BULK TERMINALS *international*

AUTUMN 2020

THE OFFICIAL MAGAZINE OF THE ASSOCIATION OF BULK TERMINAL OPERATORS

SAFE AND SOUND

Why keeping vigilant is key to cargo safety

MOVING TARGETS

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STEADY COURSE

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NEW WAYS OF WORKING

BY SANDRA SPEARES

As the fallout from the pandemic continues to be felt across the industry there have, of course, been disastrous consequences – but also opportunities to do things differently and drive forward development in areas such as digitalisation

Not only have frontline workers – whether on land or at sea – been subjected to massive pressure, including the inability to sign off ships and return home, but industry players have realised the circumstances surrounding the pandemic are resulting in new and perhaps simpler ways of doing business.

As travel to business appointments has proved impossible because of restrictions, businesses have looked to digitalisation to resolve logistical challenges. Contacts via the web have also meant companies can cut to the chase in their business communications, and communicate more frequently – and, perhaps, to greater effect.

The drive towards using electronic forms of communication has long been one that the maritime industries have failed or been slow to address. Now, the pandemic has forced companies to consider working practices they had been slow to appreciate in the past, simply because physical contacts have been restricted, for example as far as electronic documentation is concerned.

In the same way, the fact that inspections of vessels in ports have also proved logistically difficult – and sometimes impossible – has led to a greater use of remote methods of inspecting ships for safety purposes and regulatory compliance.

In ports, there has been a drive towards increasing the role played by remote working methods and remotely operated equipment. Meanwhile, terminals have been expanding their covered storage facilities to ensure there has been no break in the supply chain at a time when deliveries of vital supplies might be delayed by a breakdown in just-in-time services.

The heroes of the hour have been the seafarers who have kept that supply chain up and running, often at the cost of their own personal wellbeing and mental health. Pressing governments for better treatment for seafarers remains critical.

Although responsible operators are doing their best to mitigate circumstances, there needs to be concerted action at the highest level.

There have been a number of initiatives to improve the welfare of seafarers, partly by improving communications and a massive response from seafarers' charities which often have to pick up the pieces in critical situations.

If supply and demand situations have been improving, there will clearly be considerable knock-on effects for the economic health of many players in the industry. Many concerns may not have the economic resources to survive in business, although ports tend to be fairly upbeat about the way business has been developing since the early days of the outbreak.

The leanest and most efficient operations are the ones that will do the best in the current climate. The crisis is one for which most were unprepared, but those who had already begun to adopt more efficient working practices are best placed to cope.

If communications have been taking place via the web and through webinars and other virtual event,s everyone is looking forward to the time when face-to-face business communications can resume on a larger scale.

This year has seen the cancellation of big maritime events like Posidonia and, of course, ABTO's own conference which hopefully will now take place in Riga next October.

We look forward to seeing many of you then and in the meantime take advantage of the many web-based events being organised to keep industry players up to date.

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PUBLISHED BY abto ASSOCIATION OF BULK TERMINAL OPERATORS

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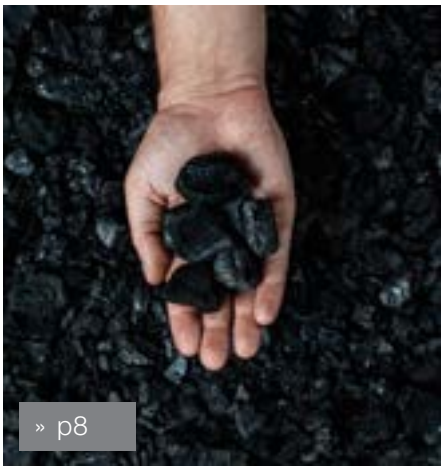
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TALKING TRENDS

SIMON GUTTERIDGE, CHIEF EXECUTIVE ABTO

The current state of the industry came under discussion at our recent, well-received Bulk Terminals 2020 webinar

The strong recovery in Chinese major dry bulk imports has been good news for export terminals supplying that market. This is particularly the case with Chinese iron ore imports where the growth is due only in part to higher steel production levels and infrastructure investment, with the rest presumably being stockpiled.

As iron ore production recovers from Vale's Brumadinho dam collapse, China is once more importing from Brazil. Australian imports are down, presumably for political reasons. When the Brumadinho dam collapsed, China turned to second tier iron ore producers to replace the shortfall, such as South Africa, Canada, Sweden or Russia. China would prefer to import from Brazil given the cheaper shipping rates for capesizes able to load from terminals located there, rather than from some of the other countries that cannot. The interesting speculation is whether Brazil will be able to supply China's increased demand – if not terminals from these and other smaller exporters will continue to enjoy the increased work.

Steel production is falling in the rest of the world. The predictable drop in European steel production continues driven by the collapse of many manufacturing sectors, in particular Germany's car production.

In the US, the Energy Information Administration (EIA) expects exports of both metallurgical and thermal coal will drop by 30%, driven by lower electricity demand caused by the pandemic.

While the trend is for coal's share of Chinese primary energy electricity generation to be in decline, its coal imports are still up, while are not seeing the same rise. BIMCO's chief shipping analyst Peter Sand reported in early October that this year's coal import volumes have seen the lowest growth rate in the past three years.

The vast majority of coal imported by China comes from Indonesia and Australia. This year, however, as tensions between Australia and China grow, the future may see a decline in Australian coal and more sourced from elsewhere. Other than from Indonesia, this will inevitably mean higher shipping costs.

According to BIMCO, during the first eight months of the year, 42% of China's coal came from Australia, 45% from Indonesia and a mere 13% from the rest of the world.

There is a bright spot in some of the minor trades because of the rise in agricultural exports, such as Brazilian soya bean exports.

These and other market trends were fully discussed on day one of our popular and well-received ABTO *Bulk Terminals 2020* webinar: "The Impact of covid-19 on Bulk Markets and Terminal Operations". As we have had to postpone our next full conference in Riga this year to October 2021, we decided to bring everybody together with two 90-minute webinars on 28 and 29 October.

The two presentations on day one focused on bulk markets. I was delighted that Peter Sand agreed to be our moderator for day one. Rahul

Sharan, lead research analyst dry bulk, Drewry Shipping Consultants made a presentation on current conditions. Basil Karatzas, CEO, Karatzas Marine Advisors & Co, presented on the future outlook. Basil is a regular contributor to ABTO's *Bulk Terminals International* magazine and also spoke at our Amsterdam conference last year. The presentations were followed by a panel when the moderator, presenters and panellists discussed and took questions from registrants.

Captain Richard Brough OBE, head of ICHCA International and director, Brough Marine Limited, moderated day two. The subject was "The Impact of covid-19 on operations". Richard is a regular speaker and session chairman at our annual conference. He was joined by Frank Robertson, vice president operations, Logistec – one of our ABTO members – who presented on the ongoing impact on operational practice and efficiency. Captain Ben van Scherpenzeel, chairman, International Task Force Port Call Optimization, made a presentation on coping now and accelerating the pace of change. The presentations were again followed by a panel.

Panellists over the two days included Professor Mike Bradley, director, The Wolfson Centre for Bulk Solids Handling Technology, chairman, Solids Handling & Processing Association and ABTO Members' Advisory Panel, and Anthony van der Hoest, director commerce, Maritime & Transport Business Solutions (MTBS). Garry O'Malley, site operations director, Teesworks and chairman, ABTO Technical Committee, was unable to join the panel for technical reasons.

Congratulations are in order to Garry O'Malley. He joined Redcar Bulk Terminal in 2012 prior to the re-opening of the steel works to oversee the resumption of iron ore imports. After only three years of production, the steel works entered liquidation and closed again in October 2015, resulting in terminal throughput falling by almost 95%.

He then successfully restructured the business and guided the bulk handling terminal through its transition from a bulk import facility for raw materials used in steel making to a more diverse multi-modal terminal operation handling a wide variety of bulk materials for a number of clients. This was the subject of a fascinating and positive presentation at Bulk Terminals Amsterdam last year.

Garry left Redcar recently and has been appointed site operations director at Teesworks – the largest industrial development in the UK. The plan is to develop up to 4,500 acres of port land on the south bank of the River Tees, which will include a 1km quay. Garry is also vice chairman of the Tees and Hartlepool Port Users Association.

As a result of the ongoing covid-19 pandemic, ports and terminals across the world are facing substantial operational, technical and financial challenges combating the virus. Many of ABTO's members have faced these challenges head on. The webinar provided them with an opportunity to share their experiences as to how they have been affected and the measures they have put in place to enable them to continue to operate, despite the restrictions – and, more importantly, how they have kept their employees and ship's crews safe.

Come March next year, it will be interesting to see to what extent covid-19 continues to affect bulk terminal operations. ABTO and our partners The Wolfson Centre for Bulk Solids Handling will run the Port and Terminal Operations for Bulk Cargoes 2020 short course online again from 8-12 March 2021.

If you are interested in attending this, contact either myself (+33 (0)321 47 72 19; *events@bulkterminals.org*) or Caroline Chapman (+44 (0)20 8331 8646; *wolfson-enquiries@gre.ac.uk*). The other short courses the Wolfson Centre run will also be offered in the same way for the foreseeable future. Those courses concerned with pneumatic conveying will be of interest to many in the bulk terminals community. ABTO Members are entitled to a discount on all courses offered by or in collaboration with The Wolfson Centre

I hope all of our readers who joined us for the Bulk Terminals webinar found it useful. For those of you who could not join us on the day, we have posted details on how you can watch the webinar on the Events page of the ABTO website (*bulkterminals.org/events*), including links to YouTube videos from our two sponsors, BRUKS Siwertell and igus.

Next year, I look forward to welcoming you to the Port and Terminal Operations for Bulk Cargoes 2020 short course in March, as well as Bulk Terminals 2021 in Riga in October.

In the meantime, keep safe

Simon Gutteridge
Chief Executive, ABTO

WORLD NEWS ROUND-UP

Chinese coal imports continue to impact bulk commodities, while cargo thefts are on the up as covid-19 restrictions continue

CHINESE COAL DECLINE

How bulk commodities have been affected by the covid-19 pandemic has been key, not least because of stalling Chinese coal imports, according to BIMCO.

Key Chinese imports such as iron ore and crude oil have seen strong growth this year despite the pandemic, while imports of coal have been negatively affected compared in May to August, compared to the same period last year.

This year's coal import volumes have seen the lowest growth rate in the past three years. In the first eight months of this year, 220.7m tonnes of coal were imported by China, just 473,000 tonnes more than in 2019, recording a 0.2% growth, according to BIMCO.

"The drop in coal imports has resulted in less business for the dry bulk fleet. Between May and August this year, there were 26.2m tonnes less imported compared to the same period last year. The drop in volumes means that ship owners lost an equivalent of 351 panamax loads," says Peter Sand, BIMCO's chief shipping analyst.

"So far, strong Chinese iron ore imports have managed to compensate for the decline in coal volumes, supporting dry bulk freight rates."

Most coal imported by China arrives by sea, mainly from Indonesia and Australia. So far this year, China has imported 96.2m tonnes from Indonesia, 45% of the total. Despite the Indonesian imports being 7m tonnes lower than in the first eight months of 2019, they are up 2.5% from the same period in 2018.

Australian coal exports to China have dropped by 8m tonnes from 2019 levels, sitting at 90.2m tonnes in the first eight months of this year. However, compared with 2018 volumes, the accumulated volumes in the first eight months of 2020 are 3% higher.

"Despite short sailing distances for the majority of Chinese coal imports, they still represent an important driver for the dry bulk market, and the lower volumes in recent months are a drag on the market," Sand say.

"In recent years, shipping has become particularly vulnerable to geopolitics and the tensions between Australia and China are now in the spotlight. So far, coal imports have yet to see any major impact, but if the relationship between the two continues to deteriorate, ship owners may see a boost in tonne miles if China replaces Australian coal with coal sourced from more distant countries".

Although strong growth rates in Chinese imports of iron ore and crude oil seem to depict a swift recovery in the Chinese economy, coal imports, together with Chinese coal output, portray a different story, Sand says.

Chinese coal output has seen a slight decrease of – 0.1% in the first eight months of 2020, totalling 2.45bn tonnes. Combined with the low imported volumes, the state of recovery for the Chinese economy looks unclear.

FAST FLIGHTS FOR SEAFARERS

Passenger and repatriation flights are essential to allow stranded seafarers to go home, and for their relief crews to be able to join ships. New guidance issued by the International Civil Aviation Organization (ICAO) to facilitate those flights marks a further step to alleviate the ongoing crew change crisis.

The guidance outlines specific recommendations for seafarer changeover flights, including the need for advanced bilateral communication, co-ordination and planning between shipowners, aviation stakeholders and the relevant authorities. It also highlights the importance of seafarers and requests states to grant rapid authorisation for the entry, departure and transit of aircraft, including seafarer changeover flights.

IMO Secretary-General Kitack Lim expressed his confidence that this new contribution by the United Nations will have a positive impact on the crew change crisis. It is estimated that 400,000 seafarers are still trapped at sea, due to restrictions imposed by governments in response to the covid-19 pandemic.

The guidance is shared by the IMO in Circular Letter 4204/Add.32. It will be reviewed and updated as necessary by ICAO as the global situation evolves.

CUTTING CONTAINER LOSSES

"Preventing the Loss of Containers at Sea", a new loss prevention report from The Swedish Club, provides an overview of statistics, an insight into specific cases, and with the help of experts, delivers hands-on advice for preventing such losses.

Even a small number of containers lost overboard can pose a serious danger to shipping and the environment, says Lars Malm, director of strategic business development and client relations at The Swedish Club.

"One catalyst for such losses is known to be mis-declared cargo. Sadly, the nature of these losses makes it difficult to translate incidents into data and, more importantly, identify the party that cause such damage to the industry.

"A second catalyst we have seen is heavy weather. The excessive forces that are applied to the structure of a vessel in extreme conditions can lay bare errors that have been made when loading the cargo on board," he adds.

"The immediate cause may seem to be poor navigation, but in fact often the root cause lies in port."

The Club's statistics show heavy weather to be the major immediate cause of container losses, responsible for half the claims and more than 80% of the costs – despite the widespread availability of sophisticated weather routeing systems.

SHELL SETS COURSE

In a new report, "Decarbonising Shipping: Setting Shell's Course", Shell highlights the important role that hydrogen and fuel cells could play in achieving a decarbonised shipping sector. Calling for the International Maritime Organization to adopt a clear trajectory to net-zero emissions by 2050, Shell outlines how it is contributing to accelerating the change needed in the industry to achieve this goal.

"The shipping industry needs to develop the new technologies, fuels and infrastructure required for a net-zero emissions sector at a pace never previously seen," says Grahaeme Henderson, global head of Shell Shipping & Maritime. "This will require the determination of all of those at the forefront of this transition."

In its new report, Shell considers the potential role of different future fuels. Continuing to build the industry's understanding of possible future technologies through research and development will be critical. Shell's analysis points to hydrogen with fuel cells as the zero-emissions technology which has the greatest potential to help the shipping sector achieve net-zero emissions by 2050.

Shell will seek to advance its research in this area, as hydrogen is projected to benefit from build-out across other industry and transport sectors, making it potentially more cost competitive than alternative zero-emissions fuels.

Download the report at *shell.com/decarbonisingshipping*

TT CLUB ON SA CARGO THEFT

TT Club and BSI have recently produced a report on South African cargo theft.

South Africa ranks among the top countries in the world, and first on the African continent, for BSI's forecasted losses due to cargo theft, underscoring the significant economic impact of this issue in the nation. Historically, there is an inverse relationship between crime and economic growth in South Africa. However, this year, due to the covid-19 pandemic and the impacts of lockdowns and a decline in the economy, an additional layer was added to that relationship.

The economic decline, along with the changes brought about by a restrictive lockdown in response to covid-19 earlier this year, left the freight sector in a vulnerable situation. South Africa is an environment traditionally characterised by cargo truck hijackings. Further, cross-border truck congestion and slower freight clearance created secondary disruptions that leave cargo even more susceptible to theft and general violence.

Mike Yarwood, TT Club's loss prevention managing director, says, "As cargo theft continues to impact business operations and disrupt supply chains in South Africa and elsewhere, it is vital that companies stay on top of potential threats and risks. Security awareness and proactive risk management actions are essential steps in creating a risk-averse supply chain.

"In highlighting causal influences, this report also points the way to how preventative measures can, and must, be introduced and enhanced to reverse the damaging trends."

David Fairnie, BSI principal consultant for supply chain security, says: "Understanding the threats in South Africa, detailed in this report, and incorporating the suggested preventative measures will help organisations work towards developing more secure and resilient supply chains."

CARGO THEFT IN TRANSIT

In-transit storage is an issue that the TT Club has raised in relation to cargo theft. According to the Club, measures brought in in certain regions because of covid-19 have changed the strategies of perpetrators of cargo theft.

Restrictions on movement led to static facilities (warehouses or transport depots) being targeted more frequently. The theft of goods from a trailer in transit evolved into the theft of the entire trailer and contents.

The ingenuity and audacity of these criminals remain astounding according to the Club. A greater degree of planning is required to enter a depot or warehouse than simply pulling a vehicle up alongside a parked truck. Intricate details of security provisions, patrols, entry and exit points and the operations on site are required.

"Those tasked with security in the supply chain operate within an ever-changing environment. Perpetrators are agile; as one gap is closed, they can quickly shift their focus to another unwitting victim or to a mutated strategy, always exploiting vulnerabilities," says the Club.

"Notwithstanding the challenge, it is important to take adequate steps to safeguard your business and the property (cargo) you take into your care, custody and control.

"The security features and strategies available are wide in scope, often expensive to design, install and significantly, to maintain. Importantly, stakeholders should ensure that the features chosen are fit for purpose and sustainable.

"Security measures should be scaled appropriately to the operations of the depot, not least the volumes of high-value cargo being handled and/or stored."

On its website, the Club lays out the aspects of security which should be considered, including perimeter fencing and having a gatehouse at the entrance to a depot to act as a deterrent, as well as security personnel.

Trailer security, especially where high-value/consequence cargoes are left loaded should be a priority. Devices such as king pin locks should be considered to increase the difficulty for a thief to couple up and drive the trailer away. High-value/consequence cargo should not be left on trailers overnight or for prolonged periods.

When this is not possible, further controls must be established. These trailers should be parked away from the perimeter fence and, where possible, reversed up to a solid structure such as a building, wall or another trailer, preventing easy access to the rear doors.

PORT PROCUREMENT

iSpec creator Remy InfoSource and Trent Port Services have signed a partnership agreement to offer port operators a turnkey procurement solution that reduces costs and frees up in-house resources for core operations.

PIETER BOSHOFF, CEO OF REMY INFOSOURCE

The aim is to offer port companies a combined service solution that enables the easy establishment and oversight of a single capital expenditure budget for all equipment procurement, third-party factory inspections and project management requirements.

"By outsourcing complex equipment projects to our new partnership, large and small port companies can reduce the in-house time, costs and resources usually allocated to manage a complex expansion project from idea to completion," says Pieter Boshoff, chief executive of Remy InfoSource.

When a port procures, for example, a ship-to-shore crane, it usually allocates a percentage of that capex to Third Party Inspections (TPI), design review meetings and periodic project manager visits to the crane factory.

In addition, overhead costs often not included in capex numbers usually include maintenance and refurbishment of systems used for project management, corporate headcounts for managing strategic projects, and office overheads to support a larger corporate team.

"All of this adds significant extra costs — often hidden — on to most port expansion or upgrade projects, taking the delivered price beyond the original budget," says Boshoff.

"Under this new business model we are offering with Trent Port Services, we can take on all turnkey equipment procurement, taking away these additional costs and distractions for a small percentage of the overall capex budget, enabling customers to outsource projects, reduce management costs and free up in-house resources for core operations."

"This solution enables port operators and their employees to focus on what they do best — managing ports, operations and their customers," says Jon Arnup, chief executive of Trent Port Services. "We take on the entire project using a single capex budget approach. This cuts down management and procurement costs with payment milestones aligned to the deliverables of each individual project.

"When a port is not buying equipment, it therefore has zero overheads and costs. In other words, you only pay when you need something. This reduces corporate costs on labour, systems maintenance, corporate server farms and other overheads.

"For larger port operators, this tangibly improves project visibility and collaboration between corporate, regions and individual terminals, while reducing costs. For smaller ports, the overhead and manpower savings are substantial."

FORCE MAJEURE FOCUS

With an increasing focus on force majeure due to the covid-19 outbreak, BIMCO has gathered a drafting team to develop a free-standing force majeure clause for use in a variety of contracts.

Successfully invoking force majeure under a charter party or other contract depends on many factors. One essential element for contracts governed by English law is that the agreement must contain a clause that defines what constitutes a force majeure event and sets out the circumstances under which the clause can be invoked to excuse liability for non-performance.

