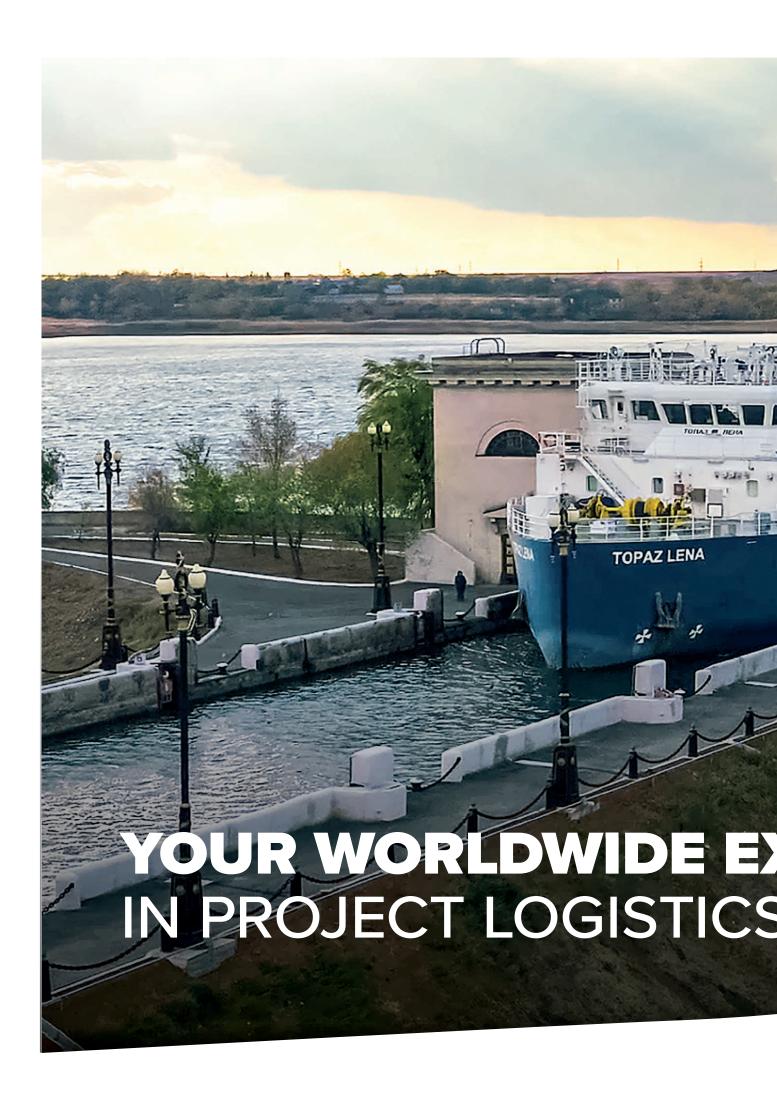


Issue: 81 July/August 2021

## Striking a balance

- Defying downturn predictions
- Unlocking untapped potential
- Bottlenecks distort outbound markets









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#### **REGULARS:**

#### **5 COMMENT**

Striking a balance.

#### 6-20 NEWS ROUND-UP

#### 22 PROJECT FOCUS

RTL aids Russian refinery upgrades.

#### 24 PROJECT FOCUS

ALL Crane's rapid installation.

#### 26 PROJECT FOCUS

The Hutton Hall TLP decommissioning.

#### **38 RISK MANAGEMENT**

LMAA analyses emerging risks.

#### **50 SAFETY**

Offshore wind: Improving efficiency.

#### **63 CAPITAL PROJECTS**

How LNG will be used in the years ahead.

#### **76 SAFETY**

How effective leaders incorporate safety.

#### **104 INDUSTRY INSIGHT**

Offshore wind: The big just get bigger.

#### **126 APPOINTMENTS**

Strømmen heads K2 Project Forwarding.

#### **128 DIARY**

The lighter side.



#### **40 OFFSHORE WIND**

There are burgeoning opportunities in the offshore wind energy sector. However, the increasing size and scale of projects is already putting pressure on port infrastructure - a trend that is likely to be exacerbated by the development of floating turbines.

#### 30 CHINA

Outbound capacity from China is under huge pressure with the country recovering well from the Covid-19 crisis.

#### **52 WEST AFRICA**

There is a broad mix of spending on capital projects in the region where rising commodity prices are buoying the market.

#### **68 BRAZIL**

It remains to be seen whether hopes of economic recovery this year will be translated into reality.

#### **78 AUSTRALASIA**

New Zealand's construction projects are belying predictions that Covid-19 would halt the country's building boom.

#### **80 AIRFREIGHT**

Airfreight demand has hit unprecedented levels. With little sign of the passenger fleet returning to full service, freighter operators are capitalising.

#### **90 GERMANY**

The country's heavy lift sector is in a surprisingly positive mood with its attention focused on a broad range of issues.

#### **96 EAST COAST NORTH AMERICA**

Several manufacturing, assembly and marshalling complexes are planned to support huge investments in offshore wind.

#### **106 RECRUITMENT & TRAINING**

Companies are adopting successful diversity strategies and boosting the number of women in entry level and managerial roles.

#### 112 SOUTH KOREA

Market factors have converged to the benefit of South Korean carriers. In addition, some renewable projects are set to hit the market.

#### 118 EQUIPMENT: UNDER THE JIB

Despite lockdowns, demand for below-thehook equipment has remained strong.



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### Striking a balance

ith vaccination programmes rolling out internationally, it is welcome to see some markets reawakening from their Covid-19 induced hibernation. Roaring crowds at sporting events have been a tonic. Vacations are undoubtedly being planned. The desire to get 'back to normal' is, quite naturally, greatly desired.

On the face of things, the path ahead appears clear: vaccinate and reopen safely. That path, however, will likely wind on farther than any of us hope. Until a critical mass of the global population is inoculated, Covid-19 and its variants will continue to spread. While advanced economies are pressing needles into arms at unprecedented speed, the Economist Intelligence Unit believes middle income countries (including India and China) will not achieve large-scale



inoculation until at least the end of 2022. For poorer countries, this date stretches to 2023, or not at all. Recent developments at China's Yantian port demonstrate the precariousness of the present situation. The Chinese gateway fully reopened on June 24 after a month-long cut in productivity as it addressed a Covid-19 flare up. The process of clearing the backlog of containers and ships could take months. The crisis compounded issues shippers face at the moment, such as surging rates and rolled containers, and reclarified how inter-connected global shipping markets are today. It is fanciful to believe that Yantian will be a discrete event.

Box rates are roaring to levels that have been described as unviable for some shippers. Equipment is in short supply. Bottlenecks and disruption persist and blanked sailings are common as carriers try to recover disrupted schedules. Service levels have undeniably deteriorated. For heavy lift and multipurpose lines, items once containerised are being moved on their tonnage. Reports of shippers delaying deliveries owing to implausible rates means that cargoes are piling up - and there is growing momentum in both the oil and gas and renewable energy markets. Going forwards, striking a balance will be tough.

All that said, project logistics supply chains have proven remarkably resilient – none more so than in the offshore wind energy sector. Renewables have been the lifeblood of the project logistics industry for many years and, according to the executives interviewed in our bumper report on p40, the only way is up. Falling development costs, major capital influx and the viability of massive floating projects all bode well.

While infrastructure, legislative issues and local content requirements are sticking points for West African project development, the prospects are undeniably huge. Greenfield project investment may have fallen 50 percent last year but strong commodity prices and a need for power have sparked a wave of new investments. The full picture is painted on p52.

Our correspondents also shine a light on developments in Brazil (p68), Germany (p90) and South Korea (p112), alongside the latest trends being seen in the airfreight sector (p80).

In this issue, we delve into the perennial issues surrounding recruitment and training and we highlight some of the breakthroughs being made in terms of diversity and representation. Shipping and logistics is an industry that gets under the skin, with many 'lifers' spending the entirety of their careers in the sector. Today's leaders are rarely parachuted in from other industries, signifying the importance of attracting and retaining young talent (p106).

We hope you find the contents useful.

David Kershaw, Editor

The front cover of this issue shows implementation of the largest investment project in Russia, which RTL won together with its Italian partner DSV S.p.A. For almost two years, numerous items of equipment were delivered from European countries to the Russian Federation for the construction of the 'Ammonia-Urea-Melanin' chemical complex to be commissioned in 2021. The most significant cargo item was carbon dioxide absorber (assembled item weight: 232.26 tons, assembled item dimensions: 50.93 x 8.20 x 8.20 m) which is shown on the cover page.

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July/August 2021

#### **NEWS** in **BRIEF**

#### Alfa Laval buys StormGeo

Alfa Laval has completed the acquisition of weather intelligence and advanced data science solutions provider StormGeo.

#### **John Good rebrands**

UK-based John Good Logistics has rebranded as Good Logistics.

#### **Geodis adds training**

Global transport and logistics company Geodis has launched Manage! - a 14-week leadership programme designed to support its 8,000 managers globally.

#### Aertssen rebrands

Aertssen brought two of its construction and contracting businesses under a single brand on June 1. The changes reflect the group's expanded range of services, including demolition work, asbestos removal, remediation, earthmoving, soil drainage, hydraulic engineering, and road construction.

## **K2 Project Forwarding** formed in Norway

eak Group and deugro group have formed K2 Project Forwarding to serve the logistics requirements of the Norwegian

"We aim to offer the Norwegian project market a dedicated, highly qualified and independent project freight forwarder, and we have the ambition to make a difference in the Norwegian forwarding market," explained Didrik Martens, chairman at Peak Group.

Peak Group and deugro group expect to cooperate closely in the venture, giving clients access to innovative solutions and an international



network. This includes access to deugro group's IT systems such as the CargoWise transport management system (TMS) and deugro visiotrack, a web-based supply chain management system providing clients with 24/7 global access to all cargo information and documentation needed for smooth work processes, ensuring visible, real-time logistics data.

Jan-Petter Slethaug, ceo at

Peak Group, said: "The establishment of K2 Project Forwarding is based on our strategy to develop freight forwarding further in Peak Group, and we have a strong belief that we will provide the market with the highest quality solutions, both technical and conceptual."

Leif Arne Strømmen, former vice president – innovation at G2 Ocean, has been appointed ceo of the venture.

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partnership with Integrated Logistics Company to cover the markets in Kuwait and Qatar.

Fagioli has established a

Together the companies will provide heavy lifting and transport engineering activities, both onshore and offshore.

Among its services are traditional and alternative heavy lifting; super-heavy transport using conventional, self-propelled and modular hvdraulic trailers: ro-ro and heavy-duty flat deck barge supply; and loud out, weighing and ballasting service support.

#### Malin opens fabrication facility

Fagioli partnership targets

**Kuwait and Qatar markets** 

Malin Group has opened its 20,000 sq m G2 shed at Westway Park in Renfrew, Scotland. The fabrication facility, one of the

largest of its kind on the west coast of Scotland, houses gantry cranes with lifting capacities of 100 and 500 tonnes.

## Blue Water opens Thyboron office

n cooperation with its local partner Kynde & Toft, Blue Water Shipping has opened an office in the port of Thyboron in Denmark

Blue Water, which has provided a range of port services in the region for several years, said it opened the office because it sees great potential in the area.

"Having strong local partners is important for Blue Water – also in Thyboron. In this new cooperation, we complement each other brilliantly," explained Søren Stougaard, general manager and authorised shipbroker at Blue Water.

Looking at some of the project opportunities on the horizon in the area, Blue Water noted the planned offshore wind farms Vesterhav Nord and Vesterhav Syd, as well as the world's first wind energy island in the North Sea.

The company said: "The port infrastructure is developing by



From left to right: Bjarke Troelberg Vinther (Kynde & Toft), Søren Stougaard (Blue Water), Per Jensen (Blue Water) and Niels Vinther Jensen (Kynde & Toft).

leaps and bounds. With the opening of excellent project quay facilities, Thyboron forms a fully equipped service base and installation port for offshore projects."

Meanwhile, at its headquarters in Esbjerg, the company has opened the Blue Water Academy for employer development and training. The new teaching room can fit up to 100 course participants and is equipped with modern IT solutions.

#### **NEWS** in **BRIEF**

#### **Neele-Vat buys Steder**

The Netherlands-based Neele-Vat Logistics has acquired Steder Group, strengthening its position in the port of Rotterdam while addding offices in Aberdeen, Dubai, Glasgow, and Houston. Steder Group will continue to operate under its own name within the Neele-Vat group for the time being. Management will remain in place and the takeover will not affect employment. Steder Agencies & Chartering will remain independent and will not be sold.

#### **Element expands**

Element International Logistics has opened three offices in Bursa, Eskişehir and Antalya in Turkey.

#### **Audubon's heavy division**

Audubon Companies has launched a crane and heavy lift division. Operated by affiliate company Audubon Field Solutions, it will offer heavy lift solutions to North and South America.

## RMS appoints MST Projects as its Asia-Pacific agent

RMS Projects has strengthened its foothold in the Asia-Pacific region, having nominated MST Projects as its commercial agent for China, Hong Kong and Taiwan

MST Projects is managed by Steven Ou, who spent 16 years with SAL Heavy Lift. MST Projects will cover the local cargo and tonnage markets on behalf of RMS Projects.

RMS Projects has also agreed to cooperate further with Hass Logistics Ghana (HGL).

RMS Projects is the representative and commercial agent for HLG in Europe, and this has now been extended to China, Hong Kong and Taiwan. MST Projects, as sub-agent, will cover this work.

#### **BHSI launches French line**

Berkshire Hathaway Specialty Insurance (BHSI) has launched a full line of marine insurance products in France, including inland marine, ocean cargo, stock and transit, project cargo, freight forwarder liability, ports and terminals, and subsea insurance.

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# AAL applies stability code across its fleet

AL Shipping is enhancing its safety and operational standards across its fleet, achieving the latest 2020 IMO Intact Stability Code.

Nicola Pacifico, head of transport engineering at AAL, explained: "The 2020 IMO Intact Stability Code is currently only mandatory for new vessels. Nevertheless, we decided to harmonise these new standards across our fleet and operations.

"In the past, carriers were free to set their own standards governing stability when lifting heavy cargoes and shippers either accepted them or not. Now the bar is pre-set, and carriers will need to prove in advance that the stability of their ships and heavy lift operations is guaranteed. This is a major step forward for setting higher safety standards within the sector and demonstrates the capabilities of one carrier compared with another."

AAL is also taking proactive steps to improve its sailing efficiency, fuel consumption and emissions reductions with its performance optimisation control room (POCR) – developed and operated by

Columbia Shipmanagement (CSM). The facility is harnessing routing, weather and sea conditions technology to monitor and plan every aspect of each sailing. Voyage recommendations are then returned periodically to each master with optimised routing, sailing and fuel consumption recommendations.

Valentin Gherciu, AAL operations manager, added: "The next step on our journey to enhanced sailings efficiency and lowered CO<sub>2</sub> emissions is the implementation of a new motion response analysis' (MRA) programme.

"The output of this programme, coupled with machine learning tools afforded to us by the POCR, will enable AAL to make even more efficient voyage calculations in terms of fuel consumption and how to reduce the same. Our commitment to this cause was also the driver for AAL's recent adoption of next generation hull coatings to our fleet, which will reduce resistance through water and thus lower the engine power and fuel consumption required."

#### Malin and Augustea's semi-sub progresses

Malin Abram and Augustea's semi-submersible lifting barge is being lengthened and strengthened at the Hat-San shipyard in Turkey in preparation for the transport and launch of a Royal Navy Type 26 vessel on the River Clyde in Scotland.

Heavy lift services specialist Henry Abram & Sons, part of the Malin Group, secured the contract with BAE Systems to transport the Type 26 vessel last year. The bespoke launch barge that will be deployed for the project will be one of the largest in Europe, capable of handling cargoes up to 140 m long. Malin Group said that it would be able to accommodate the load-out and float-off of most offshore structures and vessels, making it one of the most capable vessels of this type in Europe.

#### **NEWS** in **BRIEF**

#### **DNV** adds new tools

DNV has launched a mobile inspection app that helps shipowners and managers record and follow-up their onboard safety inspections, all while providing onshore staff with instant access to the results. It also has a digital compliance planner tool enabling customers to track the requirements and deadlines of legislation for both individual vessels and entire fleets.

#### **Charter rates rise**

The average daily time charter rate for a 12,500 dwt/F-type heavy lift vessel stood at USD11,225 at the start of July 2021, according to shipbroker Toepfer Transport. This is an increase of USD940 compared to June 2021's figure of USD10,285. Toepfer's average time charter rate in July 2020 was USD6,391.

#### **Grimaldi takes deliveries**

Grimaldi has taken delivery of the newbuild ro-ro vessel Eco Catania in Nanjing (China) — the fifth of 12 hybrid ro-ro units comprising the Grimaldi Green 5th Generation (GG5G) series ordered from Jinling Shipyard. The carrier has also welcomed Grande California — the last of seven pure care and truck carriers (PCTC) it ordered from the Chinese Yangfan shipyard in Zhoushan.

#### **Roll Group names agent**

Roll Group has appointed Representaciones Marítimas (Martimex) as the commercial agent for Rolldock Shipping in Mexico.

#### **Schram looks to wind**

Schram Shipping has signed a contract with eConowind to help optimise wind assisted propulsion technology. As part of the collaboration, Schram Shipping will install two of eConowind's 16 m tall wind-assist VentiFoil units on the 5,097 dwt general cargo vessel Anna. Retrofitting will be carried out by the end of 2021.

#### **GSL signs US pact**

Green Shipping Line (GSL) has signed an agreement with vessel engineer DEKC Maritime to pursue Jones Actcompliant offshore wind vessel solutions in the USA.

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# **European hauliers planning expansion**

ore than a third of European road transport businesses that took part in a survey for legal firm DWF are thinking about expanding their operations into other countries, with the UK leading the list of destinations.

One Poll carried out the survey for DWF in Ireland, Spain, Italy, Germany and Poland. It found that despite the challenges of the last year – new regulations, the impact of Brexit and business disruption caused by Covid-19 – transport companies are positively looking ahead to expansion. A total of 38 percent of haulage decision makers who transport goods to the UK said their company is currently considering relocating or establishing new bases there.

The UK was closely followed by Italy (31 percent), Germany (30 percent), Poland (30 percent) and Spain (26 percent) as other destinations where haubge companies were considering launching or expanding operations.

While the desire to expand into other European countries may be partly driven by opportunity, some companies are being forced to reconsider their business models to deal with the changes to EU Drivers' Hours' regulations.

According to DWF, new EU regulations mean

that operators will have to organise the workloads of international drivers to ensure they return home more regularly. An international driver can no longer spend weeks away from home. The survey found that 63 percent of those polled said they will arrange transport home to base for international drivers, while 36 percent of those surveyed said they will look to establish one or more additional bases with a view to drivers completing shorter legs of international journeys as a result.

Vikki Woodfine, partner and head of road transport and logistics at DWF, said: "Our survey clearly shows that European road transport decision-makers are gearing up for expansion and change. There has been a period of consolidation and change in the market in this turbulent year, and as things settle down, opportunities from the reshuffle of the market emerge."

Despite optimism of some companies, some perceived barriers to the market remain. The survey found that Brexit and lack of free movement within the EU was a concern for 39 percent, while 42 percent of haulage companies consider the complexity of regulation involved in setting up operations in the UK to be a barrier to establishing a base in the country.

#### **NEWS** in **BRIEF**

#### **New decarbonisation tool**

New Zealand's Ara Ake has launched a free tool designed to help freight companies and the public sector better understand the options for decarbonising their road fleet. The tool takes a 'total cost of ownership' (TCO) approach to calculating the cost of road freight movements and follows New Zealand's recent Climate Change Commission's recommendation to move away from fossil fuels to reduce emissions from heavy vehicles.

#### **MAX Trailer upgrade**

MAX Trailer – part of the Faymonville Group – has expanded the capabilities of its MAX100 low loader, which is now available with two pairs of wheel recesses and a telescopic loading platform. The deep wheel recesses are particularly suitable for the transport of wheel loaders and dumpers, while the front wheel recess can be adjusted with an extension. Insert elements can be used to adapt the resulting trough to accommodate the machine being loaded.

#### **First Stepstar for Quinto**

Specialist Trailer Hire (STH), in its role as Goldhofer's sales partner in the UK, has delivered the first Stepstar four-axle trailer to Quinto Crane & Plant. The trailer is equipped with two foldable hydraulic ramps, which can create an extremely low ramp angle. This makes the trailer suitable for the transport of moveable work machines, even with low ground clearance, Goldhofer said.

#### **Nooteboom picks Siimet**

Nooteboom has appointed Siimet as its official dealer in Finland. Siimet is responsible for the sales of Nooteboom trailers and will take care of maintenance, repair and spare parts supply for Nooteboom vehicles.

#### DICA and ITI team up

Outrigger pad manufacturer DICA and Industrial Training International (ITI) are collaborating to create educational courses focused on ground conditions and preparation for the operation of mobile cranes. The courses will be available through ITI's online Learning Hub.

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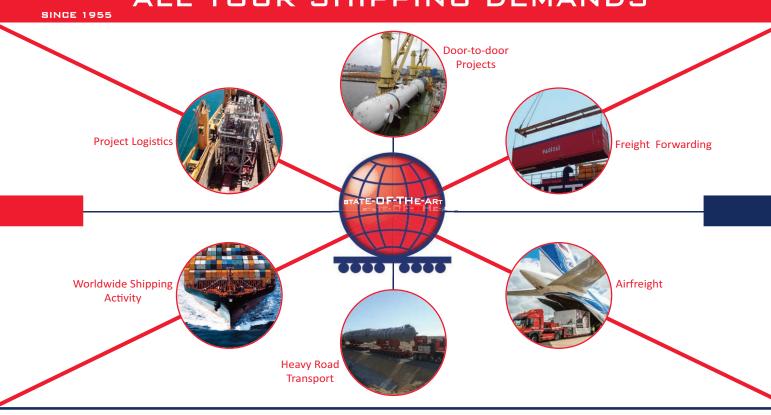








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# ABC to be WFS launch customer at Atlanta

irBridgeCargo Airlines (ABC), part of Volga-Dnepr Group, has signed a three-year contract to become the launch customer of Worldwide Flight Services' (WFS) cargo terminal at Hartsfield-Jackson Atlanta International Airport in the USA

WFS expects to handle some 9,500 tonnes of cargo annually for ABC. The contract extends ABC's partnership with WFS in North America, with WFS already delivering handling services with the all-cargo airline in New York JFK, George Bush Intercontinental/Houston Airport (IAH), and Dallas/Fort Worth.

"AirBridgeCargo is an important and growing customer of WFS globally. The airline and its customers are the first to benefit from WFS' investment in a new cargo terminal and handling systems in Atlanta and we are delighted to



welcome them as our launch client," said Mike Simpson, executive vice president Americas at WFS.

WFS opened its operation in Atlanta on May 15, 2021, under a 20-year lease agreement with the airport authority.

#### Partners aim to transform Krasnoyarsk Airport

Krasnoyarsk International Airport, Volga-Dnepr Group and the Krasnoyarsk region have signed an agreement that aims to develop the gateway into an international logistics hub.

The partners hope the airport will act as the main logistics hub for the development of crossregional and international cargo operations.

The agreement covers the opening of the international postal centre at Krasnoyarsk Airport, as well as Customs facilities and a mail Customs

checkpoint to expedite cargo clearance.

The move follows the airport reporting a fivefold increase in cargo throughput in 2020, as a result of increased demand during the pandemic. Alexey Isaykin, partner and chairman of the board at Volga-Dnepr, commented: "We have been operating through Krasnoyarsk for many years. However, 2020 was an exceptional year and it also demonstrated that the airport potential has not been unleashed to a full extent."

He added: "The airport demonstrated that it could provide high-quality services and keep on increasing the volumes. The major contributing commodities have been PPE, medical products and equipment, as the group has been carrying out an important rescue mission for our customers across Russia and beyond.

"It is very important that we have not reached the ceiling and see further potential for development."

#### **NEWS** in **BRIEF**

#### Aliscargo takes off

Aliscargo Airlines has commenced operations with two Boeing 777-200ERs. The first routes operated by the Milan Malpensa-based airline will connect Italy with Asia-Pacific and North America. The Aliscargo team is headed up by ceo Francesco Rebaudo, former ceo of Cargolux Italia. Fulvio Gismondi serves as chairman, and Ulrich Ogiermann as chief commercial officer.

#### Saudia boosts Liège link

Saudia Cargo and Liège Airport have signed a commercial partnership that will see the airline increase the number of cargo flights to and from the Belgian gateway. Liège will be added to Saudia Cargo's European network for its regular operations as well as for charter flights.

#### Lufthansa adds to fleet

Lufthansa Cargo is adding a Boeing 777F aircraft to its freighter fleet. The plane is expected to be delivered before the end of the year and will boost Lufthansa Cargo's fleet to 15 freighters. The twin-engine B 777F has a standard payload capacity of 103 tonnes with a range of more than 9,000 km.

#### **VDTM extends approval**

Volga-Dnepr Technics Moscow (VDTM)
– a provider of maintenance, repair
and overhaul (MRO) services in Russia
– has received Bermuda Civil Aviation
Authority (BCAA) approval for Boeing
777-200/300 (GE 90) maintenance
provision at Domodedovo (Moscow)
and Krasnoyarsk airports.



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## Port of Leith to invest in renewables hub

he port of Leith in Scotland – owned by Forth Ports – plans to invest GBP40 million (USD55.3 million) to develop a renewable energy hub to support the offshore industry.

The private investment covers the construction of a riverside berth capable of accommodating the world's largest offshore wind installation vessels, according to Forth Ports.

The facility, located on a 175-acre (70.8 ha) site, will also feature a heavy lift area capable of handling ground pressures of up to 100 tonnes per sq m, backed up by 35 acres (14.2 ha) of adjacent land for logistics and marshalling. This will be supplemented by the upgrading of a 140-acre

(56.7 ha) cargo handling site.

Charles Hammond, group ceo of Forth Ports, said: "We are committed to playing a significant role in the renewable energy sector and, through that, Scotland's energy transition to net zero as we also tackle the challenges of Covid-19 recovery and economic regeneration."

He continued: "Leith's proximity to the North Sea, which is set to become home to many more offshore wind developments, coupled with the natural deep waters of the Firth of Forth, make this an ideal location to support not only those developments already planned, but the pipeline of projects that are sure to follow."

#### Fujairah opens multipurpose facilities

Fujairah Terminals in the UAE has opened new multipurpose facilities as part of its AED1 billion (USD272.3 million) expansion project.

Part of Abu Dhabi Ports, Fujairah Terminals began the

expansion works three years ago with the aims of: increasing the terminal's general cargo throughput 1.3 million tonnes; boosting the multipurpose area to 25,000 sg m for general cargo and ro-ro services; and increasing container capacity to 720,000 teu.

In addition, the quay wall has been extended from 760 m to 1,000 m and the approach has been deepened from 12 m to 15 m to enable the port to handle larger vessels.

#### Radix to turn Açu into a digital smart port

Radix Engineering and Software, in collaboration with a number of industry stakeholders, is developing a smart port digital growth plan for the port of Açu

In collaboration with

Hamburg Port Consulting (HPC), the University of Houston and UTC Overseas, Radix is developing a technological platform of the port and its ecosystem with a focus on operations optimisation and

new businesses that are technologically aligned.

The five-to-ten-year plan includes proposals to digitise the different stages of the logistical process and attract new business.

#### **NEWS** in **BRIEF**

#### Antwerp in leasing talks

The port of Antwerp has started its second round of consultations for companies that are interested in leasing space in the 88 ha NextGen District, designated specifically for companies involved in the transition to a climate-neutral society and the circular economy. A shortlist has already been drawn up from companies who applied in the first round application process; the is asking any new candidates to submit project proposals by October 20, 2021.

#### Abu Dhabi in Al alliance

Abu Dhabi Terminals has formed an alliance with Microsoft that will enhance its container tracking and autonomous shuttle capabilities at Khalifa Port.

#### **Corpus Christi energy MoU**

The port of Corpus Christi in Texas and Ares Management have signed a memorandum of understanding (MoU) to develop renewable energy infrastructure at the port and supporting green hydrogen production.

#### **Gothenburg to digitise calls**

The Gothenburg Port Authority is launching Berth Planner in order to make calls at the port more time efficient, cost effective and environmentally smart. Developed by the port authority in partnership with the Finnish company Awake.AI, it offers two-way integration - for inhouse use by berth planning personnel at the port and for external partners.

#### **PSA Breakbulk and** Felbermayr team up

PSA Breakbulk and Felbermayr will jointly operate the 15-ha site beside Churchill Dock South at the port of Antwerp, with a specific focus on breakbulk activities.

#### **Swissterminal triples up**

Swissterminal has taken over the operation of three inland ports in the Alsace region of France -Ottmarsheim, Huningue and Ile Napoléon. At the three ports it will provide bulk and breakbulk services, commercial rental space, project cargo solutions and rail services.

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# Faymonville adds to HighwayMax range

aymonville has added the
HighwayMAX
Dolly&Booster trailer to its
North American product range.

Part of the HighwayMAX product series, the extendable super-heavy haul trailer consists of nine hydraulically steered pendle axles, a three-axle jeep dolly and a three-axle nitro booster.

Including the truck, the unit creates a 19-axle combination and offers a payload capacity of 108.9 tonnes at 9.1 tonnes per axle.

Faymonville said the trailer saves time and money because it can be assembled and disassembled quickly and easily. As the keep dolly and booster are detachable, they



can be loaded onto the trailer for empty runs, which also avoids the need to acquire permits.

The truck and trailer combination length is less than 2.8 m long and the loading

platform can be extended up to 2.1 m.

Faymonville added that the pendle axle technology enables high manoeuvrability. It is kingpin steered with a steering angle up to 60 degrees.

#### NEWS in BRIEF

#### First LTM 1650-8.1 for Spain

Grúas y Transportes Ibarrondo has taken delivery of the first Liebherr LTM 1650-8.1 mobile crane in Spain. The eight-axle unit is more powerful than its predecessor the LTM 1500-8.1, meaning it can tackle challenging hoisting work in the 700-tonne class.

#### LASO invests in equipment

LASO Transportes has made investments of some EUR20 million (USD24.4 million) in equipment and staff. The company now operates more than 2,000 pieces of equipment covering its domestic Portuguese market and internationally.

#### **Hovago places Tadano order**

Dutch crane service provider Hovago has ordered nine cranes from Tadano: three AC 5.220-1 and two AC 5.250-1 all-terrain cranes, two GTC-1800EX telescopic crawler cranes and two CC 38.650-1 lattice boom crawler cranes.

#### Al Faris ups crane fleet

Al Faris Group has added Liebherr mobile cranes ranging in capacity from 110-500 tonnes to its fleet in the Middle East. The most powerful new addition, with a lifting capacity of 500 tonnes, is the Liebherr LR 1500. Al Faris said that this is the first LR 1500 in the Middle East and North Africa (MENA) region.

#### **Mammoet buys winch fleet**

Mammoet has acquired Land & Marine's linear winch equipment fleet and associated pipe pulling equipment from J Murphy & Sons. The equipment includes two 800-tonne capacity linear winches of a patented design that allows socket passing under load and utilises advanced hydraulic controls for accurate monitoring.

#### Cometto's Eco1500 series

Cometto launched the Eco1500 series of self-propelled electronically steered modular vehicles. Equipped with an integrated power pack unit, it can handle payloads up to 1,500 tons (1,361 tonnes). It is available in a four-axle type with four driven suspensions; a long frame variant; and a six-axle type with four driven suspensions.

#### Goldhofer launches longer P12 PLUS

Goldhofer has introduced its P12 PLUS semitrailer (pictured) for the North American market.

With one or two intermediate bogies, the semi-trailer is capable of being combined up to 12 axle lines and offers a longer loading deck and a higher payload than comparable models.

The 12-axle variation has a maximum payload of 127 tons (115.2 tonnes) with a 12-ton (10.8-tonne) axle load. The system can also be operated in six or nine-axle configurations. Supporting accessories include



loading decks and turntables.

Stefan Kohler, director of sales – North America at the trailer manufacturer, said: "The Goldhofer P12 PLUS represents our wealth of experience with the successful THP series transferred to the highway transportation market. Thanks to its variability, heavy haul companies will now ensure delivery of diverse, special and everyday loads to destinations with just one vehicle."

#### Scheuerle expands series with the K25 L

Scheuerle has expanded its platform vehicle series through the addition of the K25 L – a low-height variation of the K25 suited to the transport of ever-larger wind turbine components.

It comes in two to six axle

configurations; it can be combined with goosenecks, drawbars, swivel bolsters, bridges and tower adapters, and used in temperatures reaching minus 25 °C.

The axle load limit is up to 23

tonnes, or up to 13.9 tonnes at 80 km/h. A wider track width considerably reduces the risk of accidents caused by overturning when transporting wind tower segments with large diameters, Scheuerle added.

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## **High & Heavy show** heads to Vancouver

pecialized Business Media will host its High & Heavy trade show, featuring a sustainable projects conference, from March 2-3, 2022 at the Fairmont Hotel Vancouver in Canada

The trade show will serve as a meeting point and networking event for executives in the industrial capital projects and infrastructure sectors. It is specifically directed at asset and resource owners, OEMs, EPCs and their project developers, as well as procurement and supply chain executives, said Specialized Business Media.

The conference will include presentations on managing contract risk and digital interconnectivity in the capital projects supply chain, as well as focusing on the opportunities the sector has to leapfrog older and dirtier planned energy



generation, focusing instead on cleaner and more sustainable technology.

"The need fordiscussion is dramatically increasing as we work to decarbonise the economy and increase electrification," said Nigel Brown, event organiser and general manager at Specialized Business Media. "There are many challenges to reduce emissions and reach net zero targets

envisaged by governments, but also incredible opportunities as new technology and solutions become commercially viable.

