businesses that are not limited to transportation in the LNG business," the Japanese shipping giant said, in addition to expanding LNG business in the growing Indian market.

The contract for an 180,000 cu m FSRU was recently placed with Hyundai Heavy Industries.

The receiving terminal will be built at Jafrabad, Gujarat State and, in addition to the floating units, will consist of a breakwater, jetty, plus onshore facilities. The LNG receiving capacity will be 5 mill tonnes per year. ■

Keppel, Pavilion and PLN explore Indonesian LNG solutions

Keppel Offshore & Marine (Keppel O&M) has entered into a Heads of Agreement (HOA) with Pavilion Energy and Indonesia state-owned PT Perusahaan Listrik Negara (PLN) to explore the development of small-scale LNG distribution in West Indonesia.

The HOA follows the discussion between the Indonesia and Singapore governments regarding bilateral energy co-operation during the Singapore-Indonesia leaders' retreat held in Semarang last year.

A joint feasibility study was subsequently carried out, which demonstrated the cost savings and mutual benefits that can arise from collaboration in the small-scale LNG value chain.

The HOA intends to leverage on the combined expertise of the companies in the small-scale LNG value chain to distribute LNG economically to remote areas in West Indonesia. ■

LNG can be delivered to floating and onshore LNG terminals using small LNGCs, where it will be regasified and used to generate electricity at PLN's power plants.

Chris Ong, Keppel O&M CEO, said, "Keppel has almost 30 years of experience in the LNG space. With a comprehensive suite of solutions for every stage of the gas value chain, including the world's first floating liquefaction vessel (FLNGV) conversion and the world's first FSRU conversion, we are able to provide cost effective, end-to-end solutions for our customers." ■

FERC approves expansion of Puerto Rico import terminal

The US Federal Energy Regulatory Commission (FERC) has given the green light to a plan to slightly increase the capacity of an LNG terminal in Puerto Rico.

This move could increase the number of LNG shipments received annually to 40 from around 24 at present.

EcoEléctrica operates an LNG import, storage and vaporisation facility at Guayanilla Bay, in the municipality of Peñuelas, which is located on the south shore of the island.

At the end of August, FERC authorised EcoEléctrica to increase the send-out capacity of the LNG terminal by an additional 93 mill cu ft per day, to a total of

279 mill cu ft per day.

This will be achieved by bringing into service one of two existing spare LNG vaporisers at Guayanilla Bay. Following the expansion, EcoEléctrica will deliver 186 mill cu ft per day of regasified LNG to the Puerto Rico Electric Power Authority's (PREPA) Costa Sur Power Plant, which is located a few miles from the Guayanilla Bay plant. EcoEléctrica will use the remaining 93 MMcf/d at its co-generation plant.

According to FERC, the construction of the LNG terminal, storage and regasification facility at Guayanilla Bay was first authorised in 1996. The current facility includes a 500 m plus pier for unloading LNGCs; a 1 mill barrel LNG storage tank; an LNG vaporisation unit and other associated infrastructure.

EcoEléctrica said it currently receives an average of two LNGCs per month.

"Because the project involves no new construction or modifica-

tion of existing facilities but simply a change in operations requiring only the dedication of an existing spare vaporiser and a spare in-tank send-out pump to full-time service, the project will have no impact on landowners or on terrestrial environmental resources," FERC said in a statement. "The increase in LNG ship traffic from the proposed project will not adversely affect other environmental resources, such as marine wildlife, air quality and noise, or cultural resources." ■

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Survey and drydock costs tip Partnership into the red

Dynagas LNG Partners reported an operating income of \$8.7 mill, a net loss of \$5.2 mill and loss per common unit of \$0.19 for the second quarter of this year.

Included in 2Q17 results are: (i) \$4.9 mill of scheduled class survey and drydock costs for the three steam turbine vessels in the Partnership's fleet and (ii) a one-off \$2.6 mill write-off of deferred loan fees associated with the Partnership's prior debt refinanced with the proceeds of the Term Loan B.

Tony Lauritzen, the Partnership's CEO, commented; "We have previously communicated that this quarter would be affected by scheduled class surveys and related drydockings for three of our six vessels, which would result in cost items and would also qualify as off-hire under the relevant contracts.

"We are satisfied that the class surveys, including dry dockings, were completed in a quick and efficient manner with an average of approximately 15 days per vessel from arrival to departure at the shipyard. The vessels are on a five-year special survey cycle, there-

fore we expect the next special class survey and related dry docking to occur in about five years.

"In April, 2017, the 'Clean Energy' became available for employment, at which time we entered into two consecutive short-term charters to employ the vessel through the end of August, 2017. Following the expiration of these charters, we have entered into an additional short-term charter and the vessel is expected to trade on the spot market until its delivery to Gazprom in July, 2018, when it will commence a charter with duration of approximately eight years.

"Our reported earnings for the second quarter of 2017 were, as expected, below those of the second quarter of 2016 and were impacted by the following: (i) the class surveys and related drydockings of three of our vessels, as described above, (ii) the temporary employment of the 'Clean Energy'

on the spot market, (iii) the inclusion in second quarter results of one-off non-cash expenses associated with our refinanced bank loans and (iv) our decision to reduce the charter hire rate on two vessels, the 'Yenisei River' and the 'Lena River', with effect from November, 2016, in exchange for a long-term charter on the 'Clean Energy' with an approximate eight year term.