That is because force majeure is not a free-standing legal concept under English law, as opposed to some civil law countries such as France, where it is written into the Code Civil. English law operates instead with frustration, which has a reputation of being almost impossible to attain.

Although several BIMCO contracts include a force majeure clause, this clause was never published as a stand-alone clause in BIMCO's clause library. The drafting team met for the first time in September and are set to meet again to discuss who should benefit from the clause and what should qualify as a force majeure event.

FUEL MANAGEMENT

As small- to mid-size shipping companies recover from the disruptions caused by the coronavirus pandemic, Glencore's Inatech has responded to market demand with a new version of its Shiptech bunker fuel management system, called ShiptechLite.

Altogether, smaller shipping firms with fewer than 40 vessels command a significant market segment of more than 2,500 ships. Unlike larger companies, these operators often lack options to weather a crisis, such as keeping ships in storage, and typically have lower cash buffers and resilience.

"While addressing the needs of smaller shipping firms today, ShiptechLite is an affordable and permanent product offering," says Alok Sharma, senior vice president at Inatech in London. "We have collaborated closely with smaller shipping companies to match the product very closely to their differing needs at a price point that suits their business models."

ShiptechLite is a decision support tool that focuses on the bunker procurement process. It automates the entire RFQ process at a glance, managing everything from creating and sending out requests to conducting multiple stakeholder negotiations, and finally to stemming the order.

It also has a powerful negotiation tool that makes port recommendations and analyses the tactics of suppliers based on previous orders to make choosing the best deal easier. Other tools include vessel position tracking and access to marine fuel pricing data in more than 200 global bunkering ports from Ship & Bunker.

ShiptechLite supports multiple product types and all new fuels.

THE HARBOUR MASTER

COMPANY NEWS

The new Fuchs MHL375 F material handling machine showcases how efficient scrap handling operations on the Rhine can be.

You can see them from a distance. The three cranes of Freyer Hafenlogistik stand like lighthouses at the Germersheim port on the Rhine. Handling operations are booming; they are well utilised. In August 2019, Freyer therefore further developed its fleet with the Fuchs MHL375 F. The latest generation of the material handling machine from Fuchs a Terex© brand looks almost like a toy next to these large cranes. And yet it is already outperforming its permanently installed large counterparts.

"The handling performance of the Fuchs MHL375 F is far superior to that of our permanently installed cranes," says Peter Freyer, owner of Freyer Hafenlogistik. "On the one hand, the MHL375 F can be used flexibly wherever it is needed. On the other, we are able to drive it much more precisely and position the material in the ship with utmost precision.

"She is a real 'harbour master'. And that means a huge increase in efficiency for us."

BRISK HANDLING

The Rhine is a fast and inexpensive transport route. Large inland water vessels from Antwerp, Rotterdam, and Amsterdam, with a length of up to 135m, regularly dock here to unload or pick up bulk and general cargo.

Freyer GmbH has been handling cargo since the Germersheimer port was established in 1969. Peter Freyer is now the third generation to run the family business. "We handle around 500,000 tons of material each year, including 70,000 tons of scrap," he explains.

THE MHL375 F IMPRESSES WITH ITS ENORMOUS OUTPUT AND A RADIUS OF 20 M

SWIFT LOADING

"A ship must be loaded within two days," says Freyer. "That means that we usually have to move between 2,000 and 3,000 tons within this short period of time." The scrap dealers often need up to 250 truck loads to make up a shipload of scrap. "That can't be done in two days." That is why Freyer has now increased its storage capacity to 1,500 tons at its interim storage facility.

"The trucks now have a week to deliver the required quantity and our new Fuchs MHL375 F can then quickly load the ship with the material directly from the bunker or the interim storage facility," says Freyer. The loading process can be done quickly with the permanently attached 1.5m^3 grab.

THE SPECIALIST IN SCRAP

The MHL375 F is used exclusively for scrap handling. With its 64-ton operating weight, the material handling machine is ideal for such operations. It was important for the business owner that the machine had a radius of 20m in order to reach into every corner of the ships.

Freyer, who also drives his machines from time to time, is not only enthusiastic about the low fuel consumption, but also about the clear visibility. "Being able to adjust the cab so that it is raised and positioned forward, you're right in the middle of the action," he reports. The MHL375 F's cab, which can be raised and positioned forward, offers the operator a perfect view of the entire working environment.

Its drivers, who take turns during their eight-to-10-hour shifts, praise the high level of comfort in the cab, the stability of the mast, the sophisticated camera system, the simple operation and the speed of the machine.

Freyer also rates the well-thought-out construction of the machine and the accessibility via the service platform for daily checks.

For more information, visit:
terex-fuchs.com

A SHIP HAS TO BE LOADED WITH UP TO 3,000 TONS OF SCRAP IN JUST TWO DAYS.

> "On the one hand, the MHL375 F can be used flexibly wherever it is needed. On the other, we are able to drive it much more precisely and position the material in the ship with utmost precision
>
> PETER FREYER

THE OPERATOR HAS A PERFECT VIEW OF THE WORKING ENVIRONMENT

OUTPERFORMING ALL OTHERS

COMPANY NEWS

Established in 1967, Negrini specialises in engineering and manufacturing a comprehensive range of grabs and buckets for rope machines and crawler mounted cranes. These products are well known for quality as well as for the accurate and skilful engineering work. Negrini supports clients by analysing the job to be done and, if required, adjusting the standard design of grabs and buckets to enhance their performances once in operation. Experience, skillful engineering, top production methods and materials guarantee that all Negrini products will outperform any other.

Negrini has three facilities of 750sq m, equipped with five overhead cranes. Its reputation is built on the professional ability and experience of its highly qualified working personnel, with the technical office always available to solve problems and provide solutions. Such extensive experience has been built up by studying case by case, job by job with skills and passion.

HIGH QUALITY

Choosing the right attachment is a major concern for any contractor and an important factor in guaranteeing the successful outcome of any job. Over the past 43 years, Negrini has engineered and manufactured attachments of the highest quality, such as mechanical and hydraulic clamshell buckets, cable clamshell buckets with radio controlled release, mechanical and hydraulic orange peel buckets, two or four rope scoop grabs, dragline grabs, trenching mechanical clamshell buckets and buckets for controlled digging depth with special valves to collect polluted mud from the sea or river bed.

Since its establishment, Negrini has engineered, manufactured and supplied contractors and port authorities with buckets for all those jobs and every one has been a success, earning Negrini its exceptional reputation.

Negrini's engineering concept is different because its engineers believe – and decades of experience show that they're right – that heavy buckets are not necessarily stronger; in fact, they prefer to combine high tensile steel such as Hardox with accurate engineering. Negrini buckets are therefore more resilient yet lightweight, therefore enhancing performance while saving significant amounts of energy.

Negrini's attachments are at work in many different parts of the world, from Italy to the US and from the Gulf Countries to Australia, making Negrini the brand of choice for many contractors. Performance and quality are the prime features that contractors want for the attachments that they will employ for their most demanding jobs.

IN-DEPTH PLANNING

When an enquiry comes in, its elements, including drawings, are studied and planned with the relevant head of department, in order to secure the established delivery time and the best use of resources. All technical data is entered into a CAD CAM electronic system and three-dimensional solid Cad, for better management and organisation.

All materials respect the technical specifications and drawings, and the company uses only reliable suppliers – it also has its own qualified welders. On demand, certificates and attestations can be provided.

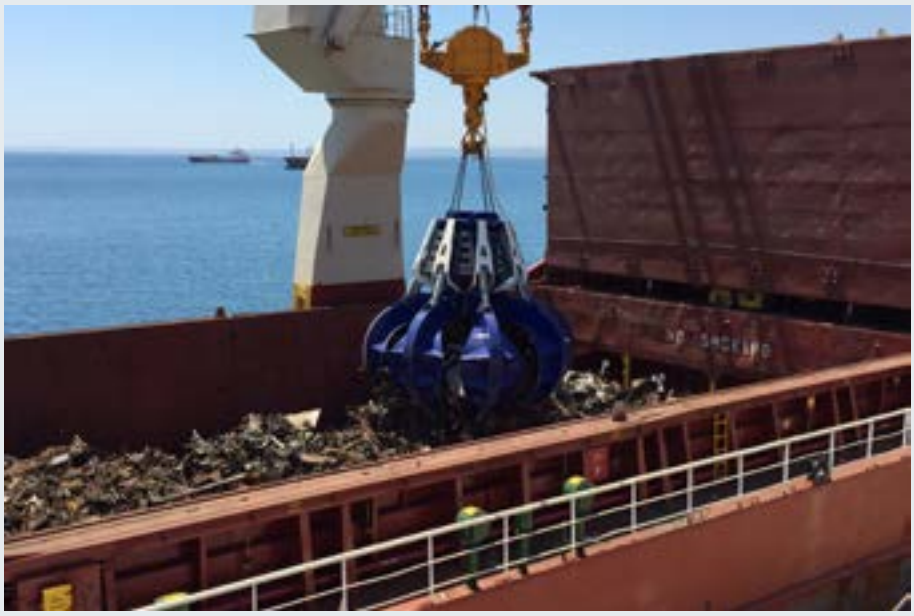
RIGOROUS TESTING

Product testing is carried out by skilled workers who are also sensitive to the customer's need. All products are subject to constant control: both on arrival into the

factory and during the production phase; before shipment, the finished product is submitted to further control and testing, with the aim of appraising the effectiveness of the applied manufacturing process and guaranteeing a quality product to the client.

It's a well known fact that any good machine, be it cable crane or hydraulic excavator, will perform at its best only if the attachment used to work is well engineered and manufactured. A high-quality attachment will not only do a good job, but will also reduce the machine stress, allow for safer working and help save energy.

negrini.org



MACHINE, REPAIR AND SERVICES

COMPANY NEWS

Established in 1977, MRS Greifer GmbH is a leading engineering company providing design, manufacture, supply and after sales services for grab buckets up to 30m³ capacity. Our commitment to continuous research and development ensures our grabs are world leaders in terms of technology, quality and performance.

With five decades of experience in the design, manufacture, research and development of grabs, plus an extensive after-sales service backed by our team of highly skilled engineers, MRS Grabs has clients from every corner of the world.

We design grabs to fully meet the needs of our clients and the parameters within which they work, producing equipment capable of unloading all kinds of bulk cargo. Our machines include the latest features and are of optimal weight, ensuring an exemplary performance for a longer period of time. When it comes to hydraulics and other outsourced parts, we only use trusted brands so the highest quality is ensured.

Each grab is manufactured under the industry's strict quality controls, according to the QAP approved by our experts. We are only too aware that delays in shipping can result in exorbitant costs so we keep a full stock of spare parts, and our committed after-sales service team is available to see to all our customers' needs in the quickest possible time.

With grabs to handle bulk, logs, scrap, underwater dredging and more, please don't hesitate to contact us to talk through your needs.

MRS GREIFER

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STRENGTH IN NUMBERS

Two giants in sustainable material flow have merged, aiming to accelerate innovation in automation, robotics, electrification and digitalisation with their combined resources

Konecranes and Cargotec have announced a merger of the two companies with a view to re-enforcing their combined position as a global leader in sustainable material flow. Based on current estimates, the combined company will have sales of about €7bn and an operating profit of approximately €565m based on last year's figures.

"The combination of Konecranes and Cargotec, with their technology brands, innovation capabilities, talented people and focus on sustainability, will create a company that is clearly greater than the sum of its parts, delivering robust synergies and creating a unique platform for shareholder value creation," Konecranes' chairman, Christoph Vitzthum, says. "Customers will benefit from the companies' combined technologies and even better service capabilities."

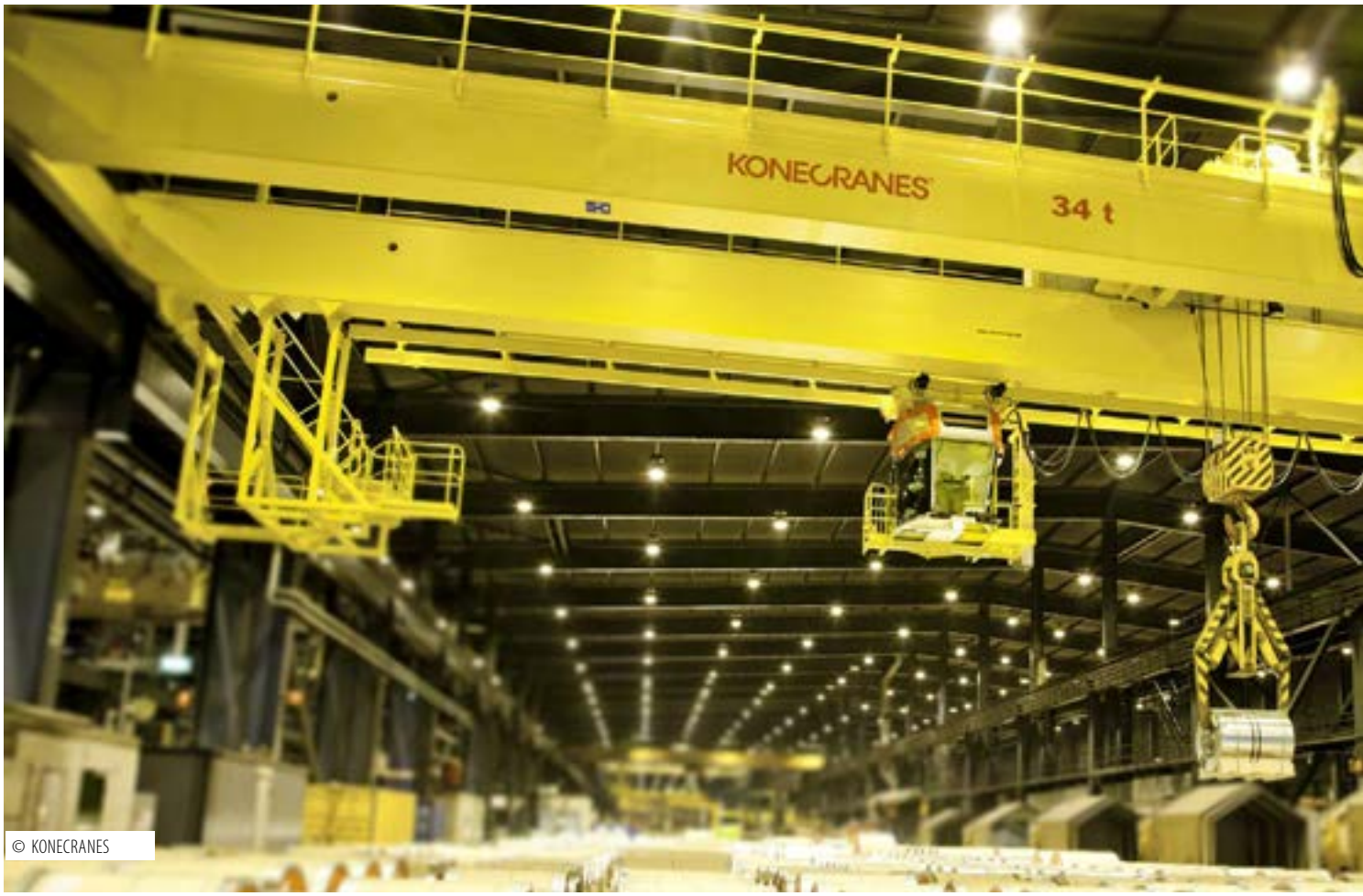
Cargotec chairman, Ilkka Herlin, says: "Sustainability has been high on Cargotec's agenda since its foundation and this merger enables us to become a global leader in sustainable material flow. Our customers are increasingly seeking green solutions and together we will have better opportunities to solve customers' challenges. I believe this is an excellent value creation opportunity both from a business perspective and also shaping global trade for the better. The future company will be well-positioned to utilise these opportunities."

Cargotec CEO, Mika Vehviläinen, says: "The future company will have enhanced opportunities to improve the efficiency in customers' operations and shape the whole industry forward to a more sustainable and intelligent one. Our combined R&D resources will enable us to accelerate innovation in automation, robotics, electrification and digitalisation. Both companies have broad service networks and together we can offer our customers superior value through our world-class service platform and intelligent technology."

SMART CHOICE

Meanwhile, Konecranes has won an order to deliver more than 40 next-generation lifting products to the Smart Technology Hub, a new integrated centre of research, product development and production in Finland, owned by Wärtsilä, with a preliminary agreement for additional lifting products.

"Wärtsilä is moving closer to turning our visions of a smart marine ecosystem and a 100% renewable energy future into reality by designing and establishing the Smart Technology Hub," says Vesa Riihimäki, director of



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delivery management at Wärtsilä. "It is a technology, innovation and validation centre with leading manufacturing and life-cycle capabilities to maximise the value proposition for our marine and energy customers. This unique setup brings together Wärtsilä's global Centres of Excellence along with world-class partners such as Konecranes to create an agile and integrated ecosystem for solution development and deployment in marine and energy industries."

The order comprehensively covers Konecranes' benchmark products including the S- and C-series lifting products, up to 400-ton engineered-to-order open winch cranes, overhead cranes with a lifting capacity between two-32 tons, workstation lifting systems, and manual hoists. Konecranes' integrated smart features such as Active Sway Control and its modern digital service platform represent the most advanced crane technology on the market today by improving process efficiency, speed, safety and quality, while assuring the total control of material flow.

Wärtsilä is a global leader in smart technologies and complete lifecycle solutions for the marine and energy markets. Konecranes is a new partner for Wärtsilä at the innovative Smart Technology Hub, which Wärtsilä is building in Vaskiluoto, Vaasa in Finland.

"Being the selected technology partner for Wärtsilä's Smart Technology Hub is definitely a milestone for us at Konecranes and having such a unique environment for joint partnerships and innovation is a milestone for the whole EMEA region," says Aku Lehtinen, vice president industrial cranes EMEA east at Konecranes.

Wärtsilä's Smart Partner Campus in Vaskiluoto aims to bring people and companies together and speed up ecosystem co-creation. The research and product development work are done together with Wärtsilä's customers and suppliers, start-ups and universities. This partnership has clear benefits: Konecranes will provide the latest in lifting equipment technology, which can be developed even further with the help of Wärtsilä and other partnering technology forerunners.

TURNING A CORNER

Demag has introduced a new standard function for its Universal Crane product range. With an optional package of features, crane installations can now be equipped with a load-turning function that achieves maximum safety — without the need for any additional engineering.

The additional costs are modest; the benefits are high. This is possible by monitoring the entire load- turning process using the Demag SafeControl safety control unit. Every so often, users of indoor cranes are faced with the complex task of not only lifting and horizontally moving heavy components such as press tools, machine beds or special containers, but turning them, too.

This function has been possible with Demag cranes for decades. However, this function required a considerable amount of additional engineering. Demag has now standardised the "load-turning" option so that it requires far less individual engineering work for universal cranes with two hoists, and has no impact on safety levels. The customer therefore benefits from the highest level of safety and functionality at an attractive price. Demag believes this package,with this level of safety, is unique in the crane market.

The package of features includes more generous specification of the steel structure and equipment with additional sensors. In addition, the Demag SafeControl system, which provides safety-orientated control and monitoring of all crane motions and functions, has been modified for the load-turning process.

Depending on the requirements for the size of the rope hoists, an inclined angle of pull of up to 20° can be achieved. With the universal cranes modified in this way, loads weighing up to 50t can be turned.

The user can choose between two safe versions. Precise measurement of the rope angle is achieved by combining the Demag SafeControl system with a two-channel, non-contact sensor system. With the basic version, an acoustic and visual warning is given as soon as the maximum deflection angle is reached.

In the safest configuration, the Demag SafeControl system monitors all motion sequences in terms of safety and automatically stops lifting and travel motions if the maximum permissible rope angle is exceeded. The load turning function is wirelessly operated by joystick transmitters as standard, allowing intuitive control while keeping an eye on the load to be turned. Alternatively, control is also possible via hand-held button transmitters or hand-held transmitters with mini-joystick operating concept.

With this option, Demag offers an interesting special function in crane operation that is both safe and easy to implement.

ELME™
Swedish Spreader Systems

SPREADING THE WORD

COMPANY NEWS

As the world's leading independent spreader manufacturer, Swedish ELME Spreader supports companies worldwide with container handling solutions to make their work easier and more profitable. Over a period of four decades, its customers have attached more than 22,000 ELME spreaders to lift trucks, reach stackers, straddle carriers and cranes.

ELME Spreader was established in December 1973 by Gösta Karlsson, a 25-year-old mechanical engineer with a dream of running a business of his own. That dream has turned into a multi-million dollar organisation employing 200 qualified people who develop, design, produce, market and service more than 1,000 spreaders annually.

What hasn't changed is that every spreader is still built at the plant in Älmhult in Sweden – from start to finish, it's completely in-house. That concept might be rather unique in northern Europe, but the benefit it brings is simple and easy to understand – it gives ELME 100% control over production and final product quality. In addition, at the age of 71, President Gösta Karlsson is still very much active in the daily operations and strategic development of this family-run company.