"The global energy mix needsto undergo a seamless shift from fossil fuels to renewables and other cleaner technologies. As this energy transformation gains momentum, new ecosystems are forming and new technologies are emerging."

#### **NEWS** in **BRIEF**

#### **Network additions**

The Project Cargo Network (PCN) has gained several new members. Aero Freight & Logistics and Console Shipping Services have joined the network as members in Qatar; SafeSea Bangladesh joined as a representative in Bangladesh; and A. Perez v Cia joined as a member in Spain.

The **Project Professionals Group** (PPG) has welcomed Next Shipping as a representative in Brazil.

SPC Logistics has joined the **Worldwide Project Consortium** (WWPC) as a member in Costa Rica.

The Heavy Lift Group (THLG) has gained Star Shipping as a representative in Pakistan.

The Overseas Project Cargo Association (OPCA) also continues to expand: Velocity Lines has joined the network as a member in Pakistan; Om Freight Forwarders as a representative in India; MSA Shipping as a member in Sri Lanka; and Aero Freight (Emirates) as a member in the UAE. Scan-Shipping has also expanded its presence in the network to include its operation in Ukraine. The company already represents OPCA in Denmark, Estonia, Norway and South Africa.

XLProjects (XLP) network has added Trans Asia Express as a member in Kowloon, Hong Kong. It also welcomed W.T.I Cambodia based out of Phnom Penh; COLI Project Cargo Denizcilik from Istanbul, Turkey; and Manuport Logistics of Antwerp, Belgium.

#### THLG elects board at online conference

The Heavy Lift Group (THLG) held its online conference on May 18, when it elected the members of its executive committee for 2021-2023.

Several members were reelected, including Murilo Caldana of FOX Brasil as

president and business development officer; Cosmatos Group's Elisabeth Cosmatos as marketing manager; Blanca Claeyssens of ASA France as treasurer; Alessio Bianchi of DCS Liburnus as social responsibility and sponsorship officer;

Sogebras' Johann Feltgen as admission officer; and Colin D'Abreo of Rhenus USA as ad-hoc member.

Joining the executive committee team for the first time is Natalya Kulagina of Vesta Logistic Company.



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#### **NEWS** in **BRIEF**

#### Wangfoong deliveries

Wangfoong Transportation has delivered transformers from Hong Kong to Macau, China. Four units measured 10.4 m x 3.45 m x 3.95 m and weighed 187 tons (169.6 tonnes), while two further items measured 6.4 m x 3.3 m x 4.2 m and weighed 82 tons (74.4 tonnes) each. The shipment also included 1,700 cu m of accessories.

#### LNG Canada milestone

The Mammoet-Haisla joint venture has completed the pile handing scope for the LNG Canada project in British Columbia. Mammoet-Haisla provided offloading services for incoming pipe piles throughout the pandemic, completing its scope during March. Over the course of a year, teams offloaded, transported and placed 6,513 piles.

#### 11D19 moves mine pieces

Eleven Danir 19 has handled 520 pieces of mining equipment at the port of Riga in Latvia. The 520 pieces of metal structures included various out-ofgauge (OOG) components, which measured up to 7 m wide. The total weight of the cargo was 1,917 tonnes.

#### **Edwards manoeuvres**

**Edwards Moving & Rigging has** deployed a Goldhofer Faktor 5 girder bridge trailer and heavy-duty modules to transport two turbines and generators in Fort Lauderdale, Florida, USA. The turbines and generators weighed 317 and 430 tonnes respectively and needed to be transported to a power plant approximately 19 km away.

#### **Bertling ships tanks**

**Bertling Logistics has delivered** pressure vessel tanks from Kuantan port in Malaysia to Singapore. The tanks weighed approximately 60 tons (54.4 tonnes) each and were transported using drop-deck trailers to reduce the total height of the loads.

#### Windy Rig under way

Collett & Sons is working with P. Adams Transport to manage and transport all wind turbine components for the Windy Rig wind farm located in Dumfries and Galloway, Scotland.



## Cometto SPMTs help scrap nuclear plant

rane and special transport company Gertzen Krane has deployed Cometto ■ SPMTs to help decommission a nuclear power plant in Emsland, Germany.

Although demolition of the plant is not due to commence until 2022, the first components are already being scrapped, said Cometto.

Gertzen Krane was contracted to remove a 391-tonne generator from the safety area of the

plant. The company used 18 axle lines of Cometto SPMTs - six from its own fleet and 12 axle lines from Autokrane Schares - along with a 202 kW power pack.

The generator was set down on support beams outside the area. The SPMTs were driven out from underneath the unit in its lowest driving positions before the generator was cut into small pieces for recycling.

#### **Esprit moves silos through Manchester**

Esprit Group welcomed the general cargo vessel Hendrik S at its Trafford Docks in Manchester, UK, in late May. The vessel was carrying three 35tonne silos that were transported to a Heineken factory in central Manchester.

The four-mile (6.4 km) journey took two hours with a police escort. Esprit said that tram lines had to be lifted by **Transport for Greater** Manchester (TfGM) and street furniture removed by Tafford Council to allow safe passage.

In early June, Eems Transporter arrived in Manchester with a further four silos destined for the Heineken factory. Another three nights of



police escorts and teamwork from Sarens, Finnie Heavy Haulage, GM Police, KeolisMetrolink, TfGM and Heineken, all under the

management of Park Project Freight, saw everything delivered safely and on time without causing any traffic disruption, Esprit said.



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### RTL aids Russian refinery upgrades

A maleic anhydride production facility will be commissioned by Tatneft in 2023 following the delivery of a reactor in 28 units by RTL.

TL delivered a maleic anhydride synthesis reactor last autumn for Tatneft – one of Russia's largest oil companies and a specialist in the development of crude oil and gas production, petroleum refining and petrochemicals production.

Maleic anhydride is a multifunctional base chemical that is used in almost all branches of the industrial chemistry; at present, Russia is 100 percent reliant on international imports of this vital chemical.

The reactor comprised 28 individual units, which were

dispatched from Rotterdam in the Netherlands.

Two units measured 10.5 m x  $7 \text{ m} \times 6.8 \text{ m}$  and tipped the scales at 333.3 tonnes apiece. The items were delivered to the Dutch gateway by barge, where they were reloaded onto oceangoing vessels for delivery to Russia.

#### River barge

The ship sailed to the port of St Petersburg, where the equipment was reloaded onto a river barge and dispatched to Nizhnekamsk. At the dock, 26 units, comprising spare parts and components for the reactors, were lifted and loaded

onto vehicles: the two massive reactors were rolled off the barge. Then cargo was delivered by road to the construction site in Almetyevsk. 24 axle lines of Goldhofer THP/SL trailers were used to complete this leg of the journey.

RTL said that the main difficulty faced in this project was a cargo readiness delay in

> Two units measured 10.5 m x 7 m x 6.8 m and tipped the scales at 333.3 tonnes apiece.

the port of Rotterdam, and there was a real risk of being unable to perform the river barge delivery in Russia.

#### **Modular trailers**

Furthermore, to facilitate the discharging operation in St Petersburg, RTL upgraded various cargo beds for the heavy reactors to be rolled out and placed safely on modular trailers.

Ultimately, the reactors and their supporting accessories travelled some 1,820 km from Rotterdam to Almetyevsk.

The maleic anhydride production facility will be commissioned in 2023 and will meet international environmental standards.

**7** HLPFI

#### **Championing ESG principles**

"When supplying logistics services to our partners, RTL keeps environmental, social, and governance (ESG) approaches in mind and we are proud to execute projects to the highest ecological standards in the industry," said Mikhail Reshetkov (pictured), ceo at the Russiaheadquartered logistics group.

"Even before the first truck makes its move, our specialists work out all possible risks and consequences along the route that may influence ecosystems and peoples' lives along the way. Appropriate steps are taken to minimise any undesirable effects of the upcoming shipment.



"We try to avoid disturbing nature and society wherever possible, while staying transparent to our partners with regard to all project details. If we have to modify infrastructure, we try to ensure this has the greatest positive effect for local people – for instance, by building better roads and communication lines that can be used afterwards," he said.



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### **ALL Crane doubles up** with Liebherr machines

ALL Crane put nearly eight months of planning into the rapid construction of a pedestrian and cycle bridge in Wendy Park, Ohio, for which it had been allocated a challenging 60-minute time slot. Megan Gildea reports.

SA-based crane rental company ALL Crane mobilised two Liebherr mobile cranes - an LTM 1450-8.1 and an LTM 1250-6.1 - to execute a time-sensitive lift as part of the construction of a pedestrian and cycle bridge in Cleveland's Wendy Park, Ohio.

The three-span pedestrian and cycle bridge was constructed as part of an expansion of the Ohio and Erie Canal Towpath Trail Due to the fact the bridge runs over busy railways tracks - roughly 100

trains per day pass the area -ALL Crane worked closely with the railway to obtain the clearance needed to set the bridge's spans.

#### Months of planning

Plans for the lift were submitted months in advance to Norfolk Southern Railway. ALL Crane was allotted a one-hour window to complete the placement of the archway that would ultimately assume the bulk of structural support duties for the entire bridge.

Ahead of this, both cranes were used to set two 38 m-long bridge spans, which weighed 38.5 tonnes each, and a third 75 m-long span, onto their respective temporary abutments.

Furthermore, Dan Lewis, project supervisor for Youngstown Bridge, had his team perform several pre-lift tests to make sure they would be ready to make the most of their time during the installation of the arch. "This gave our ironworkers the opportunity to fine-tune the rigging of each

arch section, incorporating the actual crane configurations that would be used on lift day."

Nearly eight months of planning came down to 60 minutes. The LTM 1450-8.1 was configured with a 48 m main boom at a 15 m radius and the maximum of 134 tonnes of counterweight, while the LTM 1250-6.1 had a 40 m main boom at a 10 m radius.

The two Liebherr cranes came together to set the two halves of the arch and hold them in position so ironworkers could execute a mid-air splice.

By installing the arch, the temporary structures below could be removed, and the bridge would be essentially complete, Liebherr explained.

#### **Critical splice points**

The crane operators held each arch piece in position as a dozen ironworkers, six in man lifts and six on the ground, installed scores of bolts at critical splice

Liebherr explained that there was a minimum number of bolts that had to be installed for the structure to support its own weight, and this became a crucial milestone. "If the milestone was not met. ironworkers would have to reverse course and disassemble the arch so they could try again another day.

"Given the difficulty in scheduling work windows, no one wanted this," the crane manufacturer remarked. The milestone was met at minute 35, and the work completed at minute 58.

**7** HLPFI

#### Ainscough Crane Hire upgrades Welsh railway bridge

Ainscough Crane Hire deployed a Liebherr 1750-9.1 telescopic crane to upgrade a railway bridge in Crumlin, Wales, as part of a GBP5 million (USD6.9 million) project funded by the UK's Department for Transport.

AmcoGiffen was tasked with the design and build of the new bridge and appointed Ainscough Crane Hire to carry out lifting duties.

The lifting had to be undertaken close to the River

Ebbw without halting operational use of the A467 – a strategic road to Newport. The solution was to create a crane platform that could offer structural support for the Liebherr 1750-9.1 while displacing the load away from the existing retaining wall of the river.

Ainscough removed and replaced the existing bridge so a wider deck could be fitted, allowing two railway lines to run across the bridge. This involved removing the four steel-plate arch girders and

dismantling the steel decking. The team fitted 26 new pre-cast beams to reconstruct the sub-structure and were then able to install the new steel bridge of four plate girders and steel decking.

The structure was demolished and reconstructed in a total of 68 individual lifts. Ainscough said that it was engaged early on in the project, which enabled all parties involved to undertake a series of site meetings to identify any potential issues on site.



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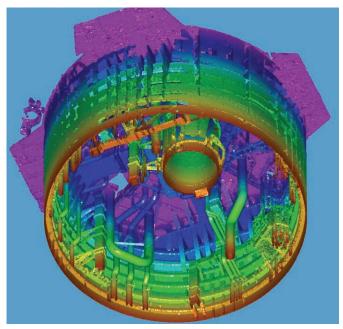


### MBM solves multiple challenges in decommissioning of Hutton Hull TLP

The 25,000-tonne Hutton Hull tension leg platform (TLP) – manufactured 40 years ago and the first of its kind to be built - has been taken to shore in Scotland as part of a complex decommissioning project. Sophie Barnes reports.

he Hutton Hull TLP known as the Pillars of Cromarty Firth - was first installed in the Hutton oilfield on the UK continental shelf (UKCS) in 1984 by Aker Offshore. It is not only the world's first TLP, it remains one of the largest of its kind to date. During 2008, it was being moved to Mexico but, during the towing operation, it broke free of its mooring chains near Scotland. As a result, the TLP was towed and moored in the Firth - where it has remained ever since.

Bob Buskie, chief executive of the port of Cromarty Firth, said: "Since 2009 the legs have been safely and securely anchored here, becoming a distinctive part of the Cromarty Firth. Now



MBM had to remodel the piping and structure in preparation for the first lift.

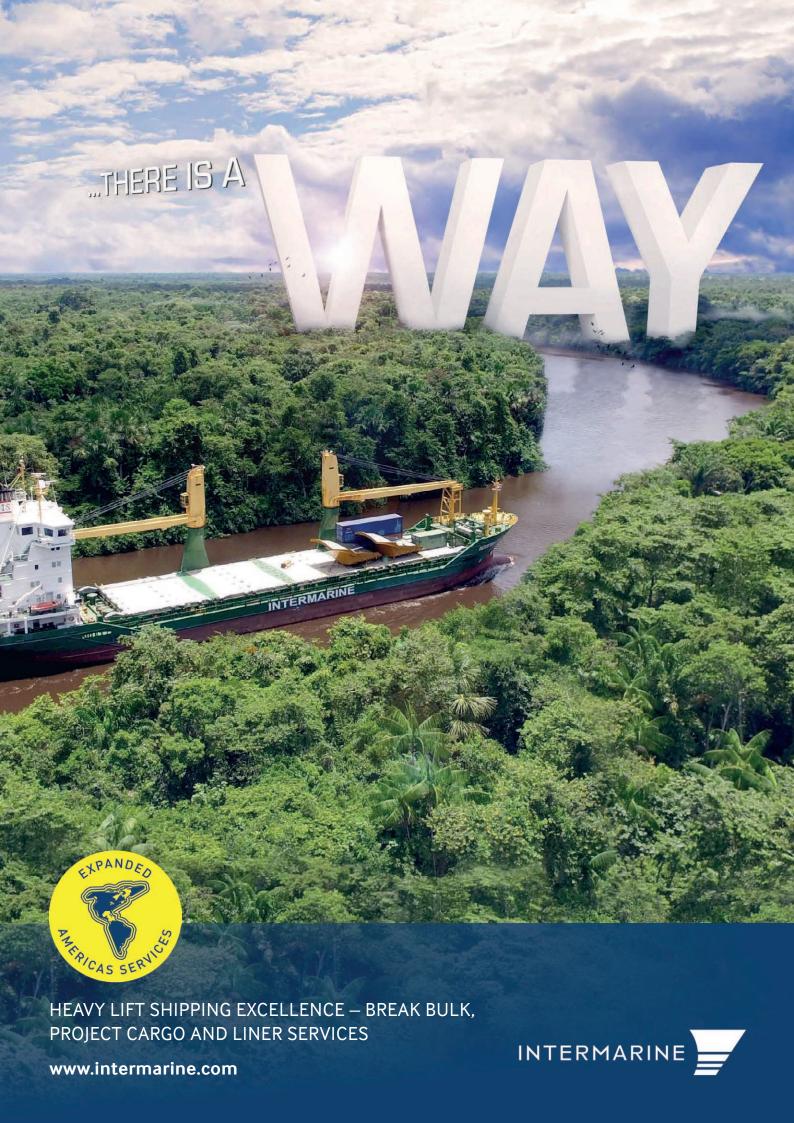
its life has come full circle as it has been transferred to the port's Queens Dock where Messiah Decommissioning will begin decommissioning operations onsite."

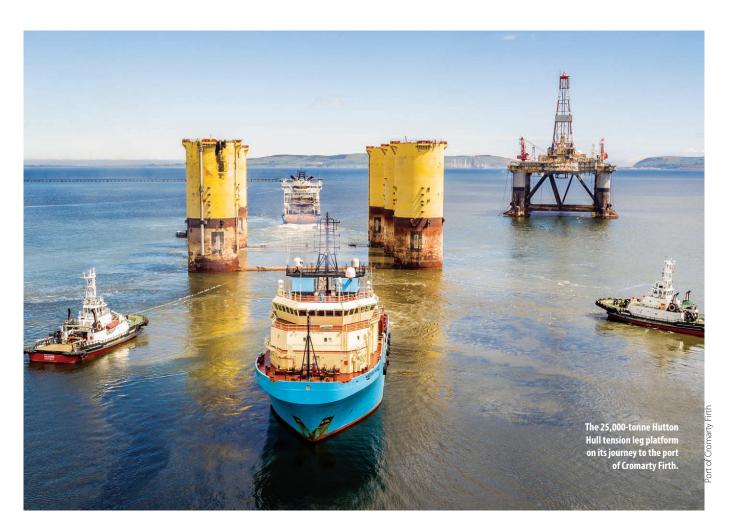
Before the decommissioning of the TLP's structures could commence, Hutton Hull had to be towed from where it stood idle for the last 12 years.

#### **Early issues**

Assisting in the project is MBM Consultancy, Speaking with HLPFI, company founder Mark Bambury discussed some of the issues that arose before any actual project work could get under way.

"After it was moored in Firth they cancelled the contract for Mexico. They closed the company down for that project and then a holding company became the owner, but legally it was not sold or transferred," he





said. With a number of other transfers and deals under its belt, it took a year for the team planning on purchasing the TLP to find out who legally owned Hutton Hull.

When MBM became involved to help with the engineering plans to move and decommission the structure, the company found that there were no drawings.

#### **Lack of drawings**

Bambury said: "Once the Hutton was purchased, MBM got in touch with Mark Darley, global marine and offshore director at Lloyd's Register (LR). This was to gain access to any drawings or data of the Hutton. LR believed it had a box of drawings in an archive in Southampton."

Much to the team's disappointment, it turned out to be the wrong vessel and no drawings were available.

With no documents, plans or drawings to assist the project, MBM had to re-engineer the

vessel hull and perform stability calculations from scratch.

"We had the a basic idea of dimensions and where the bulkheads are. So we began to recreate a whole new model of tanks and the main body. We conducted surveys to get the main draughts at the four corners, at approximately 100 m apart, to define overall displacement and weight of the TLP," explained Bambury.

"By looking at the displacement, we estimated that it weighed around 24,800 tonnes - without ballast. This is primarily the steel lightship weight. From that we developed the towing and mooring plans.

"From starting the

investigations to bringing Hutton Hull into a moored berth in Queens Dock Invergordon, took approximately three months... it was a very rewarding challenge."

The operation saw the massive 100 m x 100 m Hutton hull relocate approximately 4 km into the dock at high tide.

#### Port involvement

The port of Cromarty Firth has also been involved in the planning and execution of the structure's transport. Its Queens Dock is an ideal facility for the project – it provides a sheltered deepwater location and offers great protection for underwater works.

Buskie said: "The port

From starting the investigations to bringing Hutton Hull into a moored berth in Queens Dock Invergordon took approximately three months... it was a very rewarding challenge.

- Mark Bambury, MBM Consultancy

continues to hold all the relevant decommissioning and waste management licences to ensure the project is completed to the highest health and safety standards, which will be monitored by independent auditors and under a permit from SEPA. The project is expected to recycle around 95 percent of the structure, which is mainly made up of steel."

For the physical decommissioning, MBM had to first undertake 3D scans of the structure. This will enable the MBM naval architects to recreate the steel structure, and determine weights and the centre of gravity, which is crucial information for any heavy lift operation.

"We have to re-engineer everything from scratch to ensure every lift is executed safely. We need to work out where to cut each section and how to lift each unit, ranging from 50 tonnes up to 250 tonnes," said Bambury.

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# Bottlenecks distort outbound markets





Outbound capacity from China is under huge pressure and rates have rocketed. The country is recovering well from the Covid-19 crisis, but there are still numerous other challenges that can affect project cargo demand – many of them political. The situation there is by no means straightforward, reports *Megan Ramsay*.

he lack of tonnage out of China has its roots in a shortage of container capacity, and has been ongoing for several months. Noting that China has recovered from the Covid-19 pandemic more quickly than many other countries, Leo Liu, Protranser International Logistics marketing manager, said: "Factories here are back up and running and they are facing a headache: they have more orders than before because factories elsewhere have not yet recovered and at the same time there are no containers.

"This means double trouble for manufacturers. Goods have to be stored somewhere until they can be shipped, and meanwhile the rates are rising almost daily."

This is a stressful time for freight forwarders both in China and overseas; they are struggling to deliver on existing contracts profitably. Concurrently, shippers are delaying shipments, creating a backlog of work.

Nor is the problem confined to container traffic; tonnage that would normally be used for project cargo is also constrained. Christophe Grammare, commercial director



The conversion of container cargoes to breakbulk has created bottlenecks in breakbulk terminals, which are very few anyway...

- Jack Zhou, AAL Shipping

at AAL Shipping, explained: "The increase in volumes of breakbulk cargoes has been driven mainly by cargoes that had previously been containerised but, due to the lack of access to sufficient containers, have reverted to a 'breakbulk' style of shipment – offering less expensive and far more accessible shipment opportunities."

#### **More enquiries**

Forwarders such as Protranser are receiving more enquiries from new customers, asking for help to find space with carriers because their usual channels are fully booked.

"The fact that these companies are looking for new partners indicates how bad the situation is," said Liu. "There is not a lot of space or equipment on hand."

As a result of this shift, there are delays of several days at breakbulk terminals, said Jack Zhou, AAL's general manager and chief representative China. "The conversion of container cargoes to breakbulk has created bottlenecks in breakbulk terminals, which are very few anyway as over the past 10-20 years the focus for China's port infrastructure development has been primarily on containerisation and container terminals," he pointed out.

As demand for space on breakbulk vessels has risen, so has the cost of using them. This has driven an increase in pressure on ro-ro capacity – whose price has, unsurprisingly, also gone up, Liu noted.

Meanwhile, although the current impact of Covid-19 in China is minimal in terms of industrial production and output, the ongoing measures to control the spread of the virus are exacerbating port congestion. The strict requirements imposed – such as quarantining, restrictions on crew changes and the minimum time required between arrival and last foreign port call – continue to cause severe delays.

The consequent wait times (or diversions to other, less congested ports) mean additional costs for vessel owners, and contribute to higher rates for their customers in turn.

Zhou added: "Due to the need for epidemic prevention and control, the

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Chinese administration has also issued new restrictions on crew disembarkation, use of port captains and technical engineers boarding and even cargo delivery by barge all of which directly affect cargo operation productivity, especially for heavy lift and out-of-gauge cargo and in private terminals.

"This not only compromises scheduling, but severely affects crew wellbeing, voyage operations and overall performance."

#### Rising costs

Shippers are reeling in the face of a very different market compared with pre-Covid times. Logistics generally is more expensive nowadays, and as the cost of ocean transport has significantly increased in comparison with the time when budgets may have originally been set, it is necessary for carriers and supply chain stakeholders to work together to realign budget expectations.

Adam Ward, sales director China at transport engineering specialist Mammoet, said: "The challenge is how to apportion the costs associated with quarantine. Day market jobs can require operational staff to quarantine for weeks either end, which can eradicate budgets; we work transparently with our clients to ensure the projects are completed successfully."

Capacity out of China appears to be booked out up to the end of the year, signalling that demand will remain very strong for the balance of 2021 and into 2022.

In particular, Zhou said wind power demand and equipment movements are reaching an all-time high with several large projects coming up for the third and fourth quarters of this year. These will require a great deal of tonnage capacity to satisfy.

At the same time, several large multipurpose vessels have been chartered in the container trade to meet peak demand, with charter periods of 12-24 months not uncommon.

"This, of course, will maintain a shortage of tonnage within the multipurpose sector for the mid term," Zhou said. "If container capacity remains constrained, the multipurpose fleet demand will remain at an all-time high."

However, things look set to change for the better, if not immediately. Leo Ge, managing director at Global Star Logistics, pointed out that a great deal of container tonnage is on order, "so maybe after two years or so it will be cheaper".

For now, transport companies are finding other opportunities. Given the delays to shipping, some European trucking companies that previously only served European destinations are looking at



developing services for project cargo between Europe and China, Liu said.

"If one channel is blocked, people will try to find alternatives - and then the price of those alternatives will rise very quickly," he added.

DKT Allseas – part of Allseas Global Logistics - fixed contracts with multipurpose vessels ranging in capacity from 620-1,600 teu as it expanded its services connecting Shanghai and Ningbo in China with Liverpool in the UK.

DKT Allseas said the move was made in order to provide relief to customers facing increased ocean freight rates and reduced service reliability, as a result of knock-on effects relating to the global pandemic.



As production has come back online after some delays, the fabrication yards are getting full; we always knew the Chinese yards would be busy this year.

-Adam Ward, Mammoet

dship Carriers' Ronnie was among the first ships to operate on the service, arriving at the load port on April 22. This call was followed by BBC Russia, which arrived at the load port on May 1, and BBC Volga, which arrived on May 17. BBC Norway, Fesco Uliss, BBC Danube, Uni Storm, Maliy BS, BBC Rio and BBC Seine, were all lined up for calls to meet demand.

#### **Supply chain solutions**

Darren Wright, managing director at Allseas Global Logistics, said: "The early success of our China to Liverpool service highlights the need of cargo owners for resilient, reliable and cost-effective supply chain solutions.

"Our first three sailings were completely sold out in short order and we have now fixed additional sailings and looking to introduce further services over the next few months, working towards a longer term frequent Far East service for our customers."

He added: "We expect the service to continue and are quite happy with the multipurpose option due to their small size (which suits our niche one point of loading/point of discharge service) and can also accommodate breakbulk cargoes, which of course Allseas is heavily involved in."

The current difficulties notwithstanding, there is a mood of optimism in the project logistics community.

China has managed the prevention and control of the spread of Covid-19 impressively since the outbreak, resulting in the Chinese market being as prosperous as ever.

China's GDP has already bounced back, exceeding the government's target of 6 percent growth year on year in the first quarter of 2021 threefold - though admittedly the baseline for that period is low given the events of 2020, and the rate of growth now appears to be levelling off.

"As production has come back online

after some delays, the fabrication yards are getting full; we always knew the Chinese yards would be busy this year," Ward said.

During 2020 Mammoet shipped and installed Hong Kong Airport's Sky Bridge, which had been fabricated in several segments in China. It also completed the 34,000-tonne Ling Shui 17-2 gasfield hull load-out in southern China.

One of its current projects is the transportation and load-out of large modules fabricated in China bound for Russia's LNG project, involving numerous load outs over the course of 2021 and 2022.

Protranser has also been keeping busy supporting a range of industries. The company has been transporting 500-1,000 tonnes of sodium sulphide every month from Shanghai to the Democratic Republic of the Congo for a mining project since April 2021; each lot comprises between 20 and 50 teu.

It has also delivered a 40-tonne boiler from Shandong to Kyrgyzstan and over 1,000 cu m of heat treatment equipment from Shanghai to Jakarta in recent months.

#### **Project logistics demand**

According to Johannes Linnemann, regional business development director China and Pakistan/regional management at deugro China, only a handful of industries drove project logistics service demand in China, and from China to the rest of the world.

These were the thermal power industry, particularly coal-fired power plants; the infrastructure sector; the petrochemical industry; and the oil and gas sector, which is dominated by local fabrication yards building modules of various sizes and weights.

"Speaking of power plants, deugro planned and executed the transport of more than 26 part and full-charter voyages from Europe, the USA, Vietnam and China for a very large power plant in Malaysia within a five-month timeframe," Linnemann said.

The project, completed in February 2021, included two state-of-the-art gas turbines, each weighing 427 tonnes, as well as a 453-tonne stator – plus an additional three consecutive round-trip voyages of HRSG modules, which were shipped from Vietnam to Malaysia.

Demand from the construction industry, meanwhile, saw deugro handle the transportation of the main bridge section from a fabrication yard in China to Canada for a bridge replacement project.

The main section, which measured 42.8 x 18.6 x 7.96 m and weighed 368 tonnes, was transported by river barge from Jiangyin to the port of Shanghai, where it was transferred onto an oceangoing vessel. In



total, deugro executed 72 international shipments for this project over the course of four months.

Today, Linnemann said, the focus is shifting. "While the above-mentioned industries still create significant demand for project logistics, there is currently an increase of activity in the fields of renewable energy, predominantly wind energy [both onshore and offshore], as well as growing demand for solar and hydro power plants,"

The Global Wind Energy Council said in February that China led the world in new annual offshore wind installations for the third year in a row in 2020. The growth of wind power generation there is in line with China's commitment to being carbon neutral by 2060.

Ward remarked: "This would be a huge feat considering coal-fired power plants are



There is currently an increase of activity in the fields of renewable energy, predominantly wind energy, as well as growing demand for solar and hydro power plants.

– Johannes Linnemann, deugro China

still being commissioned in China. However, it is very difficult to source barges, for example, because most are in use with offshore wind turbine installations. China had 3 GW of offshore wind capacity in 2020 and if it achieves its target of 50 GW by 2030 it will be the largest provider of this type of power in the world."

Solar panels are another strong performer when it comes to Chinese exports. Global Star Logistics is among those involved in transporting these, many of which are destined for large-scale solar parks in Latin America, Ge said.

China is also actively expanding nuclear power generation domestically, as well as increasing its market share in this sector elsewhere, Linnemann said.

Other overseas activities include China's Belt and Road Initiative (BRI). This global infrastructure development strategy was implemented in 2013, with the goal of promoting economic development and inter-regional connectivity.

Currently, Ward said: "The BRI is in full flow, with a great deal of investment in and around Asia as well as the shipment of freight and components."

#### **BRI boom**

Linnemann explained that the focus of the BRI is geopolitical. Its purpose is to "establish and enhance a profound trade network along with substantial infrastructure investments in the more than 60 countries that form part of the BRI".

For example, he said: "deugro China has been executing a gas-to-liquid project, for which we delivered numerous overdimensional cargo and heavy items by road from the port of Tianjin (Xingang) to Uzbekistan."

"While these industries can be described as heavy industries, which have been the main contributors to China's growth in the past, China is now taking a new turn by



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changing its economy into a more highquality product and e-commerce-driven economy.

"This creates new challenges but also opportunities for demand in project logistics. However, the sheer size of China and the ongoing BRI will ensure steady demand for project logistics also in the years to come," he said.

The BRI indicates China's larger ambitions in the international arena. In a lecture entitled 'Where China goes next: how authoritarianism, history and technology are creating a new superpower', Rana Mitter, professor of the history and politics of modern China at St Cross College, Oxford, and director of the university's China Centre, outlined several key trends that are shaping China's development.

He highlighted authoritarianism, consumerism (an individualistic pursuit, which therefore conflicts with authoritarianism), global ambitions and the development of technology (a liberalising force that can undermine control of the population by the state).

Under President Xi Jinping, there has been an increased centralisation of government, a focus on stamping out corruption and a tendency toward greater nationalism, Mitter said.

One historical aspect of China's evolving identity is its re-interpretation of its World War II experiences. Mitter argued that the country is increasingly presenting itself as victor rather than victim, and foregrounding its part in the Allies' success. This reassessment is key to China's growing confidence abroad as well as the rise of nationalism at home.

#### **Poverty reduction**

The country's momentum is evident in its reduction of poverty; in Chinese technological innovation (including biotechnology) and education - with the aim of making China a 'science superpower'; the ongoing development of the BRI, which is generating goodwill especially in the global south; the Health Silk Road, proposed several years ago as an alternative to the World Health Organisation (WHO) and which has gained traction with the Covid-19 pandemic; China's role in international environmental initiatives such as the upcoming COP26 conference; and its growing role in the United Nations generally.

According to an article by Alessandro Nicita and Carlos Razo at the United Nations Conference on Trade and Development, "two intertwined events put



China on the path towards becoming the manufacturing powerhouse of today: the emergence of global value chains and China's accession to the World Trade Organization (WTO)", making it the go-to option for low-cost, large-scale production.

Nicita and Razo noted that China's dominance as an exporting nation may wane as its economy matures and labour costs rise, becoming more reliant on domestic rather than foreign demand. Near-shoring, meanwhile, is gaining traction as a result of advancements in automation and robotics as well as fiscal incentives for local employment.

Other factors in China's 'slipping' are more political. Mitter pointed to the Hong Kong national security law; the Xinjiang camps controversy; the (lack of) transparency regarding Covid-19; China's confrontational approach to diplomacy (although this is perhaps changing); and the government's increasing tendency towards authoritarianism. There is also ongoing trouble in the South China Sea.

As for the China/USA tensions that were so prominent during the Trump era, Grammare said these are still present, although they are not discussed as much. There has also been a general move among Western countries to source construction

We make sure all our staff receive up-to-date compliance training with regard to trade sanctions and tariffs. There is a lot of due diligence involved.

- Christophe Grammare, AAL Shipping

yards for project parts outside China - in Thailand and Vietnam, for instance.

"President Biden has also stressed that his priority is to ensure the USA keeps its position as the world's most powerful economy," Grammare added.

"In order to achieve that goal, Biden has mentioned more than once that a healthy agreement with allies in Europe and Asia is key to counteracting China's stronghold on the global economy. Therefore, despite making concessions with the EU, we expect that the USA's high tariffs on Chinese imports will not change - especially considering the recent 'failures to engage' between USA and China trade officials.'

#### **Trade wars**

Recent trade restrictions between China and Australia have also led to a sharp reduction in Chinese imports from Australia. At the same time, China and Vietnam are in dispute over wind power investment, with multipurpose capacity demand for Vietnamese wind turbines expected to decline gradually from a recent peak and return to normal levels by the fourth quarter of 2021, Grammare said.