"On 18th July, 2017, we paid quarterly cash distribution of \$0.4225 per common unit with respect to the second quarter of 2017. Since our initial public offering in November, 2013, we have paid total cash distributions of \$5.94 per common unit. Further, on 14th August, 2017, we paid a cash distribution of \$0.5625 per unit on our Series A Preferred Units for the period from 12th May, 2017 to 11th August, 2017.

"In general, based on the conditions of the charter market,



Dynagas CEO Tony Lauritzen forwarned of special survey and drydock costs

long-term charters maybe priced at day rates above or below shorter term charters. With our fleet 84% contracted through 2017 and 75% contracted through each of 2018 and 2019, and with estimated fleet-wide average remaining contract duration of 10.2 years, we believe we have significant cash flow visibility" he said. ■

US to agree small-scale LNG exports

The U.S. Department of Energy (DOE) has proposed a rule that should speed up the approval process of small-scale LNG exports from the US.

This LNG export market involves small shipments of LNG from the US, primarily to the Caribbean, Central America and South America.

Many of the countries in these areas do not generate enough natural gas demand to support the economies of scale required to justify large volumes of LNG imports from large-scale LNG terminals via conventional LNGCs.

By deregulating these shipments, this will expedite the review and approval of applications to export small amounts of LNG in the emerging small-scale LNG export market.

For applications to export LNG to countries without a free trade agreement, DOE must

conduct a public interest review before authorising an export.

The proposed rule will give the DOE the power to grant applications that must meet two criteria: the application proposes to export no more than 0.14 bill cu ft per day and the proposed export qualifies for a categorical exclusion under DOE's National Environmental Policy Act (NEPA) regulations.

"The Trump Administration is focused on finding ways to unleash American energy and providing a reliable and environmentally friendly fuel to our trading partners who face unique energy infrastructure challenges," explained US Secretary of Energy, Rick Perry. ■



The Trump Administration is focused on finding ways to unleash American energy and providing a reliable and environmentally friendly fuel to our trading partners... ”

US Secretary of Energy, Rick Perry.

Angola LNG signs sales agreements

Angola LNG (ALNG) recently entered into a multi-year LNG sales agreements with two service companies.

Under the first agreement, ALNG cargoes will be delivered to trader Vitol worldwide.

Commenting on this deal, Artur Pereira, Angola LNG Marketing CEO, said: "This sales agreement is an important step for Angola LNG and demonstrates our ability to respond to the needs of our customers and the market.

"Vitol has already purchased many LNG cargoes from Angola LNG, and we look forward to continuing our successful relationship."

Pablo Galante Escobar, Head of LNG, Vitol, said; "We are delighted to have entered into this agreement with Angola LNG. It is an exciting initiative for Vitol; we have a long history of investment and partnership across Africa and are pleased to add these LNG purchases to our portfolio."

ALNG signed the second sales agreement this month with German utility and energy company RWE. ■

Exmar takes a hit

For the first half of this year, Belgian gas ship operating company EXMAR, reported a consolidated result after tax of minus \$34.1 mill, compared to a positive \$33.7 mill for 1H16.

Using the proportionate consolidation reporting method, EBITDA was \$30 mill for 1H17, compared with \$72.3 mill at the same stage the previous year. EBIT came in at minus \$16.3 mill, compared with plus \$50.2 mill in 1H16.

The result included a non-cash impairment of \$22.5 mill on the LNGC 'Excel'.

In the LPG segment, EXMAR reported an EBIT of \$7.4 mill, compared to \$26.2 mill for the same period in 2016. This included a badwill of \$14.3 mill recognised on the acquisition of 50% of the pressurised fleet held by Wah Kwong in June, 2016.

EBIT for the LNG segment was minus \$20.4 mill for 1H17, compared to \$24.7 mill for 1H16.

The operating result was negatively impacted by a non-cash impairment of \$22.5 mill on the 'Excel', as well as costs related to

the late delivery of the Caribbean FLNG.

This figure also included a payment of \$8 mill as a termination fee by Pacific Exploration and Production on CFLNG.

'Excel' has been employed from December, 2016 to July, 2017 for an Indonesian account. Several employment alternatives are being explored, EXMAR said.

FSRU fleet

EXMAR's FSRU fleet currently comprises of four jointly-owned units, under long-term charter to Excelerate Energy. These units are operated and maintained by EXMAR Ship Management. The company's barge-based FSRU is now nearing completion and is due to be delivered later this year.

A term sheet for a long-term financing has been signed with Chinese banks and completion is



EXMAR's LNGC 'Excel' was the subject of an impairment charge

expected to occur in the coming months.

Discussions are still ongoing with various companies for the commercial engagement of the FSRU barge but no revenues are expected before the first half of 2018. For the Swan Energy import terminal, parties terminated their discussions in view of the complexity of the set-up of this project.