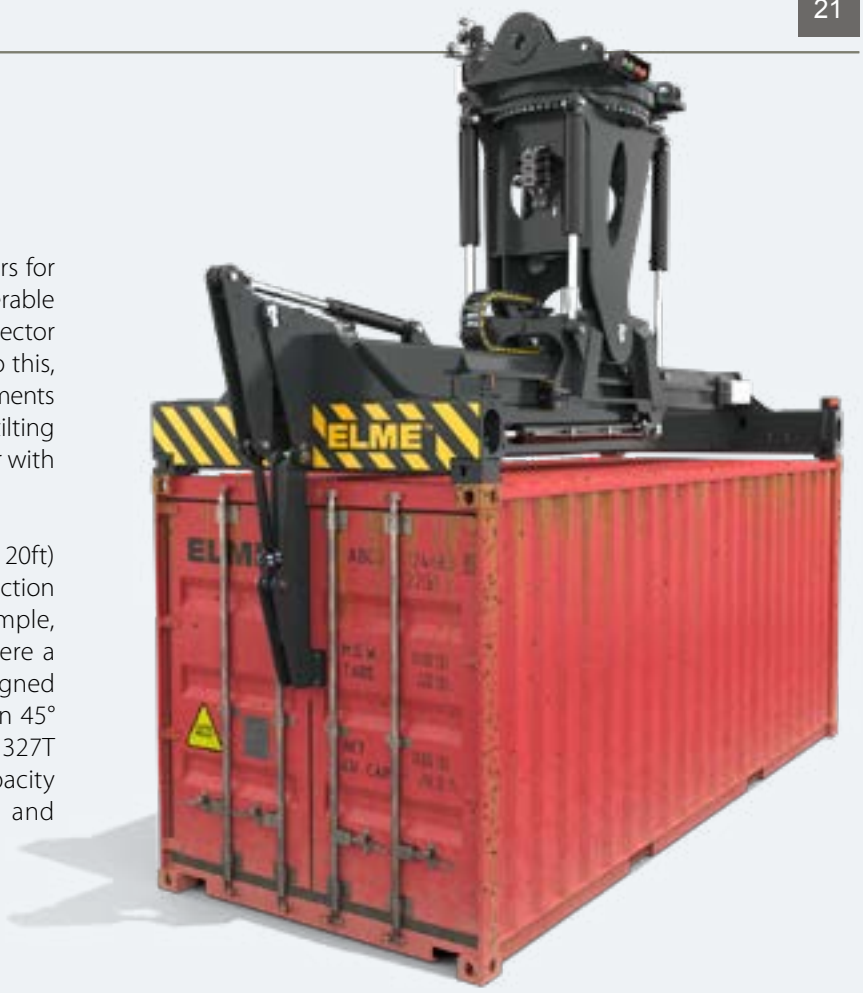
While all production remains in Sweden, two subsidiaries in Shanghai and the US enable ELME to give a high-quality service to customers on seven continents – both recognised original equipment manufacturers and end users.

AN EXTENSIVE PRODUCT LINE

The ELME spreader product line covers spreaders for truck, crane and straddle carriers, with a considerable share of the business related to the mobile truck sector for mast trucks and reach stackers. In addition to this, ELME offers a wide range of piggyback slave attachments and special equipment, such as spreaders with a tilting function, tool changer and slab handler, together with approved spare parts – ELME Genuine Parts.

The ELME top lift spreader models 327T (fixed, 20ft) and 817T (telescoping, 20-40ft) have a tilting function for handling of laden containers with, for example, grain, wood chips and other bulk material where a tilt operation is required. Both models are designed for mounting on reach stackers and available in 45° and 60° versions. Standard capacity for model 327T is up to 32 tonnes (lifting/tilting); standard capacity of model 817T is up to 45 tonnes (lifting) and 32 tonnes (tilting).

For more information, visit:
elme.com



DELIVERING THE GOODS

When considering unloaders, choosing the cheapest alternative is a false economy without considering operational parameters and performance, through-ship efficiencies and through-life costs — and value-for-money should always be the aim, says Per Karlsson, president of Siwertell.

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According to Per Karlsson, president of Siwertell: "Many customers, when designing or buying a new unloader, or in fact the whole import terminal, still consider price as the main factor in their decision-making process. Price is important, but if you only look at price, you stop looking at value, and to achieve the best long-term investment we need to look at value. There is a lot to be gained from understanding what a product can ultimately deliver to a business."

Knowledge is key, he says. "Without accurate information available about different technologies — which might be real game-changers, offering completely new possibilities and directions — operators are condemned to lose money. This is because they miss out on the possibility of developing and lifting operations to more profitable levels, or designing a completely new, optimised terminal from the outset."

Karlsson says Siwertell has developed a value calculation method that enables it to simulate the impact of different technical solutions on the long-term profitability of an operator's terminal accurately. The model is based on combining the total cost of investment in relation to the unloader, including factors such as the cost of the jetty, conveying system, and wider operational figures such as demurrage, personnel, energy consumption and material handling waste, for example, spillage.

The cost of a state-of-the-art Siwertell screw-type ship unloader, of which the largest model can offer continuous rated capacities of up to 3,000t/h, is often higher than the cost of a bucket chain, pneumatic unloader, or a grab/mobile harbour crane. "However, as soon as you compare its higher capacity and efficiency against the need to purchase two or three of the other types of machine to achieve the same work rate, this is where operational profitability really starts to take a hit.

"It is also where the value calculation model can be a powerful tool to help demonstrate how an optimum equipment arrangement can generate the best results in terms of capacity, efficiency, and profits," he says.

Calculations are also considered at such an early stage that an operator can access the commercial feasibility of options before any investment commitments are made. This can save costly project changes further down the line.

Projects tend to be divided into two main categories: the optimisation of an existing terminal, and the construction of a completely new one, he explains.

"In the case of terminal optimisations, like other projects, the value calculation method enables us to accurately simulate the impact of different technology options on the long-term profitability of an existing terminal. The modelling takes into consideration all investment and operating costs, the benefits of different equipment and how best to integrate it into existing infrastructures."

Projects within existing terminals are typically capped to keep capacity at the same level, because of limitations in downstream conveying systems, he continues. "However, a clear market trend, in new cement, fertiliser and grain projects, in particular, is to build up capacity on the jetty, and within the terminal. This is to maximise the speed at which material can be discharged from a vessel and then transferred to an onward receiving system, minimising the time the vessel stays at the jetty and any dry bulk material spends in storage. The faster the terminal moves material on from storage, or bypasses it altogether, the quicker its financial turnover."

He continues: "For customers building a complete terminal, the value calculation model is an even more critical tool because it can help the customer optimise the entire terminal environment right from the beginning. For these projects, again we consider all factors, because the size of the jetty, material transportation logistics, personnel requirements, and capacity, which all have a major impact.

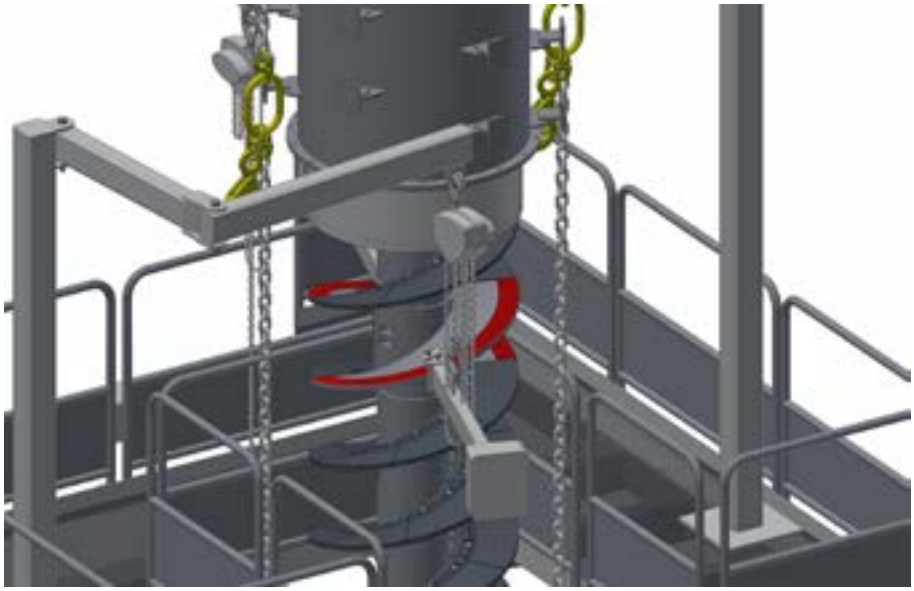
"Just taking jetty costs, for example: as higher capacities are needed, dry bulk material handling systems such as cranes and continuous unloaders must either get larger or more numerous — in both cases, adding weight or traffic to the jetty," he explains. Jetty reinforcements to accommodate heavy bulk handling equipment can easily correspond to 50% of the cost of the actual equipment. "Therefore, reducing any additional machine weight is advantageous for customers as significant savings can be made in terms of the need for quay reinforcement work — but also, a proportionately higher-throughput machine can be selected for a given strength of quay, delivering impressive returns on investment and securing capacity for any future growth."

Another project group that he mentions is operators who run traditional machinery on a day-in-day-out basis, without realising that terminals

are throwing money away. Effectively using an existing system, usign low capacity grab cranes, operated by 50 to 100 personnel per day can be converted to a high-capacity terminal operated by fewer personnel and one high capacity bit of equipment.

"There is an increasing need to upgrade operations that take one to two weeks to unload a vessel with grab or mobile harbour cranes, which have a cargo spillage rate of 1-2%, leading to huge material losses and unacceptable levels of environmental damage. There is technology available, like an enclosed high-capacity screw unloader, which can not only unload the same vessel in two to three days, saving up to $20,000 a day in vessel costs, but also saves all the material losses from spillage and keeps the jetty clean and dust-free.

"Furthermore, the shorter unloading time, the greater the possibility that the terminal has to increase its annual through-put and by that, also increase the profitability of the terminal itself. Environmentally sound operations are also critical and will become increasingly so going forward," he concludes.



SCREW REPLACEMENT

Bruks Siwertell has launched a new service product that promises to substantially simplify and lower the cost of fitting replacement screws on its ship unloaders.

"All our equipment, including service strategies, benefit from decades of continuous research, development and improvement, and the latest product is a service tower for replacing screw sections on our Siwertell ship unloaders," says Björn Ohlsson, manager, bulk terminals design and engineering.

"It offers a number of key advantages," he explains. "Principally, the service tower eliminates the need for cranes, which are traditionally used to lift the screws. This reduces costs and improves the overall safety of the operation. Also, because the tower is specifically designed for the task, the whole process is faster."

The tower's structure is self-supporting, allowing it to be moved. When required for a project, it needs to be secured at dedicated fixing points on the jetty. A replacement screw is placed and fitted into the tower's lowered screw-holding cradle, specifically matched to the dimensions of the screw. A winch raises the cradle and screw into an upright position. When in place, the new screw is locked into position and the outer diameter bearing wings are assembled. The same procedure is repeated with the next screw section. Removal and disassembly of the screws are achieved using the same equipment, but in reverse.

"Although specifically designed for screw replacements, it can also be built with additional levels to service and inspect other areas of the vertical conveyor," notes Ohlsson. "For any new or existing unloader, this is an extremely cost and time effective addition to any operator's service portfolio."

By using adaptors, the service tower can accommodate the various screw lengths and sizes of the Siwertell product range.

KICK STARTING AN EFFICIENT OPERATION

COMPANY NEWS

French agri-food group Soufflet in Rouen recently took delivery of the new Neuero Kiko (kick-in kick-out) shiploader, which has a loading capacity of up to 1,200t/h of grain with minimal dust emission. After four successful installations in the region, the Neuero Kiko DSH (dust suppression head) has impressed port operators with its efficient operation and high dust suppression, due to mass flow control.

The shiploader was assembled in Germany and transported using a heavy lift ship to France. The most significant advantage of this means of transport is the short downtime of the terminal. However, such transport is not easy and requires a lot of planning and preparation. Therefore Neuero and Soufflet already agreed on this shipment method at the beginning of the project so that lifting points and lashing points could be integrated into the machine design.

Heavy lift cranes set the shiploader into position at the site and Neuero was able to begin dry testing. The next step was hot commissioning after the site conveyor was ready.

So what is the difference that makes the Kiko DSH operate so efficiently and with the highest environmental standards available today? The answer is a combination of mass flow and pendulum movements. The mass flow allows loading of the cargo at low speeds, reducing dust emission. The shiploader does not eliminate dust completely, but reduces it significantly, therefore avoiding product segregation and slow material discharge speed. Older systems throw the product at boom height and try to stop it at arrival, especially during hatch trimming work where it is needed to fill all gaps.

The pendulum movement that we call Kiko allows the loading head to move simultaneously with the vertical telescope and enclosed system. Additionally, the slewing movement allows all areas of the hold to be reached, including the corners.

For more information, visit: neuero.de/en

READY FOR HOT COMMISSIONING

DEPARTING FROM GERMANY

GOING AGAINST THE GRAIN

BY BASIL M KARATZAS

The pandemic has had devastating effect on many markets, but grains appear to have been holding their own

It was supposed to be a year when the US economy would have sailed strongly to presidential elections in November, boosted by strong business activity, an environment of low tax rates and low interest rates, and supported by China's facing the first year of compliance with Phase I of the trade agreement and having to purchase enormous sums of US energy and agricultural products. The covid-19 pandemic upset many plans, ranging from disrupted lifestyles to new demand patterns to dislocated economic activity.

According to the Phase I trade agreement signed on 15 January this year, China was supposed to purchase agricultural products worth $36bn per annum in the first two years of the agreement.

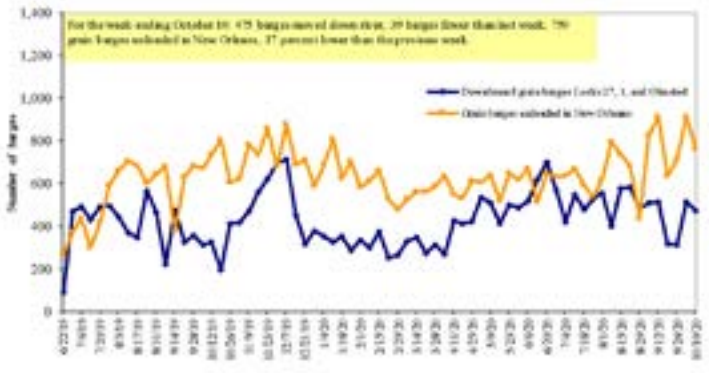
Strong agricultural imports would have been a godsend to the farmers in the Corn Belt in the US, a chronically neglected and extremely critical constituency in the upcoming US presidential elections.

In the first seven months of 2020, Chinese imports of US agricultural products stood at less than $9bn, a small fraction of the mandated imports. The shortfall can be attributed to various factors, with covid-19 first among them. Notwithstanding the true cause, the ripple effects of low exports can be felt from increased levels of bankruptcies for family farms in great plains of the Midwest to decreased utilisation rates for the 25,000 hopper barges and 3,000 push-boats that propel the grains south down the Mississippi River to New Orleans, Louisiana, for export onboard ocean-going supramax (approximately 58,000dwt) and panamax (approximately 82,000dwt) bulker vessels.

Since September, however, and the start of the new marketing year for soy beans, corn and wheat, there has been a marked improvement in US agricultural exports, especially with China as the intended destination. Graph 1 below indicates an increase in the number of barges getting pushed south on the Mississippi River and unloading in New Orleans area, higher than the first half of 2020, and higher than that of same time last year.

According to the US Department of Agriculture (USDA), China has already purchased so far 19.5m tons of US soy beans since the beginning of the new marketing year 2020/2021 (marketing year started on 1 September) versus a total 16.5m tons imported from the US for the whole 2019/2020 marketing year. Overall, Chinese soy bean imports are expected to total 99m tons in 2020/2021, a slight increase from the 98m tons imported in the 2019/2020 marketing year.

China has already imported 31m tons this year during the summer months from Brazil, which is its largest supplier of soy beans, given that Brazilian soy beans have a lower landing cost to China than US soy beans have. Soy beans primarily



GRAPH 1: BARGES WITH GRAINS SOUTHBOUND MISSISSIPPI RIVER (BLUE LINE) AND UNLOADING IN NEW ORLEANS (ORANGE LINE); SOURCE: US DEPARTMENT OF AGRICULTURE

are used for feedstock for pork farming and the swine flu had decimated more than 20% of Chinese pork farming. The 2019/2020 relatively strong imports indicate that the swine flu is under control and that in 2020/2021 the US will manage to increase its market share of Chinese soy imports.

According to Graph 2 below, 2018/2019 marketing year has been the worst in reference to US exports of soybean and corn to China, with the 2020/2021 marketing year well positioned to materially reverse the down trends. Specifically for corn, for the 2020/2021 marketing year, China already has committed to purchasing 9.6m metric tons versus 2.1m metric tons in 2019/2020.

Admittedly, the export volumes for corn are lower than the soy beans volumes, but again, the current corn exports represent the best reading in almost a decade.

The US corn exports to China have yet to be shown as shipment and activity in the US barge transport market, as per Graph 3, below, but expectations are high from the domestic shipping community, which is in need of stronger demand in an otherwise soft market.

There had been reports that in late summer 2020, covered hopper barge utilisation (used for the shipment of grains) had dipped to 60% (one of the worst readings in the past five years), but by middle October, the utilisation rate was in the 75% range, still a soft number, but with the fall grain export season ahead of us and in support of the market.

Despite the pandemic, worldwide grains production overall in 2020 has been projected to be stronger than 2019, which bodes well for the agricultural sector and also for the shipping industry, whether when seen from a localised or international point of view. The US, Canada, Brazil and Russia have, overall, reported stronger harvesting volumes in 2020.

The Great Lakes and Canadian ports have been reporting a 20% increase in grains volumes this year, at the same time when their reported activity for iron ore and coal and liquid cargoes is down by 20-30% this year due to covid-19.

There have been changing patterns of grains consumption and worries about possible disruptions to harvest due to either the pandemic or other unforeseen events (such as inclement weather) and currently wheat pricing has reached the highest in the past five years, on speculation that bad weather will impact production.

On the other hand, a soft dollar has kept the cost of grains overall competitive in the international markets which has compensated for lost demand due to the pandemic.

There have been rumours (perhaps speculation) that certain countries have been taking a more pro-active approach managing their feedstocks whether for human or animal consumption, fearing that the covid-19 pandemic poses a novel risk that could get out of control and could dangerously impact food supplies.

These rumours seem to be especially strong about China, with a huge population to procure food for, and with little allowance for social unrest that may ensue from lack of sufficient food supplies.

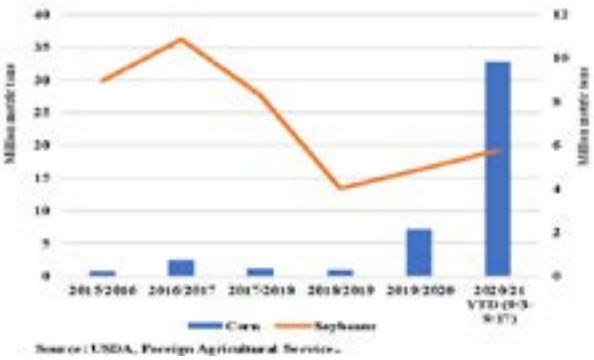
For a country known for its institutional memory and adherence to historic precedent, the Great Chinese Famine of 1959-1961 has been mentioned as the trigger for the country's increased grains imports this year and even higher commitments for grain imports in the 2020/2021 marketing year.

There have been additional smaller trends this year as well: countries of North Africa and especially Egypt have been increasing their grains imports and they are deemed strong targets for growth in the next few years. Demand for durum wheat has been exceptionally strong this year with the pandemic (durum wheat is primarily used for the production of semolina flour and past and spaghetti) in countries like Italy, but also due to higher pasta demand due to new trends of home cooking and dining in the age of covid-19.

Whether viewed strictly from a trading and trade agreement prism or viewed via a more humanitarian approach at the time of a once-in-a-century pandemic, grains in general, whether as animal feedstocks or for human consumption, are a critical part of our lives.

Although world production seems to have been un-affected by the pandemic, there have been shifting patterns in the trade of grains and the supply chains that support them. And, based on current data and newly re-assessed assumptions under covid-19, business activity (including shipping and transport) is expected to be positive in the next year.