Nicita and Razo pointed to such tensions, as well as more protectionist policies around the world, as possible harbingers of a "deglobalisation process" that could have significant consequences for exporting nations such as China.

In light of all these developments, it is clear that the Chinese market is a complex and changeable business environment.

Grammare concluded: "We make sure all our staff receive up-to-date compliance training with regard to trade sanctions and tariffs. There is a lot of due diligence 🗷 HLPFI involved," he said.





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# LMAA analyses emerging risks

**Gregory DL Morris highlights** some of the main reasons for disputes as the Covid-19 pandemic winds on, how to keep abreast of changing compliance standards in the USA, and why e-bill uptake continues to lag.





he Committee of the London Maritime Arbitrators Association (LMAA) elected David Steward, independent arbitrator and mediator, as its new president to succeed Bruce Harris at its annual meeting on May 19.

Steward practised for over 30 years with international law firm Ince, handling a wide range of maritime and offshore energy disputes. In April 2011 he became wholly independent of his former firm and is now a full-time arbitrator and CEDR-accredited mediator with Arbitrators at 10 Fleet Street.

Following the annual meeting LMAA's spring seminar, hosted by Quadrant Chambers, focused on issues raised by the apparent diminution of the pandemic. Andrea Skeoch, of North P&I Club, suggested that the main sources of dispute likely to arise from Covid-19 include: refusal to call at port, crew changes, quarantine and crew illness, force majeure and laytime.

Those are likely to include many complex and contentious issues, often related to the BIMCO Infectious or Contagious Disease Clause incorporated in charter parties or bespoke variations thereof, "some of which are charterer friendly and some owner friendly", Skeoch said

Separately, Darryl Kennard of

Penningtons Manches Cooper delivered a presentation on the recent arbitration in the case of the Tai Prize where the dispute hinged on the definition of the cargo as in "apparent good order and condition" in the bill of lading that the ship master had signed without "clausing", and whether a charterer's presentation of a clean bill of lading to the master for signature amounted to a representation that the goods were not subject to inherent vice.

"It is the master's eye that counts," said Kennard. The Court of Appeal had held that no such representation was made by the charterer or shipper in such circumstances. It remains to be seen whether the Supreme Court will agree to hear an appeal in the case.

Emmet Coldrick of Quadrant Chambers spoke about the dispute concerning the C Challenger, where the ship's speed and

The [US duplicitous shipping practices] guidance sent shockwaves through the maritime community and frankly caused chaos because it was so broad.

– Alexander Brandt, Reed Smith

consumption data was allegedly misrepresented in pre-contractual discussions, and which raised the question of whether the charterer's subsequent attempt to rescind the contract was justified and lawful.

The dispute involved several technical issues surrounding the precise wording of charter parties and grounds for their rescission, but an overriding "lesson for owners is that factual statements that you make about the performance of your vessel could come back to bite you even if the relevant statement as to the performance of the vessel was not incorporated in the fixture recap or charter party", Coldrick concluded.

#### **US duplicitous shipping guidance**

In the year since the USA roiled freight markets with its unilateral duplicitous shipping practices declarations, international shippers, forwarders and carriers have adapted rapidly to the mandates.

The rules were intended to interdict trade and finance with certain regimes, such as North Korea and Iran and therefore focus more on certain traffic, notably tanker operations, rather than project cargo. Nevertheless, the rules are broadly written and cover owners, operators, masters and crew.



"The guidance sent shockwaves through the maritime community and frankly caused chaos because it was so broad," said Alexander Brandt, an associate in London with the global law firm Reed Smith. "The wide-ranging due-diligence requirements look back 24 months at counterparties and vessel activities. But industry has risen to the challenge, and there is now software available," to help with the reporting, he added.

Brandt spoke at a late-May Reed Smith webcast review of diligence and compliance.

The red flags of the reporting, such as falsifying vessel identification or location, do not bear directly on heavy lift or project cargo vessels that are so highly differentiated, relatively few and well known. But they do apply to owners and counterparties, so an otherwise innocent vessel, forwarder or master could get snagged by association with previous operations.

In a few high-profile investigations, the penalties have been severe. In the case of paper company Bukit Muria Jaya, and separately Eagle Shipping, the negotiated fines have been more than USD1 million.

"This is an area of high enforcement priority and high penalties against non-US persons," said Brandt. In one case, a company deposited US dollars into a foreign account, thereby "causing US financial institutions to violate sanctions against a USembargoed country", he explained.

Again, project cargo operators that usually deal with major international shippers, forwarders and carriers are not likely targets of investigation. However, through successor liability, purchasers of vessels can be liable for previous activities of a vessel or operator.

"There can also be a lag time in enforcement," Brandt cautioned. "The provisions extend to the general business of

He urged shippers, forwarders and carriers to add screening against the list promulgated by the international organisation United Against Nuclear Iran to their standard screening of counterparties and transactions, as well as strengthening overall compliance procedures.

#### Challenges in e-billing

As regulatory reporting requirements become deeper and broader, carriers, forwarders and service providers are increasingly driven to using electronic invoices and billing. While the automation of the process promises a clearer path for tracing, it also opens new vulnerabilities to cyber fraud and other challenges.

"Adoption of digital technology is uneven and there is evidence of a growing divergence in standards," said Nick Austin, a shipping partner in Reed Smith's Transportation Industry Group. That presents a significant barrier to widespread and effective adoption.

One of the most significant is how to replicate the law and regulations behind a traditional paper bill of lading in electronic form, so as to give the e-bill functional equivalence. And not just in one jurisdiction, but uniformly across legal systems so that e-bills can be truly effective in international trade.

"Adoption of the UNCITRAL Model Law on Electronic Transferable Records is one tangible way of achieving that," said Austin, but uptake is low. "Instead, most maritime law systems, including the Englishbased common law system, have barely got to grips with the legal implications of e-bills, despite their being around since the 1990s."

Until more countries adopt suitable legislation, "then e-bills, and the technology behind them, cannot become a commercial and legal norm", Austin noted. "And in turn, the shipping laws that underpin the resolution of disputes in the leading maritime arbitration centres cannot develop."

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Offshore wind demand builds to

# storm force

Phil Hastings reports on the burgeoning opportunities arising in the offshore wind energy sector. The increasing size and scale of projects is already putting pressure on port infrastructure – a trend that is likely to be exacerbated by the development of floating turbine technology.

orldwide installation of offshore wind power generation capacity is set to get a further boost from two anticipated developments this year. One is the likely increased investment in all types of renewable energy by many governments around the world as part of their push to stimulate general economic recovery from the Covid-19 pandemic.

The second is the planned 26th UN Climate Change Conference of the Parties (COP26) in Scotland in November, which will put renewed focus on the need to speed up the development of all renewable energy.

Looking specifically at prospects for offshore wind power, the Global Wind Energy Council (GWEC) believes the Asia-Pacific region and Europe, in particular, are set to experience strong growth in the development of additional capacity from now through to 2025, while North America will start to see significant installation from 2023 onwards.

#### **Opportunities and challenges**

Meanwhile, from a logistics industry perspective, the increasing size of offshore wind turbine components and the accelerating development of floating wind



turbine technology alongside more traditional fixed installations are creating both new business opportunities and challenges.

Right now, the most immediate issue that heavy lift and project forwarding service providers are having to deal with is the impact of the Covid-19 pandemic, both on project schedules and supply chain operations.

UK-headquartered Trans Global Projects

Group (TGP) has in recent years been involved with a number of wind projects across Asia – one recent example involved securing a contract to transport 320,000 freight tons of offshore turbine components from China to Vietnam for an ongoing project. Joerg Roehl, ceo Europe for the company, said: "Overall, offshore wind projects have displayed strong resistance [to the impact of Covid-19] and new projects

are continuing to emerge.

"On the supply chain side, we have not seen much disruption beyond the early effects of China's shutdown during the first part of 2020. Although there were – and still are – difficulties with some suppliers due to Covid-19, the supply chain has generally proven resilient."

Thomas Bek, global director, energy and projects, for Blue Water Shipping, a Danish

www.heavyliftpfi.com July/August 2021 📆 41





global forwarder that has provided turnkey solutions for offshore wind projects for more than two decades, said that while some such developments had been delayed, they had still been executed.

"Issues with standard equipment and space on container vessels had an impact but our main challenges have related to the movement of staff to project sites - the pandemic has made travelling more difficult and time consuming," he explained.

Francisco Rodrigues, global segment lead - offshore wind for Mammoet, a Netherlands-based global heavy lift provider that has been offering services including engineering studies, heavy lifting and transportation for offshore wind projects since 2010, is optimistic about prospects.

#### Thriving sector

"Despite the pandemic, it looks like the offshore wind sector is continuing to thrive and projects that have been given the green light are proceeding without major delays," he reported. "The same applies to new countries looking to add offshore wind to their energy transition programme."

In that context, Mammoet is seeing a huge demand for large heavy lifting equipment coming up due to an increase in the size of turbines, foundations and floating structures, especially after 2023.

Björn Wittek, managing director of Bremen-headquartered Rhenus Offshore Logistics, expressed similar optimism. His company has delivered, among others, turnkey packages relating to platform commissioning. "I believe we will see increased investment in offshore wind, tidal and auxiliary markets down the road," he stated.

"Part of this will be down to a vast global drive for additional electrification. The other key element is the relentless drive of OEMs to bring down the levelised cost of energy (LCOE) of offshore wind, which has [already] reduced to a cost level where it becomes competitive without subsidies."

#### Size of components

From a logistics perspective, one of the biggest developing challenges when it comes to offshore wind projects is the everincreasing size of the components involved.

Neil Schofield, chief operations officer for Osprey Group, a UK-based heavy/abnormal load transport and logistics service provider that has to date transported components for more than 20 offshore wind farms, expanded on that point: "In the decade we have been working in offshore wind, the development in the sizes and



weights of the components has been tremendous. The great engineering challenge is to get early, proactive alignment between developers and Tier I contractors to enable efficient logistics. Early contractor involvement is key," he said.

TGP's Roehl added: "The increased size, mass and quantity of such components demands more actively managed transportation logistics, requiring a larger variety of transportation methods and modes. That has resulted in increased logistics costs for many projects," he said.

Matthieu Moerman, director chartering



Despite the pandemic, it looks like the offshore wind sector is continuing to thrive and projects that have been given the green light are proceeding without major delays.

– Francisco Rodrigues, Mammoet

and projects - head of renewables, for Jumbo-SAL-Alliance, said the recently established venture of two heavy lift shipping stalwarts offers "full scope" solutions for the marine transportation of components for offshore wind projects. It has handled monopiles and transition pieces that can each weigh well in excess of 1,000 tonnes and measure over 70 m in length.

"The much larger components create high requirements of both the ports handling them and the vessel operators providing the port-to-port transport," he explained. "You have to be capable of providing customised storage solutions (cradles and grillages) but also customised lifting tools (slings and lifting grabbers)."

#### Choice of port

Moerman added that servicing such demands requires ports to provide a "significant amount of space" plus the capability to handle and store ultra-heavy items. "That is why you see offshore wind project cargo is often guided to certain ports that have the capacity and capabilities to handle it," he said.

"The same goes for the vessel operators, which is why you only have a handful of companies that can provide the maritime logistics services to this sector."

GAC UK provides ships agency, storage, logistics, Customs and marine solutions for offshore wind farm and tidal energy projects. Herman Jorgensen, managing director of the division, also highlighted the need for substantial landside and berth space to service these projects.

Recent company developments have included opening new offices in the English east coast ports of Ramsgate and Harwich to

www.heavyliftpfi.com July/August 2021 께 service the London Array offshore wind farm and another in Providence, Rhode Island, close to the US East Coast's nascent offshore wind energy industry.

"Larger components and increasing volumes mean bigger storage facilities and yards. We are seeing a lot of work and investment in increasing capacity to meet that demand, some in a 'one-stop-shop' form," stated Jorgensen.

Blue Water's Bek said another key challenge for logistics providers is how to plan the handling of even larger offshore wind turbine components in the future. "Blue Water is investing heavily in research and development to try to solve some of the current and, more importantly, future challenges. We believe that investment in new types of equipment is needed to ensure a safe and efficient logistics flow," he said.

DHL Industrial Projects is currently involved in the ocean delivery of wind turbine generators/foundations and is also looking into the land-based and marshalling harbour activities associated with foundations for the construction phase. Nicolai Andersen, global sector head for renewables at the company, said that with the sourcing of generators and foundations becoming more global, it would make sense to consider establishing logistical 'entry hubs' for the industry.

"Those hubs would be capable of receiving larger vessels and bigger quantities of components simultaneously with an 'industrialised' mindset. They would focus on handling large volumes rather than specific projects," explained Andersen.

"From such hubs, final delivery could be made to nearby markets, as it might not be feasible for the port infrastructure at those offshore wind installation base ports to accommodate both high volumes of inbound components and the supply of those components to the installation sites."

#### **Infrastructure issues**

Elevon is a Norwegian company established last year as a joint venture between Abnormal Load Services (ALS) and NorSea specifically to provide logistics services to the wind energy industry. Further support from their respective owners - Wallenius Wilhelmsen and the Wilhelmsen Group - is being provided. Knut Magne Johannessen, ceo of the new venture, was also keen to stress port infrastructure issues.

"Our observation is that port infrastructure is generally lagging behind the development of the offshore wind industry, especially when it comes to solutions and sites for larger industrial-scale construction



of floating structures, an activity that is set to become more and more important in the years to come," he said.

In this context, NorSea is currently studying the feasibility of developing a large industrial quarry on the edge of a fjord in Norway as a manufacturing base for floating offshore wind turbine foundations (see panel on p46).

Meanwhile, a growing number of established ports around the world are



The much larger components create high requirements of both the ports handling them and the vessel operators providing the port-to-port transport.

> - Matthieu Moerman, Jumbo-SAL-Alliance

planning, or already developing, additional facilities geared to servicing the offshore wind business. GAC's Jorgensen cited one of several recent examples. "A GBP40 million (USD56 million) plan has just been announced to create Scotland's largest renewable energy hub at the port of Leith. It will include a riverside marine berth capable of accommodating the world's largest offshore wind installation vessels."

#### Floating offshore wind

Elsewhere in Europe, the port of Brest in the Brittany region of north-western France, is currently constructing a large new terminal to handle traditional fixed installation offshore wind turbine components. Longer term, the port is also pushing its case as a potential base for handling floating foundations for some planned projects in the Atlantic Ocean off the western/southern coast of Brittany, the first of which is expected to start construction in 2025/26.

Floating wind energy is expected to grow dramatically in the coming 30 years. Risk management and quality assurance company DNV suggests floating capacity could grow 2,000-fold from a current 100 MW to 250 GW in that time. Of course, this is attracting interest from some of the world's leading heavy lift and project forwarding service providers.

Mammoet, for instance, has already been involved with floating offshore wind energy projects in Japan, Scotland, France, Spain, Norway and, more recently, Portugal.

"Floating offshore wind is a market we identified a while ago as one where we could







**Blue Water is today** supporting several clients involved in floating wind and we believe those activities will increase moving forward. The floating structures are massive...

- Thomas Bek, Blue Water Shipping

add significant value due to its specific requirements - such as heavy structures, some of them over 3,000 tonnes, and logistical infrastructure challenges," commented Rodrigues. "We will be executing some pre-commercial projects

starting at the end of this year where we will by skidding or via SPMT.

be mobilising one of our largest cranes to perform the installation of the turbines. Our larger cranes, such as the SK350, can also be used on the quayside to load in and load out turbine jackets with greater efficiency than

"With the fast growth in the development of such turbines, the impact on the floater size and weights is still to be seen. We are already undertaking projects where our larger PTC and SK cranes are being used to

### Quarry project trials floating turbine assembly

Some of the greatest logistics challenges in the offshore wind energy sector over the next few years are likely to arise from the anticipated growth in floating turbine installations.

Specifically, the foundation structures are likely to be too large to be handled in most drydocks and will therefore have to be assembled on land. The resulting logistics challenge will be how to then get those units into the ocean.

One potential solution being worked on in Norway involves developing part of a huge industrial quarry operated by Norsk Stein in the Jelsa fjord, Ryfylke, northeast of Stavanger, as a manufacturing base.

The quarry has a depth of 40 m below sea level, offering the opportunity to build deep dry docks. The location also offers deep water for the assembly of spar-type floating foundations (a cylinder that floats vertically in the water).

The plan to build and assemble floating wind turbine foundations there, which is currently the



subject of a feasibility study due to be concluded later this year, was outlined by Knut Magne Johannessen, ceo of Elevon, a subsidiary of NorSea and one of several partners in the Ryfylke project.

"The idea is to build the foundations for the

floating wind turbines on dry land in a decommissioned part of the quarry, fill our entire part of the quarry with seawater and then pull the structures out to sea directly from the production area," he explained.



for project logistics providers and his own company is already involved in a number of feasibility studies in the sector.

#### **Efficient planning**

"Blue Water is today supporting several clients involved in floating wind and we believe those activities will increase moving forward. The floating structures are massive and for such projects, efficient planning and preparation is a must." he stated.

DHL's Andersen said it appears that one of the main differences between fixed and floating offshore wind turbines concerning assembly/installation operations is that more of the processes and activities for the latter will be carried

out on land rather than offshore.

"The port requirements will potentially be a lot lower and if the floating foundations are assembled at a main assembly yard they can then be floated to a port closer to the offshore jobsite to undertake the final assembly of the turbines, for example, before being moved out offshore."

Rhenus Offshore's Wittek concluded: "I think floating offshore wind will bring additional opportunities for heavy lift and project forwarding service providers. Regardless of what the turbines are made from, there are reasons to believe that we will see a work split already known in regular fabrication work these days, with large sub-assemblies shipped around the globe to an integration facility."

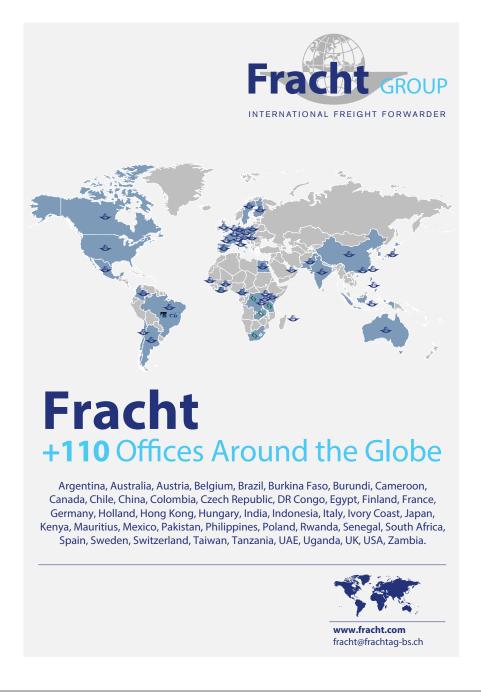
lift floating foundations and we expect that activity to grow sharply."

Jumbo-SAL-Alliance's Moerman agreed that there will be future business opportunities for heavy lift operators in the floating offshore wind energy sector "subject to what type of floating foundation technology comes into play".

"Some of the turbine designs are still highly technical, which limits the construction capacity and implies a continuing requirement for parts logistics. Other foundation types are based on simpler concepts, for example certain gravity-based foundations, meaning there can be a higher degree of local manufacturing, which would lower the scope for heavy lift vessels," he said.

"Overall, though, with the number of floating offshore turbines that are likely to be erected worldwide in the years to come, there is likely to continue to be a great mix of foundation types."

Blue Water's Bek said the development of floating offshore wind turbines will also provide additional business opportunities



www.heavyliftpfi.com July/August 2021 47

## Markets watch for tidal energy surge

Tidal stream and wave energy are unlikely to hit the heights seen in other energy sectors. Nevertheless, there is potential for thousands of these units to be installed offshore. Phil Hastings considers when this market will level up.

eployment of tidal stream and wave energy installations in Europe, currently the largest geographical market for this fledgling power generation technology, slowed last year.

However, while some projects were postponed due to the impact of Covid-19 on related manufacturing operations and installation work, industry sources report none were cancelled and suggest planned installations delayed in 2020 are expected to go ahead this year.

That, at least, is the latest assessment from Ocean Energy Europe, an association that represents this emerging sector. Beyond Europe, the current hot markets for tidal stream developments are Canada, the USA and China. In terms of wave energy, China is moving ahead apace.

Earlier this year Osprey Group was awarded the contract to load out what is said to be the world's most powerful operational tidal turbine to date, Scottish engineering company Orbital Marine Power's 680-tonne, 2 MW Orbital O2 unit

The turbine was assembled in Dundee, Scotland, moved from there to the launch site using a line-configuration of SPMTs, and then loaded onto a submersible barge for transfer to the installation site in the Orkney Islands where it will be connected to the European Marine Energy Centre.

A number of other major logistics companies have also been involved with ocean energy projects in recent years. Examples include:

- GAC, which reports it has "played a significant part in subsea renewable energy installations around the UK and
- Blue Water Shipping, which has been involved with "several" projects, including assisting French marine



Last year, the Thompsons of Prudhoe and port of Blyth decommissioning partnership, in collaboration with Mammoet, lifted the 2 MW SR2000 floating tidal turbine on behalf of Orbital Marine Power.

engineering company Sabella with the installation of its D10 tidal turbine on the seabed off Ushant Island, near Brittany, France

The SAL side of the Jumbo-SAL-Alliance, which was involved with a tidal turbine installation in the Orkney Islands in 2014-15.

#### **Future potential**

Right now, though, the ocean energy sector is still primarily a logistics market of future potential rather than current business. Björn Wittek, managing director of Rhenus Offshore Logistics, summarised: "We are constantly looking at the sector but it currently has comparatively small one-off projects and very long lead times for individual developments.

"However, there is hope that some of the OEMs are approaching the stage where they will move away from prototypes towards small-scale serial production. It is

certainly a segment to watch."

Matthieu Moerman, director chartering and projects - head of renewables for Jumbo-SAL-Alliance, expressed similar sentiments. "We do not really see much progress in this sector so far, although there has been some recent activity. We are following the sector but not as a top priority."

Herman Jorgensen, managing director of GAC UK, is more bullish, "We are supporting more and more wave and tidal projects and expect to see similar - if not larger - rates of growth in the sector, following the same sort of trajectories as we have seen with wind farms."

Rhenus' Wittek took a different view on that last point.

"There are certainly chances for the wave and tidal sector to develop but I do not think it will reach the scale of offshore or onshore wind," he suggested. "In global terms it will probably be more of a niche market, although that may still mean several hundreds, if not thousands, of devices being installed."

#### Cost challenge

Wittek said the key issue needing to be resolved to make wave and tidal power a long-term economic proposition is cost, specifically how to make the grid connections much cheaper.

"It is not so much a question of the individual tool costs or what the specific levelised cost of energy (LCOE) is - it is more an issue of how to distribute the expensive electricity infrastructure costs over a small number of megawatts when there is little cost difference between installing a grid connection for a large offshore wind farm versus a small wave and tidal project," he explained.

Commenting specifically on future ocean energy prospects in the UK, Osprey's chief operations officer, Neil Schofield, said there is currently industry pressure to include the sector in the next contracts for difference round (a mechanism designed to incentivise investment in the UK's renewable energy infrastructure) later this year.

"If successful, that will ensure developments at the Perpetuus Tidal Energy Centre (a 30 MW commercial tidal stream project located off the south coast of the Isle of Wight, southern England) and the Morlais tidal energy project off Anglesey, north Wales, will go ahead. That will bring new challenges - and opportunities," he suggested.

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# Offshore wind: improving safety and efficiency

The offshore wind energy sector will continue to grow at a rapid rate as the world strives to hit climate and emissions targets. The harsh environments where these projects are developed requires new lifting, lashing and securing equipment that is up to the task. *Megan Gildea* reports.

he Crosby Group has been busy extending its portfolio of products to cater to the offshore wind energy sector. Richard Berg, business development manager at Crosby Group, believes that there are two key challenges facing offshore wind operations: efficiency and safety.

"Lifting is inherently dangerous; we need to use the right equipment and the personnel need to be adequately trained as well; these two things are key," he stated. A recent addition to the company's equipment roster is the Easy Loc V2 bolt securement system. Conventional bolts with nut and cotter pins pose several disadvantages, according to Frédéric Crynen, regional sales manager at Crosby Group.

They are time consuming to use, tools are required, and it is not uncommon for parts to be lost. This also poses the risk of dropped objects at heights.

The Easy Loc V2 shackle bolt securement system replaces a cotter pin with a collar. In this way, it reduces the install and release time by up to 90 percent compared with conventional shackles, it is 60 percent lighter, and a wide-grip, one-size-fits-all handle makes for accessible use, Crynen explained.

The Easy Loc V2 collar and grip handle comes in three variations: the G-2140E for alloy shackles, the G-2160E for alloy wide



body shackles and the G-2170E for alloy grommet shackles. All models can have a maximum capacity of 300 tonnes.

In addition, two small holes allow a wire to be fitted to fix the shackle. "So if you install a small wire, it cannot drop when you are doing the installation at height, which is a much safer way to do it," said Crynen.

Sweden-headquartered Gunnebo Industries – which Crosby Group acquired in 2019 – has launched a mid grab chain shortener (MIG) that allows adjustments to be made to chain slings without the crane hook having to be lowered to the ground first.

The MIG can be mounted and positioned on any part of a chain sling and shortening can be carried out in both chain directions, up or down.

"Often offshore wind components have a centre of gravity that is not central," Berg said. "So we need that shortening in order to lift the load in a stable way... one drawback of that, however, is that the shortening is not very efficient most of the time.

"If we have a long chain sling with many legs, we have to wait for the crane to lower it to ground level to shorten. If we have a gantry crane lock or crawler crane lock, it travels quite slowly; we are losing a lot of time here." Gunnebo also introduced a MIG savings calculator on its website. By inputting crane, cost and lift information, it calculates the time and cost savings that can be made using the product.

#### Pinch and trap injuries

Lifts to and from transition pieces and the substation can pose significant risk for operators, according to Berg.

Gunnebo's WRIN STR handle can be mounted to a safety hook and allows the user to open the handle without having to put their hand inside. It can be operated with one hand. If the vessel is moving and there is too much turbulence, it can easily be released. "This is a cost-efficient solution to eliminate pinch and trap risk," Berg said.

Gunnebo Industries has launched a mid grab chain shortener (MIG) that allows adjustments to be made to chain slings without the crane hook having to be lowered to the ground first.

Lifting is inherently dangerous; we need to use the right equipment and the personnel need to be adequately trained as well; these two things are key.

– Richard Berg, Crosby Group

Crosby Group acquired Australia-based Verton Technologies in the first quarter of 2021 to accelerate the adoption of remote-control load orientation products. The products use gyroscopic technology to create an output torque to precisely rotate loads in either direction. For Trevor Bourne, managing director at Verton, the fact that workers are required to be in close proximity to moving loads, puts them at significant risk of injury or fatality. "This is what we are trying to change," he said.

Verton's solutions include Everest 6, a 20-ton (18-tonne) capacity load orienting spreader beam; the modular load orientating system Everest 30; and Windmaster, a load orientation device for wind turbine erection.

A positive side effect of these technologies, Bourne said, is that "we can also make that job a lot faster; it ends up paying for itself".

#### WindMaster

WindMaster, scheduled to come to market in the fourth quarter of 2021, is Verton's latest innovation. It has been created specifically for lifting and orientating wind turbine tower sections, nacelles, and turbine blades.

Patrick Taylor, mechanical engineer at Verton, explained: "We need to hold an asymmetric load in high winds. Anyone who has worked in offshore wind will appreciate the forces involved in this.

"The reason this solution is better and smarter than other load technologies is it uses the wind against itself... by balancing wind forces from one side of the load to the other."

A rotating vane pressure force provides a balancing force on the load, which counteracts the constant torque being placed on the load. Taylor explained that the device is also modular, independent of existing lifting frames, which means it can be deconstructed quickly and packed up into a 40 ft (12.2 m) container.

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Unlocking West Africa's untapped potential





Looking at the project market in West Africa, there is a broad mix of spending on capital projects. Rising commodity prices are buoying the market, while the power sector pushes ahead. *Sophie Barnes* reports.

nfrastructure and legislative instruments will continue to be seen as the barriers facing project logistics in West Africa," said George Kofi Appiah, business development at Jonmoore International.

As an example, Ian Treder, logistics director at OMA Group, which in the past year has seen demand for its services dominated by solar, mineral extraction and infrastructure projects, said: "Local content is becoming more important [in West Africa], which is to be applauded, but this can bring some complications to the awarding of contracts and the provision of handling services."

Danny Staples, corporate vice president, global key account manager and corporate tendering sales at deugro, said that one issue arising from this is a widening of a human resource gap. "This requires international project logistics companies to develop robust programmes towards upskilling, transfer of knowledge, succession planning and support of local institutions to bring best practice in project logistics into the region," he said.

#### **Legislative processes**

Another aim of the authorities, according to Treder, is to lessen legislative processes and ease cargo clearance times, "but systems changes can sometimes lead to increased processing time. In the future we believe this will ease but a key to success is making sure companies have the right local partner to guide through the processes."

With its network, demand for OMA Group's services – including its hinterland connections – is going strong. "Our office in Burkina Faso is thriving and we have excellent ongoing partnerships in both Niger and Mali, which allows us to manage the key corridors – Dakar/Abidjan/Cotonou to Bamako/Keyes; Abidjan/Tema/Lome to Ougadougou; Cotonou to various key destinations in Niger; and Douala to N'djamena and Bangui," he said.

Treder added that Covid-19 obviously had an impact on freedom of movement, creating challenges in terms of visiting sites, cargo release, etc. Having the right partner on the ground is key.

Harald Maas, director at Universal Africa

Lines (UAL) expanded on that point, stating that West Africa's response to the situation is a good example of the sometimes erratic changes in government procedures. "Every country dealt with it in its own way. With our longstanding experience we managed to overcome these problems without large disruptions to our schedules and delivery times," he said.

Aiding UAL's response to Covid-19's disruption has been its network of agents in the ports that it calls at. "We have also invested in some new employees that will monitor our agencies a little more because a good agent performs not only when the vessel is there but also has an informative obligation. We need to be aware of what is going on in each country, what are the new laws, projects, contacts, difficulties, opportunities."

Maas stressed: "We really cannot complain about our current agencies but we also feel that we can do more with them, so we will try to strengthen the relationship with our existing agents and do our due diligence for new agents in new countries/areas, because the agent still remains the official representative of UAL in their country."

#### **Dakar boom**

UAL also benefits from its own terminal in Malabo – the K5 terminal. "We often use it to tranship cargo for destination ports with draught restrictions. The recent boom in Dakar has also caused an increase in requests and bookings to this highly active oil and gas area," said Maas. "We are involved at the beginning and end of almost all the projects of the West African oil and gas community. To start these projects, they need to import the equipment using our vessels. And after the project is finished the demobilisation needs to be done, for which we are often consulted; hence UAL is there at the start but also during the project.

"A specific example is that our K5 terminal and our UAL Lobito were used for the Alen gas project in Equatorial Guinea and we were heavily involved in the Bonny LNG trains, as well as the LNG plant in Soyo."

Jonmoore's Appiah also noted that the pandemic highlighted "the over-reliance of the suppliers from the West and the Asian



countries", as lockdowns and restrictions disrupted the supply chain in key industries.

An additional impact of Covid-19, according to Staples, has been the disruption to the flow of foreign direct investment (FDI) into West Africa. "FDI for greenfield projects declined in 2020 by more than 50 percent. This led to project delays and cancellations, and subsequent profitability challenges in the project logistics sector."

Other delays, according to Dominik Keller, head global development director of Fracht Group, relate to the availability of containers that originate from Asia and/or Europe. This was echoed by Nils Haupt, senior director corporate communications at Hapag-Lloyd, who said: "One of the biggest challenges in West Africa is the turnaround time for ships and containers; this is mostly related to the landside infrastructure bottlenecks. These delays increase costs to the service provider as well as the customer/consumer."

#### **Acquisition of NileDutch**

The German shipping giant recently boosted its position in Africa with the acquisition of NileDutch, which specialised in the West Africa container shipping market. Haupt said: "Hapag-Lloyd is committed to the attractive growth market of Africa, as demonstrated by new service offerings and increased local presence through new offices... NileDutch presents an ideal complementary geographic fit to Hapag-Lloyd's set-up, connecting West Africa to Europe, Asia, Latin America and the world."

The merger is still subject to regulatory approval, but if it goes ahead will supplement Hapag-Lloyd's growth plans, which include expansion in the hinterlands of Mali, Burkina Faso and Niger.

Also targeting the West African market is Hansa Meyer Global, which opened an office in Abuja, Nigeria, at the turn of the year. Jan-Dirk Schuisdziara, managing director of the African operation, said that the company hopes to benefit from the "major potential" that Nigeria has to offer, while also focusing on Ghana, Senegal, Ivory Coast, Benin, Togo and Cameroon.

Schuisdziara commented: "The Economic Community of West African States (ECOWAS) covers 16 countries with a population of over 300 million people. The high demand covers all verticals of projects and we forecast a high number of energy and infrastructure-related projects in the



Covid-19 has obviously had an impact on freedom of movement and this has caused its own challenges... having the right partner on the ground is key.

– Ian Treder, OMA Group

region over the next three to four years."

In terms of the logistical challenges that have to be overcome in West Africa, Philippe Somers, co-founder and ceo at ACE 54, outlined: "There is a lack of infrastructure port, roads, rail, etc - and also power shortages; complex and bureaucratic Customs clearance processes; high port charges; and limited availability of heavy lifting and heavy transport assets. These result in exorbitant costs." Compliance with QHSSE standards and training of local staff still remain a challenge, he said.

#### **Civil construction**

Adding to the infrastructure issues, according to Ralf Grosskopf, president of Dako Worldwide Transport, is that particularly for bridges - "it is extremely difficult to get the full information on drawings and technical details, if at all, to make recalculations – but this is not only a problem we are facing in West Africa and somehow we manage."