The FLNG liquefaction unit 'Caribbean FLNG' (CFLNG) was delivered on 27th July, 2017. The financing of this unit has been completed with Bank of China, Deutsche Bank and Sinosure for a \$200 mill facility. The CFLNG is currently in lay-up at the Wison

shipyard, Nantong. No revenues are expected for this unit before the second half of 2018.

In EXMAR's offshore division, EBIT for 1H17 was minus \$3.9 mill, compared to \$1.2 mill in 1H16.

The contribution from the services activities to EBIT was \$1.8 mill for 1H17, compared to \$1.5 mill in 1H16. BELGIBO has subsequently been sold to Jardine Lloyd Thompson and a capital gain of around \$30 mill will be recorded in the third quarter.

EXMAR's bond on the Oslo Stock Exchange has been extended until July, 2019. The company has the option to redeem the bond prior to its maturity.

AWILCO slightly narrows losses

Awilco LNG has reported freight income for the second quarter of this year of \$2.6 mill, the same level as recorded in 1Q17.

The loss came in at \$10.1 mill, compared to a loss of \$10.4 mill in 1Q17.

Fleet utilisation for 2Q17 ended at 83 %, compared to 41 % in the previous quarter. Both vessels operated in the spot market this year.

Although utilisation increased significantly from the previous quarter, freight income did not, due to low paying positioning voyages, which will benefit results in 3Q17, AWILCO said.

Voyage related expenses totalled \$1.6 mill, the same as in 1Q17. Operating expenses and administration expenses were \$1.9 mill and \$0.9 mill, respectively, same as in the previous quarter.

EBITDA for the quarter was minus \$1.8 mill, compared with

minus \$2 mill in 1Q17. Depreciation for the quarter was recorded at \$2.9 mill, the same as in 1Q17.

As of 30th June, the book value of the two LNGCs was \$368.6 mill, compared with \$369.2 mill in 1Q17. The decrease reflected ordinary depreciation during the quarter, offset by minor vessel upgrades and capitalisation of fees of \$2 mill to Teekay LNG.

Current Assets

Total current assets were \$39.7 mill at the end of the second quarter, compared with \$24.6 mill in 1Q17 of which cash and cash equivalents were \$34.7 mill (\$19.4 mill in 1Q17). Total equity was \$137 mill, following net proceeds of \$24.7 mill from a refinanced share issue.

Following deferral of bareboat hire for the 'WilForce' and 'Wil-Pride', as agreed in the recently amended bareboat lease agreements, the short-term portion of the financial leases decreased from \$14.1 mill as at 31st March, 2017 to \$0.2 mill at 30 June. Total non-current liabilities were \$268.2 mill (\$255.7 mill 1Q17), of which the long-term part of the LNGCs financial leases was \$265.9 mill (\$255.4 mill 1Q17). Due to the deferral of bareboat hire, most of the portion previously presented as short-term has been reclassified as long-term.

Market optimism

Speaking of the market, AWILCO said that following a weak first six months of this year, the market firmed both in terms of rates and

activity during the summer months on the back of increasing LNG production and fewer available vessels.

The volatility and seasonality is expected to continue, but as additional LNG production comes on stream the current tonnage overcapacity is expected to gradually be absorbed, resulting in an improvement in the market going forward. The long-term outlook for LNG shipping remains promising on the back of scheduled LNG production capacity coming on stream over the next couple of years.

Following the comprehensive refinancing undertaken in 2Q17, Awilco LNG said that it is fully financed until 2020 and is well positioned for the improving market.

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Applying CFD analysis to simulate LNG boil-off

ABS and GasLog LNG Services have completed a joint development project demonstrating a new approach to evaluating LNG boil-off rate (BOR).

Wärtsilä re-liquefaction plants to be fitted on three LNGCs

Wärtsilä has been awarded the contracts to supply re-liquefaction plants to three new-building LNGCs.

One ship is being built at Samsung Heavy Industries (SHI) for Gaslog, while the other two are for Norway-based Knutsen and are being built by Hyundai Heavy Industries.

Gaslog's order was signed in April, 2017 and in May/June, 2017 for the Knutsen LNGCs.

The re-liquefaction plants feature Wärtsilä's latest mixed refrigerant (MR) technology, an energy efficient solution for smaller liquefaction applications. This new installation will have a capacity of 1.5 - 2.5 tonnes per hour. The Wärtsilä equipment is scheduled for delivery commencing February, next year.

"We are proud of the success of Wärtsilä's advanced re-liquefaction plants based on MR technology and this success is reflected in these latest orders. Wärtsilä is a total LNG solutions provider with products, systems, and solutions for applications throughout the entire value chain," said Timo Koponen, Vice President, Flow & Gas Solutions, Wärtsilä Marine Solutions.

Gaslog has been a customer of Wärtsilä for many years and several ships in its fleet are fitted with the company's equipment. Knutsen's two latest vessels delivered in 2016 are both fitted with Wärtsilä's nitrogen based re-liquefaction plants. ■

"By expanding the application of computational fluid dynamics (CFD) analysis to simulate the LNG BOR in cargo tanks, owners are able to better predict boil-off gas and account for it in future designs and operations of LNG carriers," said ABS Chief Technology Officer, Howard Fireman. "As a

technology leader, we are committed to working with industry to drive safer and more efficient operations."