Basil M Karatzas is Founder and CEO of Karatzas Marine Advisors & Co, a New York-based shipping finance advisory and ship brokerage firm working primarily with financial institutions active in the maritime industry. Visit karatzas.com or call +1 212 380 3700



GRAPH 2: US HISTORIC SOY BEANS AND CORN EXPORTS TO CHINA (SOURCE: USDA)

GRAPH 3: BARGE MOVEMENTS ON THE MISSISSIPPI RIVER BY TYPE OF COMMODITY (SOURCE: USDA)

A FUTURE-PROOF APPROACH

COMPANY NEWS

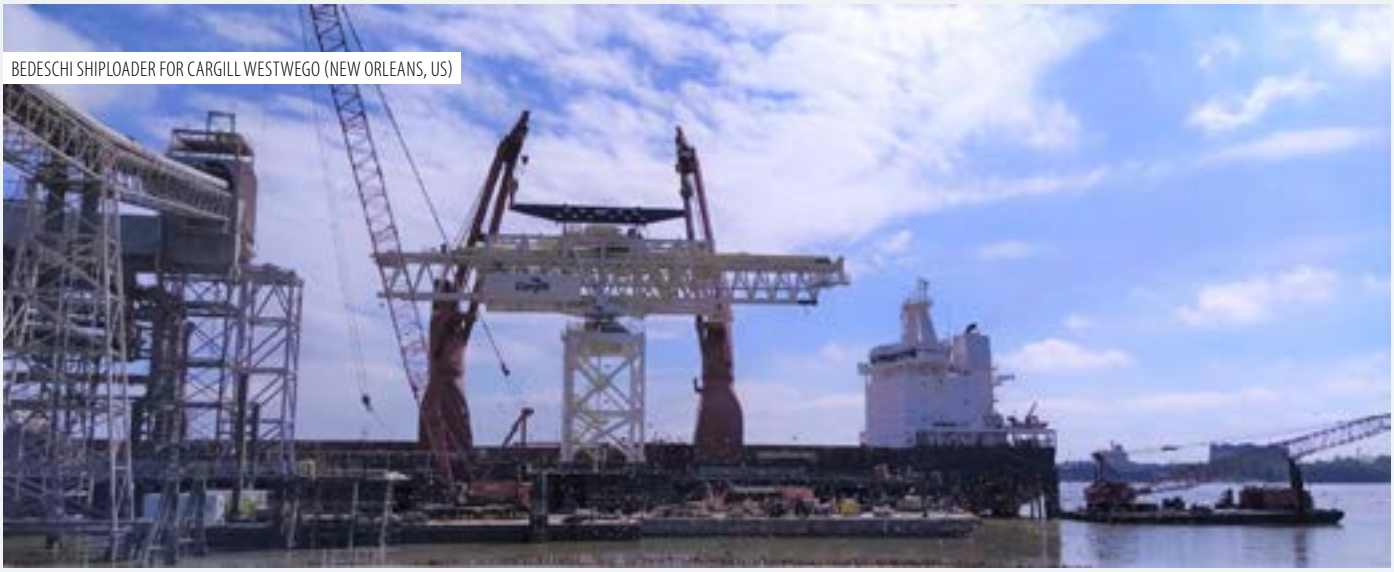
Throughout our long history, our core business at Bedeschi has evolved to become bulk handling, by far the most important segment we operate in today. We deal with any kind of bulk material, with our recent focus on grain and oilseed the last step of a long ladder. Customers benefit from our extensive experience across a wide variety of materials and industries, which enables us to provide effective tailor-made solutions.

BEDESCHI SHIPLOADER FOR KERNELL (UKRAINE)

CASE STUDIES

One of our latest shiploading projects was delivered to Trans Grain Terminal, near Odessa, Ukraine, this summer. Bedeschi delivered two shiploaders for grain with a peak capacity of 2,200t/h. Currently able to load panamax-size ships, the boom has also been configured for capesize vessels.

The two loaders features a KiKo-type loading boom with a spoon-type dust suppressor. Bedeschi also supplied the handling system on the quay, which features self-propelled trippers that receive goods from the shiploaders and belt conveyors with rubber covers. This prevents dust emission in windy conditions.



BEDESCHI SHIPLOADER FOR CARGILL WESTWEGO (NEW ORLEANS, US)

After a ship's hold is full, the loader moves on to the next operating zone, travelling at a rate of approximately 40m per minute.

One of the other major projects carried out by Bedeschi for the grain sector was for Cereal Docks at Marghera Port, Venice. The mobile shipunloader, which moves on rails, operates at a capacity of 800t/h, unloading soya beans from ships up to panamax size and oil extraction by-products at 300t/h from barges.

Delivered fully assembled, the unloading system is based on chain elevator technology, which has low power consumption, gentle material handling, compliance with the most stringent environmental regulations and is simple and inexpensive to maintain.

For Renova, Rosario in Argentina, Bedeschi provided the largest pipe conveyor for grains built so far, covering an overall length of 700m with a capacity of 1,500t/h. This conveyor features a completely enclosed belt forming a pipe: dust-tight, it requires only light supporting structures (the diameter of the conveyor to reach the peak capacity is just 500mm).

It provides unparalleled flexibility as it bends to accommodate uneven terrain and therefore eliminates the need for intermediate towers.

At Cargill West Wego in New Orleans, US, Bedeschi has provided a shuttle type fixed shiploader for grains and oilseeds, which operates at 2,200t/h on ships up to panamax size.

This project is a retrofit on an existing loading facility on the Mississippi River, where we have also replaced the entire enclosed belt conveyors line that was feeding the equipment. It was pre-assembled in Italy and shipped in three parts to New Orleans by river pontoon and assembled on site.

FACING THE FUTURE

Bedeschi is most active in North America, Europe and Ukraine, where it is enjoying an increase in orders for grain and oilseeds bulk handling equipment.

The pandemic has affected everyone and due to current travel restrictions, we are changing the way we do business.

We have introduced a smart-working model for our employees to maintain efficiency and have kept our workshop continuously operating to guarantee support to our customers throughout the pandemic.

We are looking forward to the next few months. Food is a primary need so the sector has not been affected by the pandemic. We believe that the current situation will reduce the number of players in the sector and that Bedeschi will emerge stronger.

For more information, visit: bedeschi.com

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LESSONS TO BE LEARNED

Captain Richard Brough OBE, head of the International Cargo Handling Coordination Association, and Professor Mike Bradley, director of the Wolfson Centre for Bulk Solids Handling Technology at the University of Greenwich comment on recent blasts at bulk terminal ports and the need for rigorous safety procedures to be followed

In his comment on the Beirut explosion, Captain Richard Brough OBE, head of the International Cargo Handling Coordination Association (ICHCA), stressed the need for constant vigilance. "The recent terrible incident in Beirut should be a timely reminder to all who operate ports and terminals that the cargoes you handle and store, either routinely or exceptionally – as was the case with this impounded cargo of bagged Ammonium Nitrate (AN) – should be kept under constant review from a health, safety and regulatory perspective."

Even the most innocuous of cargoes can be become a serious issue if the handling and storage methods are not suitable for the environment in which operations are being carried out. It is also no excuse if you are unfamiliar with the product as there is a plethora of guidance and regulatory material, and considerable expertise available from associations such as ABTO and its affiliate organisation ICHCA, he explained.

"It is not inconceivable that some terminal staff are ignorant of the potential dangers inherent in a cargo such as AN, but as the old adage goes: 'ignorance is no defence in law'," he said. "Incidents with AN go back a long

way (Texas 1947) and there have been many since."

In response to major incidents in Europe, the Sevsco Directive was developed. This not only ensured that the cargo and its storage should be thoroughly risk assessed, but also the impact on the surrounding hinterland – are there any major industrial installations nearby, urban centres, yacht marinas and leisure facilities and so on? Brough explained.

"In the UK, this was transposed into the COMAH Regs (Control of Major Accident Hazard). If you wish to handle and store AN, there are rigorous procedures to go through, including a thorough risk assessment. You have to apply for approval from the Health and Safety Executive and the local authority, and lodge a set of your local rules for the handling, amount of cargo to be stored and expected maximum amount of time the cargo will be in transit. Beyond that, it is classed as storage and the rules are even more stringent," he said.

"Many terminals have had their requests turned down because of adjacent risk issues. Even for in-transit AN, the intended storage facility faces precautionary measures, packaged AN (usually in big bags) must be set in 300 tonne lots with a one metre space between parcels, gaps all around the shed walls for access, extinguishers on each piece of handling equipment, drains and culverts sealed to prevent cargo getting inside, spills dealt with immediately, appropriate signage, security control (AN is an explosive, usually for commercial use, but it is also the favourite ingredient of illicit bomb-making), even matters such as avoiding contamination from oil, grease, sawdust and so on must be considered.

"Was this considered when the AN cargo was stored in Beirut," he asked? "We should not speculate, but given the length of time the cargo was stored and the resulting explosion, probably not. AN is an internationally regulated cargo, either the IMDG Code for packaged cargo and the IMSBC Code for bulk product, and we all remember the disaster on the *MV Cheshire* off Las Palmas a few years ago. However, the International Maritime Organization (IMO), which is responsible for these provisions, does not legislate ashore. There are no international regulations covering shore-side facilities (apart from the ISPS Code). Ports and terminals are not regulated that way," he said.

"A recent symposium at IMO suggested that they should be. It would, however be inherently difficult. It is therefore up to individual nation states to develop their own port regulations (and ports their own bylaws) for such matters. IMO helps by developing recommendations, and it has one on handling and storing dangerous cargoes, but it is a high-level treatise advising governments on what they should include, or consider, in any national legislation. Many nations follow this – the UK and EU (which has collective rules) are an example.

But what about other nations? What have they done? Even if they have, do they police the regulations and audit companies to ensure they are being followed? In the case of Beirut, the jury will be out for a long time, but the answers, when they come, will reveal some shortcomings, beyond a doubt. All the more tragic then, so much loss of life, so much devastation and a country already on its knees, brought further down because of lack of adherence to established principles for handling cargo. ICHCA has seen many examples of such practices around the world, so Lebanon is not unique.

"That is why, along with our partners, we are developing a 'dummies guide for DG in ports'. The idea has been around for a while; it now has a greater sense of urgency.

Meanwhile, as Professor Mike Bradley, Director of the Wolfson Centre for Bulk Solids Handling Technology at the University of Greenwich, has pointed out, the severe damage to Tilbury Grain Terminal gives another example of the dangers that storage facilties can represent, with a reminder that handling of bulk solids in ports brings substantial safety hazards that need to be controlled with care. As he explained, Tilbury Grain Terminal was built in 1969 and operated without major incident other than the odd fire, until 3 July this year, when an explosion ripped through one half of the silo block, destroying conveyors, elevators and head house. Fires were still breaking out two days later. Plans are in hand for emptying and demolition of the damaged silos.

"Tilbury is one of the UK's busiest grain terminals and the operators have had to work hard to find alternative ways to keep the nation's food flowing. The explosion in Beirut was a much bigger affair, of course – 2,750 tonnes of AN in a downtown area was, by any measures, a catastrophe waiting to happen. It seems there was a whole story as to how the material came to be there and nobody got to move it to a safer location. Political corruption has been labelled as the cause, but this is probably a rather simplistic view – the Lebanese state has been in chaos for years and I suspect concern about enforcing port safety regulations was a very long way down the list of the many pressing matters that politicians and civil servants have been struggling with.

"The destruction of the adjacent grain terminal is also a major blow to the country as nearly all Lebanon's grain supply went through it. We'll have to wait for the official investigation into the grain dust explosion at Tilbury, but don't hold your breath – the last high-profile multiple-fatality dust explosion we had in the UK was at Bosley Mill in Derbyshire five years ago and the UK government's Health and Safety Executive still hasn't issued its report. It's not only in failed states that government agencies fail to get on top of things in a timely and efficient manner."

Dust explosions, not just from grain, are much more common than AN incidents, but they don't usually make the headlines because they typically involve a handful of people rather than hundreds, said Bradley. Yet the accumulated death toll is probably higher than for AN incidents. "We have a very good, well thought-out system of regulation to avoid them (ATEX or IECEx), which is easy to use and mostly effective if used properly, yet incidents continue. Our investigations frequently reveal that incidents occur because people didn't

do things that the organisation knew should be done, yet the actions fell through the cracks," he said.

"One thing in common between Tilbury and Beirut was that both these hazards where there slumbering for years, without any outward sign of the danger lurking. There's a tendency for people to get complacent when they walk past a hazard day after day and nothing goes wrong – why should today be any different from yesterday? Neither of these hazards were unknown – over the past 100 years, there have been on average one AN explosion every three years. Its handling and storage have been regulated ever since the Texas City disaster of 1947 claimed nearly 600 lives, yet again incidents continue. What message should we take away?

"The need for constant awareness and vigilance. Just because you haven't had an accident doesn't mean there's not one waiting just around the corner. Go and look at the systems you have in place for controlling explosion hazards, both for dust and (if you handle them) explosive materials. Are your safety systems robust? Do you regularly review the hazards and the methods you use to control them, and account for the changes in the cargoes you're handling?

"Maybe the most important and often overlooked thing, in my experience, is training and awareness of people on the ground – stevedores, maintenance, contractors – are they aware of the hazards? Do they always work according to the regulations? Do they know where the hazard zones are and what they are allowed to do or not do? Do you get them to use their eyes to see things that aren't right and call them out? There's a tendency to think that safety is the job of management, but if you can engage people on the ground then you have dozens of extra eyes helping to keep you safe. But you also need a system that allows them to 'speak truth to power' and be respected for whistle-blowing, not get labelled as troublemakers.

"Dozens of people must have known about 2,750 tonnes of AN – you can't step over it without seeing it – yet nobody got the problem called out to a high enough level to have it dealt with. What's the culture at your port? Do you encourage vigilance and calling out?

"One final thought from Tilbury – where's your control centre? I often used to visit the control room at Tilbury and it always gave me an uneasy feeling – the control room nestles right in the middle of the silo block, the access stairwell being adjacent to the elevators. It gives a great view of the conveyors, wharves and machines, but it's not a place to be if there's a major incident. July's blast didn't travel as far as the control room, but that was pure luck. You have to question the wisdom of placing all your key people, who could take control in the event of a disaster, right in the heart of the zone most likely to be affected. Where are your critical personnel located? Are they going to be wiped out if you have an explosion?

"Learn from what we've seen – remember those who died and honour them by looking after your own people. Accidents are bad business, as well as tragedies."

For more information on bulk solids handling, safety and training visit The Wolfson Centre for Bulk Solids Handling Technology (bulksolids.com) and The Solids Handling and Processing Association (SHAPA) (shapa.co.uk). The Wolfson Centre offers ABTO members a discount on any short course.

FULLY COVERED

COMPANY NEWS

With support from BEUMER Group, start-up company Sparrow Networks enables optimal spare parts supply.

"We were missing a sensor. One simple part that would have cost €500. In the end, the failure cost us several hundred thousand euros," according to a logistics service provider.

"This is a common problem," says Sparrow Networks founder Meir Veisberg. "Time and again it happens that, in the event of a failure, the right components are not in stock." And it takes time for the suppliers to deliver them – too much time which can be very expensive.

He has worked out an efficient solution together with his start-up Sparrow Networks: he provides a digital marketplace where the participants can offer components from their own inventory and buy components from other members. "We created a huge virtual warehouse," says Veisberg. "We enable members to share components." They receive the required spare part quickly; long downtimes are a thing of the past.

He receives extensive support from the Berlin-based, autonomous company builder Beam, a spin-off of BEUMER Group. "We try to solve unique problems in logistics together with the start-up teams," explains Managing Director Robert Bach.

"My task is to find young entrepreneurs with business ideas that are relevant to us. For this, we are planning on founding three start-ups per year and transferring them, consolidated under Beam, into a separate company. This now includes Sparrow Networks." BEUMER Group wants to open up new business areas in logistics with these companies.

SPARROW NETWORKS FOUNDER MEIR VEISBERG: "WE ENABLE MEMBERS TO SHARE COMPONENTS."

BEAM MANAGING DIRECTOR ROBERT BACH: "MY JOB IS TO FIND YOUNG ENTREPRENEURS WITH BUSINESS IDEAS THAT ARE RELEVANT TO US."

"Not everyone is suitable to be a founder", says Bach. "We require at least two years of start-up experience or a very good knowledge of the logistics sector."

"I worked as a product manager for a long time – until I got to know Beam and Robert Bach, " says Veisberg. "In discussions with BEUMER experts, suppliers and customers, I found out that small and medium-sized companies often aren't big enough to maintain a huge parts stock. And when they do, they do not always have the components they need.

REMOVING THE RISKS

If an employee accidentally hits the sorting system with a forklift, for example, damaging a motor that is not stocked as a spare part, this can result in along downtime. The question for companies is: which spare parts should they store and in what quantity? Depending on the components required, the associated costs can be very high. But if they are not needed, they are dead capital. Delivery times can be quite long. Moreover, suppliers are usually unaware of their customers' stocks. Planning production is therefore often not easy for them.

Members of the new platform benefit from an almost unlimited pool of spare parts. Thanks to the high availability, their systems experience significantly less downtime, they can reduce their own stock and keep fewer parts in stock in the future. These are significant cost savings. And due to the constant exchange, older parts are always replaced by new ones.

"Companies have been able to access our digital marketplace (sparrow.parts) since September this year," says Veisberg. He manages the data exchange and ensures the quality of the inventory. Every registered potential buyer can offer their own stock on the online marketplace.

"Sparrow lives on this," he says. "The participants provide as many spare parts as possible, but the participants only upload the quantity they want." After all, no company should find itself in the unpleasant situation of no longer being able to access a spare part that is suddenly needed in an emergency. "Data security also plays a very important role for us," he says. Customer data is always protected. Once the deal is closed, Sparrow takes care of the delivery.

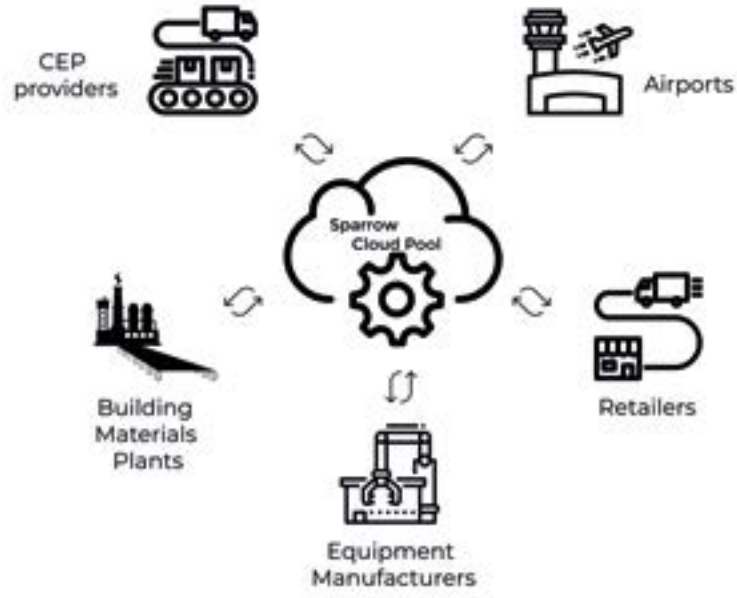
OPTIMISE THE SUPPLY CHAIN

"By participating in the digital network, the customer benefits from a very large pool of spare parts," says Bach. This pool is also the first step in improving supply chains: system operators who need spare parts can network with each other to cover their parts requirements.

"Now, if suppliers and system integrators are provided with the necessary data and kept constantly informed about requirements, they are able to optimally plan their production and avoid long delivery times. There is a great deal of optimisation potential here," says Bach..

With the start-up, BEUMER Group can successfully pursue its goal of bringing digital solutions into the corporate group. For example, in urgent cases, the system provider can now provide its customers with even better support, strengthening its position on the market.

And Sparrow Networks? "I benefit from the co-operation with BEUMER Group in the form of generous start-up financing, an extensive network of experts and customers – and a great deal of know-how," Veisberg says. "My company is now part of the BEUMER family."



SPARROW IS A VIRTUAL STOCK ROOM. THE DIGITAL PLATFORM ENABLES MEMBERS TO SHARE SPARE PARTS AMONG THEMSELVES.

START-UPS ENABLE BEUMER GROUP TO SUCCESSFULLY PURSUE ITS GOAL OF BRINGING DIGITAL SOLUTIONS INTO THE CORPORATE GROUP.

BEUMER GROUP is an international leader in the manufacture of intra-logistics systems for conveying, loading, palletising, packaging, sortation, and distribution. With 4,500 employees worldwide, BEUMER Group has annual sales of about €950m. BEUMER Group and its subsidiaries and sales agencies provide their customers with high-quality system solutions and an extensive customer support network around the globe and across a wide range of industries, including bulk materials and piece goods, food/non-food, construction, mail order, mail and airport baggage handling. For further information visit beumer.com.