He added that in the recent years, however, there has been a lot of civil construction works to improve the road capacity in certain areas of West Africa. "This is taking place in Senegal, Mali and the Ivory Coast, to name just a few," he said. For project transports, he noted that "it is necessary to inspect all these roads, so in recent months we have had our people on the ground to get the necessary detailed information" to ascertain how they can be used for the company's operations.

For its operations, Dako tries to use its own heavy transport equipment as much as possible through a local joint venture based in Dakar, Senegal. Its fleet includes 20 Goldhofer hydraulic axles, a 400-tonne capacity jacking and sliding system, two

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heavy-duty prime movers, and equipment used during the storage of heavy cargo inside ports and for port operation so as to not be dependent on local cranes.

Detailing some of the projects Dako has completed in the region, Grosskopf said: "Earlier this year we finished the transport of heavy engines weighing up to 290 tonnes for a gas-driven power plant; transported a power plant to Gambia including the setting of components weighing 195 tonnes onto the foundations; handled a power distribution system in the outskirts of Dakar, with three transformers each 135 tonnes; as well as transformer transports inside Gambia and Guinea-Bissau." In addition, heavy and bulky pieces for oil refinery projects also fall into the hands of Dako's care.

Looking forward, Grosskopf is also optimistic about "power plants coming up in various countries – Mali, Benin, Niger, Senegal, Sierra Leone, to name a few. We feel that we are well placed with our equipment and with experienced drivers and operators to do jobs properly," he said.

#### **Power plant projects**

Keller also referenced new power plant projects in Mali and Senegal, as well as Burkina Faso. Many upcoming projects in the region are related to this sector, he added, "with new coal-fired and combined power plants, as well as green energy power plant projects in the wind, solar or hydro sector." He also acknowledged that infrastructure projects are booming.

"Similar to elsewhere in the world, there is a big focus on power, not to mention renewables – solar and wind," summarised ACE 54's Somers.

According to Schuisdziara, there are more than 100 future projects in different stages of development, covering both conventional as well as renewable energy, including grid/pipeline expansions, which potentially should start between 2021 and 2025. "Hansa Meyer Global has targeted over 15 energy and infrastructure projects in the region with an estimated capital investment volume exceeding USD30 billion alone until 2025."

Some of the countries in West Africa providing significant project logistics opportunities, according to Jonmoore's Appiah, are Burkina Faso, the Ivory Coast, Niger, Senegal, and Guinea Bissau, with developments occurring in the energy, oil and gas, construction and fast-moving consumer goods sectors.

Jonmoore has also been involved in providing logistics services for a number of projects in Ghana, including the transport of



Mammoet has transported heavy cargoes for the Kossodo thermal power plant project on behalf of the Burkina Faso office of Fracht France, a branch of the Fracht Group.

three thermal plants to Ahafo for Gesner Energy Ghana; work for Munck Civil on the Dandina Bridge project in northern Ghana; the provision of cranes and heavy lift services to erect silos for FanMilk Ghana; and services for the Bui solar energy project.

Overall, deugro's Staples said: "West Africa continues to be an attractive region, with economic indicators pointing to more increases in precious metal prices, and we certainly see opportunities given the current trend... West Africa's mineral wealth is also stimulating demand within the mining industry for project logistics services. deugro's current West African footprint spans Mauritania, Senegal, Guinea, Sierra Leone, Ghana and Burkina Faso, and it expects some business to ensue in Mali and Côte d'Ivoire in the near future within the mining industry."

Se bastien Beuque, deputy ceo for Africa at Bolloré Logistics, said that his company's

mining activities tend to be focused in Mali, Burkina Faso and Ghana. "What we see is that construction developments and the supply chain are still very active. There is a strong increase in demand for mined products – such as manganese, iron ore, etc – especially by China. This means there are new mines coming."

Hansa Meyer's Schuisdziara, meanwhile, referenced the "more than favourable" price of mined commodities such as gold as having a positive impact on mining activities.

Another driver of new mining projects – both new mines and mine expansions – according to Staples, is "increased global demand for renewable energy and energy storage projects, and we see this trend in West Africa with capital expenditure on current and future projects in this industry in excess of USD90 billion. We are seeing an increase in hydro power and onshore wind energy projects. These projects still require transmission and distribution components."



Similar to elsewhere in the world, there is a big focus on power, not to mention renewables – solar and wind.

– Philippe Somers, ACE 54

#### Oil and gas revival

With regard to West Africa's oil and gas sector, Beuque commented: "With the price per barrel around the USD65-70 mark, it is generating finance for projects that were put on hold during the pandemic. In Senegal, the Ivory Coast, Mauritania and Angola, oil and gas companies are coming back to drill and explore thanks to the recovery in the oil price."

Staples agreed, stating that the oil and gas industry remains one of the key drivers of demand in West Africa. He said that Nigeria and Angola represent over 70 percent of current and future capex.

Further still, over the last five years, Africa's MSGBC geological basin – situated in Mauritania, Senegal, Gambia, Guinea Bissau and Guinea Conakry – has started to attract increased interest from international oil and gas companies. One of the largest developments to progress is the Grand Tortue Ahmeyim (GTA) gasfield project, which overlaps Mauritania and Senegal's offshore waters.

The GTA gas development is a floating liquefied natural gas (FLNG) export project, which will make natural gas supplies available not only for exports, but also for the domestic energy markets of Mauritania and Senegal. Two other separate LNG projects are also planned or under consideration in Mauritania and Senegal.

If the planned developments go ahead, they have the potential to transform Mauritania and Senegal into a new emerging African gas province. According to Beuque, the GTA project is moving forward and he expects work to start before the end of the year.

Other notable projects, according to Somers, include the revamp of the Port Harcourt refinery and Bonny LNG, both in Nigeria, as well as EACOP pipeline from Tanzania to Uganda.

#### **Dangote refinery**

Nigeria is also home to the Dangote refinery, which required some of the continent's largest transport operations. Supporting the construction efforts was global engineered transport provider Mammoet, which handled the 10 km transport of components from Dangote's new, purpose-built jetty to the site in the Lekki Free Zone. Over 52,000 tonnes of components were planned for construction. This included a 2,000-tonne crude column that Mammoet said was the largest ever fabricated; and the heaviest item ever transported on public roads in Africa - a 3,000-tonne regenerator.

Another major project for Mammoet in West Africa was the 1,400 km transport of cargoes for Burkina Faso's Kossodo thermal power plant project - a key part of the country's ambitions to increase electricity access from 20 to 80 percent. The cargoes including three 325-tonne engines, three 59-tonne generators, two 80-tonne transformers, and three 16-tonne turbo chargers - were moved from the port of Takoradi in Ghana to Ouagadougou.

Mammoet was contracted by the Burkina Faso office of Fracht France, a branch of the Fracht Group, for the project, which required the lifting of over 1,000 overhead power lines, as well as road modifications and bridge reinforcements.

"The need in energy, infrastructure and medical supply is very important in the West African countries; those sectors are the ones where Fracht is focusing as it requires a



UAL has been involved in a number of significant West African projects, including the Alen gas project in Equatorial Guinea, the Bonny LNG trains, as well as the LNG plant in Soyo.

strong expertise, financial capabilities, compliance in the working processes and high-level relations with the authorities of all concerned countries," said Keller.

"One of the big advantages of our company is the expertise and experience of its local managers and employees, their flexibility and adaptability to the frequent changes of the market. Fracht is well known for its financial capabilities and compliant approach for each project."

Despite the recent market volatility, Breadbox Shipping Lines has managed to continue deploying an average of three to four sailings from West Europe to West

Joris J Bakker, managing director of Breadbox, said: "The recent rise of the oil price has been reflected by an increased activity in the oil and gas sector, particularly in Ghana, Nigeria and Angola. Furthermore, mining activity in Africa is continuing to grow by the day. Yet our focal point is the most promising project in West Africa, namely the Tortue project in Senegal and Mauritania, an area that is not only serviced by the traditional lanes ex Europe and the Mediterranean, but also with our inter-Africa fleet of five to six vessels."



Hansa Meyer Global has targeted over 15 energy and infrastructure projects in the region with an estimated capital investment volume exceeding USD30 billion alone until 2025.

Jan-Dirk Schuisdziara, Hansa Meyer Global

#### **Political instability**

He added that political instability in certain regions remains a major concern for the oil and gas sector. The greatest example of this instability, he said, is the piracy threat in the Gulf of Guinea.

"Our vessels trading to Nigeria are, for instance, all accompanied by gunboats from point of entry of the high-risk area until the berth in Nigeria. This cost gets incorporated into the freight rate, hence increasing expenses in the supply chain," explained Bakker. These challenges are unfortunately accompanied by the wider supply and demand imbalance in the shipping sector.

However, Breadbox is in a healthy position having recently added five new vessels to its fleet: multipurpose parcels from Europe and the Mediterranean can be handled by Breadbox Warthog and Breadbox Oryx; Breadbox Elena is ready to assist with the increased activity flow between the African countries; while the 3,200 dwt gearless vessels Breadbox Viper and Breadbox Xerus can serve all the West African river ports thanks to their shallow draught. 🏿 HLPFI

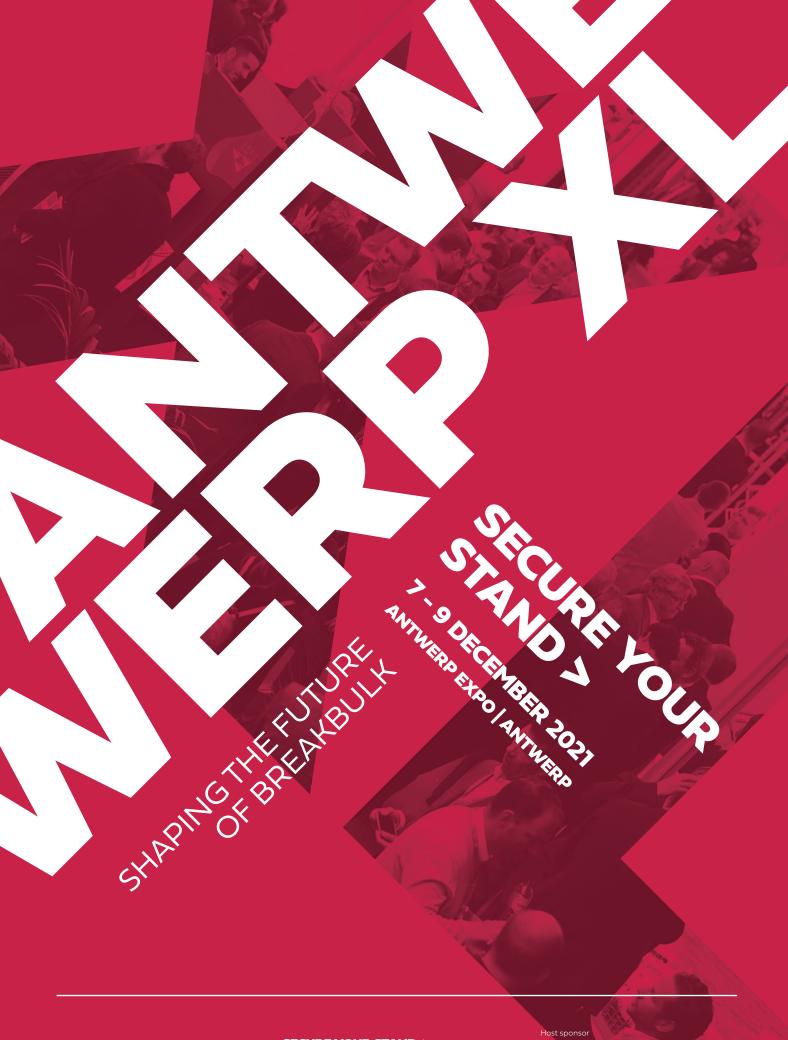




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# Piracy takes its toll on project planning

Projects in West Africa have to grapple with ongoing security issues. While the Gulf of Guinea remains the most dangerous environment for maritime operations, concerns have also been raised about security inland.

he piracy problem in the Gulf of Guinea has developed into a curse for seafarers over the past decade," said Nils Haupt, senior director corporate communications at Hapag-Lloyd. "In 2021, the threat that looms for all seafarers going to the region is being kidnapped at gunpoint for ransom. While overall numbers of pirate attacks are largely unchanged, the violence, scope and sophistication of the attacks has continued to increase."

For the project industry, Danny Staples, corporate vice president, global key account manager and corporate tendering sales at deugro, noted: "With more than 60 percent of oil and gas projects being offshore, maritime security is paramount. Effective law enforcement far out at sea is beyond the capacity of most regional states. This means that any solution to the problem of piracy is a collective one requiring multinational support, as envisioned in the Yaoundé Agreement of 2013."

During May, 99 maritime companies, organisations and flag states signed the Gulf of Guinea Declaration on Suppression of Piracy. Haupt at Hapag-Lloyd said that by signing up it has committed itself to supporting anti-piracy law enforcement as

mandated by international law. Non-regional naval forces will provide incident response capabilities to complement regional coastal states' anti-piracy operations.

Universal Africa Lines (UAL) is one of the few carriers still offering direct shipments to Nigeria; the shipping line had



Any solution to the problem of piracy is a collective one requiring multinational support, as envisioned in the Yaoundé Agreement of 2013.

- Danny Staples, deugro

five of its vessels at Onne port in May. "Safety is everything for us and we take all the necessary measures to ensure the safety of our crew, vessels and cargo," said director Harald Maas. "We follow guidelines accordingly and have other special precautions in place."

Maas noted that his company has seen an increase in activity due to the fact that "not all of our colleagues are willing to go to certain regions". UAL has also seen that it is "near impossible" to charter vessels to go to these regions because of stipulations preventing ships from transiting the Gulf of Guinea, "which until today and for the foreseeable future remains our raison d'être," said Maas. Fortunately, UAL is able to overcome this by deploying its own fleet of multipurpose vessels.

According to Sebastien Beuque, deputy ceo for Africa at Bolloré Logistics, countries are getting organised to patrol the area with the support of national navies. He added that piracy has "no major impact on projects except on premium paid for freight and security in piracy areas."

#### **Inland security**

Security inland is more of a concern, said Beuque. This is also not constrained to just West Africa (Mozambique is perhaps the best example), but it can be seen in Burkina Faso, Niger and north of Nigeria. "Areas that are quite difficult in terms of security can delay, postpone or even cancel some projects. In terms of investment in this part of Africa, it may be viewed as unstable and because of the security issues requires a more careful approach, to say the least."

He continued: "As Africa is huge, the security aspect will likely come into consideration in that organisations may prefer to go elsewhere, especially if the countries are not particularly easy to serve in terms of geography. You can see this is why many projects have been on the desk for a few years."

Ian Treder, logistics director at OMA Group, agreed. He referenced the security situation in the landlocked countries of Mali, Burkina Faso and Niger, which he said might have prevented interest from investors for a period last year.

Nevertheless, "projects do appear to be going ahead and are being planned currently", he said.

"The United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) is beginning to make an impact on the stability of the region and is making plans to be in situ for the foreseeable future," Treder continued.

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## How LNG can help the world push towards its decarbonisation goals

David Kershaw looks at some of the ways LNG may be used in the years ahead, along with the infrastructure required, as the world transitions to a renewables-based future.

n a recent report on decarbonising maritime transport, the World Bank specifically recommends that countries pull back from investing in further LNG bunkering infrastructure.

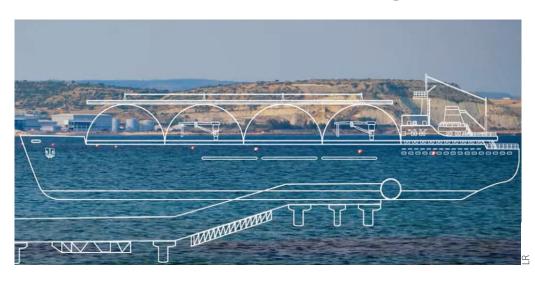
It believes that green ammonia, closely followed by green hydrogen, strike the advantageous balance of favourable features among a range of different candidate bunker fuels for ships.

Furthermore, ammonia and hydrogen offer additional flexibility as they can also be produced from natural gas combined with carbon capture storage (CCS technology) - then often referred to as blue fuels, it added. These multiple production pathways can help overcome concerns that not enough renewable electricity will be available initially to produce 'green' ammonia and 'green' hydrogen.

#### **Niche applications**

The bank's research finds that LNG is likely to be used only in niche applications such as preexisting routes or in specific vessel types.

That said, natural gas will remain key to satisfying baseload power requirements in the coming decade. Capacity to import the fuel, however, remains lacking. LNG carrier conversion is one method being trialled in Cyprus.



The 2002-built 137,000 cu m LNG carrier Galea, originally made for Shell Singapore, is being converted into a floating storage and regasification unit (FSRU). It will be mobilised to Cyprus at the end of 2021/early 2022. Work is in progress at Cosco Shipping Heavy Industry in Shanghai. The conversion is central to a deal, partly funded by the EU, which should slash the island's cost of electricity and reduce carbon emissions.

LR has been closely involved in the project since it first became a possibility in 2017. Since then, it has involved bringing together Cygas, the Natural Gas Public Company of Cyprus, China Petroleum Pipeline Engineering – which will own the FSRU - and the Cyprus Electricity Authority in

LR's global gas segment manager, Panayiotis Mitrou, said that the strategy could be adopted in many regions that lack indigenous energy

resources and are exposed to fluctuations in energy prices. He pointed to the global abundance of gas, rapidly increasing volumes shipped by sea, a series of new long-haul and small-scale trades, and its low cost.

#### **New LNG trains**

He highlighted the new LNG trains coming on stream in locations including Australia, Qatar, Russia and the USA. Despite the pandemic, more front-end engineering designs are getting the go-ahead and the number of final investment decisions continues to rise. Ultimately, without more consumers, the world could have too much gas.

"All this gas needs to be channelled to markets," he said. "And we see growing interest in many countries in using FSRUs for LNG imports. The oversupply of gas requires more entry points, and FSRUs provide a quick and cost-effective way of providing the infrastructure that is required. We see a substantial uptake in the FSRU sector," he explained.

Although Mitrou is a staunch advocate of LNG as an energy source, he is also well-aware that the fuel is not the final answer to the world's decarbonisation goals. Nevertheless, he insists that it is an essential transition fuel and has a series of benefits that are available immediately today.

In the longer term, he pointed out, the fuel has the potential to provide many further carbon-reducing options. The liquefaction of gas using renewable electricity is one example, but this will require the integration of the power generation and LNG sectors, which traditionally work quite separately. It has the potential to reduce significantly the well-towake emissions profile of the LNG that is used today.

Ultimately, as new fuel technologies develop, Mitrou believes that it will be come possible to use LNG as a hydrogen carrier by separating the carbon and hydrogen atoms, enabling the use of hydrogen as a carbon-zero fuel. Much of the world's LNG infrastructure that will exist by then, he suggested, could be adapted for hydrogen 

The oversupply of gas requires more entry points, and FSRUs provide a quick and costeffective way of providing the infrastructure that is required.

- Panayiotis Mitrou, LR

#### **OIL & GAS NEWS**

#### Crown to pick contractor

Crown LNG has initiated an LNG terminal development with an annual regasification capacity of 7.2 million tonnes a year offshore Kakinada in Andhra Pradesh. Crown LNG said it hopes to finalise the Kakinada project's EPC contractor and key subcontractors in the coming weeks.

Toyo lands ammonia work Toyo Engineering India has secured an ammonia plant project with a capacity of 1,500 tonnes per day and associated offsite and utility facilities from **Performance Chemiserve** Limited (PCI). The project will be developed at Navi Mumbai in Maharashtra state on the west coast of India

**UAE targets hydrogen** 

Helios Industry plans to build a 'mega' ammonia plant in Abu Dhabi. To involve local and international partners in two phases, it is projected to produce 200,000 tonnes of green ammonia from 40,000 tonnes of green hydrogen. Meanwhile, Abu **Dhabi National Oil Company** (ADNOC) will advance a world-scale blue ammonia production facility in Ruwais, Abu Dhabi. The facility, which has moved to the design phase, will be developed at the new TA'ZIZ industrial area and chemicals hub in Ruwais.

#### KBR supports Nigeria LNG

KBR will support the development of Nigeria's first FLNG facility. UTM Offshore appointed KBR as owner's engineer and it will be responsible for a due diligence review of the pre-FEED being completed by JGC.

#### Nacero picks Bechtel

Nacero has selected Bechtel to design a USD6.5-7 billion natural-gasto-gasoline manufacturing facility in the Permian Basin. Nacero awarded a FEED contract to Bechtel for the 115,000 bpd facility, which will incorporate carbon capture, sequestration and 100 percent renewable power. On completion of the FEED, Bechtel will deliver a lump sum, turnkey EPC price proposal.

# **Dutch court makes** landmark Shell ruling

Dutch court ordered **Shell** to significantly slash its carbon emissions during May. setting the stage for potential lawsuits against other oil and gas companies and big polluters globally.

A judgment issued by the district court in The Hague said that Shell and its suppliers must cut CO<sub>2</sub> emissions by 45 percent by 2030 from 2019 levels. The lawsuit against Shell, filed in 2019, was led by the Dutch arm of Friends of the Earth, alongside six other bodies and 17,000 co-plaintiffs.

The EU, meanwhile, has laid out more stringent targets for the transport sector, including shipping. EU energy commissioner Kadri Simson said at the end of May that the current global commitments fall short of what Europe needs to reach climate neutrality by 2050, and that all governments need to ramp up action before it is too late.

The EU Commission is set to present its Fit for



55 package in July. Proposals will include the revision of the energy efficiency and renewable energy directives, strengthening and extension of the emissions trading scheme, and a carbon border adjustment mechanism.

#### **OIL & GAS NEWS**



#### **Rosneft starts** Vostok talks

Rosneft has started meeting with international contractors and suppliers for its Vostok Oil project. It aims to begin shipping oil from the planned project in 2024 via the Northern Sea Route. Rosneft estimates the project's resources at 6.2 billion tonnes of oil and plans to build three airfields, two sea terminals, a railway, some 50 vessels and facilities to generate 3,600 MW of power.

#### **Worley wins Captain contract**

Worley has been awarded a two-year contract to provide engineering and procurement services for stage two of **Ithaca Energy's** Captain enhanced oil recovery project in the UK North Sea, 130 km north of Aberdeen.

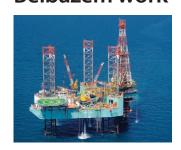
#### Methanol plant for Sarawak

**Air Liquide Engineering & Construction** will partner with Samsung Engineering to build a methanol production plant for Sarawak Petchem in Malaysia. The facility is planned to come into operation in 2023.

#### **AET** work for Black & Veatch

Black & Veatch has been selected to conduct the technical, engineering and commercial studies of the Andes Energy Terminal (AET) in the Aguadulce Peninsula in Buenaventura, Colombia.

#### **ADNOC** awards Belbazem work



**ADNOC** has awarded a USD744 million contract for the full field development of the Belbazem offshore block as it expands its oil production capacity to 5 million bpd by 2030. Located 120 km northwest of Abu Dhabi city, the Belbazem Block consists of three marginal offshore fields. ADNOC subsidiary Al Yasat Petroleum has awarded the EPC contract to the National **Petroleum Construction** Company (NPCC).

# Biden waives Nord Stream 2 sanctions

he construction of the Nord Stream 2 pipeline is a point of contention in Euro-US politics. The pipeline will transport natural gas from Russia through the Baltic Sea into the European Union via Germany. The motive is to enhance the security of supply, support climate goals and strengthen the internal energy market – but it has received criticism from the USA, which claims it will increase European relian ce on Russian gas.

The project – financed by **Gazprom** and five other European companies – had fallen foul of sanctions under President Trump's administration but the latest development has seen US President Joe Biden issue waivers against any further sanctions on the Nord Stream 2 entity and its ceo Matthias Warnig.

President Biden told reporters that he decided to waive sanctions because the project was alrædy nearly complete.

He added that to impose sanctions now would be counter-productive to the USA's relations with Furone

Despite the waivers, a number of Russian vessels involved in Nord Stream 2 have been placed on US sanction lists under the Protecting Europe's Energy Security Act, although this will do little to hamper the landmark project's progress. One vessel on the list, Fortuna, is continuing its work and recently started operations in German waters.

With Nord Stream 2 going full steam ahead, it looks on course to be completed by September.

#### **NEWS** in **BRIEF**

#### **Technip Energies contracts**

**Technip Energies** has been awarded two contracts by Neste for work on the development of its renewables production platform in Rotterdam, the Netherlands. The first contract covers **EPCM for the modification of Neste's** existing renewables production refinery in Rotterdam to enable production of sustainable aviation fuel (SAF). The modifications to the refinery represent an investment of approximately EUR190 million (USD232.28 million) and will enable Neste to optionally produce up to 500,000 tonnes of SAF per annum. The second contract covers the FEED for Neste's possible next renewable products refinery in the city.

#### Ørsted partners for Akita



Ørsted has partnered with Japan Wind Development (JWD) and Eurus Energy to jointly develop offshore wind projects in the Akita Prefecture.

Maple Hill go ahead
Gemma Power Systems recently
entered into an EPC services contract
with CPV Maple Hill Solar to
construct the Maple Hill Solar facility,
which will be among the largest plants
of its kind in Pennsylvania, USA.
Gemma received notice to proceed
with project activities immediately.
Project completion is scheduled for the
second half of 2022.

#### **BIM Wind opts for GE units**

BIM Wind has picked GE to supply, install and commission GE Cypress onshore wind turbines for its 88 MW wind farm located in Ninh Thuan Province, South Central Vietnam.

## Ireland hydrogen MoU ESB and dCarbonX have signed a new memorandum of understanding (MoU) to assess and develop offshore green

hydrogen subsurface storage in Ireland.

#### **POWER GENERATION NEWS**

## GE-Prolec and Xignux buy SPXT

**GE-Prolec Transformers** and **Xignux** have signed a definitive agreement to acquire **SPX Transformer Solutions (SPXT)** for USD645 million in cash. SPX Transformer Solutions is known for its Waukesha transformers, services and components.

## bp alliance bids for Sørlige block

**bp** has agreed to join forces with Norway's **Statkraft** and **Aker Offshore Wind** in a consortium bidding to develop offshore wind in the Sørlige Nordsjø II licence area off Norway.

## Cerulean seeks turbines assent

**Cerulean Winds** has submitted plans for a 200-turbine floating wind and hydrogen development in the UK part of the North Sea. A formal request



#### Drax partners with Bechtel

**Bechtel** will partner with UK-based **Drax Group** to identify opportunities to construct new bioenergy with carbon capture and storage (BECCS) power plants around the world.

Drax has already converted its UK power station from coal to biomass and is now working to deploy BECCS, with the goal of becoming carbon-negative by 2030.

for seabed leases has been submitted to Marine Scotland.

#### Mitsubishi wins Hyuga contract

**Mitsubishi Power** has secured a contract for a 50 MW wood

biomass-fired power plant planned for the city of Hyuga, in Miyazaki Prefecture, Japan.

Mitsubishi Power will provide the full turnkey solution for the plant, handling EPC services, with commercial operation scheduled to commence in November 2024.

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#### **CIVIL ENGINEERING**

#### Savener desalination work

Savener has been awarded a contract to undertake the engineering design of a new desalination plant at Barka in South Al Batinah Governorate. Savener said the contract was awarded by the partnership of **GS Inima** of Spain and Itay's Fisia Italimpianti. The latter partnership is the EPC contractor for the Barka-V seawater reverse osmosis desalination plant.

#### **GE** wins upgrade contract

**GE Power Conversion** was selected by thyssenkrupp Steel to modernise the drive and automation system of the downcoiler 3 and side guides in the Bochum hot rolling mill in Germany. The upgrades will secure the productivity of the hot rolling mill as well as the future spare parts and service availability.

#### **Decarbonising concrete**

bp and CEMEX will work together on accelerating the progress of CEMEX's ambition to deliver net-zero CO2 concrete globally by 2050. The two companies have agreed to a memorandum of understanding to develop solutions to decarbonise the cement production process and transportation. Potential solutions may include low-carbon power, lowcarbon transport, energy efficiency, natural carbon offsets, and carbon capture utilisation and storage technologies. Additionally, the companies intend to work together to develop urbanisation solutions envisioned to decarbonise cities.

#### India road building plan

The National Highways Authority of India (NHAI) has set itself the target of building new highways with a combined length of 4,600 km in the current fiscal year. Last fiscal year, NHAI constructed a record 4,192 km of highways, up from 3,979 km developed in 2019-20 and 3,380 km in 2018-19.

#### **Energy hub for Leith**

The Port of Leith in Scotland owned by Forth Ports - plans to invest GBP40 million (USD55.3 million) to develop a renewable energy hub to support the offshore industry.

# **HIP launches Atlantic** floating turbine project

ecate Independent Power Limited (HIP) has launched the GBP21 billion (USD30 billion) HIP Atlantic Project, which involves the installation of 10,000 MW of fixed and floating wind turbines in the North Atlantic.

The turbines will be connected to the UK grid by high-voltage direct current (HVDC) submarine transmission cables that will be manufactured in a new cable plant, built at a port location in the northeast of England.

HIP has lodged four connection applications with National Grid Company for an initial 4,000 MW of grid connections to the UK's 400 kV electricity transmission system across four connection sites. Each wind farm - or pod - will be in a different north Atlantic location, and each pod consisting of 1,000 MW of wind turbines will have iits own dedicated cable linked to the UK.

HIP Atlantic's initial 2,000 MW of generation capacity, targeted to be off the southern and eastern coasts of Iceland, is expected to be commissioned in early 2025. The HIP Atlantic HVDC transmission cables will never connect to the Icelandic transmission system: the high availability wind capacity will be solely connected to the UK, dispatched by National Grid.

HIP's planned offshore wind pods in the north Atlantic will al be installed in a different meteorological catchment area from current North Sea and Irish Sea wind farms and so HIP renewable electricity can be supplied at times when existing British wind farms are becalmed.

HIP Atlantic aims to maximise the British manufactured content in every element of its equipment manufacturing and installation process, it said.

#### MINING NEWS

#### **Blanket solar** project signed

The construction of a USD13 million solar power plant at a mine in Zimbabwe is expected to begin in the second half of the year. Last year Caledonia Mining announced that it had been issued a licence by the Zimbabwe Energy Regulatory Authority (Zera) to build the proposed 18 MW solar power plant at the Blanket gold mine in Gwanda. Work on the 13 MW project is scheduled to start in the second half of 2021.

#### ADB ends coal support

The Asian Development Bank (ADB) will end all financing for coal mining and power plants and ban support for oil and gas production, under a draft energy policy released last week. The policy is the latest in a series of shifts away from coal in Asia's major economies. Last month,



China committed to peaking its coal consumption by 2025 before gradually reducing its coal reliance. South Korea has also pledged to end overseas financing for coal-fired power plants. Meanwhile, Japan has cancelled the last coal plant in its pre-construction pipeline.

#### **Juwi secures** hybrid project

Germany's Juwi, through its South African subsidiary, has signed a deal with Sukari Gold Mines to supply and build a solar/battery-hybrid power plant for Egypt's largest gold mine. The developer claims this will be the world's largest solar hybrid project at an off-grid mine.

#### **Agrimin opts** for Primero

**Agrimin** has awarded **Primero Group** the FEED contract for the process plant and associated non-process infrastructure at the Mackay potash project in Western Australia.

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Brazil walks an extended tightrope to recovery

TI FIT

As Covid-19 vaccination programmes started around the world earlier this year, hopes for economic recovery following the pandemic were high – not least in Brazil, which had a tough time in 2020. It remains to be seen, though, whether those hopes will translate into reality in 2021, writes *Megan Ramsay*.

razil has been almost at a standstill over the last year. Many cities were locked down, while hospitals reached up to 99 percent capacity. Curfews were imposed and at the time of writing (early June) some reopened cities were closing again.

Brazil's weakening currency is hampering the feasibility of big projects this year as most of the heavy equipment required for new installations, construction work and infrastructure development has to be imported from manufacturers in Europe, the USA and China. However, this has considerably reduced project costs for foreign investors. "I personally see the opportunities being greater than the risks, at least in the short run," said Marcelo Braga, managing director at Over Projects.

The main challenge in operating in Brazil is the delays caused by a lack of storage capacity at the country's ports. This holds up inbound sailings and, in turn, creates delays for exports.

#### 'Disappearing' inland market

In addition, there are ongoing practical difficulties due to Covid-19. These include restrictions on inland transportation, while permits for transportation are taking a lot longer than they used to. In fact, according to Thomas Weitmann, director at Brasil Projects, Brazil's inland market – "which was always the saviour of this country" – is disappearing.

Disruption to projects has been wideranging, starting with an imbalance in the freight market resulting in equipment shortages and rate increases.

"The special safety requirements at ports and jobsites were also extremely challenging for operators," Braga said. As an example, some customers were requiring our staff to stay locked in a hotel for 14 days before entering their facilities, which means idle manpower, extra costs and a stretched project schedule.

"Project managers undoubtedly will need to take all these aspects into account for future projects, or they can easily go over budget or overrun their schedule," he cautioned.



I personally see the opportunities being greater than the risks, at least in the short run.

- Marcelo Braga, Over Projects

The biggest impact, though, was that many companies were not prepared for such a downturn in the market, and went bankrupt. Thiago Soares, project supervisor at Axis Shipping World Cargo Brazil, observed that small and medium-sized mining companies and steel factories had to sell or return equipment they had bought only one or two years before.

As a result, he said: "In the last 12 months we have exported many shipments of used equipment from those companies to other countries, mainly in emerging economies."

As for solutions to these problems, there is little that carriers and forwarders can do—it is down to the authorities and how they choose to manage the pandemic at any given stage of its development.