LNG boil-off gas (BOG) is the vapour phase of LNG carried in a cargo tank. Accurate assessment of the rate of LNG BOG generation is critical for the design of the

cargo tank and the BOG processing system.

To support this collaborative project, a robust CFD analysis procedure was developed modelling the physics of heat transfer, boiling, phase change and vapour flow.

Extensive simulations were run on a representative LNGC and actual BOR measurements were taken to demonstrate the accuracy of the analysis results.

"By taking a collaborative approach with ABS on this project, we were able to demonstrate and prove the viability of CFD analysis to determine LNG BOR," said GasLog FSRU Project Engineer, Vassilis Millas. "Being able to predict BOR in various operating conditions will allow us to build efficiencies into future designs."



GasLog and ABS used an operational LNGC to measure the BOR

Cryostar installs compressor on new LNGC

Cryostar's latest 6-stage fuel gas compressor - CM6-200 - has been successfully commissioned and tested on the first LNGC delivered fitted with XDF propulsion.

The 180,000 cu m 'SK Audace', delivered last month from Samsung Heavy Industries in South Korea, is equipped with WinGD X62DF main engines and Wärtsilä 34DF gensets.

Cryostar's compressors were designed to be able to manage the different fuel gas requirements for each engine type.

Although the configuration of the machinery and systems represented something of a prototype for XDF, the gas trials were concluded successfully with some minor tuning of control loops, allowing the system to operate as planned, for all engine loads up to the required 4 tonnes per hour, the company said.

The alarm and safety functions performed as planned and load adjustments, as well as full engine trip, was successfully undertaken over the 11-day trial period.

A wider than usual tank pres-

sure range and very high methane content in the boil-off gas was managed without issue, the company claimed, while the full design fuel gas pressure was achieved. Higher inlet temperatures were also well handled, providing a very easy solution for the cargo engineer when handling heel-out or other extreme events.

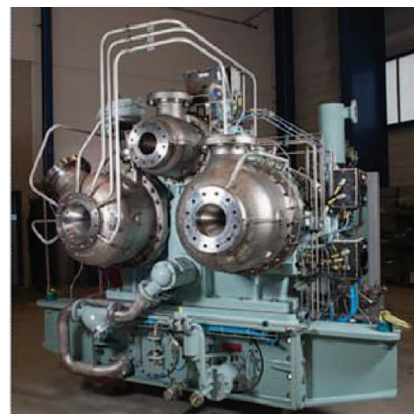
The ground-breaking equipment followed in the footsteps of the highly successful 4-stage compressors fitted to a large proportion of the DFDE and TFDE LNGC fleet, Cryostar said.

A total of 16 CM6-200 compressors have been delivered to date and are currently being installed on vessels under construction, with a further 12 units on order, the company said.

'SK Audace' was believed to be chartered to Total to

ship gas from Ichthys LNG, which is expected to ship its first commercial cargoes next year when the 4.5 mill tonne per year Train 1 comes on stream.

She is the first of two sister-ships owned by SK Shipping to be fitted with XDF propulsion systems. The second vessel is 'SK Resolute'. ■



Cryostar has claimed success with its compressor series

Electrically heated fire-resistant glass solutions for LNGCs

Manufacturer of fire resistant glass, Vetrotech Saint-Gobain, has introduced the patented THERMOVIT PRO A0, an electrically heated glass solution.

This is an A0 fire-resistance solution in line with IGC International Code for Liquefied Natural Gas (LNG) Carriers.

With over 30 years of experience in producing fire-resistant and heated glass, Vetrotech has developed a glass solution specifically for wheelhouse applications, which offers 60 mins of fire integrity resistance (A0) and an integrated heating function in one single laminated glass.

Assisting with the safety of crew and ship, the solution meets the requirements set out within the IGC International Code for Liquefied Natural Gas (LNG) Carriers, which states wheelhouses in LNGCs need to be installed with A0 fire-protective glass.

Ruud van der Sterren, the company's Business Manager Marine, said: "Having clear fire-safety guidelines for a fuel carrying ship, such as an LNG carrier, is crucial. When holding large volumes of fuel on board, it is essential that the crew are protected in the event of a fire to the highest possible standard. Safety glass is an essential component in assisting with fire safety, providing

additional time for the crew to evacuate or navigate the ship to a safe destination."

When sailing in areas where temperatures can fall below freezing - such as the Arctic - the defrosting of glass is required before setting sail. It is common practice to use blowers directed on the glass to defrost and obtain clear views.

This technique has disadvantages, as when using blowers the water does not evaporate and may seep into the interior. This can cause longer term negative effects on the vessel and only provides localised clearing on the glass, resulting in limited vision.

With its conductive coating, THERMOVIT Pro A0 heats the entire surface of the glass and ensures the glass remains frost, snow, vapour or condensation free, the company claimed.

A neutral coating applied eradicates external weather influences providing a clearer vision, particularly important for wheelhouses where binoculars may be used, as it causes, unlike conventional solutions, no visual disturbances of the heat conductive wires. The clear coating also improves out-

side views particularly for discoloured views of the traffic lights, which can sometimes occur.