Picture credits: BEUMER Group GmbH & Co. KG

SPACE SAFETY

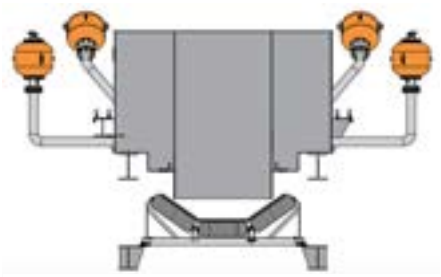
Stringent advice has been issued in recent years, but accidents in enclosed spaces continue to occur. Martin Engineering gives guidance on safe confined space entry for silos and hoppers

Many factors can cause bulk materials to adhere to the sides of chutes, silos and hoppers — including humidity, moisture content, size/texture of the raw material or increased production volume — resulting in lost capacity or clogging. Ongoing accumulation reduces flow and eventually stops production in order to address the issue, causing expensive downtime and requiring extra labour to clear the obstruction.

Clearing extensive build-up often involves confined space entry, but the consequences of untrained staff entering a chute, silo or hopper can be disastrous, including physical injury, burial and asphyxiation. Without proper testing, ventilation and safety measures, entering vessels containing combustible dust could even result in a deadly explosion.

CONFINED SPACE ENTRY?

The Health and Safety Executive's definition of a "confined space" means any place, including any chamber, tank, vat, silo, pit, trench, pipe, sewer, flue, well or other similar space in which, by virtue of its enclosed nature, there arises a reasonably foreseeable specified risk.



PROPER AIR CANNON PLACEMENT IN CHUTES AND SILOS CAN REDUCE ONGOING BUILD-UP

A FORESEEABLE RISK?

A foreseeable risk in relation to a confined space is:

- Serious injury to any person at work arising from a fire or explosion.
- The loss of consciousness of any person at work arising from an increase in body temperature.
- The loss of consciousness or asphyxiation of any person at work arising from gas, fume, vapour or the lack of oxygen.
- The drowning of any person at work arising from an increase in the level of liquid.
- The asphyxiation of any person at work arising from a free-flowing solid or the inability to reach a respirable environment due to entrapment by a free flowing solid.
- Entering a confined space.

Working in confined spaces typically requires:

- Permit to work
- Special personnel training
- Safety harness and rigging
- Extensive preparation
- Added personnel for a "buddy system"

Systems designed to minimise permit-required confined spaces can provide a significant return on investment and the best time to reduce the amount of confined-space entry for component maintenance and replacement is during the specification and design stages of a project. Many manufacturers offer systems and products that can reduce the need for confined space entry.

Examples would include:

- Modular chute designs with abrasion-resistant liners.
- Chutes that hinge open and lay down for liner replacement.
- Skirtboards with external liners.
- Belt cleaners that can be serviced without confined space entry.
- Flow aids such as air cannons and vibrators to reduce build-up.
- Modular air cleaners for specific locations rather than centralised dust collection.

FOLLOW THE RULES

Rules regarding confined space entry vary greatly depending on the country. As always, regional and local codes should be identified and followed, but general rules can be drawn from regulations established in major industrial markets such as the UK, Australia/New Zealand, Canada and the US. Commonalities between governmental regulations provide employers with a measured approach to safety. These procedures include:

- Prior to starting the job.
- Carry out a thorough risk assessment and prepare a safe system of work.
- Develop an appropriate emergency rescue plan.
- Further manage the risk with the use of a permit to work to support the risk assessment, safe system of work and emergency procedure.
- Ensure personnel operating in or with the confined space are appropriately trained and deemed competent.
- Gather and inspect all necessary PPE.

- Test and/or calibrate any safety gear, test instrumentation or communication tools.
- Conduct proper tests for toxins, vapour, dust levels, oxygen levels and material-specific hazards.
- Perform as much cleaning and maintenance as possible outside of the vessel.
- Post completed confined space entry permit outside of the vessel.
- Isolate contaminants and moving parts to prevent the accidental introduction of materials.
- Workers should complete the proper log-out/tag-out try-out procedure prior to entry.

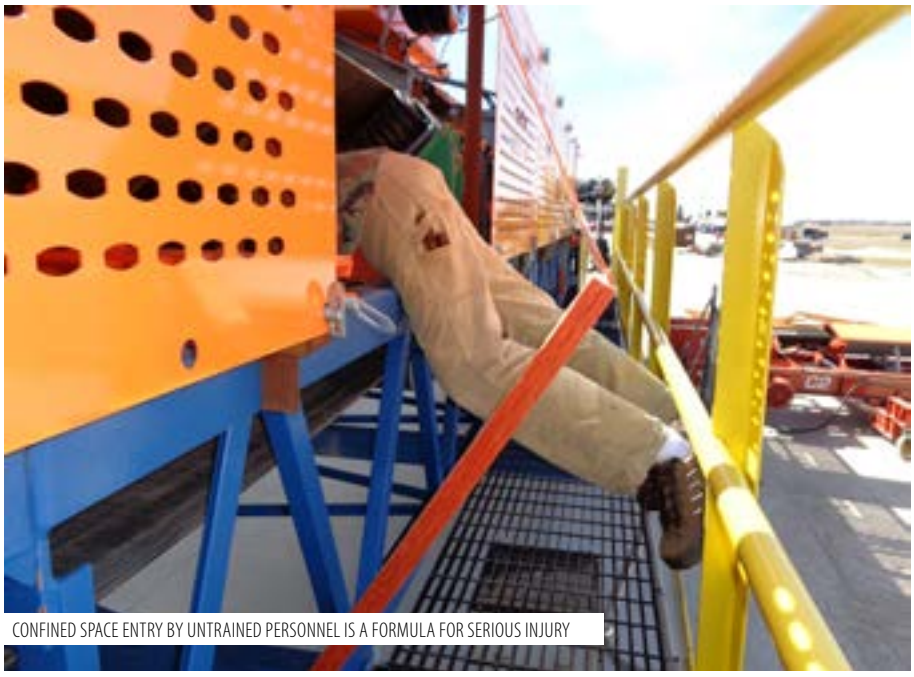
DURING PROCEDURE

- Perform maintenance/cleaning using non-toxic substances such as water and avoid using heat/fire in the confined space. Never use oxygen to purge a confined space, as this can create a fire and explosion hazard.
- Provide ventilation if the risk assessment requires it.
- Select personal protective/ safety equipment such as safety helmet, gloves, hearing protectors, safety harness and lifeline and breathing apparatus.
- Assign a trained observer to monitor the procedure and internal conditions.
- Practice fast evacuation of confined spaces.

COVERING YOUR ACCESS

Over time, well-designed access improves safety and saves money. Safe access that is carefully located and adequately sized will increase dependability and also reduce the downtime and associated labour required for maintenance. Consider equipment designs that minimise the need for confined space entry, including improved access doors, vibrators, air cannons or silo cleaning services. Vessels that are properly retrofitted with the right cleaning and material discharge equipment experience longer life and less downtime, while creating a safer workplace.

THE REAR CHUTE WALL IN THIS IMAGE IS BOLTED ON TO SIDE FLANGES, ALLOWING SAFER ACCESS



CONFINED SPACE ENTRY BY UNTRAINED PERSONNEL IS A FORMULA FOR SERIOUS INJURY

RIDING THE STORM

There is a mixed picture across global ports, according to a survey examining the impact of covid-19 on operations

The latest International Association of Ports & Harbors and World Port Sustainability Program report by Professors Theo Notteboom and Thanos Pallis from the Covid-19 Taskforce points towards momentary stabilisation in the four main areas of operations that ports have been reporting during the pandemic since early April.

Some 4% of investments have been accelerated and 2% have additional funds. 15% have incurred major delays and only 2% have been shelved. Almost without exception, figures are holding steady at low levels for responding ports in terms of hinterland transport delays, high warehouse and storage capacity utilisation and shortages of port-related workers.

"It is noticeable for the first time that delays for trucks at both gate and for cross border trade, inland barge operations and rail services have all fallen back to single digits" comments co-author Professor Theo Notteboom. He adds: "The number of ports reporting less container and cargo vessel calls compared to normal are, for the moment, holding steady at 35% and 40% respectively."

The cruise and passenger sector remains the most impacted, with 51% of respondents in week 41 indicating that passenger vessel calls are down more than 50%, in many cases even down more than 90%. For passenger ferry services, co-author Professor Thanos Pallis comments: "The picture remains mixed with many ferry calls almost back to normal schedules, but with fewer passengers onboard. Some ports testified that even though passenger vessel calls are at reasonably decent levels, the number of passengers is as low as -70 to -80%."

SOME FERRIES ARE BACK, BUT WITH LOWER PASSENGER NUMBERS

International Association of Ports & Harbors Managing Director Patrick Verhoeven comments : "The results on this particular question echo the views taken by some of the ports of our Covid-19 Task Force, namely that a long-term integrated approach towards port environmental sustainability is the best way of combating this current crisis as well as future ones.

"Joined-up initiatives on climate change mitigation, energy transition, and data collaboration in combination with a coherent business continuity plan will reduce risks to ports' businesses and enhance resilience."

While dry bulk remains at lower levels, liquid bulk heads to what would be normally expected, while new car traffic figures are getting better, the report suggests.

The situation in hinterland transport has significantly improved, with none of the ports currently reporting delays (six-24 hours) or heavy delays (more

than 24 hours) in cross-border road transportation.

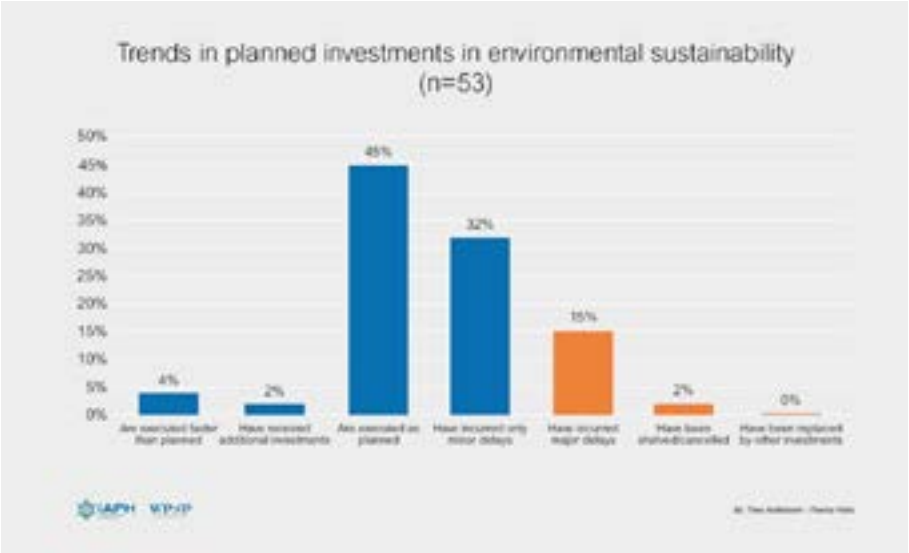
In early April (week 15), only 57% of the ports were experiencing normal cross-border trucking operations. For trucks arriving or leaving the port, there is also an improvement overall: 94% of ports report normal activity versus some 88% in weeks 29 and 36, 78% in week 21 and only 63% in week 15, the report suggests.

"In summary, expressed in percentages, the number of ports experiencing delays in crossborder trucking services, rail services, and barges are down to very low single digits for the first time. Inland transport volumes are moving towards recovery, reflecting the continuation of the reopening of markets. However, there are still no expectations on reaching pre-crises volumes in the short term," the report states.

Warehousing and distribution activities in ports have, in some cases, seen changes due to the fall in demand for consumer products or the closure of factories in countries with partial or full lockdown measures still in place, it adds. Utilisation levels such as tank storage parks for liquid bulk, and oil products in particular, have to some degree been impacted by the sharp decline in the oil price at the start of the covid-19 crisis.

The survey results for week 41 show the crisis has resulted in 17% of ports reporting an increase in utilisation of warehousing and distribution facilities for foodstuffs and medical supplies, a doubling of the figure compared to week 29 and slightly below the 20% of week 36. This figure is higher than between mid-May and mid-July, but still far below the 35% in week 15.

At the other side of the spectrum, there has been a small decrease in the share of ports facing an under-utilisation of storage capacity for foodstuffs and medical supplies. This figure of 8.5% remains far below the peak share of 18% in week 27. For consumer goods, 8% of ports faced under-utilised facilities in week 41 and 17% of ports report increases in utilisation. In weeks 15 to 17, only 10-14% of respondents witnessed



under-utilisation and 25-28% of ports mentioned an increased usage of facilities or even capacity shortages.

From week 19 to week 27 (six survey weeks in a row), more ports faced under-utilisation than higher utilisation levels. The figures reached a balance in week 29 (10% each), but since week 36 the balance tilted again towards increased usage of facilities.

In the liquid bulk market, 65% of the respondents have seen no changes in utilisation levels, a higher figure compared to the 59-63% range in weeks 15 to 25.

About 19% of ports are reporting under-utilisation of liquid bulk storage facilities in October 2020, a doubling compared to week 29, which was the lowest figure since the start of the surveys recorded. The share of ports with increased utilisation levels in liquid bulk storage facilities has remained stable at 16-18% since week 23 and reached 16.7% in week 41.

In the dry bulk sector, 18% of the ports reported an under-utilisation of facilities in October 2020. The share of ports with increased utilisation levels in dry bulk storage reached 16% compared to 10% in week 29. Overall, this indicator has been going up and down in a narrow band of 10-20% since the start of the survey, with no observable trend.

The covid-19 crisis is now having a very limited impact on the availability of port-related workers as measures have been relaxed in many countries around the world, the report suggests.

Only 7.3% of the ports mention that they face shortages of dockworkers. Only 3.6% of the sample face shortages for the delivery of technical-nautical services, the lowest figure up to now.

Some 3.6% of ports are short of personnel in the harbour master division. Only 7.3% of the port authorities report a moderate to more serious decline in staff availability, far below the figures of the first weeks of the barometer.

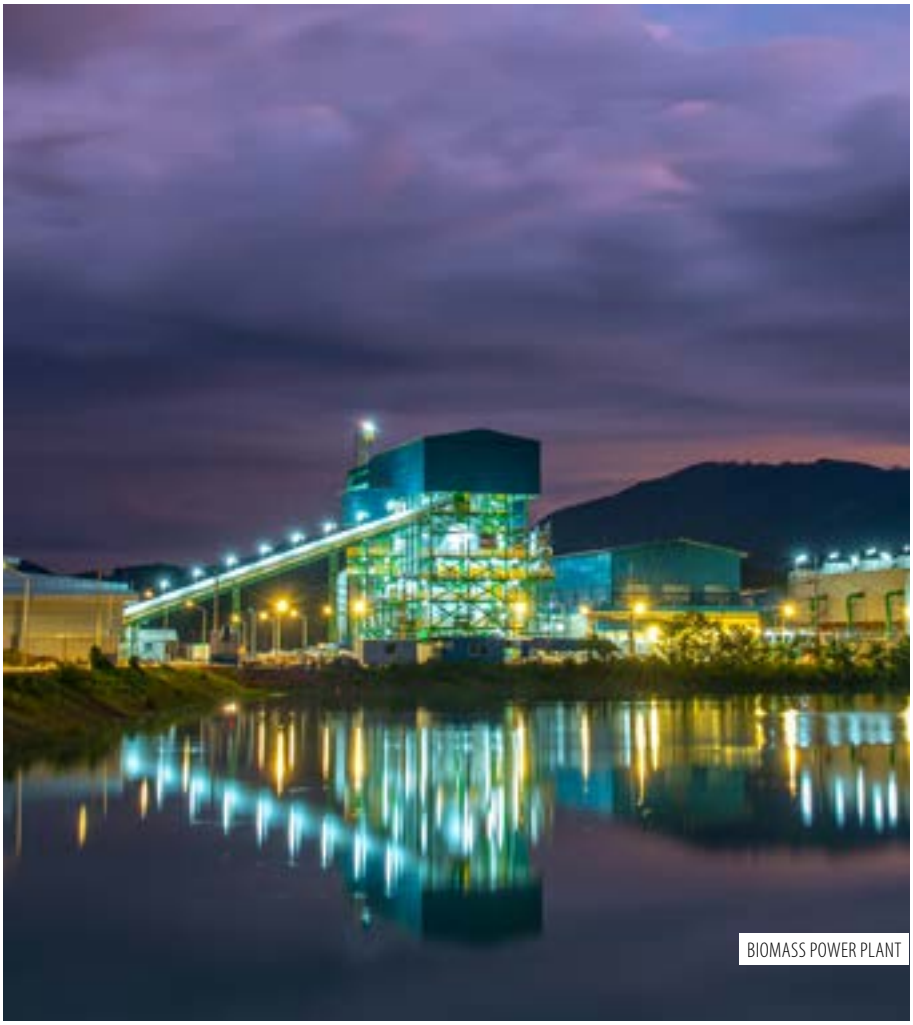
In several countries, a percentage of port authority staff members remain at home-office stage, working online. This is not caused by the illness or isolation, but is due to the formula of organisation endorsed during the pandemic situation (for example one person per office).

As a result, more online meetings/ webinars instead of physical contacts continue to take place. Notably in some emerging markets, ports reported that, although there are no shortages, the covid-19 test capacity of regional health authorities remains limited — with this implying that workers have to wait for a few days (longer than would be ideal) for test results before they can start working again in case of a negative result.

The availability of truck drivers, meanwhile, remains good with only 7% of the ports facing truck driver shortages compared to 21% in week 17.

SEEKING AN ALTERNATIVE

As governments seek to address the issue of greenhouse gases, energy alternatives such as biomass are coming to the fore



BIOMASS POWER PLANT

> The shift from conventional fuels to renewables to reduce the emission of hazardous gases that affect the environment is also driving the need for cleaner energy supply. This will subsequently drive biomass power generation market growth over the forecast period

Analyst Technavio has recently issued its latest report on the biomass power generation market going forward, which it estimates has the potential to grow by 39.21 GW during the next four years, with growth set to accelerate during the period to 2024.

As far as biomass generators are concerned, the market is fragmented, the report suggests. "The market is quite competitive and manufacturers are mainly focusing on undertaking several initiatives to mitigate GHG emissions," Technavio says.

Acciona Ameresco and Andritz are among the major participants considered in the report. "Although the growing need for cleaner energy will offer immense growth opportunities, the rise in project and feedstock costs will challenge the growth of the market participants. To make the most of the opportunities, market vendors should focus more on the growth prospects in the fast-growing segments, while maintaining their positions in the slow-growing segments."

The report provides a detailed analysis of the market leaders and offers information on the competencies and capacities of these companies and also provides details of the market and the different products offered by suppliers as well as information on trends and challenges.

"APAC was the largest biomass power generation market in 2019 and the region will offer several growth opportunities to market vendors during the forecast period. The abundant supply of diverse forms of wastes such as agro-industrial wastes, woody biomass, agricultural residues, municipal solid wastes, and animal wastes will significantly drive biomass power generation market growth in this region over the forecast period.

"50% of the market's growth will originate from APAC during the forecast period. China and India are the key markets for biomass power generation in APAC. Market growth in this region will be faster than the growth of the market in other regions."

The increasing use of renewable sources of energy and the demand from power production companies are driving the need for solid biomass. They are also highly preferred by power generation plants to cater to the demand for clean and efficient coal-fired power generation, the report suggests.

"Market growth in this segment will be slower than the growth of the market in the municipal solid waste segment. This report provides an accurate prediction of the contribution of all the segments to the growth of the biomass power generation market size."

Given the increasing concern over greenhouse gas levels, many governments are taking steps to reduce emissions. "As a result, they have started replacing fossil fuels with renewable energy sources, including biomass, geothermal, and solar power. The increasing energy demand, clean energy initiatives, and subsidies granted for power generation using sustainable sources are promoting the use of renewable energy sources. "The shift from conventional fuels to renewables to reduce the emission of hazardous gases that affect the environment is also driving the need for cleaner energy supply. This will subsequently drive biomass power generation market growth over the forecast period."

Biomass power generation market trends, such as the adoption of biomass in fuel cell technology, will also influence market growth, the report suggests.

Fuel cell and hydrogen technologies can also help convert environmental hazards into clean and renewable power by producing hydrogen, which can be used in stationary fuel cells. Work is also taking place to make use of agricultural and urban waste in the development of a hydrogen economy.

The report estimates that the market will have a compound annual growth rate of more than 5% during 2020-2024. For more information, visit: *technavio.com*.

IEA LOOKS AHEAD

The International Energy Agency's (IEA) world energy outlook for the year stresses the effects of the covid crisis. "It has been a tumultuous year for the global energy system. The covid-19 crisis has caused more disruption than any other event in recent history, leaving scars that will last for years to come. But whether this upheaval ultimately helps or hinders efforts to accelerate clean energy transitions and reach international energy and climate goals will depend on how governments respond to today's challenges," the report suggests.

The World Energy Outlook 2020 focuses on the pivotal period of the next 10 years, exploring different pathways out of the crisis. The new report provides the latest IEA analysis of the pandemic's impact: global energy demand is set to drop by 5% in 2020, energy-related CO_2 emissions by 7%, and energy investment by 18%.