The protests that took place across Brazil in May against President Jair Bolsonaro's handling of the Covid-19 crisis illustrate the deep dissatisfaction and distrust of the current government among the country's population at large. The turbulent political environment in Brazil is a major source of uncertainty and concern.

In Weitmann's view: "Unfortunately, there is no trust in the Brazilian government

Reels being unloaded at Vitoria after arriving at Brazil from Newcastle on Intermarine's Challenger.

www.heavyliftpfi.com July/August 2021 📆 69

by foreign investors, mainly due to its environmental policy and its destructive economic policy. I have been here 30 years and never seen the country in such a delicate situation," he warned.

Right now, there is still not much movement in sectors such as paper and cellulose (although several investments in cellulose plants are in the pipeline), cement and automotives.

On the other hand, some Brazilian manufacturers such as WEG and Romi have seen their production and exports rise, as did their 2020/2021 gross income, which led those companies to invest more.

Soares added: "As foreign equipment became expensive for us to buy, it turns out that our products got cheaper for the rest of the world. In this scenario we were able to export more equipment in recent months and think about new markets."

Heavy cargoes that are frequently exported from Brazil include transformers and turbines.

#### **Strong export market**

Peter Sjelle, chartering manager East Coast South America at BBC Chartering in São Paulo, noted that since the beginning of 2021 the market for exports of Brazilian commodities, to Europe and Asia, has been quite strong.

"We do not expect a downward trend for this market for the coming months - quite the opposite, as it has held quite firm in terms of quantities and freight rates," he said.

While the pandemic resulted in a dramatic slump in demand for mined materials, the various steps governments have taken to promote growth have already resulted in a significant uptick.

Julian Kettle, senior vice president, vice chair metals and mining, at research and consultancy company Wood Mackenzie, commented: "Having reached marked lows during Q1 2020, most mined commodity prices recovered to well above pre-pandemic levels during Q4 2020.

"Some have even been boosted to multiyear highs; in the case of iron ore, for example, China's steel-intensive stimulus programme has combined with supply constraints (primarily in Brazil) to drive prices up to levels not seen in a decade."

Demand for metals such as aluminium, nickel, copper, lithium and cobalt will only accelerate in the next decade or two as the transition to renewable energy gathers pace globally. Brazil has substantial reserves of lithium as well as copper and iron, among other commodities.

However, Kettle contended: "It is



apparent that the industry needs to start to tilt towards investing in growth soon. Otherwise, the sunlit uplands of transformational energy transition demand will be illusory, as consumers will not commit to commodities if supply cannot be guaranteed."

Perhaps the most hopeful sector for heavy lift and project businesses operating in Brazil is the energy market. Power is in high demand, as past investment was low and maintenance "zero", Weitmann pointed

"Now with the signals that the economy will start to recover a bit, the energy sector is seeing higher demand for maintenance and investment," he said. "This is mainly for power plants, maintenance of transmission, new solar energy plants and wind power."

Brazil is working to build up its



Power is in high demand, as in the past investment was low and maintenance zero.

- Thomas Weitmann, Brasil Projects

renewable energy portfolio - and Soares said most Brazilian companies are focusing on their environmental, social and governance (ESG) credentials in order to attract more investment and get increasingly involved in the green energy market.

There is growth in the production of wind turbine components such as blades in Brazil. WEG is making rotors, while AERIS is investing heavily after its IPO on the B3 stock market (Brazil's stock exchange).

#### Wind energy parts

Multinational companies such as Siemens and Vestas are bringing substantial quantities of wind energy parts from China to installations in Brazil. Projects are being erected in the north of the country including Statkraft's 519 MW Ventos de Santa Eugenia wind project - and also in the south now, said Sjelle.

Solar power, meanwhile, is also expected to grow. While these cargoes tend to arrive in containers, the quantity and sometimes scale of supporting equipment requires the skills of project forwarders.

Hydropower plants, however, remain at a standstill, and Weitmann believes that the dry season this year will not help the situation.

More positively, Enegix Energy has unveiled the Base One green hydrogen project in cooperation with the state government of Ceará and Enerwind. The plant will produce over 600,000 tonnes of green hydrogen per year once it comes online.

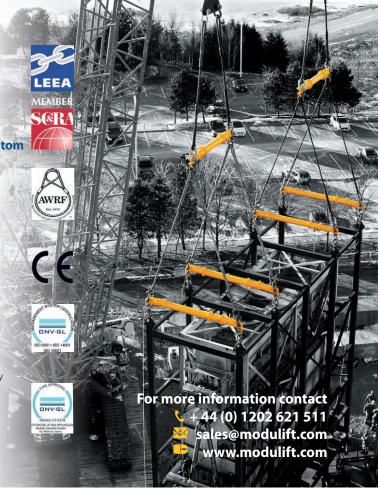
Furthermore, Weitmann's colleague at Brasil Projects, sales manager Aline Marinho, said that as Brazil emerges from the pandemic, the energy auctions that were cancelled last year will resume.

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#### New venture targets recovery opportunities

Intermarine and SAL Heavy Lift set up a joint venture office in São Paulo earlier this year. They aim to benefit from the growth taking place in the industrial, renewables, offshore oil and gas and power sectors in Brazil and South America.

Svend Andersen, Intermarine ceo, said: "I have done business in Brazil for more than 30 years and know the great importance of the country on the global heavy lift and breakbulk scene.

"With our new joint establishment, we will offer our customers a local access point to a truly unique service with the combination of SAL's global project and semi-liner services and Intermarine's very strong Americas liner service and breakbulk business."

Conceding that Brazil and Argentina are "not what they should be right now", Andersen said the joint office has already been quite busy.

"Intermarine (which used to serve Brazil and Argentina a few years back) now has two or three ships a month coming into Brazil, plus we have SAL's services. Jumbo has recently joined the new set-up as well and we are also close to a deal that will bring in another carrier," he revealed.

Exports from Brazil include pipes, wind turbine blades and mined commodities. Activity relating to oil and gas projects is growing as prices are rising.

"The market has picked up across the whole of South America in the last couple of months, mainly on routes to and from the US," Andersen said.

"Both northbound and southbound, we are seeing more volumes especially because containerships are so expensive; people are booking breakbulk vessels instead.

"I expect activity out of Brazil will continue to increase. It is not a huge market, but the economy is

"Also, it is relatively cheap to produce things there, and will remain so even if the real picks up against the US dollar and the euro."

"The energy sector in Brazil has a deficit of investments so these projects will be a priority, with a large part of this resource investing in thermal, wind and solar," she said.

"The auction of power generation scheduled for this year has about 88 projects registered and adds up to an offer of 40 GW, with effective energy production in up to four years."

#### Oil and gas recovery

Another encouraging point is that the oil and gas industry has gradually recovered. As a result of the huge Lava Jato corruption investigations that implicated Petrobras and numerous construction companies, new management formats have been implemented at these firms and prospects are looking up.

Expectations are high in Brazil due to the fact this sector is the main source of taxes for the country. Activity certainly seems to be building.

For instance, the Mero-3 project was recently sanctioned in Brazil; ExxonMobil has confirmed that its priorities for near-term investment will include targeted exploration in Brazil; and Petrobras has pre-approved investments of USD55 billion between 2021 and 2025, of which USD32 billion is set aside for pre-salt oil projects.

Brazil's subsalt reserves have proven to hold an enormous supply of drillable oil though the cost of extracting and delivering to shore any natural gas found there is high (not to mention the associated taxes).

"We are already witnessing an increase in both imports and exports for the oil and gas industry, and we expect this to increase - but of course Covid-19 could put a damper on things for a while longer," Sjelle said.

There is change afoot for Brazilian

energy companies such as Eletrobras and Petrobras; the latter, for instance, is undergoing a divestment of assets as well as a bidding process to allow foreign players into its state-controlled divisions.

Natalie Jones, a consultant for Intermarine and SAL Heavy Lift and acting general manager for their joint office in Brazil, pointed to "a strong force within the existing government to secure private investments". To achieve this, she said, several elements will be necessary:

- Convincing foreign outfits that Brazil is a decent and profitable investment with reliable returns
- Reducing the tax burden
- Revisiting the laws requiring local
- Facilitating the bidding process. At any rate, the drive for privatisation will

The auction of power generation scheduled for this year has about 88 projects registered and adds up to an offer of 40 GW.

– Aline Marinho, Brasil Projects

no doubt bring investment in the power sector and consequent demand for project transportation services in the coming years.

There are also expectations for Brazil when it comes to infrastructure development – and with that will come the need to import heavy machinery, such as cranes and trucks.

Brazil is the largest country in Latin America, with an area of 21 million sq km. Connectivity across such a vast and varied landscape has always been an issue, observed Murilo Caldana, project director at FOX Brasil.

However, he pointed out: "The slowdown caused by Covid-19 opened up an opportunity for the government, attracting the private sector to participate in bids for concessions for a period of time - let us say 25 years - or privatisation."

#### **Airports auction**

In April, for instance, the government auctioned 22 airports to the tune of nearly USD600 billion in total. The largest blocks (15 airports altogether) went to Brazilian infrastructure company CCR.

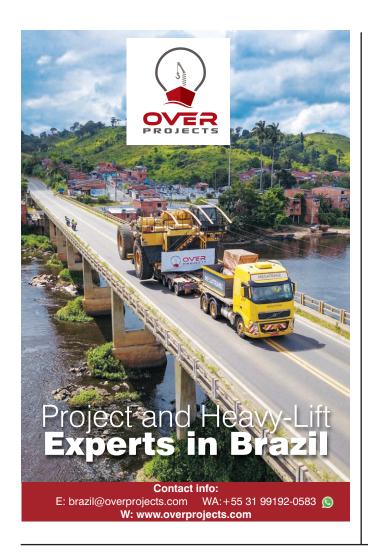
Opportunities for the project cargo sector relating to such developments include, for instance, airport fingers and bridges. FOX Brasil has experience transporting this type of out-of-gauge equipment – it has done similar airport-related work in the past - and Caldana expects many more projects of this sort during the next few years.

Ports and terminals present a similar opportunity. Brazil has approximately 8,000 km of coastline, plus the rivers that link it with the Amazon and to Bolivia, Paraguay, Argentina and Uruguay. The government has simplified the rules surrounding investment in port terminals in order to encourage more development.









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#### Reviving renewables set to attract investment

Marco Bregoli, managing director at TGP Brasil, believes investment in Brazil is likely to rise "considerably" in 2021, particularly in the renewable energy sector.

He explained: "With the expected increase of energy demand and the historical low levels in our hydroelectric reservoirs, it has become obvious that the energy matrix needs to be strengthened. Since the quantity of energy generated by hydroplants depends on environmental factors beyond our control – such as rain – there are limited possibilities to increase that output.

"According to the government, there will be no power rationing as the other energy sources will

provide sufficient energy to compensate for the reduced hydro capacity. A big part of this emergency energy is produced by thermoelectric power plants from fossil energy, [but] there is a clear understanding that more investment needs to flow into renewable energy."

Apart from the pandemic, there have been other difficulties in the creation of a more dependable and secure environment for investment, Bregoli went on.

One step in addressing this has recently been taken by ANEEL (Agência Nacional de Energia Elétrica – the Brazilian Electricity Regulatory Agency).

Bregoli said: "For a very long time, many wind parks could not distribute their energy due to

non-existent or insufficient/overloaded transmission lines. At the end of March, ANEEL approved procedures and a new methodology for compensating the wind parks if they have to reduce their production due to problems with the transmission capacity. Having found a solution for these situations, an important obstacle for possible investors has been removed.

"In the last few years Brazil has moved up to seventh place in the Global Wind Energy Council's ranking and the expected investments for 2021/2022 will increase the contribution of wind energy to a more stable and efficient energy matrix in Brazil," he concluded.

FOX Brasil's work in this sector includes the movement of 12 electric gantries to Rio de Janeiro port on two charter vessels, Caldana said.

More projects are on the way – not only ports and airports but also highways, railways and subways, concessions for mining and various energy projects.

#### **Logistics rethink**

For Over Projects, 2021 has been very busy so far. "Our experience in special projects and multimodal solutions is becoming more relevant in such a challenging market environment, where the industry is being forced to rethink the current logistics setup and look for alternatives," Braga pointed out.

In May, for example, Over Projects completed a plant expansion project for the brewer Heineken in Ponta Grossa (via Paranagua port), which is now the company's biggest factory in Brazil.

But in spite of the encouraging signs of demand, development is not happening fast enough to support real growth in the heavy lift and project sector. There remains a long way to go.

"I would be happy to see Brazil building up a friendly environment for project development in the future," Braga said. "The current infrastructure [ports, roads, waterways] is very limited and the archaic bureaucracy needs to move rapidly towards digitalisation."

The so-called 'Brazil cost', a combination of such operational inefficiency and high taxation, makes the country less attractive to foreign investors and leaves it far from achieving its economic potential.

Some of the difficulties may be easier to tackle than others, Soares said. "To be honest I do not see our government – or any other – reducing or cutting taxes now, as they are





The slowdown caused by Covid-19 opened up an opportunity for the government, attracting the private sector to participate in bids for concessions for a period of time or privatisation.

– Murilo Caldana, FOX Brasil

in need of money to support all the stimulus cheques and other measures they have taken during the pandemic."

The country is making some progress, albeit slow, with reducing bureaucratic procedures, but digitalisation and automation are still in need of significant improvement.

#### Infrastructure concerns

Under these circumstances, Soares said: "The main thing that could make a huge impact is infrastructure. Today only the central southeast of the country has good infrastructure to receive and send heavy lift project cargoes. Elsewhere in Brazil, such as the north and Amazon rainforest area, it is quite a struggle to make things happen. We have difficulties with equipment, cranes, manpower, roads and the weather."

In summary, Jones said: "Infrastructure, politics and legislation are the basis for future growth. These must be addressed in an arena filled with corruption and internal political chaos."

**7** HLPFI

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July/August 2021



## How effective leaders include safety in planning

When it comes to any project, good planning creates good outcomes. Okos Partners' senior partner Peter Krammer, and Bart Gragg, president of Blue Collar University, discuss how leadership in the planning phases can result in safer and more efficient solutions.

hile working on leadership development with the US Department of Transportation's Maritime Division (MARAD) at its Suisun Bay Reserve Fleet, we were asked to help plan the movement of a mothballed ship to another location in the anchorage.

The SS Peterson, a specialised fuel oil tanker, was at anchor in Suisun Bay on the Sacramento River Delta.

It was held in position against shifting tides by three anchors with 13 lines tying it alongside a cargo ship. It had no onboard power, so it had to be towed to the new location.

Some of the major hurdles we had to overcome were:

- Crossing a shallow sandbar in the middle of the bay – the ship had to leave its mooring at just the right time to catch high tide to clear the sandbar
- Not cutting a major buried high-voltage power cable crossing the riverbed. One of the two bow anchors was lying within 40 ft (12.2 m) of the cable. If the ship shifted and dragged that anchor across the cable, the costs and consequences would have been unthinkable
- Releasing the stern anchor under strain against the outgoing tide; it would be a difficult and hazardous manoeuvre to lift

that anchor off the bay bottom with no help from ship power.

#### **Good planning**

When it comes to any project, especially one as complicated as this, good planning creates good outcomes, including safety, efficiency, quality, happy customers and people going home uninjured. MARAD needed a good plan.

Before we started the planning process, it became apparent that not everyone was on board. Conversations with one supervisor showed the attitude that "we have moved 80 ships out of here - what is different about



this one?" Few people held onto that attitude once the conversations got going.

We brought the supervisors together for one meeting to get an overview of the department leaders' thoughts, questions and needs for the ship movement. Then we had an all-hands meeting that included mechanics, deckhands, crane and barge operators, electricians, environmental technicians and representatives from the ship's live-aboard crew.

We had a range of talent, from decades of experience to just a few weeks on the job. In all, there were nearly 40 people in the room. We gave a detailed outline of the objectives – what we needed to accomplish on this project – and asked for input and questions to promote thought and conversations. We had to know the issues and obstacles and needed to fill in the details of the entire picture, not just the big picture. This included the validity of the objectives, how we would meet them, the work required to get the job done and the resources needed every step of the way.

What we wanted most was for people to speak up and share their ideas and fears. This was not an easy task in a culture unused to sharing. We got pushback. We encountered resistance not because people thought knowledge was power and they did not want to give that away; they did not

want to share knowledge because they did not think anyone would listen to them. Leadership used pushback as feedback.

But people stepped up. Often a working supervisor raised a question, and another had the answer. Leadership encouraged the least experienced to tell their thoughts and concerns. Their input turned out to be critical to the success of the operation. The planning session spawned other conversations, which raised even more questions. When those questions got answered and there was confidence that the answer was the best one, it was documented on a working plan accessible to everyone.

#### **Safety decisions**

Safety was just a part of it, but it was a big part. If an operation could not be done safely it was not going to be done.

One big example was staffing the team that would loosen and retrieve the lines holding the two ships together. A lead deckhand asked: "Who are the line handlers?" As names were called out, a mix of personnel from electricians to environmental techs raised their hands. When asked which of them had ever handled a line, some of them had, some of them had not. Here is where it got interesting – that deck lead said: "All of you are with me after lunch today. We are going to have line handling training." And they did. And there were no incidents.

The planning session uncovered many issues and questions. Another example was retrieving the anchor that could drag across the high-voltage cable. A barge-mounted crane was needed to do the retrieval. The operators brought up an issue: operating a crane on a barge is very different than operating a crane on dry, stable land with outriggers and crane mats.

There is more than just the maximum lifting capacity of the crane – you have to consider the tilting of the barge. Too far and the crane ends up upside down stuck in bay mud and the Coast Guard fishes the crew out of the water somewhere downriver.

We asked what the maximum tilt angle would be for them to call off the operation; there were lots of 'we think' opinions but nothing definitive. They had to know. So,

Critical to safety and effectiveness is not just learning from what goes wrong – it is taking a look at what goes right and what happens seemingly without incident.

# In business, and on the jobsite, discipline only happens when each member of the team engages in the process.

they researched the questions and came back with the answers. Those were incorporated into the plan.

On each issue, the team worked out who would get the right information and who had to agree on how a specific operation like lifting the anchors would happen. Then we documented each of those decisions on the plan.

The ship movement went off without any major issues. The team followed the plan and updated it as issues arose. The major tasks had a Plan B. Each task had the right resources needed to carry it off; each team member was clear on his or her duty; and supervisors knew the whole picture so they could make good decisions in the moment.

Critical to safety and effectiveness is not just learning from what goes wrong – it is taking a look at what goes right and what happens seemingly without incident.

Usually, when an operation was successful no one reported anything. The leadership team did two things to make the next move even more successful: firstly, they did not accept that everything went well, and secondly they made it safe for people to speak up and tell the truth.

#### **Hidden issues**

It turned out there were some issues the team dealt with on the fly during the operation that could have been dealt with beforehand. Fortunately, the teams were smart enough to know how to handle these situations and knew that someone had their backs if they did not think the job could get done safely.

The planning was not the end of the story, but it played an essential role in the operation. Planning brought discipline to the teams and, in doing so, minimised their guesswork.

In business, and on the jobsite, discipline only happens when each member of the team engages in the process. When your team takes part in writing the plan, they align and engage with the plan. When this happens, they tend to get home safe and uninjured that night.

To do anything, whether it is handling a line, operating a crane or moving a ship, you need the discipline of planning. Without planning, you are just winging it.

**71** HLPFI



## efying downturn predictions



#### **AUSTRALASIA**

New Zealand's construction projects are belying predictions that the Covid-19 pandemic would knock the bottom out of the country's building boom.

hile there were fears that construction activity in New Zealand would be handicapped by lockdown restrictions, economic uncertainty and a decline in forward workload, there was in reality an increase in long-term construction cranes on site in the six months to the end of the first quarter 2021.

The Rider Levett Bucknall (RLB) crane index, which analyses New Zealand construction activity, has revealed a much brighter picture, with an increase in the number of cranes in each of the country's

key construction centres, a new peak in Auckland and a record number of cranes in both Wellington and Queenstown.

The RLB Crane Index took a snapshot at the end of the quarter and recorded 136 construction cranes working on key projects across the main centres, just 13 below the record level of 148 that were at work in Q1 2019, when the country was at the height of a construction boom.

All regions of New Zealand are seeing increased crane numbers, including 61 longterm fixtures, most of which are in Auckland. RLB said that the non-residential

crane index, which is of most interest to the heavy lift and project market, is due to rise as the government pumps more resources into 'shovel-ready' projects earmarked to inject more activity into infrastructure after the impact of Covid-19. That increased activity will flow through into the next crane count for Q3 2021.

The government's budget has generated further impetus, with infrastructure investments rising from an already announced NZD42 billion (USD30.5 billion) in the next four years to NZD57.3 billion (USD41.6 billion).

#### Rail contracts

Much of this boost is not yet allocated to anything specific. However, the rail industry is celebrating after being earmarked for NZD1.3 billion (USD943.7 million), including NZD810 million (USD588 million) for KiwiRail to buy new trains. Heavy lift and multipurpose vessels can expect employment if the rail operator follows recent practice and sources overseas



- not just the locomotives and wagons but also steel rails.

The New Zealand government is strongly backing rail as part of its bid to reduce transport emissions. An analyst's report recently confirmed that rail provides an economic benefit to New Zealand each year, mainly by taking cars and trucks off the roads and reducing transport CO2 emissions.

That finding has provided the government with the ammunition to plough more investment into the mode, with a tenyear rail plan backed by the Rail Network Investment Programme (RNIP), which will

set out the detailed works.

Furthermore, there could also be some major hospital builds coming through as a result of NZD700 million (USD508 million) earmarked for new assets for district health boards.

#### **Energy boost**

Adding further gloss to the New Zealand project picture is the emergence of a new energy company which plans to launch five solar farms across the upper North Island with more than 500,000 solar panels over 500 ha of land.

Lodestone Energy plans to construct the country's largest network of solar power generating stations. Together, the five farms will act as one giant generation plant, injecting sustainable renewable power into the electricity grid during the daytime and helping reduce the country's reliance on fossil fuels. The New Zealand government aims to hit its goal of 100 percent renewable generation by 2030.

The first site will be developed at Kaitaia in the far north of the country, with construction scheduled to start by late 2021. The initial NZD300 million (USD217 million) capital programme is privately funded and will bring the solar technology to the market beginning in 2022, producing enough electricity to power a city the size of Hamilton (population 165,000).

Freight forwarder Burnard International reflects the positive New Zealand picture, saying there is strong demand in the project and heavy lift sector, particularly given the travails of the container market. Rob Hageman, Burnard's commercial manager, said many traditional project vessels have been time-chartered to third parties and are now vying for the container trade in what are very challenging times in global container shipping.

"In most cases, as these project vessels are self-geared, it provides additional flexibility for loading and discharging containers,

#### With significant infrastructure projects under way in New Zealand, there are many opportunities currently and on the horizon.

– Rob Hageman, Burnard

alleviating congestion for ports with vessel berths but insufficient onshore cranes for vessel discharge.

"With the regular increasing costs of vessel chartering and steady increase in bunker costs over the last 12 months, carriers are in a strong position to increase freight offers should deadlines for acceptance not be met. Vessels rarely stay open as heavy project ships are in strong demand between Asia, the Americas and the Middle East," he said.

"With significant infrastructure projects under way in New Zealand, there are many opportunities currently and on the horizon. Careful forward planning and locking-in contracts at the earliest opportunity acknowledging a potential moving target on freight rates – become essential in ensuring success on every project move."

#### **Project moves**

A successful example of a recent large project move managed by Burnard was the shipment of two 110-tonne hoppers from Tauranga to Geelong in Australia. The hoppers measured 2,200 cu m each and because the manufacturing location was 2.5 km away from the port, delivery was made between the hours of 01.00 and 03.00.

Significant planning was undertaken by the local transport contractor, including partial road closures, street sign removals, street lighting and traffic light realignment, and power line lifting. Additional port sign removal was required to enable the hoppers to enter the wharf.

Over in Australia, the port of Newcastle welcomed BigLift Shipping's Happy Star, which delivered a bulk ship unloader standing more than 62 m high and weighing 750 tonnes. A meticulously planned operation to transfer it onto Newcastle's K2 berth in its Bulk Precinct was undertaken, utilising the ship's two 1,100-tonne lifting capacity mast cranes.

The BigLift vessel undertook a two-week journey from Vietnam to deliver the unloader to Newcastle, where it will discharge bulk cargo such as fertilisers, meals and mineral sands at up to 1,200 tonnes per hour. The port's previous two unloaders were decommissioned in 2018. **THEPFI** 





# Volatile markets drive agility and innovation

Since the beginning of the pandemic demand for airfreight capacity has hit unprecedented levels, with the grounding of passenger aircraft resulting in an immediate eradication of bellyhold capacity. The need for the rapid deployment of medical equipment, PPE and vaccines added further fuel to the fire, as did widespread disruption at shipping hubs around the globe. *David Kershaw* reports.

ll-cargo airlines such as Cargolux were highly solicited to fill the vacuum in the market," said Domenico Ceci, executive vice president sales and marketing at Cargolux. "There was a rush for PPE at the outbreak of the pandemic and this constituted the bulk of the freight carried in April, May, June and July of 2020. Cargolux played a crucial role in maintaining the air bridge open between Asia, Europe and the USA.

"With regard to healthcare and medical products, these continue to be flown as part of our overall cargo mix, including vaccines. However, contrary to initial statements by third parties, there are no planeloads of vaccines being flown everywhere. Vaccines are transported by road and air depending on how close the production facilities are to the final distribution points."

On the brokerage side of the equation Jack Burt, vice president of freight USA at Air Partner, said the volume of requests for heavy and oversized cargo enquires has fallen since the start of the pandemic. Volumes of PPE and vaccines are falling too, with most of these items "now being moved via standard ocean or airfreight, not charter", he explained.

For UAE-headquartered Emirates, heavy and outsize cargo comprise a small

proportion of its total volumes – the large items it carries include machinery and goods such as aircraft engines. "At the moment, we are not carrying as much PPE as we were at this point of time last year. However, we continue to carry this and other medical supplies for Covid-19 on our flights," explained Hiran Perera, senior vice president, cargo planning and freighters.

To date, Emirates has moved more than 75 million doses of Covid-19 vaccine, it expects to hit 100 million by the end of June. "We continue to build on our capabilities in Dubai and around our network. We recently extended our pharma cool room infrastructure with the addition of cool cells

80 🗾 July/August 2021 www.heavyliftpfi.com



with 94 airline pallet positions, giving us the ability to store and handle more Covid-19 vaccines currently and other temperaturesensitive pharma in the future," Perera said.

Volga-Dnepr Group traditionally moves heavy and oversized shipments aboard its AN-124 and Il-76 ramp freighters. "During Q1 2021 we have seen that over 80 percent of total operations contained XL shipments," said Alexey Zotov, sales director for AirBridgeCargo (ABC) Airlines/Volga-Dnepr Group.

#### **Humanitarian shipments**

Concurrently, the airline has been engaged with healthcare and humanitarian shipments; 5 percent of its volumes this year comprised medical products and equipment. "[This percentage] is shrinking compared with over 25 percent in 2020, which is normal given that the outsized and superheavy market is gradually coming back to life with revival of major projects across the globe, he said.

For ABC almost 7 percent of cargo carried during Q1 2021 comprised healthcare and pharma shipments, with the company being heavily involved in projects for vaccine distribution, oxygen crisis in India, as well as supporting stable supply chains of other vital healthcare products. "As of today, we have delivered almost 6 million doses of Covid-19 vaccines to UAE, Mexico, Moldova, India and other countries, with



There was a rush for PPE at the outbreak of the pandemic and this constituted the bulk of the freight carried in April, May, June and July of 2020.

– Domenico Ceci, Cargolux

requests still coming for more deliveries," said Zotov.

With little sign of passenger travel returning to pre-pandemic levels anytime soon, the prospects look promising for the airfreight sector. Still, there is a fine balance to strike in terms of satisfying all client requirements in a capacity-constrained market.

Zotov said: "Marketwise, we are getting a lot of enquiries amid the continuing capacity constraints and slow passenger operations recovery, and we do our best to process them in line with other long-term commitments, also paying particular attention to healthcare and humanitarian projects."

#### **Resilience and agility**

He added that, if 2020 proved anything, it is that "that resilience and agility are a must for all market players. That, together with proactive approach towards market demands enabled us to offer logistics solutions for our customers worldwide."

To strengthen its presence in humanitarian and healthcare sectors, Volga-Dnepr Group developed a global healthcare team consisting of experienced logistics practitioners. It also joined the UNICEF Humanitarian Airfreight Initiative and the Pharma. Aero association, became part of the Validaide pharma shipment platform, and established a humanitarian logistics hub in Leipzig. The carrier also cooperated with like-minded companies to foster vaccine distribution, said Zotov.

Given the disruption, striking the balance between delivering the highest margin cargoes and supporting longstanding clients that may have been priced out of the market, is a key concern for freighter airlines and their clients. Leonard Rodrigues, head of revenue management and network planning at Etihad Cargo, explained: "Long-term partnerships are a key focus for Etihad Cargo and have

www.heavyliftpfi.com July/August 2021 7 81

#### **INDUSTRY FOCUS**AIRFREIGHT

supported our strategy throughout the recent period. This trade-off between long term and short term is well understood by the leadership team at Etihad Cargo, and this balance is reflected in our regularly updated targets. This allows us to serve profitable lastminute traffic, while supporting our key partners in the long term."

Right now, he added: "All major traditional cargo gateways have returned to nominal production. The strength of trade lanes is thus mainly a function of supply, with demands from Southeast Asia particularly strong due to the relative lack of passenger services."

Cargolux's Ceci said his company honoured all of its block space agreements that were concluded before the sanitary crisis, when market conditions were less favourable. "As we progress into 2021, Cargolux has strived to be fair to all of its customers in the allocation of its capacity. In order to serve the market in the best possible manner, Cargolux continuously assesses market requirements to ensure a flexible response where services are needed."

#### **Asian demand**

Demand out of Asia has been extremely strong since the end of 2020, both into Europe as well as on transpacific routes. Europe to the North America has been strong as well, he added.

Air Partner's Burt, meanwhile, said the brokerage remains "deeply committed" to servicing and providing the best solutions for its clients. "We consistently support our longstanding clients with the most competitive margins before, during and after the Covid-19 pandemic," he said. The hottest trades right now include transpacific-China/Southeast Asia to USA; transatlantic-USA to EU and EU to USA; and the Americas-USA to Central America.

Last year, Volga-Dnepr Group made changes to its product portfolio to enhance its scheduled and charter cargo operations, long-term regular charters and ACMI programmes. Fedor Novikov, marketing director of Volga-Dnepr Group, said: "This enabled us to support our customers across the globe with dedicated solutions, stable deliveries and uninterrupted supply chains. Some of our longstanding customers choose various formats depending on markets and types of cargo and so far, no customer has been left behind.

"For scheduled cargo operations we also offer the possibility for digital bookings via our partners' platforms (Webcargo and Cargo.one) or our website, which embrace small and medium-sized enterprises."



#### **Black Hawks take flight with Antonov**

Antonov Airlines recently transported five S-70i Black Hawk helicopters on a single AN-124-100 flight from Rzeszów, Poland, to Angeles in the Philippines.

Measuring 11.52 m x 3.2 m x 3.9 m and weighing 5.6 tonnes each, the helicopters were loaded using the AN-124's winches. Antonov Airlines' in-house engineers developed detailed loading and unloading plans.

"Although the total payload in terms of weight was quite light for our aircraft, loading five helicopters safely and transporting them without damage takes considerable collaboration," said Amnon Ehrlich, director North America – aerospace, government and defence programmes.

"We have been working closely with Sikorsky as

For its scheduled services, the busiest trade lane has been APAC-Europe (both directions) with a more than 20 percent increase over 2019, as well as intra-Asia-Pacific where volumes have tripled.

For one-way flights, Europe-North America, Russia/CIS-Asia Pacific, and North America-Russia/CIS were among the major markets, increasing 80 percent, 150 percent and 10 percent respectively. "For charter cargo operations, the busiest markets were



It is not only about the additional planes but also about capacity management.

-Fedor Novikov, Volga-Dnepr Group

Europe-North America, intra-Middle East, India/Far East-North America and Europe, and China-North America.

"From a network perspective we see strong demand on the existing markets and routes and most likely will leverage new destinations through charter options this year," he added.

#### **Market adjustments**

To satisfy the requirements of the market, adjustments have been made to the Volga-Dnepr fleet. A B777F joined in December, and two B737s were added to the roster in May. "However, it is not only about the additional planes but also about capacity management, which covers capacity management process, synchronisation of all the programmes and strengthening of our 'Cargo Supermarket' concept within Volga-Dnepr Group, which allows us to handle all the cargo requests through a one-stop-shop and find the most suitable logistics solution," said Novikov.

Rodrigues at Etihad believes that fleet optimisation is an absolute priority for all airlines presently. "During this recent period, we have accelerated our plans to remove oldgeneration aircraft from our fleets, and we reconfigured five B777-300ER aircraft for cabin loading. We have also made multiple minor adjustments such as - for example -



well as its logistics supplier Helicopter International Shipping Services (HISS) for several months to ensure that all current and future programme requirements are met."

This is the second delivery of Polish-built S-70i Black Hawk helicopters to the Philippines; the first shipment took place during November 2020 and was subsequently delivered to the Clark Air Base, north of Manila.

changing the way we manage fly-away kits to allow freighters to operate at full capacity."

The airline also opened regular services in Myanmar and Cambodia, and is extending services to Vietnam. "We have also significantly reinforced our presence in all major freighter gateways, such as Shanghai, Hong Kong, Hanoi and Amsterdam, among others," he said.

Emirates' Perera drew attention to the difficulties in ensuring long-term customers can access optimal capacity. "It is true that our customers also understand market dynamics and our operating environment and by maintaining dialogue and transparency, we are able to continue a mutually beneficial partnership with our customers even during challenging circumstances.