The coating has several features to create a comfortable living or working environment within the ship's wheelhouse. It improves the solar reflection, minimising solar heat gain and has an impressive g-value of 0.58, allowing easier regulation of temperatures within the ship. When heated the glass can also help control colder environments to ensure that a warm and comfortable temperature is available.

The glass is suitable for use in both extreme heat and humidity and freezing conditions down to -40 deg C. Controlled heating of the glass evaporates and clears condensation from the glass, even in high humidity environments.

To meet architectural and technical requirements, the THERMOVIT product range comprises three different solutions, which can be customised to all project needs. The glass is available in sizes up to 5,500 mm and are in line with ISO614 and ISO21005 (standard for toughened glass), ISO3434 (standard for heated glass). ■

NEWS NUDGE

DSME to postpone LNGC deliveries

According to a South Korean stock exchange filing, Daewoo said it was close to postponing the deliveries of two LNGCs ordered by European interests.

The vessels were originally due to be handed over by the end of this year.

Traders short listed for two import terminals

Bangladesh has short listed commodity traders Trafigura and Gunvor to arrange the installation of two FLNG import terminals in 2018.

"Trafigura and Gunvor have been short listed out of 13 companies for two 200 mill cu ft per day LNG import terminals," a director at state-run energy firm Petrobangla's LNG division told Reuters.

Petrobangla will hold talks with the companies and deals will then be finalised, he added.

It was believed Bangladesh needs the terminals to be in place in 2018, the newswire said.

Gunvor will use an FSRU barge provided by EXMAR, which will fit the shallow water conditions at Chittagong in southeastern Bangladesh where both terminals will be located, sources told Reuters.

GAIL takes LNGC for three years

Indian state-owned energy company GAIL is believed to be close to chartering a TOTAL operated, Teekay owned, LNGC.

The charter was thought to be for three years and the vessel will be used to ship LNG from the US beginning January, 2018. ■

ABS awards AIP for HHI FLNG

Houston-based class society ABS has granted an Approval in Principle (AIP) to Hyundai Heavy Industries (HHI) FLNG hull design.

ABS and HHI collaborated to develop a technically feasible and class compliant FLNG hull design, using the latest industry trends, while maintaining high safety standards.

ABS' AIP demonstrates the design substantially complies with class and regulatory requirements and minimises risk to project schedules and safe operations, giving regulatory agencies and other key stakeholders confidence in the design, the class society said.

"ABS has a strong history of collaborating with the offshore industry to evaluate novel designs

that enable industry efficiency," said ABS Executive Vice President, Global Offshore, Ken Richardson. "Our work with HHI is another example of ABS's technical leadership promoting safety in innovative concepts."

"The Newbuilding Conversion FLNG hull design can be constructed for about half the cost as compared to a standard FLNG hull," claimed Jae-Eul Kim, HHI Senior Vice President, Shipbuilding



Myung-Jae Joo, ABS Country Manager of Korea (right), presents Jae-Eul Kim, Senior Vice President, HHI Shipbuilding Division, with the certificate acknowledging Approval in Principle of newbuilding conversion FLNG hull design

Division. "In the current difficult energy market, ready-to-convert FLNG hull with ABS AIP gives the FLNG market an efficient approach, with competitive price and schedule, helping investors take financial investment decisions." ■