The report lays out different scenarios going forward. In the Stated Policies Scenario, which reflects the announced policy intentions and targets, global energy demand rebounds to its pre-crisis level in early 2023. However, this does not happen until 2025 in the event of a prolonged pandemic and deeper slump, as shown in the Delayed Recovery Scenario. Slower demand growth lowers the outlook for oil and gas prices compared with pre-crisis trends.

However, large falls in investment increase the risk of future market volatility. Renewables take starring roles in all the report's scenarios, with solar centre stage. "Supportive policies and maturing technologies are enabling very cheap access to capital in leading markets," the report suggests. "Solar PV is now consistently cheaper than new coal — or gas-fired power plants in most countries, and solar projects now offer some of the lowest cost electricity ever seen. In the Stated Policies Scenario, renewables meet 80% of global electricity demand growth over the next decade. Hydropower remains the largest renewable source, but solar is the main source of growth, followed by onshore and offshore wind. I see solar becoming the new king of the world's electricity markets. Based on today's policy settings, it is on track to set new records for deployment every year after 2022," says Dr Fatih Birol, the IEA Executive Director. "If governments and investors step up their clean energy efforts in line with our Sustainable Development Scenario, the growth of both solar and wind would be even more spectacular — and hugely encouraging for overcoming the world's climate challenge."

BIOMASS CONTRACT EXTENDED

GB Railfreight (GBRf) and Drax have agreed to extend their contract to transport supplies of sustainable biomass from UK ports to Drax Power Station in North Yorkshire until 2025.

Teams at GBRf have worked closely with Drax for the past decade to maintain the supplies of sustainable biomass needed for the UK's largest power station to continue generating the flexible and reliable renewable power for millions of UK homes and businesses. This deal is critical to Drax's global biomass supply chain and another step on its journey to negative emissions.

Drax supplies 11% of the UK's renewable electricity. Using sustainable biomass instead of coal at Drax Power Station has reduced emissions by more than 80% and helped the UK power system decarbonise faster than any other country in Europe.

Under the terms of the contract, GBRf will run all of Drax tonnage from the Ports of Tyne and Liverpool to Drax Power Station.

The partnership between GBRf and Drax dates back to 2010 when GBRf began moving biomass by rail from the Port of Tyne. Originally, GBRf used wagons that had been converted from coal hoppers by adding lids and these remain in use under the new contract. As Drax converted more of its coal units at the power station to sustainable biomass, Drax invested in new purpose-built biomass wagons that are larger and therefore more efficient at carrying the pellets.

In the past year, the long-standing relationship between Drax and GBRf has helped overcome challenges such as the local floods in February to the Drax branch line and then the covid-19 crisis, ensuring continuous flows of biomass that helped keep the power station running and the lights on in Britain.

John Smith, managing director of GB Railfreight, says: "I am delighted to be continuing GB Railfreight's ongoing partnership with Drax. We will continue to deliver vital supplies of sustainable biomass for a further five years, ensuring power is generated in a clean and sustainable way as well as reducing the UK's carbon emissions.

"The announcement also comes at a time of great economic uncertainty for our country. We at GBRf remain committed to getting the UK economy back on track and having worked with Drax over the past few months during testing times, I know we will continue to work closely in the months and years to come as we emerge from the covid-19 crisis."

Mike Maudsley, UK portfolio generation director at Drax adds: "GBRf's rail deliveries are a critical part of our global supply chain for sustainable biomass that supports thousands of jobs and has delivered economic growth across the north of England, while supplying renewable electricity to millions of homes and businesses.

"We're very pleased to extend our existing contract with GBRf for another five years and we're looking forward to continuing to work with the team."

GOOD HANDLING PRACTICES

Safety is key when handling bagging systems and a number of new models increase productivity while keeping handlers safe

BULK-OUT® MODEL BFF BULK BAG DISCHARGER CEASES © FLEXICON

Concetti has launched an automatic bulk bag (FIBC) weighing, filling and closing system designed to be operated by only one person. The new net weighing and filling station for single loop bulk bags can fill up to 180/BB per hour, ensuring a high productivity combined with increased flexibility.

This system is designed to provide enhanced automation of a traditionally manual process that normally needs three workers, reducing costs and ensuring greater safety at work.

With the new design, the machine operator should only place bags on to the filling spout, while all subsequent steps such as bag inflation, alignment of the filling neck after filling, transfer to the sealing station, heat sealing of the filling neck, lifting of the single bulk bag hook and automatic insertion of the sealed neck of the internal liner inside the bulk bag are all carried out automatically within the system.

The full bags will then be removed by the fork lift truck at the end of the filling line. Additional innovations include an adjustable filling system enabling bags of different heights to be filled for the first time.

This bagging system is suitable for

aggressive and corrosive chemicals: bulk bags and FIBC's system has been manufactured entirely in stainless steel and can be wet washed to prevent scaling. The single loop sacks used are polypropylene WPP (raffia) with an internal "PE" liner for heat seal closure.

Meanwhile Flexicon's new Bulk-Out® Model BFF Bulk Bag Discharger features a steel safety cage to prevent contact with moving parts during operation and automated unloading of bulk bags. The enclosure features externally-mounted controls and full height doors with an intrinsically safe relay that halts operation when the door is open.

The discharger is equipped with top-mounted receiving cups and a removable bag-lifting frame for forklift loading of bulk bags. Z-CLIP strap holders at the frame extremities allow rapid, secure insertion and removal of bag straps.

The Tele-Tube® telescoping tube provides quick, dust-tight connections between the bag spout and hopper, and maintains downward tension on the spout as the bag empties to eliminate creases, folds or bulges that could hinder material flow.

Additional flow promotion is afforded by Flow-Flexer bag activators that raise and lower opposite bottom sides of the bag at timed intervals, loosening compacted material and directing it into the discharge spout.

As the bag lightens, the stroke of the bag activators increases, raising the bag bottom into a steep "V" shape, while top-mounted Pop-Top extension devices elongate the entire bag, promoting total discharge with no manual intervention.

The universal flanged outlet of the hopper allows connection of a rotary airlock or charging adapter to feed optional pneumatic or mechanical conveyors, or other downstream equipment.

The discharger is constructed of carbon steel with a durable industrial finish and stainless steel material contact surfaces, and is available in an all-stainless steel finished to food, dairy or pharmaceutical standards.

CENTURION CONCERNS

Bulk bag supplier Centurion Packaging has outlined a concern for users of bulk bags, notably the fact that oxidation may reduce the strength of the bag once it has been used.

In a blog on its website, the company explores the issue, saying that bulk containers in natural environments with direct sunlight will have their strength reduced. "Over the course of a week, the strength of the bulk bag is reduced to 25%, and reduced by 40% after two weeks making it practically unsafe to use. This means storage is crucial for bulk bags," it says.

The load weight of a bulk container made of polypropylene by drawing, weaving, sewing or paste is typically 200kg-three tonnes.

"Bulk containers need to be placed in a cool and clean indoor storage, transportation should avoid the sun and rain and should not be close to the heat source. The storage period should also not be more than 18 months.

"During 18 months, your bulk container will age, so we would recommend using them within 12 months of purchase. They should also be kept away from direct sunlight during the storage period," it says.

Spout bottom bulk containers are perfect for a number of applications because of their flexibility and easily controlled discharge of materials, the company explains. Because of their design, spout bottom bags can also be prone to clogging, however.

This is sometimes referred to as bridging, and occurs as material sticks to itself during discharge and builds up around the bag's spout. This is quite common for applications involving materials with high moisture content such as agricultural goods and fresh organic products.

Bridging can really impact the efficiency of operations as it will delay the discharge of materials. This can also present a safety hazard to workers, which makes it important to understand how to unclog an FIBC.

In its latest blog, Centurion gives advice on how to unblock bags. This includes a warning that if looking to unclog a spout bottom bulk bag "do not stand beneath the bag as it can be very dangerous and lead to significant injury".

Luckily, there are many ways to unclog a spout bottom bag without endangering workers. These include:

- Using a broom handle or another type of extension pole to push the spout bottom and try to free the materials, while staying as far away from the bag as possible.
- Massaging the area around the spout manually or with an extension pole to try to loosen the materials.
- Pushing the material through the spout with a broom handle or extension pole, while standing above the bulk bag. If attempting this method, ensure you maintain stable footing and keep any other workers away from the bottom of the bag.
- Cutting the bag around the bottom of the spout, bearing in mind it will not be possible to reuse the bag afterwards. If using this method be careful with the blade and cut as little as possible to avoid an uncontrolled discharge of the material. Leverage a blade that can be used at a distance to minimise risk to the worker.

Over the course of a week, the strength of the bulk bag is reduced to 25%, and reduced by 40% after two weeks making it practically unsafe to use.

RETURNING TO ACTIVE SERVICE

As vessels return to the world's oceans after lockdown restrictions are slowly eased, operators are being reminded of the importance of ensuring all safety certificates are up to date

With an increasing number of vessels returning to service following the easing of covid-19 restrictions, Survitec is advising that ships' life-saving appliances are maintained according to their original service schedules in order to avoid delays.

Operators must have valid safety certificates in place before their vessels can return to service after lockdown and while some flags have allowed three-to-five month extensions, there are concerns that there will be a backlog of equipment requiring service, which could render the vessel unable to return to service until certificates of compliance have been issued or extensions approved.

Highlighting a potential bottleneck as demand for safety equipment servicing ramps up, Survitec has advised its customers to keep to their original maintenance plans where possible and ensure approved service providers are kept abreast of vessel movements so that safety equipment can be booked in and certificates issued in time.

"Doing so will ensure that vessels returning to service remain safe and compliant," says chief operating officer Claude Sada. "Due to the

pandemic and subsequent travel restrictions, classification surveyors have experienced difficulties arranging surveys and carrying out onboard activities to meet statutory requirements. As a consequence, Flag States have granted extensions on many of the certificates issued so that vessels can remain compliant. They have taken a very pragmatic approach in dealing with vessels on a case-by-case basis, with three-to-five-month extensions being approved," says Sada,

In accordance with SOLAS Chapter 1 Regulation 14, safety certificate extensions can be issued for liferafts, lifeboats, marine evacuation systems (MES), davits and launching appliances.

However, the first round of extensions is now coming to an end and those extensions issued in the second half of 2020 will start to expire from early 2021.

Paul Clarke, Survitec operations director – MES, says: "We expect servicing demand to peak in the first half of 2021, so it is imperative that shipowners keep the lines of communication open with regards to vessel movements. This will help minimise risk and avoid any potential delays."

If certificates or extensions are due to expire or have already expired, then operators need to contact an approved service provider to arrange a service as soon as possible. If certificates have expired, ships will be unable to sail until they have been renewed.

Vessels can operate for up to five months passed the expiry date if granted an extension by the Flag State.

"We have made the necessary changes to our systems and procedures so that when extensions are given, the next due date is based on the anniversary of the expiry of the previous certificate. We have taken these measures to ensure companies remain compliant," says Clarke.

Rented life rafts, lifeboats and MES exchange units that are customer owned are not affected by the extension policy.

Survitec has registered an increase in liferaft exchanges in ports new to the company. "Where we don't have a service station, we are despatching flying squads to those areas to facilitate shipowner requirements," says Clarke.

Survitec has introduced a new service aimed at ensuring CO_2 low pressure (LP) firefighting systems are correctly deactivated when ships enter lay-up.

The turn-key CO_2 LP lay-up service, developed in collaboration with a leading European-based shipowner, was introduced a few months ago following market demand for a solution capable of simplifying decommissioning and recommissioning procedures.

Survitec has already seen an upswing in demand for the service following a surge in the number of ships temporarily suspending services and deactivating ships due to the lack of trade.

Sada says: "Due to the pandemic and the on-going economic uncertainty, we are seeing ro-ro vessels, VLCCs, and large bulk carriers and containerships heading for lay-up, with owners looking to ensure their CO_2 systems are deactivated correctly and safely."

A CO_2 LP system, typically used in a vessel's fixed-fire extinguishing arrangement, can only be decommissioned and recommissioned by a specially trained service provider once the Classification Society has granted approval for the system to be deactivated and the tank emptied.

Survitec training manager Steven Puis says that while cold lay-up procedures are similar to the processes carried out during the periodical service or refilling of the CO_2 system, there are subtle differences.

"In addition to stringent ventilation, gas detection and personnel safety requirements, cooling compressors need to be prepared prior to tank emptying. Once the compressors are safe, the tank

must be emptied through the liquid filling line instead of the gas/vapour return line to avoid a rapid drop in pressure and the CO_2 turning into a solid block of ice," he says.

"When the tank has been emptied of its liquid content and pressure is maintained at about 10 bar, it avoids the need for any hydro and pressure testing, internal tank cleaning and purging when the system is reactivated. There is no risk of damage caused by humidity or water accumulating inside the tank."

Jan-Oskar Lid, Survitec's global technical sales manager for fire, rescue & safety, adds: "The CO_2 LP system must be emptied prior to lay-up since the ship's generators will be shut down and unable to provide any power to shipboard compressors and refrigeration units.

"Based on the Survitec deactivation procedures, the tank doesn't have to be opened, inspected, internally cleaned and purged before refilling and reactivation," he says.

"The safest and most cost-effective way to carry out this work is to move the vessel by tug to a quayside. However, refilling of the CO_2 tank at anchorage is possible with good planning and special arrangements, such as a barges," he says.

With traditional lay-up spots, such as Scotland and Norway, becoming congested and with new destinations emerging, Survitec is providing its customers with a list of locations where service engineers with CO_2 LP system capability are available. A minimum of two service engineers can be deployed on a case-by-case basis.

LIQUEFACTION GUIDANCE

In spite of widespread knowledge of the dangers of carrying cargoes such as nickel ore, accidents involving liquefaction continue to occur – often with fatal consequences.

The London P&I Club's publication *Reducing the Risk of Liquefaction* provides general guidance and practical advice to masters, shipowners, shippers and charterers on the loading and carriage of bulk cargoes that may liquefy, the risks associated with liquefaction, and the precautions that should be taken to minimise those risks, both before acceptance of the cargo and during carriage.

Members must notify managers at the earliest opportunity and comply with the Mandatory Notification Requirements, otherwise they risk prejudicing Club cover. See the Club's website for more details: *londonpandi.com*

HAZARD DETECTOR

Exis Technologies and parent company National Cargo Bureau (NCB), the New York-based cargo inspection company, have launched Hazcheck Detect, a cargo screening tool to detect misdeclared and undeclared dangerous goods in containerised shipments. Maersk is the first customer signed to the Hazcheck Detect solution.

In a white paper published by NCB in July this year, it reported that a recent container inspection initiative it had carried out revealed an alarming number of containers carried by sea include misdeclared dangerous cargoes that represent a serious safety risk to crew, vessel and the environment.

The inspection initiative showed that 55% of containers were non-compliant with 43% failing to secure dangerous goods correctly within the container itself. Approximately 6.5% of containers carrying dangerous cargoes had been misdeclared.

The white paper is calling for industry to adopt a comprehensive, holistic and co-ordinated approach to address this worrying trend, with 12 recommendations ranging from embracing a safety culture for dangerous goods compliance to practical measures for container and vessel inspections and monitoring.

One of the white paper recommendations is the incorporation of integrated digital tools that automate critical compliance functions, such as Hazcheck Detect.

Hazcheck Detect focuses on:

- Undeclared dangerous goods (DG) – looks for cargo that is not declared as DG, looking for suspicious items that should be declared as DG.
- Misdeclared dangerous goods – looks for cargo which is declared as DG, but may not have been declared as the correct DG.

Hazcheck Detect is delivered as a software-as-a-service solution, hosted and maintained by Exis Technologies. It includes a web user interface so that users can enter and maintain data search terms, keywords and rules.

Henrik Lauritsen, Director at Maersk says: "Exis Technologies has developed a solution that could be used industry wide and allows easy sharing of keywords and rules between industry partners.

"We are delighted to be the first shipping line to start using Hazcheck Detect and we encourage more lines to come on board."

DIGITAL DASHBOARD

Verifavia Shipping has launched the world's first "3-Way Plug & Play" IHM Maintenance Dashboard to ensure efficient and continuous maintenance of Inventory of Hazardous Materials (IHM) reports.

The digital system ensures the IHM can be updated accurately, effectively and in real-time to comply with the EU Ship Recycling Regulation (EU SRR) deadline of 31 December 2020, as well as its ongoing maintenance requirements.

On 31 December 2018, the EU SRR came into force, prohibiting or restricting the use of hazardous materials onboard EU-flagged newbuilds and EU-flagged vessels heading for demolition at recycling yards.

From 31 December 2020, it will be further extended to cover all other EU-flagged ships, as well as ships trading under the flag of a third country that call at an EU port or anchorage.

The regulation prohibits or restricts the installation and use of hazardous materials (such as asbestos or ozone-depleting substances, among others) on board ships, as well as making it mandatory for ships to carry onboard a certified and maintained IHM specifying the location and approximate quantities of those materials.

The EU SRR also requires the IHM to be continuously updated with relevant suppliers documents such as Material Declarations (MDs) and Suppliers Documents of Conformity (SDoCs) throughout the ship's operational life and renewed every five years. It covers all items and equipment that are installed, modernised or replaced.

Verifavia's "3-Way Plug & Play" IHM Maintenance Dashboard is the industry's first online platform providing shipowners, superintendents, vessels and even Port State Control and Class with live access to the IHM maintenance status of the vessel.

The dashboard can be connected to any procurement system, as well as the suppliers' data portal, and is hosted on Hazinvent-M; the tool Verifavia uses to conduct IHM surveys where the data is automatically and continuously updated.

The dashboard can function on any IHM Part 1 prepared by any service provider across the globe. It is maintained by one of world's largest in-house teams of hazmat experts, who are all marine engineers or naval architects with expertise in Port State Control, IMO and EMSA regulations.

JULIEN DUFOUR, CEO, VERIFAVIA SHIPPING

The system can automatically generate monthly or ad-hoc IHM maintenance reports to demonstrate implementation and compliance with regulations, and ensures vessels are prepared for PSC inspections.

Julien Dufour, chief executive of Verifavia Shipping, says: "Launching shipping's first IHM Maintenance Dashboard ensures the industry has access to a simple, reliable, digital solution to maintaining a vessel's IHM. The regulations dictate the IHM must be constantly up-to-date and this system will ensure this is done efficiently and accurately, and also helps to facilitate the renewal survey which is required every five years."

Yuvraj Thakur, Global Head of IHM, Verifavia Shipping, adds: "Our international hazmat experts have now completed IHM preparation on more than 670 vessels and it is a testament to our innovative approach and expert knowledge that our dashboard is already used by more than 500 ships from 25 shipping companies worldwide.

As we get closer to 31 December, it is essential for the industry to be confident that its operations comply with the EU SRR regulation. Verifavia's IHM Maintenance Dashboard provides industry-wide confidence – not only for this deadline, but also the ongoing maintenance requirements of the legislation."

REPORTING PLATFORM

The Hellenic Marine Environment Protection Association (HELMEPA) has made an online presentation of the "Voluntary Incident Reporting Platform" (VIRP) to representatives of the Association's managing member companies.

The platform was developed in collaboration with DYNAMARINe as part of a three-year project entitled "Enhancing the Understanding of New and Enduring Challenges in Maritime Safety Culture in the Eastern Mediterranean", which is implemented by HELMEPA and Lloyd's Register in Greece and CYMEPA in Cyprus, with the support of Lloyd's Register Foundation (LRF).

The aim of the initiative is for shipping companies to report to the platform, under complete anonymity, incidents and near-misses from their ships that could have very serious consequences and through the sharing of lessons learned, avoid the repetition of the same mistakes and incidents.

The expansion of the platform that is going to take place in the coming years is planned to include accidents and incidents of fishing vessels and recreational boats.

Welcoming the guests online, HELMEPA's director general Dimitris Mitsatsos referred to the importance of incident reporting in establishing a maritime safety culture and thanked the project partners for their co-operation, LRF for its support and HELMEPA members for their contribution and participation in the VIRP. Also attending the presentation was the chairperson of HELMEPA, Semiramis Paliou, who urged members to continue to contribute data to the platform so that it can become a useful tool for all and help attract more member companies.

NEW PROJECTS ONGOING AS SERVICES TAKE A HIT

Port authorities in the Netherlands have undergone a number of improvement projects in recent months as they come to terms with the day to day economic effects of the coronavirus pandemic

Transshipment in the seaports in the North Sea Canal region — Amsterdam, IJmuiden, Beverwijk and Zaanstad — fell by 10.7% to 48.7m tonnes (2019: 54.6m) in the first six months of this year. The impact of the global coronavirus crisis on the transshipment figures is clear.

Transshipment also fell in the port of Amsterdam during the first six months of 2020. The volume declined from 45.2m tonnes in the first half of 2019 to 39.8m tonnes this year (-12%). This drop was also clearly a result of the coronavirus pandemic.