"We do see strong demand on the transpacific trade lane as well as from Asia to Europe and the Middle East. However, we have to keep in mind that market conditions are currently very dynamic and volatile, changing on almost a daily basis. Covid-19 continues to have an impact on manufacturing and trade and we have to constantly monitor demand and supply patterns around the world to adjust our



We have to keep in mind that market conditions are currently very dynamic and volatile, changing on almost a daily basis.

– Hiran Perera, Emirates

capacity deployment accordingly."

Emirates' priority in 2020 was to rebuild a large part of its network, although this did not mean that new opportunities were spurned. "We started operations to Bogota, Colombia, and also initiated freighter



www.heavyliftpfi.com July/August 2021 📆 🔞

services from Guadalajara, our second destination in Mexico. We also started operating to Miami in October 2020," Perera said.

It reconfigured ten of its B777-300ER passenger aircraft into "mini-freighters" capable of transporting around 70 tonnes of cargo per flight. In all, 16 mini-freighters are currently in service at the airline.

Looking ahead, there are number of variables to be aware of – one being the restart of passenger flights and the return of bellyhold cargo capacity to the market. On one hand, increased supply should apply downward pressure to rates but, on the other, airlines could get a boost as markets 'wake up'.

#### **Cautious tone**

Ceri at Cargolux struck a cautious tone: "The evolution of the situation remains uncertain, and it depends heavily on the resumption of international passenger travel. The pandemic has highlighted the importance of the all-cargo model as an important player in the global supply chain.

"The current level of under-capacity in the market has driven passenger airlines to become innovative and use their passenger aircraft as freighters, because the rates are so attractive. However, it could be argued that passenger-freighters will only fly profitably while prices are at high levels."

He intends to keep a vigilant eye on the level of capacity that is entering the market, versus demand, and the impact on rates. "In the event of the next downturn the negative impact on rates is likely to be much more significant than previously experienced due to the capacity level that is building up in the present environment," said Ceri.

And, looking further ahead, fleet renewal is a concern. "Cargolux currently operates a fleet of 30 B747 production freighters, an aircraft which is adapted to our operating model. The B747 offers significant advantages for specialised cargo such as nose-door loading capability, temperaturecontrolled zones and the capability to carry heavy loads, including single piece items. The challenge will be mainly on finding a suitable replacement in the coming years as the B747 line has come to an end."

Air Partner's Burt explained that with the ocean freight market at full capacity, and little sign of the situation abating in the immediate future, more companies are looking at air charters, with more requests coming across the desk of its freight division.

"The market dynamic for the air charter industry should remain robust as long as there is a supply/demand imbalance in the ocean and air transport industries in the



near-medium term.

"Additionally, we saw during Covid-19, many companies realised just how responsive air charter is and how it can be utilised for meeting their cargo needs, especially during extremely urgent situations. Our clients understand the value of chartering their cargo, and there is an overall impact on efficiency and strategic operations. Given the market situation and companies seeing the added benefits of air cargo, we foresee this trend continuing for the remainder of the year and beyond."

Volga-Dnepr's Zotov believes that any return to pre-covid business activity is three or four years away, with travel restrictions hindering a full recovery in passenger traffic until 2024.

"Besides, most companies will be hesitant in terms of widebody plane deployment, relying on narrow-body operations instead, which leaves less available capacity for cargo. From our



We will keep on developing our product range, strengthening our footprint in industry logistics and working with customers in line with their expectations.

Alexey Zotov, AirBridgeCargo/Volga-Dnepr Group

perspective, customers will still be interested in having solid commitments, especially for special commodities, the likes of e-commerce, high-tech, fashion garments and healthcare throughout the year.

"Unfortunately, given slow vaccination programmes, the resurgence of Covid-19 and its mutations, passenger operators are still in an insecure position. That said, we will keep on developing our product range, strengthening our footprint in industry logistics and working with customers in line with their expectations and requirements, especially when it comes to transportations of special cargo for various industries."

#### **Influx of requests**

In the immediate future, port congestion in Asia-Pacific and North America has seen an "influx" of requests from shippers that would have moved their items by sea. "We review each situation case-by-case, trying to leverage growing volumes but at the same time keeping the commitments for our existing customers," said Zotov.

In the long term, e-commerce and hightech are sectors showing the best signs of growth. However, oil and gas will recover slowly, owing to fuel price fluctuations. In addition, the transport of aerospace equipment, particularly satellites, is a market that is certainly on the up.

For Perera at Emirates, the continuing growth of e-commerce and cold-chain shipments remain at the centre of its attention. "There are also new trends, such as the recent growth of comparative platforms such as Cargo.one, CargoAI and Webcargo. Some other interesting developments include aircraft design, as the size of the global fleet currently grounded has pushed manufacturers and airframe engineers to innovate new designs promoting cargoes that are certainly worth looking into," he added.

**7** HLPFI



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sunny day in October 2020 was an unforgettable day for Project Director Claus V. Laursen and the rest of Blue Water Shipping. The delivery of the final module at the purpose-built cargo transportation site in Prorva, Kazakhstan, marked the last transportation milestone for Blue Water Shipping and its four consortium partners under the Tengizchevroil (TCO) Future Growth Project- Wellhead Pressure Management Project (FGP-WPMP) contracts.

The first module was delivered in April 2018 - and two years and six months later, the last of 285 modules reached Prorva. All modules - the heaviest weighing 1.800 tonnes - were delivered safely and on time.

"It has been an impressive achievement by everyone involved in the project management and logistics during this project. The preparation started in 2015 the first modules delivered three years later and now completing it all three years later. We are very proud to have been part of an extremely successful logistical challenge and very humble that TCO chose Blue Water



Shipping to project manage the four contracts," states Claus V. Laursen, who has been Blue Water's Project Director throughout the entire project.

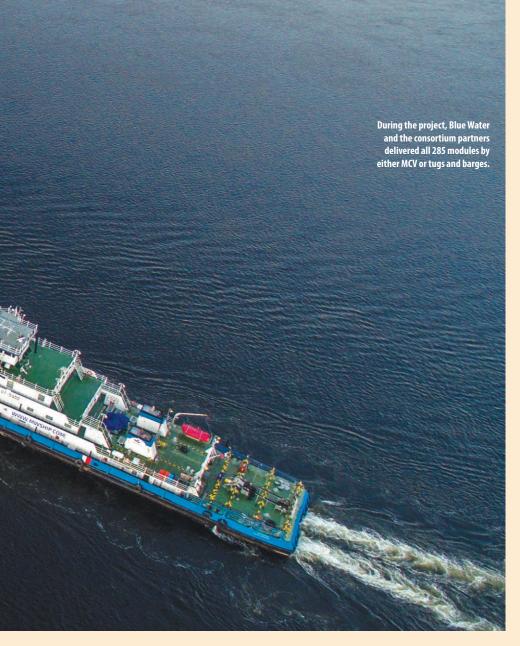
During the contract negotiations in 2015 and 2016, many different options and scenarios were discussed with TCO to develop the best and most efficient logistics proposition for this world-class capital project. At all times, safety, schedule and quality were considered the primary drivers.

"This was a first-of-a-kind project into the Caspian Sea, and there were no benchmarks or previous projects to consult during this difficult but - for the success of the project - very defining period. So, a lot was at stake during these negotiations both for Blue Water and TCO," says Thomas Bek, Global Director for Energy and Projects at Blue Water.

#### **Vessels built to purpose**

Transports of special cargoes through the Russian Inland Waterways has traditionally been done by tugs and barges. However, due to the size of the TCO FGP-WPMP project, the existing fleet of Russianflagged barges and tugs would not be sufficient to meet the tight project schedule.

Decisions had to be made to either build additional barges or investigate alternative modes of transport. Known concept, operational knowledge and decades of experience were the main benefits for choosing the barges; operational safety, speed and the ability to build a project-bespoke vessel were the main drivers for the alternative solution, the Module Carrying Vessel (MCV). To mitigate potential risks, the pioneering solution was to design, build, and commission 17 new MCVs, construct four barges, upgrade another seven barges and project upgrade around 30 tugs to tow and push the barges from Bulgaria and Finland to Kazakhstan. For the MCVcontract, Blue Water was the lead in a consortium with P&O Maritime Logistics.





The new-built MCVs were specially designed to accommodate the limitations of the locks of the Russian Inland Waterways.

This was a first-of-a-kind project into the Caspian Sea, and there were no benchmarks or previous projects to consult during this difficult but... very defining period.

- Thomas Bek, Blue Water

"Due to the scale of the order combined with a very tight delivery schedule, the 17 MCVs had to be constructed in three different yards – one in Vietnam and two in Romania. The pressure was high from day one as no one had ever constructed 17 vessels based on a new design in such a short span of time before," states Thomas Bek.

To ensure the highest possible safety on site, the timeline was kept, and complete transparency was maintained, Blue Water, along with our partners and client, mobilised strong and competent construction management and HSEQ management to the various sites.

Contrary to potential concerns, early progress indicated that the construction schedule would be achievable. But many challenges would still lie ahead, with the final sea trial being the ultimate test of quality and operability of these types of vessels that had never been built before. As time would tell, the MCVs matched the project's full expectations.

#### Width challenges

Concurrent to constructing the 17 MCVs to operate in the Russian Inland Waterways, Blue Water Shipping signed a second consortium agreement with KazMorTransFlot (KMTF). This contract with TCO required three Caspian Seaspecific MCVs, which needed to be wider than the river MCVs as they would have to carry much wider modules.

The width of the three MCVs was 21 meters – and to get from the yard in Romania to the Caspian Sea, they would have to navigate the Volga Don and its locks with a maximum width of 17.77 m! The solution was to sail the vessels to Tuzla, Turkey, where they had their wing tanks on both sides removed. This exercise made the vessels 16 meters wide and able to be towed through the Volga Don. In Baku, the three vessels were taken ashore to reassemble the wing tanks and to refit all the installation that had been dismantled in Turkey.

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July/August 2021 7

#### **Blue Water's biggest contracts**

Upon signing the first contract with TCO, Blue Water Shipping set up a project headquarters in Farnborough, UK. Here, Blue Water's personnel would sit in-house with TCO and their other main contractors, executing the complex supply chain.

Blue Water's scope would ultimately cover the transport from the two transhipment ports in Hamina, Finland, and Burgas, Bulgaria, via the Russian Inland Waterways to Prorva, Kazakhstan, as well as the domestic transport from Kuryk, Kazakhstan, to Prorva, Kazakhstan.

"This being the biggest contract ever awarded to Blue Water Shipping and the biggest EPC contract awarded globally in 2016 made everybody involved in the project very focused on the tasks ahead. But the full extent of the project was still hard to understand as we were still negotiating further contracts with TCO that would increase the total scope of work significantly," says Thomas Bek.

#### **Ecological and environmental** considerations

The third consortium with Manchester Shipping covered 11 barges and 30 tugs for transport of modules from Hamina through the Russian Inland Waterways to Prorva. It was determined that four barges would have to be newly built - and seven existing barges would need an upgrade.

"The upgrade and new build of the barges was not easy, but through joint effort, hard work and a lot of commitment from all parties, the barges were delivered in the spring of 2019, ready to load out modules from Finland," states Claus V. Laursen.

The ecological and environmental considerations when shipping to the Caspian Sea are very important. Due to the unique ecosystem in the Caspian Sea, Blue Water had been contractually committed to adhere to the highest norms and standards in relation to ballast water - and treatment of same. Therefore, state-of-the-art ballast water treatment systems on the MCVs and barges had to be installed.

#### 75 km dredged channel

The summer of 2017 saw Blue Water concluding the fourth and final consortium agreement with Caspian Offshore Construction (COC) for the design, build, and operation of six custom-built tugs to support the cargo operation through the Cargo Transportation Route (CaTRo) channel into Prorva.

TCO had to build a 75 km long channel from the shores of the Prorva peninsula to a deep-water location in the Caspian Sea.

At TCO's Cargo Offloading Facility in Prorva, Blue Water's local team discharged 408 large cargoes – 285 of which had been transported by Blue Water together with their partners.

#### Strong team of experts

As contracts were signed, more personnel were brought on board to support Blue Water's project management team in Farnborough. The team consisted of Project Managers, HSEQ, Engineering & Naval Architecture, Planning, Bunker Management, Construction Management, Marine Assurance, Contract Management, Document Control and Site Management. All supported by Blue Water's HQ in Denmark.

"We worked hard to find the right experts, but we also focused a lot of our energy on encouraging everyone to work as one team. Key to our success were competencies, preparation, willingness to find solutions - and strong team spirit," says Claus V. Laursen.

As preparation progressed, site offices were established in the critical areas: Prorva in Kazakhstan, Kuryk in Kazakhstan and the two European loading ports Burgas in Bulgaria, and Hamina, Finland. At the sites, Blue Water was responsible for all engineering and load in and out documentation to ensure a safe operation performed by all stakeholders and partners. Project-wide, more than 4,900 technical documents were issued by Blue Water. Furthermore, Blue Water was responsible for designing, manufacturing and fitting the sea fastening materials that would ensure the safety of the modules during the voyage to Kazakhstan.

"As the vessels were being built, upgraded and delivered, the sites were springing to



finding their place in this massive logistical puzzle. But the preparations for the actual transportation were still ongoing with kickoff meetings, HazID meetings, issuance of processes and procedures, schedule simulations, test loadouts and much more. And all the 'what ifs' were discussed in ways of risk assessments and mitigations," states Claus V. Laursen.

#### **Unique system for safety**

The method of loading, where the aft end of the MCV or barge is moored against the quay (Mediterranean mooring), and the





fact that the cargo was almost as wide as the MCV and barge, made the access to the vessel for welding (and removing) up to 22 units of up to 135 kg sea fastening brackets impossible. Blue Water, therefore, proposed access platforms in both the load ports and at the discharging facility in Prorva. These were unique systems that assured safe access to the work areas and a lot of storage areas for materials.

#### The first module

April 2018 was a key milestone. The first loadout of a module - and it was from Kuryk in Kazakhstan. Over the next two years, the Caspian MCVs and the three backup barges did an outstanding job ultimately delivering 89 modules from Kuryk to Prorva. They were so successful that the anticipated third season never materialized. A sign of successful delivery on the scope.

July 2018 would mark the first loadouts from Bulgaria and Finland. The cooperation between the vessel crew and the Blue Water site crew and engineers went very well, and the first loadout gave everybody great confidence that the MCV concept was a success. The next challenge was the first navigation through the Russian Inland Waterways with a full module on board. A lot of preparation, simulations and planning had naturally been carried out, and that work indicated that it would be a success.

But it takes an actual passage to confirm it.

"We were all smiles when the first vessel arrived at Astrakhan, Russia, ready to navigate the last part of the voyage - the Caspian Sea and ultimately navigation of the 75 km long channel into Prorva. All went well, and the offloading operation in Prorva under our management went as planned. The first voyage proved that all the planning in the lead up to it had not been in vain - and it promised well for a successful delivery campaign," says Claus V. Laursen.

#### The final season

Both 2018 and 2019 ended on a high in terms of schedule, safety and performance. Blue Water successfully delivered all the modules scheduled for each season.

"We even ended 2019 better than expected, and we were all confident that with the lessons learned from the previous two seasons, we would be in a strong position to finish the transportation scope by the end of 2020 and not go into a fourth

The first voyage proved that all the planning in the lead up to it had not been in vain and it promised well for a successful delivery campaign.

season in 2021. Little did we know that the world was about to face a pandemic that had not been foreseen in any of the many risk assessments conducted across the project," states Claus V. Laursen.

The project was forced to introduce new solutions and procedures to keep the operation running. Aside from following the general guidelines, there were stringent rules applied to specific sites to prevent the spread of the virus.

Amongst others, this meant that many employees on site had to extend their rotations by months to ensure continuity. It was of course not only the Blue Water staff that committed to a very different way of working throughout 2020. The crew on the 60 vessels under Blue Water contracts had to commit to more extended stays onboard, workers on site had to work under much stricter guidelines, rotational personnel had to isolate on every rotation, etc. It would require a real team effort to make 2020 a success, just battling the consequences of the coronavirus.

"But with a tremendous effort and dedication, we managed to move forward as planned. Taking all challenges into consideration, the 2020 season shows team spirit like never before. Delivering the last module was both a very happy and very sad moment. Happy because we had performed with great success. Sad as it marked the end of this first of its kind project," states Claus V. Laursen. 🗷 HLPFI

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# Striking a balance

What has been the impact of Covid-19 on Germany's flow of heavy lift and project cargo? Felicity Landon finds the industry in a surprisingly positive mood with its attention focused on a broad range of other issues.

epending on who you ask about the effects of Covid-19 on heavy lift and project cargo in Germany, there has been a slight hiatus - or none at all. All seem to have a positive outlook. Notably, those at the sharp end seem more concerned with other issues - poor infrastructure, permitting problems, the shift away from coal, oil and gas to renewable energy, rocketing shipping rates and the increasing pressure on forwarders when it comes to contract negotiations.

"When Covid started here in Europe in March 2020, suddenly there was a big hole which we all fell into, and millions went into short working [where employees work reduced hours]," said Eduard Dubbers-Albrecht, managing director of Ipsen Logistics. "Factories were closed - not just the small ones, but the really large automotive manufacturers. We just ran against a wall.

"However, even though the pandemic became more serious in the second half of 2020, business life in terms of industrial output and manufacturing rebounded. Today the manufacturing side, including project business, is doing rather well."

The period of 'no economic activity' was too short to really hit projects, said Dubbers-Albrecht. "When we had the financial crisis, existing orders were still executed and immediately after the crisis they continued in 2009-10. Then the project business was hit in 2010-11. I do not see that happening this time, people are busy.

"Of course, we are also in a state of change - the big question is what will happen with oil and gas. However, that does not mean logistics business and projects will die down, because they are being replaced by renewables, including solar and wind energy. Wind power plays a huge role in demand for worldwide transport. There are incredible orders out there, which means activity for the project logistics business - including



The big question is what will happen with oil and gas. However, that does not mean logistics business and projects will die down, because they are being replaced by renewables.

- Eduard Dubbers-Albrecht,



transformers, which are moving in large numbers. So we are not suffering from a gap, and we need not expect it."

#### **Positive outlook**

Wolfgang Schellerer, general manager at Felbermayr Transport and Hebetechnik, said that there had been a gap when some projects were postponed, "but we hope that these projects will start soon".

"The project and heavy lift business was already weakening before Covid-19 and that did not get any better in the pandemic," he said. "Because we are broadly positioned and operate in many industries, we were able to retain all employees. We have compensated for the lack of orders by using equalisation hours and old vacation balances [for staff], as



well as short-time work in some areas, and have seen an upward trend since March 2021. We were very happy that the construction industry has worked through almost without Covid-19 interruptions."

Within the EU, Felbermayr sees additional demands for wind repowering projects and there are also a number of projects in the plant construction sector," said Schellerer. "In the automotive industry, we hope to see significant investments in the e-mobility sector, as with Tesla in Berlin."

Felbermayr acquired Poland's Daher Projects last year and moves into its new headquarters in Wels-Oberthan this summer. "Felbermayr has grown continuously over the last 30 years and the current location has been expanded again and again," said Schellerer. "Compromises had to be made in the processes. Among other things, the commercial and operational units have been housed in different office buildings, which definitely creates disadvantages.

#### **Fresh start**

"In addition, there were no expansion possibilities at the current location.

Therefore, it was the best decision for us to be able to design a plan according to our needs on a free site without any restrictions."

BLG Cargo Logistics, at Neustadt port, Bremen, had expected project business to enter a weak phase with a time lag of several months, said Sven Riekers, managing director. "This phase has been noticeable since the beginning of the year. However, we expect this market to pick up again in the second half of the year.

"We do not anticipate any lasting changes [in project cargo]. As mentioned, the expected gap has occurred. However, numerous stimulus packages and an overall healthy global economy will, in our opinion, mean that the market will not change permanently."

Terminal operations were not affected at any time, he said – the measures taken to protect personnel were effective and had no impact on operational capability.

"In recent years, the Neustadt port in Bremen has become the most important German port for handling onshore wind turbines, both for imports and exports. The

www.heavyliftpfi.com July/August 2021 📆 🥦 91





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port's inland geographic location, close to production for wind farm sites and excellent transport links, has resulted in strong volumes. The global fight against climate change and the strong German wind energy industry will continue to have a significant impact on project cargo volumes at the port of Neustadt in the coming years."

He added: "We expect that global economic stimulus programmes will continue to have a positive impact on the project cargo market."

Heavy lift, project and breakbulk cargo scarcely make up 1 percent of total volumes handled through the port of Hamburg these days - but nevertheless, the port still has three specialist terminals, and there is a steady flow and wide variety coming through - including generators, transformers, gas turbines, railway building equipment and track-laying machines, mining trucks, brewery equipment and ship propellers.

#### **Breakbulk uncertainties**

Everything that can go into containers does so, said Axel Mattern, ceo of Hamburg Port Marketing. However, he said it was difficult to say what would happen with the transport of breakbulk in the next two to three years.

"Coal mining and coal energy production is going to close very soon. Meanwhile, you have a lot of activities in setting up factories - for example, battery factories are in the planning stages or being built already, so it is a complete change."

He added: "A year-and-a-half ago you maybe paid USD1,000 for a container from China to Poland. Now we are close to USD14,000-15,000. What we have seen first is industries such as furniture - because furniture is space consuming - looking to move production to Romania, Poland, Hungary and Bulgaria [from low-cost manufacturing regions]. It might be a little bit more expensive but you are very close to your markets and, in addition to that, quality control is much easier." Near-shore supply chains are also more resilient to disruption.

He expects this relocation to be a continuing trend, and one that will spark demand for new factories and therefore potential for project cargoes associated with construction.

Meanwhile, the craziness in the container sector has its impact on projects where large units are traditionally accompanied by smaller components in containers.

Dubbers-Albrecht said this was contributing to pressure on forwarders where contracts imposed by many shippers are already "extremely tough".



"The clauses that the EPC or manufacturer imposes on his logistics partner are really hard to live with, including liability," he said. "Our business rules include limits of liability, which make a lot of sense when you think about moving a container full of laptops - the freight you receive and the benefit as a forwarder may be in the hundreds of euros, so you cannot be liable for millions. Shippers have marine and transport insurance which covers the value, but the forwarder has cover for his mistakes. However, shippers are insisting on unlimited



The project and heavy lift business was already weakening before Covid-19, and that did not get any better in the pandemic.

- Wolfgang Schellerer, Felbermayr

liability. The terms become tougher and tougher, and you are confronted by voluminous contracts, because the EPCs are afraid of liability issues themselves."

After disasters such as the Deepwater Horizon oil spill, no one wants to be liable, said Dubbers-Albrecht. "So these are tough negotiations."

#### **Price problems**

Price is the other challenge as the imbalance in terms of containers and availability of space has a knock-on effect on the project business. "A project with a load of 250-300 tonne pieces also tends to consist of container shipments, so the cost of shipping has increased for everybody by hundreds of percent. For example, a major project from India to Algeria with 2,000 containers could see a USD16 million difference in cost. This has also happened in airfreight, often used for time-critical pieces. But with the air schedules nowhere close to what we had in 2019, airfreight rates are high. Overall, the cost of transport, whether normal, oversize or project, has increased tremendously."

Who pays? Nobody can afford to lose that USD16 million, he said. "Basically, you go into negotiations. It can get difficult because the shipper says you signed a contract for that price. But at the end of the day, the shippers must swallow the difference. Of course, it can [partly] go against our margin - we try to compromise."

He agreed that the push back against globalisation, a desire to reshore for sustainability/resilience reasons, and the high

July/August 2021 께

container rates are driving a shift of production back to Europe, and he expects more development in this direction.

As far as heavy cargo is concerned, this sentiment could lead to lower volumes on long distances, he said, but the issues remain the same because in the project business, the actual shipping part is generally the easiest. "Once a transformer is loaded and secured on the vessel, it is fine for the next 20 days or however long it is on the voyage. On the road it is very different – basically every corner is difficult and you might have to remove cables, traffic lights, etc."

So-called 'short moves' are therefore often more complicated, he said, especially due to lack of investment in infrastructure. "For example, Liebherr's crane manufacturing site in Ehingen is 700 km from Bremerhaven, which handles a lot of ro-ro. But in order to get there, they have to drive 1,200 km because so many bridges can no longer handle the weights and they have to take detours."

#### Importance of canals

At Hamburg Port Marketing, press officer Bengt van Beuningen emphasised the importance of canals for project cargo heading to and from the port. "We talk to the producers of heavy equipment and it is a problem in Europe because the infrastructure must be modernised," he said. "For example, several bridges in western Germany are blocked for heavy truck loads. For the industry, that is sometimes a signal to look for other production places worldwide to shift production to other regions."

Mattern added: "Heavy lift and project cargo can still be transported without any limits by barge and at the end of the day it is the only transport mode left that is easy to be used for the big items."

Another road-related challenge in Germany arrived at the start of this year, when new rules came into force for VEMAGS, the online system for applying for road permits for abnormal loads and heavy transport in all 16 federal states. The system has caused controversy both nationally (especially because of price rises) and among international companies, who are experiencing a disadvantage when it comes to applying for permits.

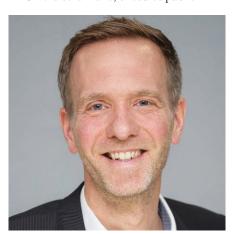
The reforms have had a major impact on Felbermayr and its customers, said Schellerer. "It is becoming more and more difficult to move oversize goods from A to B and it brings another significant disadvantage for producers in the domestic market due to the price increases," he said. "Many producers are considering relocating their



production to places from where their goods can be transported under good conditions."

The VEMAGS system requires a lot of paperwork and it can be a major task to get a route approved, requiring staff time and experience, said Dubbers-Albrecht. "If one authority is under-staffed, suddenly you do not get the permit. Also, permits are only valid for a certain period of time, so if one takes too long, permits that have been agreed might have expired again. Digitalisation? Let us call it antique - we are not as far ahead as we should be. There is a lot of red tape and paperwork to be done to get these permits to use the road system and that indeed is a major obstacle."

On the other hand, of course public



Germany as an industrial location depends on a functioning infrastructure that can handle transports to and from the ports quickly and reliably.

– Sven Riekers, BLG Cargo Logistics

safety is paramount, he said. "You do not want to see a bridge collapse under a 250-tonne generator. There is an effort to facilitate things by digitalisation and standardisation - there is a lot of talk between shippers and the authorities to try to make things easier."

#### **Role of VEMAGS**

However, the experience of Riekers at BLG is more positive. "Germany as an industrial location depends on a functioning infrastructure that can handle transports to and from the ports quickly and reliably. This also includes fast and digital ways of transport approval, which VEMAGS is designed to enable in principle," he said. "The authorities in Bremen and Bremerhaven have been able to adapt to the changes in good time, so that the short response times further contribute to the competitiveness of Bremen's ports."

Meanwhile, the Czech Republic and Poland have always been important markets for project cargo. "Both countries are well connected to the German ports via roads and waterways, and we have not noticed any changes in cargo flows here," said Riekers.

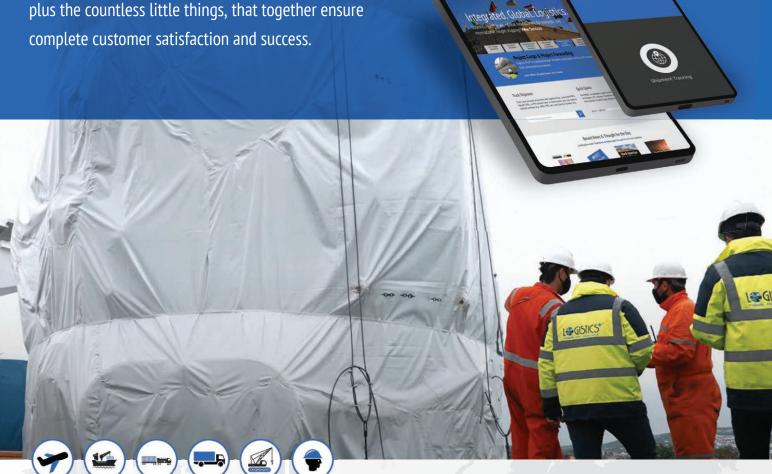
BLG regularly loads project cargo for customers in the industrial engineering sector to various destinations. "The largest volumes come from the wind energy sector, which also ships to changing, worldwide regions," said Riekers.

"In addition, we continue to offer our customers the option of carrying out assembly or module construction directly on the quay. This option is regularly used by customers from the oil and gas industry and manufacturers of large-volume conveyor systems." 🏿 HLPFI

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# Energy hubs dominate East Coast planning

Several manufacturing, assembly and marshalling complexes are planned to support huge investments in offshore wind energy on the US East Coast – although not all of them are likely to come to fruition. Gregory DL Morris highlights current progress being made along the seaboard.

ith global trade recovering smartly from the pandemic, the new priority for ports and the wider project logistics supply chain on the US East Coast is the growing set of plans for wind turbine manufacturing, assembly and marshalling complexes.

Three hub initiatives that seem well under way are in New York, Connecticut and Virginia. They are being built to support initial wind farm projects, but all with the idea of continuing and even expanding to support many others.

The vast amount of wind energy projects planned all along the Atlantic seaboard make the need for dedicated shore facilities obvious. In 2020, despite the pandemic, Ørsted's pilot programme to install two wind turbines was completed in federal waters off Virginia. The larger Coastal Virginia Offshore Wind Project is planned to generate 2.6 GW of power going to Dominion Energy when it comes into service in 2026.

Notably, the landside marshalling and project management was handled out of Halifax, Nova Scotia, rather than a US port. Part of the reason for that is the Jones Act, which mandates intra-US carriage be done by US-flag vessels; those in turn have to be built, owned and crewed by US citizens.

Early in June, Ørsted and Eversource confirmed that they will charter Dominion Energy's Charybdis, the first Jones Actqualified offshore wind turbine installation vessel in the USA, for the construction of two offshore wind farms in the Northeast.

#### **New vessel deployment**

Charybdis, which is expected to be in service by late 2023, will first be deployed out of New London, Connecticut, to support the construction of Revolution Wind and Sunrise Wind, both under joint development by Ørsted and Eversource. The two projects will generate more than 1.6 GW.

As Ørsted's Virginia pilot project was being completed, the company leased 40 acres (16.2 ha) in Portland Marine Terminal (PMT) from the port of Virginia. PMT has 43 ft (13.1 m) water draught, unlimited air draught, and 750 lbs per sq ft (3.7 tonnes per sq m) weight tolerance on the wharf. That is sufficient at present but will be enhanced.

PMT is to be the core of a large complex of manufacturing and assembly facilities, to which the state has committed an initial USD40 million of support. "We are engaged to support wind energy in the mid-Atlantic region and the entire East Coast," said Chris Gullickson, director economic development for port of Virginia.







In that last aspiration there will be some competition. A consortium of North American wind turbine tower manufacturers Marmen and Welcon, along with Norwegian energy company Equinor, have taken two leases in New York State, one at either end of navigable Hudson River in New York: at Albany, about 150 miles (241 km) north of New York City, and in South Brooklyn. Those facilities will support two proposed wind farms, one not far off the south coast of Brooklyn, the other at the east end of Long Island.

Last year the New Jersey Economic Development Authority (NJEDA) announced its intention to build a wind energy hub on Delaware Bay. Indicative of the tenuous nature of some of these plans, however, the last update on the proposal was in November 2020 when the authority issued a request for bids from prospective construction management companies. No further announcements have been made and the NJEDA did not respond to requests for information.

#### **Probable developments**

It is possible that all of the hubs could be completed. But what is considered more likely by most sources is that at least two or three full-scale manufacturing and assembly complexes will be developed. Others, it is reckoned, will be more modest support and marshalling facilities.

"We agree that the pace and scale of offshore wind energy is accelerating all along the Atlantic seaboard," said Megan Daly,

chief commerce officer for the port of Albany, New York, about 150 miles up the Hudson River from New York City. "Our port is pleased to be working with project partners Equinor, Marmen and Welcon on the first offshore wind tower manufacturing operation in the USA."

The project is in the design, engineering and permitting stages, with plans to start construction next year. Groundbreaking is expected in the first quarter of 2022 on 81 greenfield acres (32.8 ha) that have been leased for Marmen's tower manufacturing.

"We are excited for the related development happening [elsewhere] in New York State to support offshore wind energy and the supply chain development as well. New York State's leadership role in renewable energy plays a big role in this and the assertive approach to going green," said Daly.

As has been noted in previous reports, Albany has long served as a project cargo port both for the US East Coast and as an ice-free side door for winter access to a wide area of North America from the Great Lakes and Midwest to Eastern Canada.

"As a green marine port, and with maritime experience of moving renewable energy shipments and other heavy lift/over-

We agree that the pace and scale of offshore wind energy is accelerating all along the Atlantic seaboard.

– Megan Daly, port of Albany

dimensional cargoes, the port of Albany believes there is more opportunity and more support needed to grow the industry," said Daly. "New policies and funding resources available at the federal level are helping with this as well."

#### **Tower sections**

In something of a foreshadowing, the port of Albany recently handled an inbound shipment of tower sections that were being stored at a site in western New York. It was a single set of components, rather than part of a continuing project, but port officials were glad to have the chance to flex in advance of the Marmen-Welcon development.

"For wind towers, air draught is just as important as water draught," said Tony Vasil, manager of business development at the port. The high clearance under the bridges around New York and along the Hudson is well known.

For other project cargo, Vasil noted that last autumn the port had completed a new ro-ro ramp to accommodate large pieces being moved by barge. In May last year a 60,000 sq ft (5,574 sq m) warehouse for project cargo placement was completed. "We have two cranes at the port, and project managers can make use of those, or ships' cranes or arrange for heavier barge cranes to come in," he added.

Notably, the port of Albany has seen the same number of port calls by project cargo vessels so far this year, while project cargo tonnage is 106 percent of the same period in the previous year.