WORLD LNG CARRIER ORDERBOOK

Name	Segment	Yard	Containment System	Propulsion	Capacity	Delivery Date	Ordered	Primary Owner
Flex Constellation	LNGC	DSME	GT NO 96	MEGI	173,400	Jun-19	2017	John Fredriksen
Flex Courageous	LNGC	DSME	GT NO 96	MEGI	173,400	Aug-19	2017	John Fredriksen
Hyundai Ulsan 2964	LNGC	Hyundai Heavy	TZ Mk. III Flex	MEGI	180,000	May-19	2017	Knutsen
Hyundai Ulsan 2963	LNGC	Hyundai Heavy	TZ Mk. III Flex	MEGI	180,000	Jun-19	2017	Knutsen OAS Shipping AS
Samsung SLNG 1	LNGC	Samsung	KC-1		7,500	May-19	2017	Korea Line
Samsung SLNG 2	LNGC	Samsung	KC-1		7,500	Dec-19	2017	Korea Line
MOL HUDONG-ZHONGHUA 1/4	LNGC	Hudong-Zhonghua	GT NO 96	MEGI	174,000	Jul-19	2017	MOL
MOL HUDONG-ZHONGHUA 2/4	LNGC	Hudong-Zhonghua	GT NO 96	MEGI	174,000	Oct-19	2017	MOL
MOL HUDONG-ZHONGHUA 3/4	LNGC	Hudong-Zhonghua	GT NO 96	MEGI	174,000	Jan-20	2017	MOL
MOL HUDONG-ZHONGHUA 4/4	LNGC	Hudong-Zhonghua	GT NO 96	MEGI	174,000	Apr-20	2017	MOL
KEPPEL NANTONG 2	LNGC	Keppel Nantong			7,500	Aug-19	2017	Stolt-Nielsen
KEPPEL NANTONG 1	LNGC	Keppel Nantong			7,500	May-19	2017	Stolt-Nielsen Gas
Hyundai Mipo 8250	LNGC				7,500	Sep-18	2016	
Samsung 2212	LNGC	Samsung	GTT Mark V	XDF	180,000	Jun-19	2016	GasLog
Samsung 2213	LNGC	Samsung	GTT Mark V	XDF	180,000	Sep-19	2016	GasLog
Daewoo 2466	LNGC	DSME	GT NO 96	MEGI	173,400	Oct-19	2016	Maran Gas Maritime
Daewoo 2467	LNGC	DSME	GT NO 96	MEGI	173,400	Nov-19	2016	Maran Gas Maritime
Hyundai Ulsan 2937	LNGC	Hyundai Heavy	TZ Mk. III Flex	XDF	180,000	Feb-19	2016	SK Shipping
Hyundai Ulsan 2938	LNGC	Hyundai Heavy	TZ Mk. III Flex	XDF	180,000	Apr-19	2016	SK Shipping
Coral Energice	LNGC				18,000	Nov-17	2015	
Daewoo 2489	LNGC	DSME	GT NO 96	MEGI	173,400	Feb-19	2015	BWGas
Kinisis	LNGC	DSME	GT NO 96	MEGI	173,400	Sep-18	2015	Chandris
China Merchants Jiangsu CMHI-188	LNGC	China Merchant	Membrane		45,000	Feb-18	2015	Landmark Capital
Daewoo 2458	LNGC	DSME	GT NO 96	MEGI	173,400	Jan-19	2015	Maran Gas Maritime
Daewoo 2456	LNGC	DSME	GT NO 96	MEGI	173,400	Jan-19	2015	Maran Gas Maritime
Daewoo 2459	LNGC	DSME	GT NO 96	MEGI	173,400	Apr-19	2015	Maran Gas Maritime
Mitsubishi Nagasaki 2332	LNGC	Mitsubishi H.I.		STaGE	165,000	Feb-19	2015	Mitsubishi
Daewoo 2462	LNGC	DSME	GT NO 96	TFDE	180,000	Jul-17	2015	MOL
Kawasaki Sakaide 1731	LNGC	Kawasaki	Moss	TFDE	177,000	Dec-17	2015	MOL
Kawasaki Sakaide 1734	LNGC	Kawasaki	Moss	STaGE	177,000	Jun-18	2015	MOL
Mitsubishi Nagasaki 2323	LNGC	Mitsubishi H.I.	Moss	STaGE	180,000	Aug-18	2015	MOL
Kawasaki Sakaide 1735	LNGC	Kawasaki	Moss	STaGE	177,000	Sep-18	2015	MOL
Mitsubishi Nagasaki 2322	LNGC	Mitsubishi H.I.	Moss	STaGE	177,000	Jun-19	2015	MOL
Diamond Gas Orchid	LNGC	Mitsubishi H.I.	Moss	STaGE	165,000	Feb-18	2015	NYK
Mitsubishi Nagasaki 2326	LNGC	Mitsubishi H.I.	Moss	STaGE	180,000	Mar-18	2015	NYK
Mitsubishi Nagasaki 2325	LNGC	Mitsubishi H.I.	Moss	STaGE	165,000	May-18	2015	NYK
Mitsubishi Nagasaki 2327	LNGC	Mitsubishi H.I.	Moss	STRH	180,000	Jun-18	2015	NYK
Mitsubishi Nagasaki 2321	LNGC	Mitsubishi H.I.	Moss	STaGE	177,000	Dec-18	2015	NYK
Hyundai Samho S856	LNGC	Hyundai Samho	TZ Mk. III	MEGI	174,000	Jan-19	2015	Teekay LNG
Hyundai Samho S857	LNGC	Hyundai Samho	TZ Mk. III	MEGI	174,000	Jan-19	2015	Teekay LNG
Imabari Saijo 8200	LNGC	Imabari		MEGI	178,000	Oct-21	2015	Trinity LNG Transport SA
Daewoo 2441	LNGC	DSME	GT NO 96	MEGI	173,400	Apr-18	2014	BP
Daewoo 2442	LNGC	DSME	GT NO 96	MEGI	173,400	Oct-18	2014	BP
Daewoo 2443	LNGC	DSME	GT NO 96	MEGI	173,400	Nov-18	2014	BP
Daewoo 2444	LNGC	DSME	GT NO 96	MEGI	173,400	Jan-19	2014	BP
Daewoo 2445	LNGC	DSME	GT NO 96	MEGI	173,400	Feb-19	2014	BP
Daewoo 2446	LNGC	DSME	GT NO 96	MEGI	173,400	Mar-19	2014	BP
Bw Tulip	LNGC	DSME	GT NO 96	MEGI	173,000	Sep-17	2014	BWGas
Bw Lilac	LNGC	DSME	GT NO 96	MEGI	173,000	Dec-17	2014	BWGas
Patris	LNGC	DSME	GT NO 96	MEGI	174,000	Jan-18	2014	Chandris
Boris Vilkitsky	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Aug-17	2014	Dynagas
Fedor Litke	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Sep-17	2014	Dynagas
Daewoo 2427	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Oct-18	2014	Dynagas
Daewoo 2428	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Nov-18	2014	Dynagas
Daewoo 2429	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Dec-18	2014	Dynagas