Koen Overtoom, chief executive of Port of Amsterdam, says: "For the first time in years, we have seen a reduction in the transshipment in our port. And it is a significant one. However, we are not pessimistic.

"In the first half of the year, we have shown in difficult conditions how crucial the port is for the region and for the country. As vital infrastructure, we have continued to manage shipping traffic and to handle cargo flows, without let-up. We have thereby contributed to keeping the country and the economy running.

"Our distribution clients, in particular, have had a strong six months, with the distribution of foodstuffs and packages. The market for transport fuels (petrol, kerosene and so on) is now recovering."

"It is hard to say what the second half of the year will look like. The fuels market is too fickle for that and the impact of the coronavirus is uncertain. We do anticipate that in the current conditions the shortfall in volume for the year as a whole, will remain limited to the level that we have seen in the first six months," says Overtoom.

INCREASES AND DECREASES

The decline in Amsterdam in the first six months was attributable to both liquid and dry bulk and containers. The transshipment of liquid bulk (mainly transport fuels) fell by 5.1% to 24.7m tonnes, compared to 26m tonnes over the same period last year.

Despite decreased aviation and road traffic, the volumes of transport fuels remained relatively constant. This is due to the fluctuating market for these cargo flows, which results in constant movement.

The volume of dry bulk fell by 21.2%. This was in particular due to a substantial decline in coal to 4.6m tonnes, compared to 8.2m tonnes last year (-43.6%). The unexpected, non-structural

growth last year amplified the decline in coal volume this year. The transshipment of grains also fell (-15.4%) and there was a reduction in break bulk (-18.2%).

Sea and river cruises also ceased as a result of the corona virus pandemic. Port of Amsterdam decided, in consultation with the Amsterdam Amstelland Safety Region, to suspend cruise ships from the port from mid-March onwards, in order to minimise the risk of infection.

The port has been open to cruise ships again since mid-June and the number of visits from river cruise ships is increasing slowly and cautiously. There were 21 visits in the first half of the year, of which there were 18 in January and February. The port of Amsterdam expects to welcome more river cruise ships in the second half of the year. On the other hand, at this moment the port does not anticipate sea cruise vessels returning in the second half of the year, either.

Container transshipment fell by 31.6%.This cargo flow had grown steadily in recent years, partly as a result of the focus of the port of Amsterdam on short-sea lines. The decline can therefore also be attributed to the coronavirus, which resulted in scheduled services being partly suspended.

ACROSS THE REGION

Transshipment in IJmuiden fell slightly, by only 3.4% to 8.76m tonnes. In Beverwijk, the transshipment volume fell by 44.3% to 194,000 tonnes, and Zaanstad saw a 15.3% increase in transshipment to 84,000 tonnes.

Port improvement projects are continuing with an ongoing project by the Port of Rotterdam Authority to deepen the Amazonehaven basin

A 500m stretch of the Amazonehaven port basin at Maasvlakte is being deepened from 16.65m to 17.45m. This project, commissioned by the Port of Rotterdam Authority in partnership with Hutchison Ports ECT Rotterdam (ECT), is expected to be completed in the second half of November 2020.

This first step will already yield a significant improvement in the short term. Once work on the project has been completed, the Port Authority and ECT will evaluate whether it is possible to deepen a larger section of the Amazonehaven basin. The partners intend to realise a comparable depth for at least two additional berths, each of which is 500m long.

MOBILE DEGASSING INSTALLATION SUCCESSFUL

Emile Hoogsteden, vice president commercial at the Port of Rotterdam Authority, says: "Rotterdam is favourably situated on the North Sea coast and offers unrivalled water depths, strong hinterland connections and a high level of digitalisation. Shipping lines are always striving for new economies of scale, since this enables them to offer more competitive transport rates.

"The Port of Rotterdam Authority is happy to facilitate this trend on behalf of shipping companies and deep sea terminals, to ensure that Rotterdam maintains its status as Europe's most attractive port of call."

Leo Ruijs, chief executive of ECT adds: "We continuously invest in the ECT Delta Terminal — both to remain future-proof and so we can keep offering our clients an optimal range of services. The deepening of the Amazonehaven basin forms an important element in this programme as it will further strengthen our competitive edge."

MOBILE DEGASSING

An initial trial using a new mobile degassing installation on the public quay of the Seinehaven in Rotterdam has been successful. In August, inland tanker *Visioen* was degassed of petrol without any measurable vapours being released into the atmosphere. This concerns a degassing that took place outside an establishment and that is unique in the Netherlands.

The Port of Rotterdam Authority has been working towards enabling degassing in the port for years now. Within the Rotterdam region, the Province of South Holland, the Municipality of Rotterdam, the Rotterdam-Rijnmond Safety Region, DCMR and the business community have collaborated closely to this end.

The 3,235-tonne *Visioen* was empty of petrol and all 10 tanks were degassed in order to be able to take on the next cargo. The aim of the trial was to determine whether the installation is suitable for degassing inland vessels without the emissions exceeding the standards. The installation must also be safe. The experiment was also used to test the permit conditions.

The Rotterdam-Rijnmond Safety Region, the DCMR and the Port Authority

were involved in the trial. The technology was provided by ENDEGS.

It is prohibited to de-gas a number of substances, including benzene and petrol, into the outside air in the port of Rotterdam. Degassing while sailing is also prohibited in most provinces. In the coming period, the Port Authority will be testing various installations together with the Safety Region and the DCMR.

GRONINGEN INVESTMENT

Groningen Seaports is to invest more than €25m to make the Heveskes industrial site, located between Chemie Park Delfzijl and the Aldel aluminium plant, suitable for allocation and to develop it and connect it to the existing roads, cables and pipelines. Developing the Heveskes site means that Groningen Seaports is fulfilling its broad mission of sustainably developing and exploiting industrial sites and contributing to employment and sustainable green economic growth in the region. This part of the industrial site is expected to offer jobs for 200-250 people.

Heuvelman GSO recently announced its intention to establish in this area and SkyNRG and Avantium had also expressed their intention to operate in Delfzijl. North Water also plans to expand its activities in Delfzijl in response to the many projects that are currently underway. Once the land has been prepared for construction, the result will be a site designed in such a way that there are plots of land that can immediately be allocated and built on, taking the wishes of the prospective buyers into account wherever possible. The project will be carried out in phases to ensure that the final layout of the site remains flexible.

Groningen Seaports' chief executive Cas König says : "This is a shining example of industrial interaction, where we have worked intensively together with local industry to bring a site that has been vacant for decades to maturity by creating an optimum establishment climate with public authorities, companies and other parties and bodies. This pre-investment will help the potential new arrivals to bring their plans to fruition and give a huge boost to the development of the energy transition in general and sustainable economic activities in Delfzijl in particular."

As well as the basic infrastructure such as roads, waterways and utilities, the Heveskes industrial site will be linked to the existing utilities of the Chemie Park Delfzijl. Groningen Seaports will be realising and operating a large part of these utilities.

This facilitating joint infrastructure also includes a hydrogen infrastructure, for which Groningen Seaports is using the plastic hydrogen pipeline developed by the port authority itself. Shared facilities such as car parks, a gatehouse and weighbridge with services are also being developed on the site.

According to König: "By future-proofing this area, we are making an important contribution to a circular economy. With Chemport Europe, this region offers a strong ecosystem for green chemicals. That is what we're going for. Our goal is to make the

HEVESKES INDUSTRIAL SITE (PHOTO: GRONINGEN SEAPORTS)

chemical industry cluster completely climate neutral by 2050. This investment and attracting leading companies are increasingly giving shape to that vision."

The work is now in full swing and includes raising the site, dismantling an old dredging spoil depot, building ditches, roads, a fence and an entrance gate. Also, a loading and unloading facility is being built at Oosterhornkanaal.

The work is needed to facilitate new businesses on the 42-hectare site that has been left undeveloped for many years, 29 hectares of which can ultimately be allocated for new businesses. The site is being developed in phases up to and including 2024.

DIRECT RAIL SERVICES

Multimodal company Samskip and Nunner Logistics are launching direct rail services between Amsterdam and Duisburg, in a new and far-reaching commitment to shippers using rail, road and waterborne transport services out of two of North Europe's main container ports.

From August, the new service connected Samskip's rail terminal in Duisburg with TMA Terminal Amsterdam, initially with two weekly departures in each direction. Service frequency will increase to three round trips per week from September.

Nunner Logistics operates weekly trains from the Chinese cities of Xi'an and Changsha to Duisburg. With both Duisburg and Amsterdam linking seamlessly into Samskip's European rail, road and short sea network, the six-hour rail transit between the two provides a reliable and flexible transport option, optimized for prompt delivery of 40ft/45ft containers, reefer units, flat racks and tank containers.

The new rail shuttle has been launched in collaboration with TMA Terminal Amsterdam, the Port of Amsterdam and Duisport Group, with DistriRail to provide rail haulage services.

The first of its kind link to-from Amsterdam adds a new dimension to Samskip's weekly short sea service connecting to the Norwegian Westcoast, and for shippers using its three-times weekly departures to Hull and Tilbury. High frequency rail shuttles will also extend the penetration of short sea services into Amsterdam beyond Duisburg, to Sweden, Denmark, Poland, Italy and Turkey.

"We are excited to launch this missing link in our network and offer an even stronger intermodal product," says David Besseling, Samskip head of UK trade. "The combination of the Samskip rail and short sea service networks creates a variety of efficient long-distance intermodal services for a sustainable door-to-door solution. Together with our partners, we look forward to increasing frequency and geographical reach even further."

Rob Smit, manager hinterland says: "Samskip's new rail service further strengthens the intermodal network in Amsterdam and is efficient, clean and safe. It further solidifies the strong trade position of our port and offers new opportunities."

Erik Groot Wassink, director special products at Nunner Logistics, comments: "Nunner Logistics transports a lot of containers from China destined for the UK on the new silk road, with most trains arriving in Duisburg without a suitable intermodal link onwards to the Dutch ports connecting to the UK.

"This new service bridges the gap, ensuring a sound intermodal connection for cargoes destined for the UK. It is also a wonderful intermodal addition for our services between the Netherlands, the UK and CIS countries."

"This greatly enriches our current rail shuttle services on this corridor" adds Sander de Roo, managing director, DistriRail.

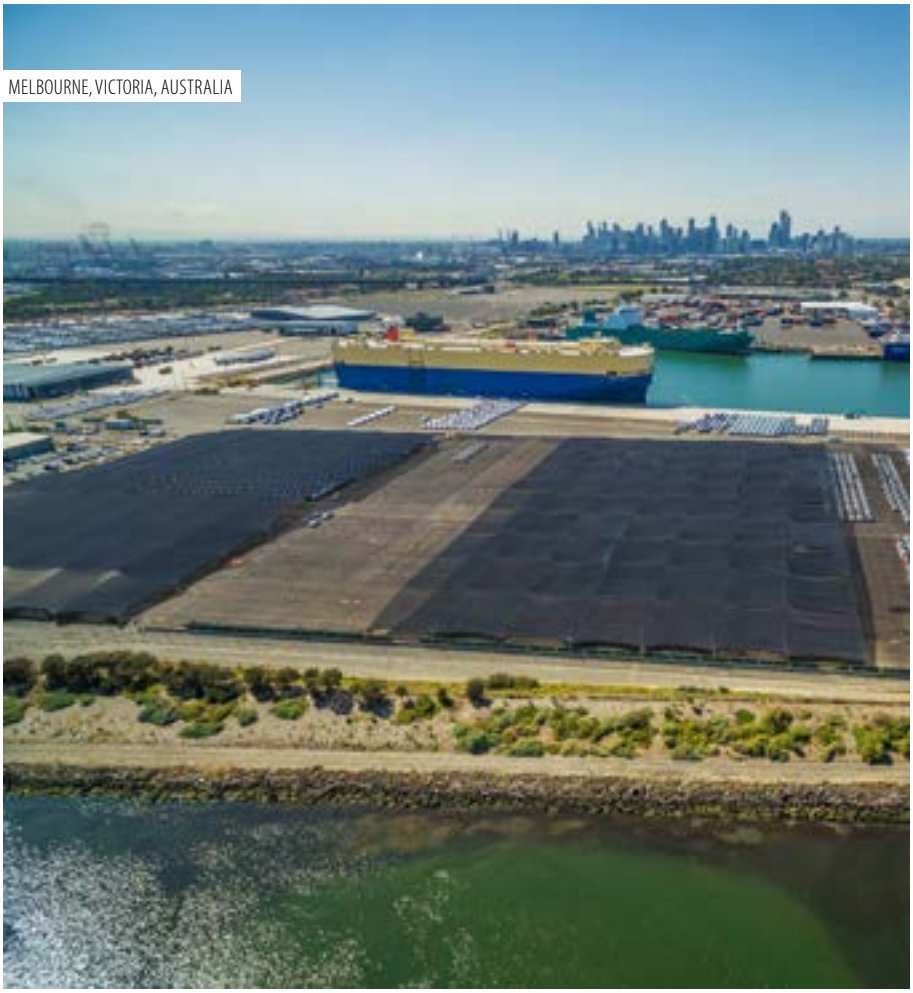
Duisport Group chief executive Erich Staake describes the connection as a "central project" in enhancing intermodal networks and supply chain resilience, while TMA Logistics chief executive Gerben Matroos sees the service as the means to "further shape Amsterdam's position as a short sea hub".

SAMSKIP

> The combination of the Samskip rail and short sea service networks creates a variety of efficient long-distance intermodal services for a sustainable door-to-door solution

SUSTAINABLE SOLUTIONS

Australian ports have been feeling the pressure in the attempt to control the spread of coronavirus and some ports have been looking at alternative strategies in the current environment


MELBOURNE, VICTORIA, AUSTRALIA

Incidents involving Filipino-crewed bulkers arriving in Port Hedland with covid-19 cases on board have led to calls from mining companies to avoid sourcing crew from the Philippines.

Two ships, including Mitsui OSK Lines's *Vega Dream*, had arrived at the port from the Philippines with sick crew members, according to Western Australia's health minister Roger Cook, and Western Australia's Chamber of Minerals and Energy and a number of mining companies are reviewing whether or not to use crews from Manila.

Mitsui OSK Lines issued a statement about the crew position saying: "Among the seven crew members that have tested positive, one boarded on 13 August and six boarded the vessel on 24 September, which is the latest crew change for the vessel. All crew members have boarded in compliance with the Department of Transportation in the Philippines, Protocol for Crew Change and Repatriation, as well as being quarantined and tested negative in the Philippines prior to joining."

SUSTAINABILITY IN PORTS

Ports Australia has launched its world first Port Sustainability Strategy Development Guide with the aim of providing Australian ports with a systematic and robust approach to sustainability as they prepare their strategies or evolve the work they've already done.

The approach has been industry applied throughout Australia and New Zealand, but equally has the potential to be adapted through ports across the world according to Ports Australia.

The guide follows on from Ports Australia's 2019 Ports and a Sustainable Australia, which went hand in hand with a Sustainability Hub, both projects showcasing the work Australian ports are already doing for the sustainability of their business and surrounding communities and environments.

Head of Ports Australia Sustainability Working Group Simona Trimarchi comment: "Given the nature of what ports do and the incredible amount of value we provide to regional and national economies and the natural environments and communities in which we operate, sustainability planning is critical.

"The guide is different in that it is a how-to on sustainability, it gets into the detail of how to start looking at sustainability for your business, how to define sustainability and then how to develop a logical and structured plan on how to advance it over time.

"It also includes the ethos of sustainability principles, how to make actions practical and results tangible, as well as looking at the United Nations Sustainable Development Goals and how to factor what they mean into your specific port business' sustainability strategy so that it has an ultimately holistic approach."

Ports Australia Mike Gallacher reiterated the organisation's belief in sustainable practice and how it should be positioned at the core of business, community and environmental practice.

"I've repeated time and again that ports are not just trade gateways, they're community members operating along Australian coastlines which aren't just beautiful locations, but socially and ecologically important environments.

"We recognised that sustainability, just like the ports sector, is unique. There is no one size that fits all, which is why this guide had to be made adaptable to suit any port wanting to future-proof their business."

PORT SPENCER GO-AHEAD

Port Spencer deep water port has received the green light from the authorities as a means of boosting Australian grain exports from South Australia's Eyre Peninsular.

The Peninsular produces about 2.6m tonnes of grain or about 8% of the Australian grain crop. About 85% of this is exported, principally to Asia and the Middle East.

With approval of the Public Environmental Report having been received and plans in place for Port Spencer to accept grain from the 2021-22 harvest (commencing November 2021), Peninsular Ports says growers will benefit from: increased competition resulting in freight savings and supply chain savings; advanced receival and storage technology; the largest at-port storage facility in the region (currently planning for approximately 800,000 tonne capacity); new access to affordable shipping capacity, particularly for small-to-medium traders, which will bring greater competition to global trade. This should contribute to higher prices paid for SA grain.

Port Spencer will also benefit global grain traders by providing: additional shipping slots in the peak demand period of December to March; wharf loading of Panamax sized vessels (83,000dwt) and associated cost efficiencies; value-add blending capacity to meet buyers' needs and flexibility to further expand 'at port' storage.

With the recent closure of the grain rail freight services on Eyre Peninsula, it is estimated that up to an additional 30,000 truck movements will go through the township of Port Lincoln each season. Development of the Port Spencer deep water port facility will divert significant truck movements into, and out of Port Lincoln, reducing road maintenance costs and improving road safety.

Port Spencer's deep-water port location avoids the need for marine blasting and ongoing dredging, significantly reducing environmental impact and ongoing maintenance costs. The Port facilities will provide capacity to hold multiple grain types, enhancing the opportunity to increase grain handling speed and throughput.

These factors contribute to Port Spencer having what Peninsular Ports believes will be the lowest operating costs for any port in the region.

Some farmers have been criticising plans to build the new grain port on the basis that there are few benefits to them of building another facility on the Peninsular and the main drive behind the development is for investors and there is already another development on the peninsular in the pipeline.

Peninsular Ports, meanwhile, believes that the advent of the new facility will increase competition and therefore impact on storage, handling and port costs, with resulting benefits for grain producers.

RENEWABLE ENERGY

The South Australian Government has also welcomed the beginning of construction of two renewable energy projects near Port Augusta worth $670m.

DP Energy and Spanish global energy company Iberdrola are investing $500 million in a hybrid wind and solar plant at Port Augusta Renewable Energy Park while Nexif has begun the $170m stage 2 expansion of its Lincoln Gap Wind Farm.

Premier Steven Marshall says these major investments show Port Augusta will become a critical component of South Australia's renewable energy revolution delivering cheaper, cleaner electricity to households and businesses.

"During the construction phase of the DP Energy and Iberdrola project, there will be 200 full-time construction jobs and 20 full-time ongoing jobs once the project is complete," he says. "Nexif's expansion will generate 110 jobs during

the construction phase and 10 ongoing jobs once operational.

"We welcome the investment by Iberdrola into Port Augusta Renewable Energy Park as its debut into the Australian market.

"Nexif's $170m stage 2 expansion, follows a $200m investment in stage 1 and a proposed $400m investment in stage 3.

"These projects provide a critical boost to South Australia's post-covid economic recovery, and are encouraged by the SA-NSW interconnector which provides them with new export opportunities."

Minister for Energy and Mining Dan van Holst Pellekaan says that once completed, DP and Iberdrola's project will showcase a new generation of renewables designed to provide predictable power more uniformly across the day. "This international project highlights how the SA-NSW Interconnector is cementing South Australia's role in a clean energy future, with the $500m project comprising 110MW of solar generation and 210MW of wind generation," he says.

"The project will see 50 wind turbines take advantage of the Port Augusta area's usual high daytime wind resources, in addition to 245,000 solar panels.

"The project's combined solar and wind generation output is expected to closely match South Australia's electricity demand profile, which will help place downwards pressure on electricity prices while also assisting with the security and reliability of the grid.

"Nexif's $170m stage 2 comprises 86MW of wind and 10MW/10MWh of battery storage.

"When Lincoln Gap is complete, Nexif will have invested $770m in 364MW of wind power at the site.

"These regional renewable energy projects are an example of how the state government is delivering on its vision for South Australia to achieve 100% net renewable energy by 2030.

"We are working hard to leverage our wind and solar resources to attract investment and support a growth of the jobs from the renewable energy sector," he concludes.

The South Australian Government has invested $12m into a Regional Growth Fund, which will help 16 projects, including a number of bulk handling operations.

PORT OF MACKAY INVESTMENT

The Port of Mackay is set to benefit from more than $17m in infrastructure projects over the next 12 months, in a boost for the local economy.

North Queensland Bulk Ports Corporation (NQBP) Chief Executive Nicolas Fertin says the projects will strengthen Mackay port's capabilities to handle diversified trade.