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Marmen, based in Trois Rivieres, Quebec, began making steam turbines and other heavy machinery before it expanded into wind towers, so its expertise in shipping project cargo goes back to its roots. "We ship by rail, truck or water," said Claude Mallick, director of purchasing and supply. "Generally, customers handle the outbound freight once we have loaded the shipment. In our three existing facilities our overhead gantries load trucks or we bring in cranes to load rail or marine. Over the last few years, many wind tower sections have left our facilities by rail on saddles."

The main shop at Trois Rivieres still makes general equipment as well as wind tower sections. The two other facilities along the Gaspe Peninsula on the Gulf St Lawrence and in Sioux Falls, South Dakota - build only towers. Onsite, the plants use hydraulic suction machines to move steel plates and flange sections.

#### **Breaking ground**

Mallick stated that he expects to break ground this autumn and that site erection will take about a year. Manufacturing equipment is expected to start arriving early in 2023, which will mean inbound project cargo as well. Tower sections will be fabricated in Albany and moved down river to the South Brooklyn facility. Beyond that he deferred to the other project partners. Neither of those responded to requests for information, but other sources suggested that blades and nacelles are likely to be shipped from Europe to South Brooklyn, which will act as the staging area for installation of the two wind farms.

How the assemblies will get to the jobsite remains to be seen. "The supply chain for these components does not really exist yet," said Mallick. "There are lots of assets and equipment in the US, but they are mostly in the Gulf Coast for the oil and gas industry. Even so, I have yet to see people who have moved both the size and the amount that we are looking at for the planned installations up and down the coast."

While the Marmen-Welcon manufacturing operation at Albany is being built to supply two initial wind farms, it plans to operate for at least 30 years, said



The pipeline of US offshore wind projects is one of the largest globally and will, in turn, bring plenty of opportunity for both the local US market and the global industry supply chain.

– Tobias Schultz, deugro group

Mallick. "The advantage of the Albany site is that we can make towers for anyone anywhere on the Atlantic seaboard."

Beyond wind energy hubs, there has been other activity on the US East Coast. deugro group has just opened an office in Miami. The facility has direct access to 50,000 sq ft (4,645 sq m) of warehouse space under cover, including 15 loading docks with oversized cargo ramps and ten forklifts with heavy lift capacity, according to Tobias Schultz, executive vice president.

#### **New facility**

"The new facility will be an integral part of the deugro group network, supporting supply chain activities covering all transportation modes in connection with deugro's main industry verticals such as oil and gas logistics, mining and minerals, and power and renewables," he added.

Miami is the US gateway to the Caribbean, Central and South America for air and ocean freight. About three quarters of all air imports and exports between the USA and the Latin American/Caribbean region are handled through Miami, according to deugro group.

"The pipeline of US offshore wind projects is one of the largest globally and will, in turn, bring plenty of opportunity for both the local US market and the global industry supply chain," said Schultz. "Today we see the current administration in the USA committing to advance offshore wind energy, including 30 GW of offshore wind energy by 2030 and 110 GW by 2050.

"With the US-based offshore wind energy portfolio currently in its infancy,

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there is a vast undertaking required to create a sustainable local supply chain," he continued. This will not be an overnight success. The market will rely on experienced partners from mature markets, such as Europe, for the initial project pipeline."

deugro group has already assisted with engineering and logistics studies on the US East Coast, including marshalling ports for wind turbine generator foundations and other components, and transport and marshalling of modular floating wind turbine generator hulls. The group is in active talks with "various companies," said Schultz, for growing and expanding wind energy operations.

#### **Wind prospects**

"It is very likely that we will see continued growth in wind energy in Europe followed by rapid developments in the USA in the coming years," said Schultz. "Large investments need to advance in creating innovative transport [facilities and operations] to deal with heavier and larger offshore components."

More broadly, Schultz noted that "emission reductions and ambitious goalsetting from now through 2030, 2050 and beyond is the main driver for trends and developments not only in North America but worldwide. As an example, the number of projects in the renewable energy, not just solar and wind energy but also, carbon capture and biofuel segments are increasing at a fast pace. Many companies are striving to increase their business portfolios to include a variety of alternative energy choices."

Atlas Heavy is the oldest new kid on the block. Atlas Heavy Projects and Atlas Heavy Transport, based in Houston, were the only asset-based operations in the Hansa Meyer Group. Earlier this year, it became independent and 100 percent US-owned.

"We have equipment all over the country," said Anders Pedersen, general manager, "and we are looking into extending that into renewable energy. There is nothing

We have equipment all over the country and we are looking into extending that into renewable energy.

– Anders Pedersen, Atlas Heavy

official yet but we are talking to potential partners among the wind energy hubs, ports, and stevedore firms that are establishing themselves. We already do a lot of work in that sector as a heavy lift firm to the primary manufacturers and project managers."

#### **Space programmes**

The firm already has a registered presence in Florida supporting work for both government and private space programmes, and expects to open at least one more in the eastern USA later this year.

"Projects like space exploration or wind energy play to our strengths," said Pedersen, "because we have our own engineering and load-planning teams. We design our own saddles and do our own lashing and securing. We also have our own fabrication shop, so we do all our own hot work such as welding and cutting to secure loads on barges. We even have our own paint shop."

Pedersen is quick to note that while Atlas Heavy has expertise in forwarding, that capability is so that the firm can collaborate with, not compete against freight forwarders.

**7** HLPFI

### A model for energy hub success

In terms of wind energy manufacturing, assembly and marshalling complexes, US project planners along the East Coast will be looking to Europe for models of development.

One that is often cited by US ports and developers as a model wind energy hub is the Hull-Humber facility in the north of England opened in 2017 for an investment of GBP310 million (USD438.2 million).

As with several of the projects planned for the US East Coast, the wind hub at Hull had a decade-long gestation period that started with ideas for the best use of available space.

"Ten years ago we had redundant dock area," said Dafydd Williams, head of policy and economic development for Associated British Ports (ABP). "We were casting about for the best long-term sustainable use for this space. We went to the local council, and that is when Siemens came on board. Today the joint venture of Siemens-Gamesa runs the operations at the wind hub."

As is taking place on the US East Coast, other

wind hubs are being developed on the UK East Coast. That will support what is expected to be a fourfold increase in UK energy from offshore wind. There are also operating hubs in continental Europe with growth and expansion plans, and most sources expect there will be widespread borrowing of ideas from assets to operations.

Williams stressed that these facilities have a multi-decade future.

"The shelf life of wind turbine installations is about 20 to 25 years," he said. "And the time to develop a full project can be almost as long. So by the time one or two projects are completed, it is time to go back and replace the first ones."

www.heavyliftpfi.com July/August 2021 🛣 103



*Richard Thomsen*, managing director at deugro Denmark, highlights how the wind energy market overcame its nascent challenges, while discussing what needs to be done to enable the sector to become the planet's primary source of power generation.

n the 1980s, when turbines were packed into containers, the biggest export boom was on the West Coast of the USA. Today, the forwarding industry faces new challenges, with wind turbines and components becoming heavier and larger. Watching the turbines develop from 55 kilowatts (KW) per turbine to up to 14 or 15 MW today has been exciting and fascinating.

There is another difference: even though there will still be a huge number of turbines erected onshore, the fastest growing area for wind energy industry is definitely offshore.

Having been involved in the transport of wind turbines for more than 35 years, I am lucky to have been part of this incredible development. The factors for a successful project are always more or less the same. The key one is the reliable, robust, high-quality, safe and timely delivery of the cargo without any damages. This has not changed over the time and is true for any other type of cargo. But when talking about offshore, the impact and consequences are so much bigger if something is not working out, due to the cargo size and the complications involved in working at sea, as

well as the expensive equipment mobilised to install the wind turbines.

One of the most relevant changes over the years is the shift from a project focus towards standardisation. In the past, each project was processed and planned individually.

#### **Changing methods**

With the continuous demand to reduce the levelised cost of energy (LCOE), the industry has been forced to change its

The factors for a successful project are always more or less the same. The key one is the reliable, robust, high-quality, safe and timely delivery of the cargo without any damages.

- Richard Thomsen, deugro Denmark

methods in order to achieve the required savings. This has trickled down the supply chain. Subsequently, transport providers developed innovative transport methods, for instance implementing ro-ro solutions such as a ferry concept, which enables turbine manufacturers to utilise their production facilities and hubs in a flexible manner. At the same time, they are still able to deliver to several projects ongoing in parallel.

Other achievements have been optimised loading and fast deliveries, which not only save costs but also reduce risks and ensure timely delivery.

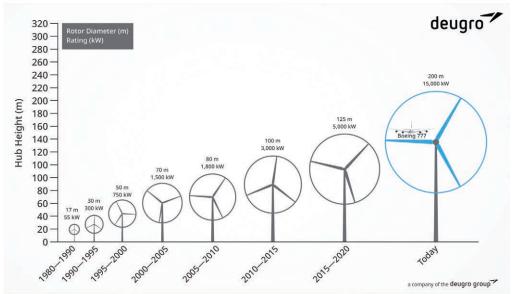
The rapidly increasing size and weight of the components has been another challenge for the transport providers. In addition to the aforementioned factors, larger components require an even greater focus on safe, costefficient solutions – all of which contribute to lower costs.

Furthermore, new logistics





#### Turbines have grown from 55 KW per turbine to up to 15 MW turbines today.



solutions need to be engineered for future generations of wind turbines. With transition pieces (TP), monopiles, jackets, blades, hubs and nacelles all becoming bigger, handling becomes evermore complex.

The capacity of vessels (maximum intake per shipment), terminals and equipment in general needs to be reconsidered and potentially replaced by new designs suitable for the future.

On top of that is being able to navigate various external factors, such as weather, which requires a high degree of operational flexibility to ensure sufficient component supply to facilitate efficient installation schedules.

The rapid expansion of the offshore wind energy market globally is another challenge to overcome. Denmark, for instance, recently revealed its new Energy Island plan that comprises up to 10 GW of

offshore wind capacity. Germany is introducing adjusted offshore wind legislation for a 20 GW target, as well as working on hydrogen plans. Ireland and Poland, meanwhile, are key emerging markets with approximately 10 GW and 8 GW in the pipeline respectively.

#### **Global markets**

Beyond Europe, expansion will continue in Asia, but of particular interest is the rapid growth of the USA's offshore wind energy market predicted for the coming years. This will put further pressure on shipping solutions, requiring innovative transport methods that can satisfy the demands posed by heavier components in what is a much more complex shipping environment.

On top of that, there will be various hurdles to overcome regarding component manufacturing, with local content requirements changing from country to country, and even state to state. These dynamic and challenging supply chains will require a great deal of flexibility from a logistics standpoint in order to accommodate all these requirements while providing the right solutions, timely and safely, at the right cost.

In the Asia-Pacific region, for

instance, potential roadblocks are the lack of experience, vessel availability and restrictions, and evolving consent and legislation.

The tight shipping capacity witnessed in recent months will come under further pressure in



One of the most relevant changes over the years is the shift from a project focus towards standardisation. In the past, each project was processed and planned individually.

 Richard Thomsen, deugro Denmark the coming years. With expanding volumes in the offshore wind industry, further tonnage is likely to be required in the years to come.

Along with the difficulties faced in designing and building the next generation of installation vessels, there is the challenge of predicting and preparing for the future transport and shipping requirements that will be key to the development of the industry.

#### **Powerful players**

Any early scepticism about renewable energy has now been replaced by investments on a global scale, with the technology at the forefront of a push to low-carbon power supply, and with some of the world's most powerful energy companies getting involved

The understanding that renewable energy is a costeffective source capable of meeting the planet's power requirements, while protecting the environment for future generations, has triggered many players in this market.

Cross-sector coupling and the decarbonisation of industry through the growth of offshore wind capacities will help with future climate protection even further. **7** HLPFI





# Boosting diversity across the industry

Yvonne Mulder highlights how companies are adopting successful diversity strategies and boosting the number of women in entry level and managerial roles. Tackling unconscious bias and recruiting from a range of backgrounds and cultures has proven fruitful too.

he project forwarding industry is probably more diverse than most people realise, according to Jason Dickens of Rockbottom
Consulting. "In the last 12 months, 50 percent of the people I recruited in senior leadership roles were women. And, in the

last ten years, companies have been much more inclined to recruit locally rather than bringing in ex-pat management."

He believes it makes sense to include as many industry-relevant people as possible in the recruitment process. "With the current skills shortage, we need to recruit from a

targeted, yet wide range of candidates. And companies are conscious that they want a better balance, especially at the board and steering committee level."

One of the keys to increasing diversity, particularly at senior level, is to ensure diversity when recruiting people entering

106 🗾 July/August 2021 www.heavyliftpfi.com



the industry, Dickens explains.

"It is not so easy to bring in people at more senior level from outside the industry. Maybe you can for HSE and IT roles, but generally we need people with hands-on experience who have sustained experience developed across our industry.

"That is why we are so reliant on entrylevel candidates coming into the business. It is a niche and specialist industry. We need a steady flow of entrants coming into the business. If you look at the senior level executives within our industry, you will find that virtually all of them have developed from entry-level opportunities."

Dickens believes the industry does not get enough credit for the really strong mentoring role played by more experienced workers. "It is a key component of the industry and its success - and helps transmit the passion and energy I see every day from my clients and candidates across the sector.

"I see all my clients invest a great deal of time in younger people. A lot of training is on the job - which cannot be completed in a classroom. Sometimes it is about getting

thrown in at the deep end and learning to

Martha Røed, global human resources and organisational development director, G2 Ocean, agreed that it is important to bring in a wide range of people early in their careers.

"We go to schools and educational institutes to inform and create awareness of the roles and positions we have in the company and we hire a wider range of people. We also invest in professional development. One example being our graduate programme where we give young professionals from around the world handson business experience and a kick-start to a global career."

#### Importance of diversity

She said that as an international company it is important for G2 Ocean to be diverse. "Leveraging the perspectives and opinions sourced from different cultures, backgrounds and experiences is necessary to achieve our full potential. Supporting greater equality, diversity and inclusion in the workplace is an important part of our strategy."

There are 23 nationalities represented in G2 Ocean globally, but Røed believes the shipping industry, including G2 Ocean, must work more systematically to enhance diversity and inclusion. G2 Ocean is a member of the Diversity Study Group (DSG), which states: "Equality, diversity and inclusion need to be a business strategy. It is not sufficient for it to be solely an HR programme."

Members complete the Diversity in Shipping Survey and the resulting data helps both individual companies and the industry as a whole understand where they are with regard to diversity. G2 Ocean's survey showed one in two of its employees thought both the company and the industry as a whole could do more to increase diversity and inclusivity. About 40 percent had been personally aware of discrimination in the shipping industry.

"This information allows us to understand more about the issue," said Røed. "We are committed to taking action to achieve greater inclusion and diversity by partnering up with other industry players, educating our employees about the topic, and involving them more actively in our work."

She said its strategies include looking at unconscious bias in the recruitment process, and training line managers to enhance awareness and critical thinking.

"We are working strategically to develop high-performing teams. This includes recruiting the right person for the right role, building trust among employees, leveraging



**Every member of our** organisation enriches our diversity by exposing us to a broad range of ways to understand and engage with the changing environment.

- Laura Exner, Höegh Autoliners

the strengths of all team members - it is all about building relationships. Through this focus, we aim to achieve better results and maintain an environment where everyone feels accepted and welcome."

Laura Exner, chief human resources and communications officer at ro-ro carrier Höegh Autoliners, stated that one of the key enablers often put forward by women who are taking on more senior roles is flexibility.

"We have a very flexible work environment which is important when combining work and family life. However, working from home or working flexible hours is not only a matter of technology - it is a matter of culture and embedding new ways of working."

#### **Gender balance**

She said the company sees gender balance in management and senior management roles across the organisation as a key priority. "Every member of our organisation enriches our diversity by exposing us to a broad range of ways to understand and engage with the changing environment, identify challenges, and to discover, design and deliver solutions."

The Höegh Autoliners team of 350 people comprises some 30 different nationalities, with women holding two of the seven management positions.

"We recruit for capability, mindset and potential to develop and learn. Providing an inclusive workspace where everyone is

www.heavyliftpfi.com July/August 2021 7 107



treated fairly and given equal career development opportunities is one of the pillars of our sustainability agenda," said Exner.

Höegh Autoliners has participated in the Norwegian Shipping Owners' Association maritime trainee programme for several years. "This is a fantastic way to create a succession pipeline for the company and support the development of talented people in their career ambitions."

#### Online training

The company has been using online training for some time, which has proved very useful during the pandemic. "We worked on implementing digital solutions for development and learning for our people before the Covid-19 crisis hit. For instance, global leadership development programmes and a digital learning platform for all onshore staff," Exner explained.

"For seafarers we worked on more digital learning opportunities onboard to ensure compliance, safety and learning effectiveness."

The company has a digital learning platform provider which enables staff to choose from a wide range of learning, including wellbeing, remote working, leading virtual teams, compliance and leadership, as well as professional learning pathways, including preparation for certifications such as Prince 2, ITIL and Microsoft products.

"In terms of leadership development, we have partnered with a longstanding external provider to run our digital leadership development programme during 2020/2021. Our approach has been to design the sessions based on what is most relevant for our leaders within our overall leadership capability focus areas."

Amanda Long, vice president of sales at Industrial Training International (ITI), said Covid-19 has "absolutely had an effect on the training programmes – but it was not all negative. We have had to become a bit more creative."

She said there was an initial slowdown when there were lots of unknowns. "We had to look at how to mitigate the risk for students and instructors, especially in relation to travelling and being in a classroom together. We are continuously working through creative measures to ensure a positive and safe learning environment. Work in the field did not stop – many of the industries we serve, like the

We had to look at how to mitigate the risk for students and instructors, especially in relation to travelling and being in a classroom together.

– Amanda Long, ITI

energy and maritime sectors, had to keep going so we were very eager to gain exemption to continue to service them."

There was a pause in instructor-led training in certain regions but ITI was able to gain exempt status for its facilities in Houston and in Washington State, USA.

"Here in Houston we are very fortunate to be part of the Health & Safety Council, which has a large campus which quickly got exempt status to keep working. Much of the industrial sector here depends on us all being open. We could provide education and certification to the workforce here."

#### **Live webinars**

Long said some customers now use live webinars for theory-based parts of courses instead of having everything done as onsite learning. "We have been offering courses online for at least ten years, but it was not the live webinar style. Most companies prefer to send students in person. However, at the moment this can depend on corporate policies regarding post-pandemic procedures. So it is great to have a webinar option."

She believes the new ways of working during the pandemic are increasing adoption of online learning. "It has opened everyone's eyes to the fact that it is a great way to learn. Even craftsmen are now used to the computer conference call and are more willing to do training on online platforms."

It does need to be properly organised, she

said, with a defined learning path including timeline, objective and outcome and customdesigned for the specific end-users. "This is the way to make it a really beneficial process."

The new ITI Learning Hub helps facilitate the process. "We are working with customers on their learning paths built out for different roles in their companies. The hub is not just ITI content, but also includes safety libraries, access to online webinars. manufacturers' specifications and a wide range of other resources."

#### Advantages of simulators

The use of simulators in training is also increasing and ITI has them both at its own centres and provides them to be deployed at clients' sites. "By having both actual cranes and some simulators, we are able to train more people at once. It is good to have another platform.

"Simulators also have the advantage that they give us the ability to train people in different circumstances such as adverse weather or in the event of equipment failure. Virtual reality simulators expedite speed to competency and we are seeing more application and use as time goes on."

Long also believes that simulators will



It [a simulator] is not a video game but the similarity helps attract younger people into wanting to try the machine and ultimately helps us recruit more people.

> – Julien Richer-Lanciault, **CM Labs Simulations**

help increase diversity in the recruitment process. "They can help us give more people a taste of what jobs we have available and what skills are needed.

"We find, for instance with crane operators, that women are very patient and pay attention to detail. The simulators help show all people that they have the ability to be smooth-controlled operators."

#### **Engaging recruits**

Julien Richer-Lanciault, product manager for CM Labs Simulations, agreed that the use of simulators, especially when taken to trade shows or colleges, can help engage the next generation of staff.

"It is not a video game but the similarity helps attract younger people into wanting to try the machine - and ultimately helps us recruit more people - especially those who may never have thought to go into this type of work. It helps them see it as an alternative to university - a good trade with a good salary."

He said that in Canada, where the company is based, simulators are helping bring more women into the trades. "It helps show them that there is so much more they can do now. They would often not think to move into the sector before because they see



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www.heavyliftpfi.com July/August 2021 **109** 





it as a dirty or very physical job."

He also believes that "women show more respect to the machine than the boys and are usually more sensitive to the controls".

CM Labs promotes its products as being different to other simulators in that it does complete reverse engineering of the actual cranes, so its simulators are exact copies of the originals. "Operators will recognise the difference compared with other simulators. It is all about 'feeling the machine' which our simulators allow for," claimed Richer-Lanciault.

"Our clients tell us that an individual can save two weeks in training by using a simulator rather than the real equipment. One reason is the stress factor. People learn faster when they are less stressed. They can learn by making mistakes – you just press restart. Another reason – you can condense time. You can do it again and again for eight hours a day on a simulator but for only one or two hours in real life."

#### **Basic controls**

Students start by covering all the basic controls and then can move onto more advanced training, all on the simulator. Other people such as signallers and lift supervisors can be introduced into the virtual world as well.

"We can also show how what seems like a very small change can make a big difference. For instance, the impact of side-pulling can increase the chances of a crane falling over by 30 percent."

Using simulators also reduces the wear

and tear on physical equipment, but he agreed that schools need to have the physical equipment available so that when students are competent on a simulator, they can move onto the real thing.

"Customers tell us that the confidence the students show on the real equipment after having been in the simulator is priceless. They are much less intimidated and feel more ready for it."

CM Labs' main customers are training schools but as technology evolves and simulators become more affordable, they are also seeing contractors wanting to train their operators on them.

"Vortex Simulators can be used during the recruitment process to assess operator competency. The person does an exercise and the simulator reports on various metrics like cycle and idle times. You can see weaknesses and where extra training might be needed. Then they can tailor training accordingly."

Simulators can also be used in the recertification process. Richer-Lanciault

Customers tell us that the confidence the students show on the real equipment after having been in the simulator is priceless. They are much less intimidated and feel more ready for it.

Julien Richer-Lanciault,
 CM Labs Simulations

explained that across most of the USA, crane operators must be recertified every five years. In some states, this drops to every three years. Similar requirements are found worldwide. "We had to work hard to get the industry to accept simulator recertification, but it has been done now. It saves time for the re-accreditors as well, as they had to do site visits before. Now they can check the records of operator, which are very detailed."

#### Portable desktop simulator

CM Labs held a virtual trade show where it launched its portable desktop simulator, the Vortex Edge Plus, "which we can take to real job fairs, or people could take home to train on a specific task. This is democratising training. People can use it to start training before moving to more immersive methods".

The smaller versions are also useful in more remote communities. "In the north, where there are large mining projects, it helps recruit locals into the jobs. You cannot travel to these areas by road so you need to fly and have a simulator that can be put on a plane."

With the drive to increase automation, what role will simulators – and operators – play in the future?

"Automation is not the end of the training journey," said Richer-Lanciault. "You still need to train the algorithm. It will evolve but you will always need a human in the loop so we will need simulators. You can also use simulators to train and test automated equipment. I see it as being more semi-automation – how to enhance operator use of the controls."

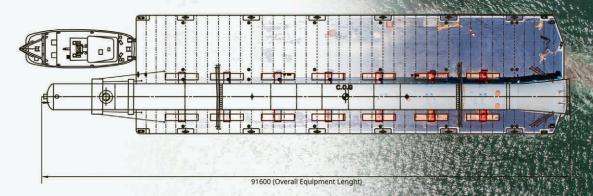
**110** July/August 2021

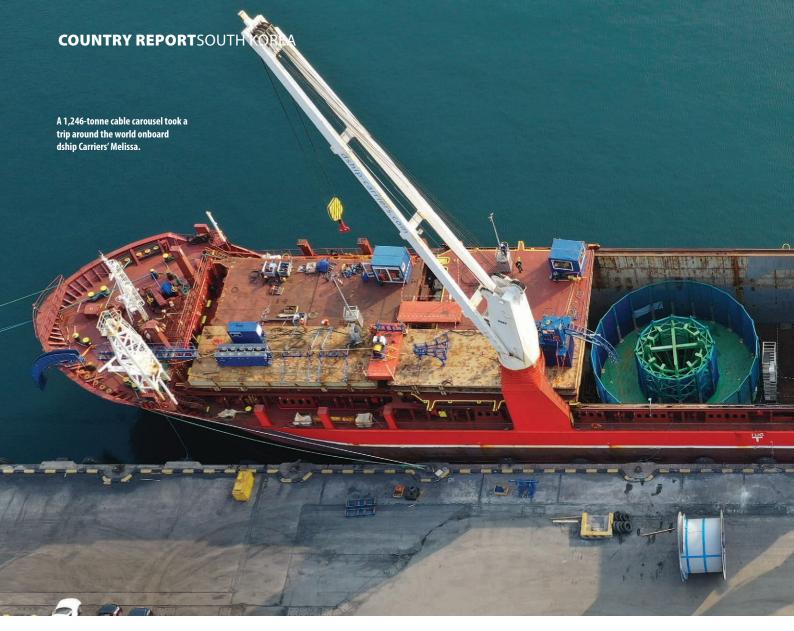


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# Thriving in an abnormal market

Various threads are aligning to the benefit of South Korean shipping lines. A lack of tonnage due to widespread disruption in the container shipping sector is affording strong opportunities to ro-ro operators. For deck carriers and operators of super-heavy lift tonnage, international business ex China is strong. Long term, some eye-catching projects in renewable energy and green fuels look set to hit the market. *David Kershaw* reports.

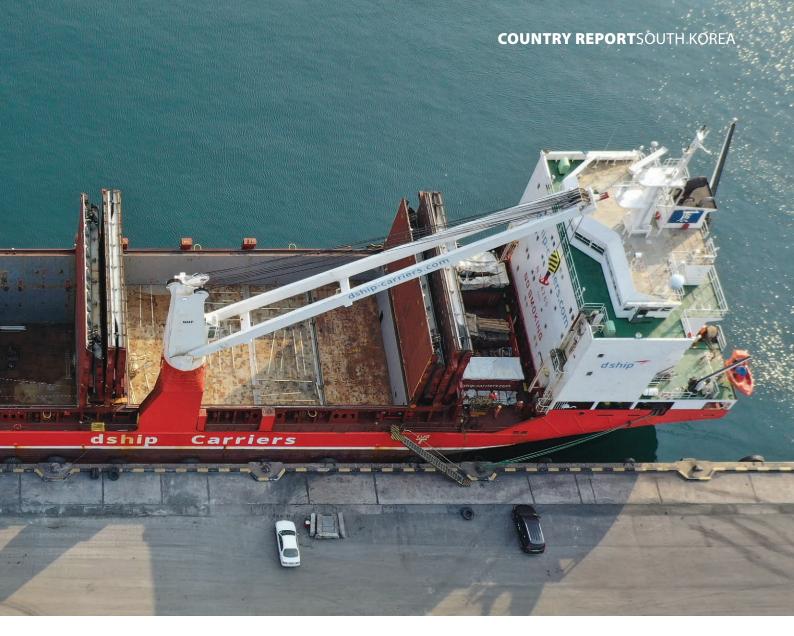
he ear of the project freight
forwarding sector was pricked
earlier this year on the news that
South Korea intends to press ahead
with two large-scale wind energy
projects. In February, the government
revealed plans to build an 8.2 GW offshore

wind energy facility by 2030, requiring an estimated investment of USD43.2 billion. The project, located off Sinan County in South Jeolla province, would be the world's largest single offshore development.

Then in May 2021, President Moon Jae-in announced plans to build a 6 GW

floating offshore wind farm off the coast of Ulsan by 2030, estimated to cost some USD32.8 billion. Korea National Oil Corporation, Korea East-West Power and Equinor are reported to be developing the project at the soon-to-be decommissioned Donghae 1 gasfield. The South Korean

112 July/August 2021 www.heavyliftpfi.com



government has said it would stump up USD1.2 billion for the project's first stage by 2025.

The Ninth Basic Plan for Electricity Supply and Demand 2020-2034, drawn up and released by the Ministry of Trade, Industry and Energy at the start of 2021, suggests that the country's electricity generation capacity will surge to 185.3 GW by 2034. Renewable energy will account for nearly 42 percent of that figure, with LNG at 31.8 percent and coal at 15.6 percent. Nuclear power is projected to provide 10.4 percent.

#### Shift away from coal

This indicates a massive shift for the coal (40.04 percent), LNG (25.9 percent) and nuclear (25.6 percent) dependent country. A total of 30 coal-fired power plants will shut by 2034, 24 of which will be converted to run on LNG. Nuclear power plant decommissioning services will certainly be in high demand.

To compensate, 77.8 GW of renewable capacity will be needed by 2034 (up from roughly 20.1 GW today). The government's previous medium-term goal was to increase

solar and wind power generation to 29.9 GW by 2025, although this has been revised upwards to 42.7 GW.

The country has made steady progress with offshore wind energy projects but the sector is set to be supercharged in the coming years. At the end of 2020, Ørsted revealed plans to develop a 1.6 GW facility off the coast of Incheon City.

Meanwhile, Korea Southern Power (KOSPO) said in September last year that it intends to invest USD3.4 billion in renewable energy capacity by 2025.

Also in September, Total and Macquarie's Green Investment Group (GIG) entered into a 50/50 partnership to develop five floating offshore wind projects in the country with a potential cumulative capacity

In February, the government revealed plans to build an 8.2GW offshore wind energy facility by 2030, requiring an estimated investment of USD43.2 billion.

of more than 2 GW. The partners aim to launch construction of the first project (500 MW) by the end of 2023.

South Korea currently imports 98 percent of its natural gas requirements – volumes will only grow as it tries to achieve its energy mix target. This, along with the growth of the LNG sector internationally, will create work for South Korean EPCs, OEMs, shipbuilders and its project logistics industry.

#### **LNG ship construction**

For instance, during June last year, Qatar Petroleum entered into three agreements to reserve LNG ship construction capacity in South Korea. The space will be used for Qatar Petroleum's future LNG carrier fleet requirements, including those for the ongoing expansion projects in the North Field and in the USA.

Under the agreements, Daewoo Shipbuilding & Marine Engineering (DSME), Hyundai Heavy Industries (HHI) and Samsung Heavy Industries (SHI) will reserve a major portion of their LNG ship construction capacity for Qatar Petroleum through to the year 2027.

The transition to cleaner fuel is also one

www.heavyliftpfi.com July/August 2021 🛣 113

that has attracted the interest of South Korean EPCs – particularly blue and green hydrogen. Since last year South Korea has operated hydrogen projects and hydrogen fuel cell production units under its Hydrogen Economy Development and Safe Management of Hydrogen Act 2020.

"At present, hydrogen projects, especially green hydrogen, are centred in Australia and Europe. In Asia, meanwhile, Japan and South Korea are looking into importing hydrogen and developing international supply chains around the gas, especially within transportation," said Audun Martinsen, head of energy service research at Rystad Energy.

Like traditional 'grey' hydrogen, blue hydrogen is produced using steam methane reformation (SMR) with natural gas used as feedstock. The blue variety has the added benefit of carbon capture, storage or alternative-use technology, which captures and stores CO<sub>2</sub>. This in turn results in minimal atmospheric leakage, rendering blue hydrogen a low-carbon fuel.

Saudi Aramco recently announced a partnership with South Korea's Hyundai Heavy Industries Holding Company to cooperate on blue hydrogen production and use of carbon-based Enhanced Oil Recovery technology in the kingdom's oilfields. Aramco expects its hydrogen business to become world-scale by 2030.

Then, in early June, HMM signed a memorandum of understanding (MoU) with Lotte Fine Chemical, Lotte Global Logistics, POSCO, Korean Register (KR), and Korea Shipbuilding & Offshore Engineering (KSOE) with the aim of developing the green ammonia supply chain.

#### **Ammonia-powered ship**

Under the terms of the MoU, each member pledged joint efforts to form the end-to-end supply chain for ammonia bunkering, including production, storage and transportation of green ammonia. More specifically, KSOE plans to develop an ammonia-powered ship, which will be certified by KR. HMM and Lotte Global Logistics will test and operate the vessel. Once POSCO produces green ammonia overseas, Lotte Fine Chemical will transport the fuel and perform a bunkering operation.

In 2019, HMM said it aims to reach carbon neutrality by 2050 for its entire fleet, with biofuels, LNG, hydrogen and green ammonia parts of a broad strategy. An HMM official said: "We simply cannot decide and select one single carbon-neutral fuel at this moment, considering commercial viability, availability and scalability. HMM will



spearhead an effort to promote the use of a range of alternative fuels in cooperation with top-rated industrial players with experience and expertise."

Of course, it will be some time before the projects described above will result in notable volumes for the logistics sector. The present situation, however, continues to improve.

Hee-Chul Kim, managing director at deugro (Korea), said the South Korean project forwarding market, as is the case across the Asia-Pacific region, remains strong. "We are traditionally most active in the project oil and gas, petrochemical and power industry verticals, which will remain very busy for our Korean clients and deugro." He also drew attention to South Korea's position as a "global leader" in building all kinds of ships, including floating liquefied natural gas (FLNG) carriers.

"Regarding local power, energy and/or civil infrastructure projects for the domestic transport scope, EPCs or project owners contract local asset-based companies directly. For material and equipment that is purchased overseas, project freight forwarders like deugro are involved," he said.

"Locally, we are focusing on shipyards such as Samsung Heavy Industry, Hyundai Heavy Industry and DSME, offering our services for the material and equipment they purchase from overseas. For this purpose,

Locally, we are focusing on shipyards such as Samsung Heavy Industry, Hyundai Heavy Industry and DSME, offering our services for the material and equipment they purchase from overseas.