DFDE = dual fuel diesel engines, STRH = steam turbine reheat / ultra steam turbine, MEGI = marine electric gas injection, DRL = slow speed diesel, FSRU = vessel with regas capacity, FLNG = floating LNG production unit
Data last updated = 16 August 2017

Name	Segment	Yard	Containment System	Propulsion	Capacity	Delivery Date	Ordered	Primary Owner
Castillo De Caldelas	LNGC	Imabari	TZ Mk. III	MEGI	178,000	Aug-17	2014	Elcano
Castillo De Merida	LNGC	Imabari	TZ Mk. III	MEGI	178,000	Nov-17	2014	Elcano
Gaslog Houston	LNGC	Hyundai Heavy	TZ Mk. III	XDF	174,000	Jan-18	2014	GasLog
Samsung 2130	LNGC	Samsung	TZ Mk. III	XDF	174,000	Jan-18	2014	GasLog
Gaslog Hong Kong	LNGC	Hyundai Heavy	TZ Mk. III	XDF	174,000	Feb-18	2014	GasLog
Samsung 2131	LNGC	Samsung	TZ Mk. III	XDF	174,000	Jan-19	2014	GasLog
Flex Endeavour	LNGC	DSME	GT NO 96	MEGI	172,400	Jan-18	2014	John Fredriksen
Flex Enterprise	LNGC	DSME	GT NO 96	MEGI	172,400	Jan-18	2014	John Fredriksen
Kawasaki Sakaide 1720	LNGC	Kawasaki	Moss	TFDE	164,000	Mar-18	2014	K-Line
Daewoo 2457	LNGC	DSME	GT NO 96	MEGI	173,400	Apr-19	2014	Maran Gas Maritime
Seri Cemara	LNGC	Hyundai Heavy	Moss	STRH	150,000	Apr-18	2014	MISC
Jmu Tsu 5070	LNGC	Japan Marine United Corp	SPB	TFDE	165,000	Jul-17	2014	MOL
Daewoo 2424	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Dec-17	2014	MOL
Samsung 2148	LNGC	Samsung	Mark III Flex	TFDE	177,000	Feb-18	2014	MOL
Jmu Tsu 5073	LNGC	Japan Marine United Corp	SPB	TFDE	165,000	Apr-18	2014	MOL
Kawasaki Sakaide 1729	LNGC	Kawasaki	Moss	STRH	155,000	Apr-18	2014	MOL
Samsung 2149	LNGC	Samsung	Mark III Flex	TFDE	177,000	May-18	2014	MOL
Kawasaki Sakaide 1728	LNGC	Kawasaki	Moss	STRH	155,000	Jun-18	2014	MOL
Samsung 2150	LNGC	Samsung	Mark III Flex	TFDE	177,000	Aug-18	2014	MOL
Daewoo 2426	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Sep-18	2014	MOL
Jmu Tsu 5072	LNGC	Japan Marine United Corp	SPB	TFDE	165,000	Dec-18	2014	MOL
Daewoo 2432	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Sep-19	2014	MOL
Jmu Tsu 5071	LNGC	Japan Marine United Corp	SPB	TFDE	165,000	Aug-17	2014	NYK
Mitsubishi Nagasaki 2316	LNGC	Mitsubishi H.I.	Moss	STRH	153,000	Jan-18	2014	NYK
Sk Spica	LNGC	Samsung	KC-1	TFDE	174,000	Sep-17	2014	SK Shipping
Sk Serenity	LNGC	Samsung	KC-1	TFDE	174,000	Jan-18	2014	SK Shipping
Pan Asia	LNGC	Hudong-Zhonghua	GT NO 96	TFDE	174,000	Sep-17	2014	Teekay LNG
Eduard Toll	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Oct-17	2014	Teekay LNG
Magdala	LNGC	DSME	GT NO 96	MEGI	173,400	Jan-18	2014	Teekay LNG
Pan Americas	LNGC	Hudong-Zhonghua	GT NO 96	TFDE	174,000	Jan-18	2014	Teekay LNG
Myrina	LNGC	DSME	GT NO 96	MEGI	173,400	Apr-18	2014	Teekay LNG
Pan Europe	LNGC	Hudong-Zhonghua	GT NO 96	TFDE	174,000	Jun-18	2014	Teekay LNG
Megara	LNGC	DSME	GT NO 96	MEGI	173,400	Jul-18	2014	Teekay LNG
Rudolf Samoylovich	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Aug-18	2014	Teekay LNG
Pan Africa	LNGC	Hudong-Zhonghua	GT NO 96	TFDE	174,000	Jan-19	2014	Teekay LNG
Daewoo 2430	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Jul-19	2014	Teekay LNG
Daewoo 2431	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Aug-19	2014	Teekay LNG
Daewoo 2433	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Oct-19	2014	Teekay LNG
Daewoo 2434	LNGC	DSME	GT NO 96	TFDE - Azipod	172,410	Nov-19	2014	Teekay LNG
Yuan He 1	LNGC	Ningbo Xinle Shipbuilding			30,000	Aug-17	2013	
Cesi Tianjin	LNGC	Hudong-Zhonghua	Membrane	TFDE	174,000	Sep-17	2013	China LNG Shipping Holdings
Hudong-Zhonghua H1719a	LNGC	Hudong-Zhonghua	Membrane	TFDE	174,000	Jan-18	2013	China LNG Shipping Holdings
Qi Yuan	LNGC	Dalian Inteh		DFDE	28,260	Aug-17	2013	Dalian Inteh
Samsung 2107	LNGC	Samsung	TZ Mk. III	MEGI	174,000	Jan-18	2013	Flex LNG
Samsung 2108	LNGC	Samsung	TZ Mk. III	MEGI	174,000	Mar-18	2013	Flex LNG
Oceanic Breeze	LNGC	Mitsubishi H.I.	Moss	STRH	155,300	Jul-17	2013	K-Line
Kawasaki Sakaide 1718	LNGC	Kawasaki	Moss	TFDE	180,000	Aug-17	2013	K-Line
Bishu Maru	LNGC	Kawasaki	Moss	TFDE	164,700	Sep-17	2013	K-Line
Seri Camar	LNGC	Hyundai Heavy	Moss	STRH	150,000	Oct-17	2013	MISC
SK Resolute	LNGC	Samsung	TZ Mk. III	XDF	182,000	Oct-17	2013	SK Shipping
Macoma	LNGC	DSME	GT NO 96	MEGI	173,400	Sep-17	2013	Teekay LNG
Hudong-Zhonghua H1720a	LNGC	Hudong-Zhonghua	Membrane	TFDE	174,000	May-18	2012	China LNG Shipping Holdings
Trinity J/V (Mitsui & Co.)	LNGC	Imabari	GTT Mark III Flex	MEGI	178,000	Jan-20		K-Line
MOL E.On.	LNGC	DSME	GT NO 96	TFDE	179,900	Apr-18		MOL

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 / Lucia Ambition	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	Aman Hakata	18,800	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
2000	Tripura (ex Surya Satsuma)	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	Norgas Creation	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2010	Norgas Innovation	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2011	Akebono Maru	3,556	LNG	Japan	Yes	Chuo Kaiun
2011	Norgas Bahrain Vision	12,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2011	Norgas Conception	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2011	Norgas Invention	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2011	Norgas Unikum	12,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2012	Coral Energy	15,600	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2013	Coral Anthelia	6,500	LNG/Ethylene			Anthony Veder
2013	JX Energy TBN	2,500	LNG	Japan	Yes	JX Energy
2013	Kakuyu Maru	2,500	LNG	Japan	Yes	Tsurumi Sunmarine
2014	LNG-Oil combi**	2,000	LNG	Germany	Yes	Veka
2014	Short Sea LNG Tanker **	4,000	LNG	Germany	Yes	Veka
2015	10 small carriers TBN**	5,000	LNG			Bimantara Group
2015	Jahre TBN**	6,200	LNG	Norway	Yes	Donsotank/Jahre Marine
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	LNG Barge TBN	3,000	LNG	US Coast	Yes	LNG America
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 Inland bunker**	800	LNG	Germany	Yes	Veka
2015	Norgas TBN**	17,000	LNG/LPG/Ethylene	Worldwide		Norgas Carriers
2015	Norgas TBN**	17,000	LNG/LPG/Ethylene	Worldwide		Norgas Carriers
2015	PetroChina TBN	30,000	LNG	China		PetroChina
2015	TBN	14,000	LNG	China	Yes	Zhejiang Huaxiang
2015	TBN 1	27,500	LNG	China?		Danyang?
2015	TBN 2	27,500	LNG	China?		Danyang?
2015	TBN 3	27,500	LNG	China?		Danyang?
2016	Clean Jacksonville	2,200	LNG	US Coast	Yes	CME
2016	Dalian TBN	28,000	LNG	China	Yes	Dalian Inteh Group
2016	Hai Yang Shi You 301	30,000	LNG	Bali FSU	Yes	CETS (CNOOC)
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	LNG Prime	2,250	LNG	Northwest Europe	Yes	Veka Deen LNG
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

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** = project shelved † = Data to be verified Data last updated = 24th May 2017

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
2016	Shell Bunker Barge TBN 1	6,500	LNG	Northwest Europe	Yes	Shell
2016	Shell Bunker Barge TBN 2	6,500	LNG	Northwest Europe	Yes	Shell
2016	Shell Bunker Barge TBN 3	6,500	LNG	Northwest Europe	Yes	Shell
2016	Shell Bunker Barge TBN 4	3,000	LNG	Northwest Europe	Yes	Shell
2017	Yuan He 1	30,000	LNG	China	Yes	CSR
2017	ENGIE Zeebrugge	5,000	LNG	Northwest Europe	Yes	NYK
2017	CME TBN†	2,200	LNG	US Coast	Yes	CME
2017	CME TBN†	2,200	LNG	US Coast	Yes	CME
2017	Coral EnergiCE	18,000	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2017	Coralus	5,800	LNG	Northwest Europe/Baltics	Yes, for Skangas	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	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	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	Bernhard Schulte TBN	7,500	LNG	Baltic	Yes	Bernhard Schulte
2018	CME TBN†	2,200	LNG	US Coast	Yes	CME
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
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	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2020	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2021	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas

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