- Hee-Chul Kim, deugro (Korea)

we have our own office in Busan, besides our South Korean head office in the commercial centre of Seoul." He added that the company's experiences with the Hebron, Prelude FLNG, Petronas FLNG and recently the Coral FLNG projects stand it in good stead to secure work in this arena.

HG Jung, ceo at Chung Yang Shipping, said that the company is busy and the market is improving. "As the pandemic hit the shipping market so suddenly and so hard, the gradual dispersion of Covid-19 with vaccines has pushed demand for merchandise so widely and strongly. This has resulted in an overflow of work for all shipping sectors. Port congestion on the US West Coast, Panama Canal and the Suez Canal accident poured some more gasoline on the fire."

He also drew attention to HMM, which reported record Q1 turnover in 2021 after a challenging few years that included a recovery from bankruptcy. Year-on-year, its share price was up 710 percent in June 2021.

#### **Short-term stimulus**

Jung, however, was not ready to get carried away. "I would assess that this situation is a short-term boom but it may not last long enough to define it as a tipping point toward the upward curve [of long-term growth]."

"We have not seen any remarkable change in the movement of heavy and oversized cargoes in and out of South Korea. Since our heavy industries lost their competitiveness to newcomers in China, India and other Southeast Asian counties, heavy lift movements are gradually decreasing year by year."

That said, developments in neighbouring China have created a highly charged spot market for all heavy lift ships in the wider region. "All South Korean heavy lift ships and deck carriers are moving around busy with spot orders – a side effect of China



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#### **COUNTRY REPORTSOUTH KOREA**

subsidising policies stating that any offshore wind energy project completed this year will be entitled to a big bonus from the government. Subsequently, Chinese carriers are engaged in the transport of wind power components domestically, leaving other international trade unattended.

"I have never seen so many firm spot enquiries originating from China as have been circulating in the market during recent months. So, for the time being and for the rest of this year, project cargo exporters in Asia will experience a shortage of vessel availability, plus freight rate hikes that they have not faced during the last decade."

A recent example of such work was performed in June 2021. Chung Yang's deck carrier CY Interocean I finished discharging blades in Bason, Vietnam, having carried them from Changshu in China.

In 2019, BigLift Shipping and Chung Yang agreed to combine their heavy transport capabilities. BigLift's Hansje Dahmen-Verkade said a combined fleet of four heavy transport vessels, commercially managed by the BigLift Shipping office in Amsterdam, has been serving a variety of markets and clients. Suppliers of port equipment and EPC contractors to the renewable energy market can be counted as regular customers.

Solidifying the partnership, CY Interocean I completed its first special survey during June and was repainted with the new BigLift-CY colour scheme. Its sister vessel, CY Interocean II. will follow suit soon, she said.

#### Rising with the tide

Wonwoo Choi is manager, breakbulk Korea, at ro-ro giant Wallenius Wilhelmsen, in charge of breakbulk sales for both WW Ocean and Eukor out of the country. Activity is on the increase. "With rising of container rates – especially to USA – our South Korean breakbulk teams handling both WW Ocean and Eukor products have been receiving a considerable number of enquiries and bookings, even amid the Covid-19 pandemic. The enquiries are mostly for containerised cargoes that forwarders cannot move on container lines," he explained.

There is a great deal of disruption in the shipping sector right now and ro-ro is not immune to the effects. Available space onboard ro-ro vessels is extremely tight.

"We have been focusing more on our existing customers who are shipping heavy cargoes out of South Korea. Our main target cargo segment is super-heavy transformers and press machines, which have already



WW Ocean loading 250-tonne transformers onto Tonsberg using two sets of jack-up trailers with blocks and beams in Masan, South Korea. The transformers were stowed on blocks and beams during terminal storage and on the vessel during the sea voyage.

contributed remarkably to the performance this year," he explained.

The carrier's focus is on export cargoes and this year's performance is tracking at a high level. "We expect this year's breakbulk performance ex Asia (our South Korea team to be specific) to be its highest ever. However, we do not want to be too optimistic about heavy cargo shipments in the second half. This is mainly because of anti-dumping tariffs for transformers expected to be implemented from June. The heavy and oversized cargo market is influenced by the government policy and thus we are carefully monitoring whether this will impact on our performance," Choi explained.

The company added staff to its South Korean roster to cope with increased activity and purchased additional trailers that can accommodate 220 tonnes to handle the increasing power-related volumes.

"The container market is abnormal, and no one has experienced the same situation before," said Choi. "Many customers contact us and request rates, but we are not giving green lights to all – especially for containerised general cargoes. Our focus is on generating more revenue and higher profit using the same space, while targeting for long-term businesses opportunities. We are in discussions with customers for up to five annual contracts for shipping heavy and oversized cargo ex Korea."

Kim at deugro (Korea) said that, like

I have never seen so many firm spot enquiries originating from China as have been circulating in the market during recent months.

- HG Jung, Chung Yang Shipping

many other forwarders, it has had to switch full container load (FCL) cargo to breakbulk and ro-ro due to the lack of empty containers and limited space availability. "Since March this year, the space on breakbulk vessels has also become very tight, which forced us to book cargo well in advance to be able to secure space for our project cargo.

#### **Proactive coordination**

"This meant close proactive coordination with our clients and their vendors; we all had to adapt to the changing market quickly. Presently, we believe that the disruption for FCL will last for another 9 to 12 months. This, in return, will most likely also mean that for the same period, breakbulk space will remain tough to come by," he explained.

Nevertheless, Kim said that activity levels remain high, the company is active in more than ten projects currently. Notably, deugro (Korea) coordinated the delivery of 67,800 freight tons of petrochemical cargo from South Korea and China to Poland; 294 pieces were delivered over a three-month period, the largest being a propylene propane splitter weighing 889 tonnes. "Sophisticated transport engineering, strict QHSE requirements, a tight timeframe, temperatures down to -17°C, heavy snow fall, ice, strong winds and a client with the highest quality standards," were all factors that needed to be managed, said Kim.

Looking ahead: "The renewable energy projects are now also arriving in South Korea, as our President Moon has pledged to expand our offshore wind power capacity to 12 GW by 2030. South Korean companies are also involved in creating new solutions to produce green and less carbon-intensive energy, following the global trend such as hydrogen, biomass, LNG-to-power, carbon capture and storage, to just name a few."

**7** HLPFI



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with accumulated experience in shipping heavy cargoes including petrochemical plants, desalination plants, ship blocks, and large cranes, Hanjin is equipped with specialised inland transport equipment such as a module transporter for and two self-propelled deck carriers for extremely heavy cargoes. Offering world-wide shipping service, with the latest equipment and wide range of global networks, Hanjin is the right choice for customers expecting high





## Taking the strain as lift weights rise

Despite pandemic lockdowns, demand for below-the-hook equipment has remained strong with continued interest in new products to handle increasingly heavier lifts while improving safety. *Megan Gildea* reports.

The last 12 months were definitely a challenge," remarked John Baker, commercial director at Modulift. Nevertheless: "The sales of our standard stock of modular spreader beams, spreader frames and lifting beams for next day delivery have remained healthy; the team has seen substantial growth in the bespoke design

and manufacture areas."

Harshal Kulkarni, engineering manager at Modulift, said: "We have seen an increased amount of lifting requiring a low height frame solution, adjustability, biaxially and performing as multifunctional lifting tools in lifting and spreader configurations."

In one such order, Modulift designed, manufactured and

delivered two custom lifting frames for the High Speed 2 (HS2) railway project in the UK during December. The first lifting frame is being used at Southampton Docks. The second has been mobilised at DB Schenker's warehouse facility in Immingham, where a low height lifting solution is required.

Earlier this year, Modulift also expanded its range of modular

spreader beams with the MOD 1100/2000 – the first beam the company has manufactured that is capable of lifting 2,000 tonnes.

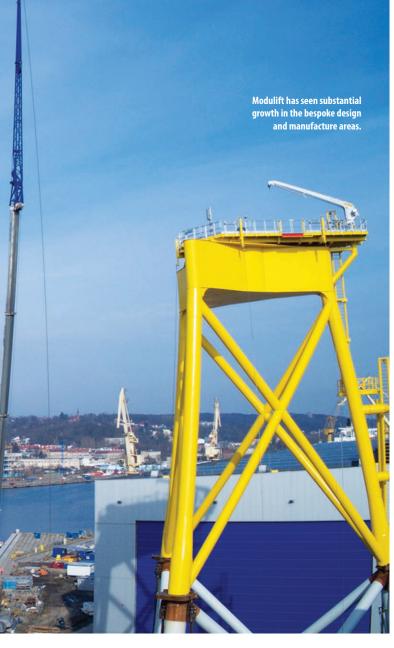
The Netherlands-based heavy lifting rental company Safe Lifting Europe contracted Modulift to design and manufacture the beam, which has a span of 33 m. Modulift's inhouse compression test rig had to be upgraded to facilitate the proof load test of the beam, which was witnessed by DNV. This means the manufacturer will be able to proof load test any spreader beam up to a load of 2,000 tonnes and a span of 33 m. Modulift added that it is already looking at upgrading its testing equipment to 3,000 tonnes for an upcoming project.

Modulift's Baker said: "With the demand for larger and heavier lifts showing no signs of abating, the team at Modulift is

118 July/August 2021 www.heavyliftpfi.com

#### UNDER THE JIBEQUIPMENT

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becoming increasingly more involved with working closer to client design teams to produce achievable and efficient engineering solutions."

#### Lifting beams

Similarly, USA-based Caldwell Group, which manufactures a range of under-the-jib equipment, also experienced a spike in demand for custom products. "Many projects in which our custom lifters are required were never really shelved [during the pandemic] or have been brought back to life after a temporary halt on spending," said Darrin Noe, director of sales.

For its customisable products, Caldwell incorporated its digital tool SmartSpec, which allows distributors to configure products, into its revamped website that provides a full catalogue of the company's

below-the-hook and other lifting equipment.

Noe explained: "If you want a catalogue product, it is right there in front of you. If you want something a little more customisable, you can simply click a button to take you to SmartSpec. And if you are hunting for a full-blown, one-off system, you can contact our sales staff from that same window."

A popular product from Caldwell over the last year has been its'triangle

50 TONCAP Caldwell STRONG-BAC' A Caldwell Triangle beam.

style' lifting beams, which are designed for high-capacity lifts where there is not a large spread between the picking points. "The top attachment points can either be a lifting eye cut directly into the beam or a lifting shackle." Because there is very little labour involved, these are often a costeffective option, Noe added.

Meanwhile, Van Beest - a manufacturer of lifting, lashing and mooring fittings - has seen increasing demand for its Green Pin products, buoyed by the wind energy industry. Roan Retera, general sales and marketing manager at Van Beest, said that the industry has seen a "significant rebound in the market" with large offshore projects taking off.

"One highlight is that any product that is used a lot by the wind industry, such as sling shackles and (Dyneema-based) Green Pin Tycan-chain, has skyrocketed in demand."

Over the course of last year, Green Pin expanded the range of its power sling shackles to include a unit with a working load limit of 1,550 tons (1,406 tonnes). "[It] has a unique design that enables end users to lift the same load with a lighter wire, thus saving money," said Retera.

Green Pin also launched a new range of sockets at the end of 2020, designed for anchoring tubes, pipes, dredging materials, oil platforms, towing cables, bridges and roof constructions, as well as other heavy-duty applications.

The wind energy market has also provided a boost for Airpes, which shipped the first in a series of 75-tonne capacity adjustable spreader beams that will be used in the

One highlight is that any product that is used a lot by the wind industry... has skyrocketed in demand.

– Roan Retera, Van Beest

assembly of wind turbines.

Weighing approximately 5 tonnes and measuring 10 m, the beams will be utilised beneath the hooks of various overhead and mobile cranes ranging in capacity from 100-400 tons (90-360 tonnes).

Tad Dunville, general manager at Airpes Americas, said: "The beam is designed for safety and flexibility. It can work under most reasonably similar cranes of that capacity and has features that allow it to quickly be moved from crane to crane and also refocus on somewhat different loads."

#### Wind energy

Also developing equipment for the wind energy industry is ematec; it recently secured an order from wind turbine manufacturer Enercon for six of its rotor blade lifters. The battery-powered Rotor Blade Clamp (RBC) D-Green-Line traverse systems are able to adjust and balance themselves to the respective rotor blade thanks to an automatically adaptive blade support plate. The technology means the lifters can handle a variety of blades from those that measure 45 m to the colossal 110 m-long units.

To ensure safe handling, the RBC is able to define its precise centre of gravity. Two counterweights located on the two wings of the rotor blade lifter automatically adapt to the point of gravity – with or without a rotor blade, said ematec.

Martin Halford, managing director at UK-based Dynamic Load Monitoring (DLM), said his company has seen an increase in demand for both its standard and custom-designed products,

www.heavyliftpfi.com July/August 2021 **119** 



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driven primarily by the offshore and marine industries. "The bulk of our business is within the offshore renewables sector, which has continued to be busy and has strong signs of growing hugely over the coming years."

In February 2021, DLM provided a 25-tonne capacity telemetry tensile link and a 20tonne capacity S-cell load cell so that MHI Vestas could measure the weight of its 80 m-long turbine blades at both the root and the tip.

The load monitoring equipment was rigged beneath the hooks of the site's overhead lifting gear. The data can be read on two separate wireless handheld displays.

DLM aims to raise its profile in the wind energy sector throughout 2021 and has developed a data-logging device that provides load, angle and acceleration data at high sample rates for use in particular in offshore renewables.

Chris Scrutton, technical manager at DLM, said: "With many existing wind turbines installed already, we are finding clients are now looking for ways to improve reliability and efficiency, which often involves measuring real time data in the field. Our data loggers have been used for measuring forces due to sea waves on array cables, and have been used in research and development projects in turbine fields. The next step in the development of instrumentation in offshore wind is remote access and data transfer."

For its range of load cells,



Insight is described as a logging; load visualisation; proof load testing; and centre of gravity analysis. The product can be used with a laptop, tablet or other Windows devices, and comes with a SW-D USB wireless dongle.

Users can view and log load data from connected individual and multiple load cells, live on screen and directly into a csv file for later analysis at speeds of up to 200Hz.

#### Yunlin deployment

Lankhorst Ropes is a supplier of synthetic fibre and steel wire ropes. Heavy lift shipping company Jumbo deployed Lankhorst slings to install offshore wind turbine transition pieces onto monopiles at the Yunlin offshore wind farm in Taiwan.

The Lankhorst LankoForce slings were fitted to a lifting tool used to aid the correct positioning of the transition pieces - which weigh 450 tonnes. The pieces were lifted and positioned from the heavy lift crane vessel Jumbo Javelin.

"The Lankhorst slings provide the strength and level of control we need when lifting and positioning the transition pieces," said Jochem Tacx, project manager, Jumbo. "Moreover, they are easy to handle and maintenance free."

According to Marcel van der Molen, sales manager heavy lift at Lankhorst Ropes, the adoption of synthetics is growing rapidly: "We do see a rise in the acceptance of synthetics, driven of course by the fact it is cheaper to build structures onshore and have a

Green Pin





www.heavyliftpfi.com July/August 2021 **121** 

#### **EQUIPMENT**UNDER THE JIB more news at www.heavyliftpfi.com

shorter offshore campaign."

However, he also acknowledged that the widespread adoption continues to be hindered by a lack of fibre rope standards. Through a close collaboration with DNV, Lankhorst is trying to address this.

#### **Ongoing research**

In addition to this partnership, Lankhorst has an ongoing research and development (R&D) programme that looks into the characteristics and performance of fibre rope slings. "The next stages of the programme will see the development of ropes from 300-320 mm in diameter, able to handle loads above and beyond 7,000-8,000 tonnes."

Looking ahead, van der Molen added that he would like to see the industry take a more holistic approach to the suitability of a sling. "People often look to the minimum break load (MBL)," he explained. "It is a qualifier, but there are more things that makea sling fit for purpose.

"For example, the hardware connections, the environment of the lifts, chafing, all affect the durability of the sling. This is an educational thing that deserves more attention from contractors."

He continued: "People say they want a certain MBL but they do not look at other characteristics. There is more to it – if I lose strength in my slings because of a small bend inefficiency, thenthe safety of that lift is reduced. One should

Jumbo used heavy lift slings from Lankhorst Ropes to install wind turbine transition pieces onto monopiles at the Yunlin offshore wind farm in Taiwan.

look further than the MBL."

There has been a push within the market for more sustainable solutions. In May this year, Hampidjan Offshore launched completely recyclable heavy lift slings for the offshore and onshore construction sectors.

The company said that it has been working with suppliers for the past two years to select materials that have "after-use value to society" without compromising on performance or certification requirements.

Teijin Aramid supplied its Twaron material for the slings; the high-performance fibre has been used within the offshore industry for two decades and can now be recycled and reprocessed for use within the automotive industry. The polyester jacket material is a recycled product and sourced directly from reprocessed material suppliers.

Hampidjan Offshore encourages all customers to return TERRA slings at the end of their use. Partnering with Teijin in its recycling programme allows substantial rebate payments to

#### Ranger warns on disposal failings

Ashley Thacker, general manager of Australia-based Ranger Lifting, has stressed the importance of the safe disposal of lifting gear.

Thacker explained that, generally, lifting equipment inspection is covered in two categories, as outlined in most Australian and other standards: inservice and periodic.

In-service inspection is a visual procedure to be carried out before each use of the equipment.

Periodic inspection is more comprehensive and might involve the removal of equipment to a location where it can be properly analysed and the results

documented. In both scenarios, an item of rigging hardware, wire rope or rigging gear should be withdrawn from service if a defect is found.

"Remember," Thacker said, "wire rope is a consumable item, meaning it wears and expires long before the apparatus upon which it is fitted. The rate at which that happens is entirely dependent on the application and its duty cycle... Environment, bending, stresses, shock loading and abrasion are just a few things that impact the life of wire rope slings."

Thacker explained that many wire rope defects

are detectable in a visual inspection: a reduction in outer wire diameter; localised wear (often seen as a shiny area); corrosion; broken wires; kinking and distortion; bird-caging; displacement of end fittings (hooks, latches, etc).

Thacker added: "If a competent person decides that wire rope should be removed from service, the priority is that it is not mistakenly put to use again.

"It is not good enough to inspect an item, detect a problem and just put it to the bottom of a pile. Eventually it will come to the top again and might end up beneath the hook of a crane. It is a good idea to cut a wire rope into pieces, so the discard process is more thorough."

122 🔻 July/August 2021 www.heavyliftpfi.com



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#### **EQUIPMENT**UNDER THE JIB

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be offered based on the weight of each sling returned.

Earlier this year, USA-based Samson began offering biosourced versions of some of its ropes – AmSteel-Blue, AmSteel-X, Saturn-12, EverSteel-X and Turbo-RC

"Made from climate-neutral feedstock through sustainable forestry, using Samson products with bio-sourced fibre will enable customers to reduce their carbon footprint without compromising performance," the company said. Samson has been working with DSM Dyneema to introduce bio-sourced, ultra-high molecular weight polyethylene fibre.

Another ongoing trend, according to Airpes' Dunville, is "a hard push" for devices that improve operator safety.

"Powered rotating blocks keep operator hands far away from hot, sharp, or unwieldy loads. Smart crane systems help engineers understand how the crane is used and help correct



operator behaviour, thus engineering bad behaviour out of the system."

However, Dunville went on to say that it is a challenge to 'right-

size' safety equipment, particularly for jib cranes. "If the biggest jib crane under the bell curve is USD25,000, it is hard to get someone to spend USD20,000 on safety equipment no matter the justification.

"It is a good start to educate people that they are not buying a USD20,000 doo-dad for kicks, they are buying a USD20,000 device that prevents a USD200,000 injury."

To this end, Airpes has made some devices simpler. "A jib crane does not necessarily need a smart crane system, it needs an overload switch," Dunville added. Airpes also introduced a mechanical load-limiting device – the ALM/M-100 – designed to control the overload in elevation devices such as cranes, overhead travelling cranes and hoists.

#### **Branding change**

Elsewhere, DICA has changed the branding of its Linton Rigging Gear line of products – which it acquired during 2020 – to LiftGuard Magnetic Sling Protectors, which prevents damage to slings caused by contact with abrasive edges, corners or protrusions from the load.

They also keep the sling away from other significant contact points during lifting operations.

"Cut and damaged slings are the cause of many riggingrelated accidents. Using LiftGuard eliminates the need to use makeshift load or sling protection, or take unnecessary risks," explained Kris Koberg, ceo of DICA.

"We made the name change to highlight the phenomenal dual sling and load protection benefit LiftGuard provides. All slings, especially synthetic web and round slings, can be damaged during lifting, and loads are susceptible to damage from chain and wire rope slings if they are not properly protected.

"Edge protection with sling use is critical in preventing sling failure and is an OSHA requirement and ASME standard," said Koberg.



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## Augmented reality rigging training app launched

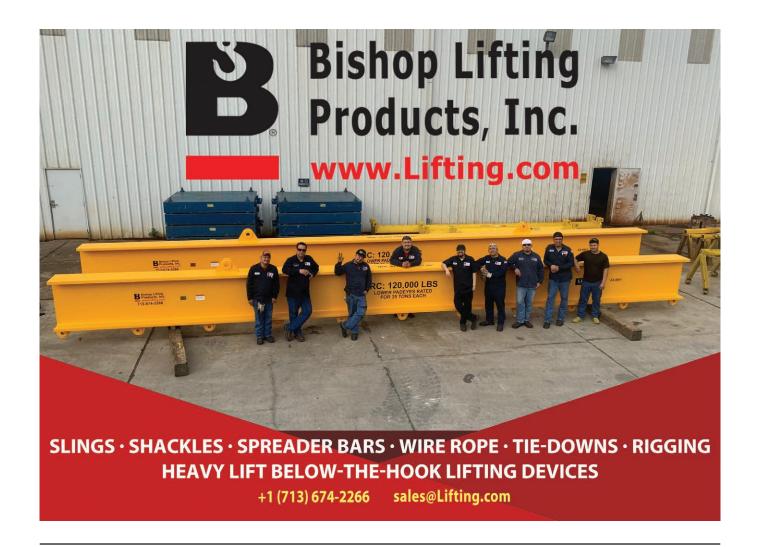
Bishop Lifting Products (BLP) and SENAR last year released an augmented reality (AR) sling and rigging hardware inspection and lifting training app for Apple and Android mobile devices.

The AR simulator offers interactive safety inspection training on both individual pieces of rigging equipment and on proper use and attachment of rigging to various load types.

In one of the four scenarios, trainees walk around a life-size digital rack loaded with more than 2,000 lbs (0.9 tonnes) of rigging equipment where they must identify the 40 flaws that could cause an accident.

Dan Rose, training manager at BLP, said: "Without AR it would be impossible to replicate those scenarios. They are too dangerous or too costly to reproduce and too heavy to carry when I travel. Now, everything is available on an iPad.

"We are excited about the training tool and cannot wait to use it in our training classes."





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#### **NEWS** in **BRIEF**

#### **Solent names Thomas**

Solent Stevedores has named Clive Thomas as commercial director, effective August 16, 2021. Thomas joins Solent Stevedores from Associated British Ports' (ABP) Port of Southampton. He has more than 25 years of experience in the UK ports industry, which includes serving in various senior roles at ports in South Wales and on the Humber in northern England.

#### **Reeves joins ABP**

Associated British Ports (ABP) chose **Paul Reeves** as its head of commercial for the Southampton region of the UK. Reeves is currently vice president of sales for the UK and Ireland at Wallenius Wilhelmsen.

#### **Terex targets N America**

Terex Cranes has selected **Jonathan Caldwell** as sales representative for tower cranes and **Michael Goll** as business development manager for rough-terrain cranes for North America. The appointments, which follow the naming of **Andreas Ernst** as general manager of cranes for the Americas, are part of the company's growth strategy for North America.

#### Chao elected at BIMCO

Sabrina Chao has been elected as president of BIMCO. She succeeds Şadan Kaptanoğlu who has completed her two-year term.

#### **Barrier strengthens LEEA**

Duncan Barrier has joined the Lifting Equipment Engineers Association's (LEEA) technical team. He has a strong mechanical engineering background with 15 years of experience in the lifting equipment and personal protective equipment (PPE) industries.

#### SC&RA elects Johnston

The Specialized Carriers & Rigging Association (SC&RA) has elected **Kevin Johnston** from J&R Engineering as president for the 2021-2022 term.

#### Rasquinha joins Schenker

DB Schenker has appointed Aditi
Rasquinha, formerly of Kuehne +
Nagel, as head of ocean freight for the
Asia-Pacific region.

## Strømmen heads up K2 Project Forwarding

eif Arne Strømmen has been appointed ceo of the recently launched K2 Project
Forwarding – a joint venture between Peak
Group and deugro group that is targeting the
Norwegian market.

Strømmen has extensive knowledge of the freight forwarding business having held several international positions within innovation, projects, oil and gas and marine logistics. Most recently, he served as vice president – innovation at G2 Ocean.

"Leif Arne Strømmen has achieved significant results in his previous positions and will contribute strongly to the development of K2 Project Forwarding," said **Jan-Petter Slethaug**, ceo at Peak Group. "The establishment of K2 Project Forwarding is based on our strategy to develop



freight forwarding further in Peak Group, and we have a strong belief that we will provide the market with the highest-quality solutions, both technical and conceptual."

#### UniportBilbao president re-elected

At its recent annual general meeting, UniportBilbao reelected **Jimmy Jaber Bringas** as president. He will serve as president for a further two years. This will be his third consecutive presidency.

Bringas has more than 40 years of experience in the logistics and industrial sector. He has previously held roles at

Schenker Bilbao, is a founding partner of Sparber Group, and is ceo and president of forwarding group Sparber Lineas Maritimas.

UniportBilbao's purpose is to promote the port of Bilbao and to act as a voice for the local logistics community. The association comprises members from the private



sector as well as local authorities.

### Morley elected as BIFA chair

Rachel Morley has succeeded John Stubbings as the elected national chair of the British International Freight Association (BIFA).

Morley, regional manager Western Europe at OIA Global, has been vice chair for the past two years.

She was appointed a director of BIFA in 2017 and chairs the trade association's Midlands region. She will serve a two-year term as national chair.

**Charles Hogg,** commercial director of Unsworth, will serve alongside Morley as vice chair. Hogg is currently chair of BIFA's

maritime, road and rail policy group.

Stubbings becomes immediate past chair for a two-year term, while **Sir Peter Bottomley** remains as BIFA president.

#### Kilper joins Toepfer team

Shipbroker Toepfer Transport has expanded its research department with the appointment of **Sabine Kilper.** 

Kilper has a wealth of experience in the multipurpose, heavy lift and dry cargo shipping sectors. She will work closely with **Niclas Prehm** on Toepfer's research and analysis, including the company's multipurpose and shortsea shipping reports and indices.

### Crane WW picks O'Connor

Crane Worldwide has appointed **John O'Connor** as executive vice president, strategic development. Crane Worldwide said that in this newly created role, O'Connor will drive the company's strategic development and further enhance the integrated supply chain solutions offered to its growing portfolio of international clients.

## **CNE recruits Dumas** to target US markets

ichael Dumas, former chief financial officer for Intermarine, has joined hybrid power company Carbon Neutral Energy (CNE) as it looks to expand into the American market

CNE develops a range of mobile battery energy storage systems, which can store and deliver significant green power capacity to address inadequacy in power infrastructure. CNE said that it is fast-tracking its overseas expansion due to the huge demand for energy storage systems to add capacity and stability to the electrical grid and prevent emergencies like the loss of power in Texas earlier this year.

With a depth of international shipping and maritime expertise, Dumas joins CNE (USA) from Maritime Holdings, where he served as president and ceo. His career has spanned roles in corporate finance and business development.

Also joining CNE (USA) is **Stuart Nelson**, who



becomes ceo. He previously served as president of Cameron International's flow control division and has extensive experience in leading manufacturing, sales and service of multiple product lines for the energy industry.

#### **Beardmore** Davis takes on joins Allelys

**UK-based transport engineering** specialist Allelys has named Richard Beardmore as senior commercial manager.

The company said Beardmore's appointment would enhance the expansion of its project cargo business. He joins from Mammoet having formerly held positions at ALE and deugro group.

#### **UHL** appoints **Dennis Grube**

German shipping specialist United Heavy Lift (UHL) has appointed **Dennis Grube** to its Hamburg operations team. Grube will focus on bunker procurement for the carrier. He joined the shipping industry 20 years ago and has held various positions across the sector. For the past four years he specialised in bunker fuel trading and sales.

#### Ambercor role

**Ambercor Shipping has** appointed **Tami Davis** as project manager. She will head up the company's recently opened Houston, Texas, office.

Davis has over 20 years of experience in the project and general cargo sector across North America.



#### **Echeverria to be Gulftainer CFO**

UAE-headquartered Gulftainer has appointed Javier Echeverria as its chief financial officer.

Echeverria previously served as regional finance manager for Europe/Mediterranean and Americas for the Singaporean company PSA; he joined PSA in 2014 as regional head of finance for the Latin America region.

#### THLG re-elects Fox's Caldana

Murilo Caldana, project director at Fox Brasil, has been re-elected president of The Heavy Lift Group (THLG) for a second term. The project freight forwarding network selected Caldana to serve in the role for another two years.

#### **NEWS** in **BRIEF**

#### **Lustrin in at Reed Smith**

Global law firm Reed Smith has appointed Robert Lustrin to its transportation industry group based in New York.

#### **Duffy steps up in UAE**

Energy and marine consultancy group AqualisBraemar LOC has appointed David Duffy as its country manager for the UAE. Stephen Craig has also joined the company as operations manager for Dubai.

#### **Hoss elected at Freeport**

Port Freeport in Texas, USA, has appointed John Hoss as chairman of the port commission and Rudy Santos as vice chairman. Hoss has served on the port commission since 2011 and was most recently assistant secretary.

#### **North Star names Duncan**

Aberdeen-headquartered North Star Renewables has appointed Andrew **Duncan** to the permanent role of renewables director.

#### **Aero Africa appointments**

Aero Africa has appointed Joey Xu to the newly created role of director airfreight Asia. Meanwhile, Aero Africa Southern Africa has selected Gary **Tobias** as regional operations manager. Tobias will be responsible for the regional airfreight import and cross-border operations of Aero Africa.

#### **HFW strengthens team**

Global law firm HFW has appointed Mark Myles as master mariner at its Singapore office. Myles has more than 20 years of experience in the shipping industry as a mariner and lawyer and joins HFW from Reed Smith.

#### Polychronakos steps up

Röhlig Logistics promoted Andreas **Polychronakos** to the role of global sales director, effective May 28, 2021.

#### **Merritts bolsters team**

**UK-based heavy machinery moving** specialist Merritts Machinery Logistics has appointed Andy Booth as operations manager and Paula Law as quality, health, safety and environment (QHSE) coordinator.

www.heavyliftpfi.com July/August 2021 **127** 



HLPFI gossip columnist Evie Aufheben delivers another collection of lighter news, anecdotes and amusing facts from the world of project cargo logistics.

#### The alternative **Euro winners**

It has been a whirlwind 18 months, with the deepest lows followed by some promising highs. A particular highlight for HLPFI has been the Euro 2020 football championship.

If the winner of the tournament had been determined by shipping factors rather than sporting prowess, we would have witnessed some unfamiliar winners. For instance, BIMCO said that if having the largest ship recycling capacity decided who lifted the trophy, then Turkey would have taken home its maiden win.

If handling the most seaborne freight by gross weight decided the championship, the Netherlands would have enjoyed a comfortable victory: largest orderbook would have seen Switzerland come out on top; and the largest fleet by gross tonnage would have resulted in Germany holding the trophy once more, albeit only because Greece failed to qualify.

#### **ABP** protects local wildlife

Associated British Ports (ABP) will reconstruct the port of Lowestoft's Harbour Kittiwake Wall, maintaining the important breeding site for the local bird population.

The bespoke structure was originally designed to replicate the cliff-like conditions that the birds favour for nesting. The population, however, has been somewhat sparse of late. ABP will be clearing old nests from the wall and installing safe wire mesh protection above the wall ledges, in a bid to entice the birds back.

James Mallinder, East Suffolk Council's cabinet member for



the environment, welcomed the work. "We all have a responsibility to support and protect our wildlife and by introducing positive enhancements, no matter how small they may be, we can really make a difference over time."

#### **Emergency help** for seafarers

Leading seafarer welfare charities and shipping industry players have launched an emergency relief fund to support seafarers and their families devastated by Covid-19 in India and other countries.

The escalation of Covid-19 cases in India has prompted some major ports to prohibit ship crew changes for seafarers who have recently travelled to India, Bangladesh, Nepal, Pakistan and Sri Lanka.

The Seafarers International Relief Fund (SIRF) has in response set a target of raising USD1 million. Esben Poulsson, chair of the International Chamber of Shipping, said: "I am calling on shipowners and all those engaged in the maritime sector to support this initiative and consider increasing your contribution to seafarer charities at this time"

Donations can made via the SIRF Donations page.



#### **Duluth's DeLuca** wins award

HLPFI extends its congratulations to Deb DeLuca, **Duluth Seaway Port Authority** executive director, who was presented with the Distinguished Service Award from the University of Minnesota's Center for Transportation Studies.

Since becoming the port authority's executive director in 2018. DeLuca has marshalled resources to initiate more than USD26 million in port-related capital projects, greatly increasing freight transport capacity and efficiency in the port of Duluth-Superior. She also helped facilitate a college internship programme at the port authority in 2020.

#### **Blue Water aids** flood relief

Blue Water Shipping has donated to support flood relief efforts in Guyana, which is suffering a particularly harsh rainy season.

Blue Water collaborated with the Civil Defence Commission (CDC) of Guyana to hand over the donation to support affected areas -



particularly the deep south Rupununi and several other villages.



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