"The state government, through NQBP, has approved a $17m package of infrastructure works that will boost the regional economy and increase opportunities for attracting trade to the region," Fertin says.

"The projects include construction of a new tug berth facility, upgrades to Wharves 1 and 4, seawall repairs and essential maintenance dredging. Additionally, we will be investing in upgrading the Hay Point administration building that houses Vessel Traffic Services.

"The creation of a tug berth facility inside the port and the wharf works will boost the efficiency of the port for current trade and position the port to continue to grow — whether for new, breakbulk trade or existing commodities such as fuel, sugar and grain," Fertin says.

He says Mackay's multi-commodity port continues to build momentum in growing and diversifying its trade, with the volumes in the past financial year the second-best on record.

"These works will further strengthen the Port's role as a key part of the Mackay economy and as a gateway to the central Queensland region."

DREDGING PROJECT

North Queensland Bulk Ports Corporation (NQBP) has applied for permits to enable the continuation of maintenance dredging at the Port of Weipa.

The 10-year permit application, to be assessed by the Department of Agriculture, Water and the Environment (DAWE), will allow NQBP to continue its maintenance dredging programme when needed until 2031.

NQBP CEO Nicolas Fertin says maintenance dredging was undertaken by port authorities around the world and was critical for maintaining port infrastructure.

"In the same way we maintain roads and rail lines for freight transport, we need to look after our port infrastructure to keep trade flowing," Fertin says.

"Regular maintenance dredging ensures efficient, navigable shipping depths for our port users.

"These activities involve detailed regulatory approval processes under international conventions, and national and state legislation."

Fertin says NQBP's assessment reports found the risks to sensitive marine environments as a result of the maintenance dredging were predominantly low when managed appropriately.

"NQBP's maintenance dredging management plan has been developed in consultation with a Technical Advisory and Consultative Committee consisting of representatives from Commonwealth, state and local government, port users, environmental/conservation, traditional owners and community interest groups."

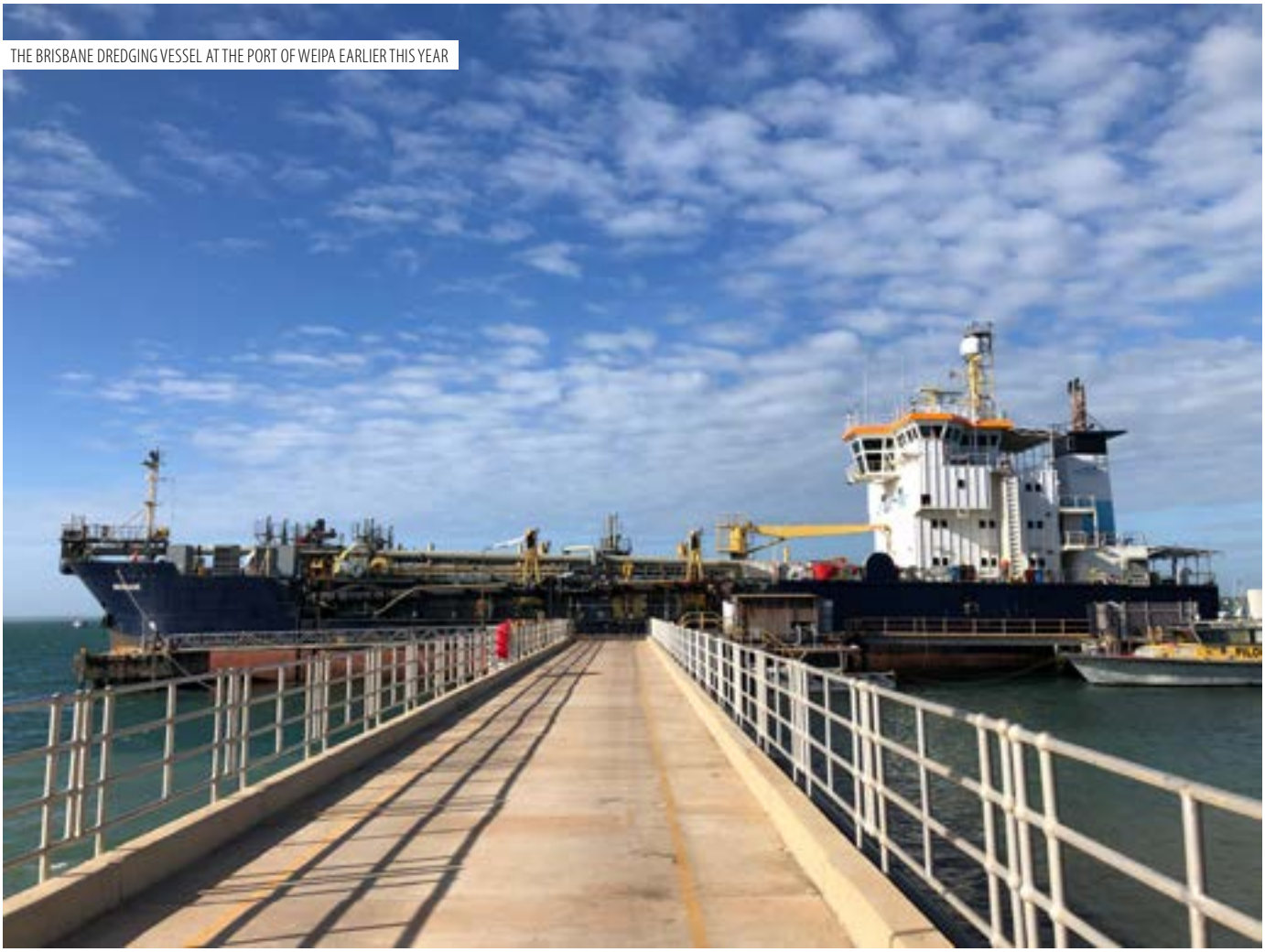
It is proposed that the overall maximum dredging volume for the 10-year permit would be approximately 10.8m metres^3.

One change to the permit, if approved, would be the relocation of the existing Dredge Material Placement Area (DMPA).

Currently located in Albatross Bay, it is proposed to shift the DMPA two kilometres west into deeper water to facilitate access for dredge vessels and to provide additional storage capacity for the next 10 years.

The most recent maintenance dredging programme at the Port of Weipa was successfully completed in June this year.

NQBP has managed the annual maintenance dredging programme at the Port of Weipa for more than 30 years.



THE BRISBANE DREDGING VESSEL AT THE PORT OF WEIPA EARLIER THIS YEAR

A NEW ADDITION

Adoption of additive manufacturing is becoming increasingly popular as maritime service providers seek to reduce costs and deliver spare parts efficiently

With the signing of the letter of intent to establish a joint venture, Thyssenkrupp and Wilhelmsen will be collaborating on delivering maritime spare parts using 3D printing, leveraging on Thyssenkrupp's expertise in additive manufacturing alongside Wilhelmsen's in-depth knowledge and ongoing experience in understanding the needs of vessel fleet managers.

Based on current data, maritime fleets spend approximately $13bn a year on spare parts; with 50% of these vessels being older than 15 years, availability of parts is limited. This makes fulfilment of orders for maritime spare parts costly and complicated and, in fact, supply chain overheads involved may often far outstrip the cost of the part itself.

Traditional manufacturing processes such as machining often involve long lead times and ship managers have to maintain high stock levels in order to ensure they can fulfil orders, resulting in higher capital costs.

Additive manufacturing provides a solution to these issues by improving lead-time and costs considerations as suitable components are fabricated near the vessel location in a matter of weeks, sometimes days.

"We are already seeing very positive response from our maritime customers on Additive Manufacturing adoption," says Abhinav Singhal, director of Thyssenkrupp Innovations.

"They are realising the benefits from faster lead times, reduced costs and having more resilience in their spare parts supply chain. This is going to be a true game changer for the maritime industry and we are proud to offer it alongside Wilhelmsen."

Hakon Ellekjaer, head of venture, 3D Printing at Wilhelmsen, says: "We are very excited to enter the next phase of our 3D printing journey, hand in hand with Thyssenkrupp.

"This joint venture will, we believe, take the lead as the de-facto supplier of 3D printed maritime spare parts, continuing to bring the benefits of Additive Manufacturing technology to shipping companies by reducing the cost of spare parts, lead times and environmental footprint."

The joint venture will position both Thyssenkrupp and Wilhelmsen as leaders in the additive manufacturing fulfilment platform for the maritime sector. It is expected be headquartered in Singapore and it will serve the key port locations around the world.

STOCKPILE MANAGEMENT

Engineering for handling stockpiles of commodities such as coal is something that German company Beumer Group has been providing to ensure constant filling and reliable emptying of stockpiles in controlled situations.

Beumer offers a comprehensive product and system solutions portfolio to customers from the coal mining industry. Conveying technology includes closed pipe conveyors and open-troughed belt conveyors that can be adjusted to the respective situation.

As a system supplier, Beumer also provides extensive know-how and the necessary components for storing hard coal, for example stackers and bridge reclaimers.

"We support our customers immediately from the design phase," says Andrea Prevedello, system technology global sales director at Beumer.

Drone technology is used more and more frequently during project planning, implementation and documentation to optimise the design phase. The recorded aerial photos are rectified with regard to their perspective and evaluated photogrammetrically. The software calculates a point cloud in order to generate 3D

models from the two-dimensional views, that is digital terrain models. Stockpiles can now be greenfield and brownfield developments.

One recent customer included Prairie Eagle Mine in Illinois, the largest coal mine of Knight Hawk Coal. Beumer not only supplied the conveying solution, but also supported the mining group in building a stockpile for hard coal.

"The requirements for storing coal are obviously very different from other materials," explains Prevedello.

There are other important requirements if the stockpile is covered and if explosion-proof specific equipment is needed. Hard coal is very susceptible to spontaneous combustion, which is why the height of the stockpile must be in certain cases limited.

Stockpile dimensions and design can vary. Two layouts are generally available: circular and longitudinal. "Their dimensioning and design depend on the purpose of the stockpile," says Prevedello. Space availability and possible future expansions are also critical factors.

The application must also be considered: does the customer want to store the bulk material temporarily, then continuously feed it for further processing, like Knight Hawk?

"Then longitudinal stockpiles are your best choice," he adds. They can also be extended, if necessary. The irregular flow of bulk material arrives at the stockpile and can then be continuously introduced to the process.

Circular stockpiles are also frequently used for other bulk materials as well, for example for limestone or clay. These are used in particular by cement manufacturers and power plant operators.

Once the layout of the stockpile has been decided on, the next task is to stack the bulk material efficiently and Beumer can provide stackers for the job, which could be stationary, travel on rails or be circular

The stacking method of choice depends on whether the bulk material is only temporarily stored or if it also needs to be blended. "For simple stockpiling without blending, we provided with the simple 'cone shell method'," explains Prevedello. The stacker only moves up and down, not slew.

"The perfect system solution is always an optimal relation between stacker and reclaimer," says Prevedello. Reclaimers such as side reclaimers or bucket wheel remove the material, as necessary.

The best option for the customer depends again on the stockpiling task at end. Side reclaimers work for both types of stockpiles, longitudinal or circular. The bulk material can be reclaimed from the front or the side.

Each operator has their own very specific requirements on the stockpile and stockyard machines. This is shown in a project that Beumer is currently implementing for a customer in the energy industry. The order includes the delivery of several conveyors, including pipe conveyors and a shiploader.

LNG LOGISTICS

Given the importance of eco-friendly fuels going forward, the German Shipowners' Association (VDR) has welcomed discussions taking place on investments in LNG supply logistics.

"As one of the world's major shipping nations, Germany needs an LNG infrastructure for its shipping industry to prepare for the upcoming energy transformation," says Ralf Nagel, chief executive of VDR.

"That's why we welcome projects that quickly become reality, such as the terminal in Brunsbüttel."

Nagel was in discussion with Rolf Brouwer, managing director of German LNG Terminal. Brouwer and Nagel were discussing the status of the terminal project in Brunsbüttel and perspectives for shipping companies and the maritime industry.

Nagel emphasised that, from his point of view, LNG was currently the only marketable fuel available with which the maritime industry could approach its climate goals within the International Maritime Organization as well as the objectives set for improving air quality. He said that it is important in the long term that LNG technology will also enable the large-scale use of alternative "green" gases on board ships in an environmentally-friendly way.

"A ship's engine running on oil-based fuels cannot be converted to 'green gas' without great effort and expense — but a dual-fuel or LNG-capable engine can," explained Nagel.

"That's why we should impartially discuss and carefully weigh up the use of liquefied natural gas to power large sea going vessels — and by all means develop the supply logistics for this at our location."

"The LNG terminal in Brunsbüttel is an ambitious and forward-looking infrastructure project because natural gas and therefore LNG play an important role in the energy transformation," said Brouwer.

"The shipping industry is also facing the particular challenge of significantly reducing the emission of pollutants. The planned terminal in Brunsbüttel will be a practical support for introducing more sustainable alternative fuels, especially for shipping traffic."

The technology also enables the handling of synthetically-produced and therefore environmentally-friendly LNG. "Our project team brings a wealth of relevant experience to German LNG Terminal, enabling us to optimally implement the project from start to finish," he said.

The plan is to work with two special jetties. One will handle Q-Max tankers ranging between 120m and 345m in length and with a capacity of approx. 265,000m^3 LNG, while the other will handle smaller LNG tankers, such as bunker vessels, ranging from 70-170m.

The terminal will have a maximum unloading rate of 14,000 m^3/h, which means that large ships can be unloaded in approximately 20 hours.

Safety checks, paper work, tug assistance and so on must also be taken into account. Smaller LNG tankers will have correspondingly shorter layovers.

GOING FOR GROWTH

Expansion continues at the Port of Fujairah in Dibba, with new contracts awarded at the second-largest ship-bunkering hub in the world

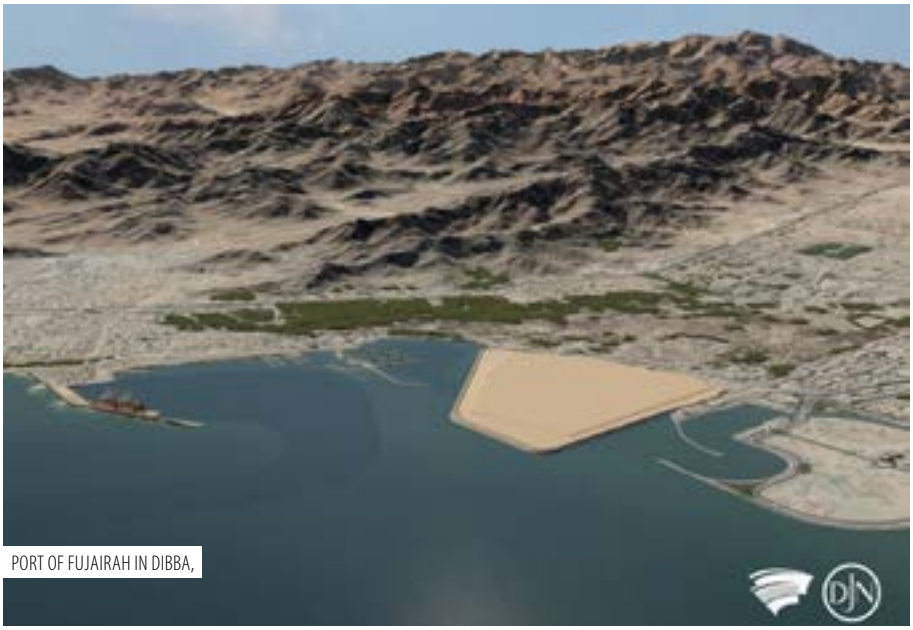
BESIX and Jan De Nul Group are helping to deliver the expansion of the port of Fujairah in Dibba, the second largest city in Fujairah in the UAE, located along the Gulf of Oman.

The works for the Dibba Bulk Handling Terminal Project were awarded to the consortium of Six Construct, BESIX's entity in the Middle East and Jan De Nul Group by the Port of Fujairah (PoF), one of the world's key oil storage centres and the second-largest ship-bunkering hub in the world.

The design-and-build contract consists of dredging the navigation channel and port basin, reclamation and shore protection, as well as constructing breakwaters, a 765m-long quay wall, foundations for shiploader rails, port infrastructure and creating utilities and aids to navigation. The fishing harbour will be relocated in the process.

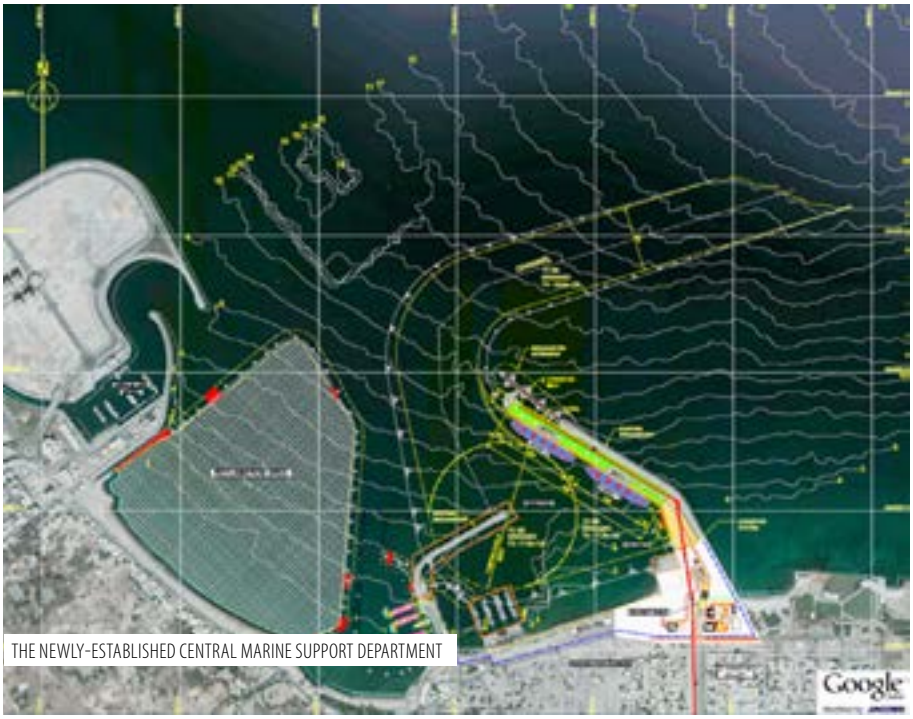
The expansion plans are part of PoF's strategy to increase the port's bulk handling capacity and operational efficiency, as well as improve the quality of its service, which is considered among the best in the world.

The consortium's approach is to optimise the design by providing



PORT OF FUJAIRAH IN DIBBA,

> "We share the same values in aspiring to create long-term partnerships to support the Emirate's development goal and we are investing in a long and prosperous relationship



THE NEWLY-ESTABLISHED CENTRAL MARINE SUPPORT DEPARTMENT

"value engineering", along with the newly-established Central Marine Support department

Yasser Laroussi Ben Asker, operations manager marine works Middle East at Six Construct says: "Six Construct is pleased to partner with the Port of Fujairah, as part of our decades-long history in the Emirate. The history of Six Construct and the port of Fujairah are very connected. BESIX's entity in the Middle East helped on several occasions to extend the port infrastructure.

"We share the same values in aspiring to create long-term partnerships to support the Emirate's development goal and we are investing in a long and prosperous relationship."

Stefan Moens, area manager Middle East at Jan De Nul Group says: "We build on many years of experience in the UAE and this award confirms the Port of Fujairah's satisfaction with our previous port expansion projects executed in the region. We are very proud to be appointed as a trusted partner for the delivery of these works, moreover, in consortium with BESIX, another company with Belgian roots."

The contract is valued at AE$371m. Works will be carried out over 19 months.

HUB BUILDING

Abu Dhabi Ports has acquired MICCO Logistics as part of ongoing efforts to enhance its status as an international hub for trade and logistics.

According to Abu Dhabi Ports, MICCO's international and regional logistics solutions, its large and diversified transportation fleet, and a network of temperature-controlled warehouses, in combination with the company's cargo handling and industrial zone capacity, put the group in a unique position to offer comprehensive supply chain services.

"The acquisition of MICCO is a critical step in our emirate's journey to establish itself as a leading hub within the global trade and supply chains," says Captain Mohamed Juma Al Shamisi, group CEO of Abu Dhabi Ports.

"The combined advantage of both organisations means that Abu Dhabi Ports will be able to compete on the regional and global stage as a provider of holistic logistics solutions, enhancing what we offer to both existing and prospective customers, while at the same time furthering our contribution to Abu Dhabi's non-oil GDP and the government's diversification efforts."

TT CLUB APPOINTMENT

TT Club has appointed Abdul Fahl to take up the role of TTMS (Gulf) director. The move follows the return to London from Dubai of Julien Horn, who will continue in the position of portfolio underwriter for the Middle East, Eastern Med and African region and reiterates the TT's long-standing commitment to provide insurance solutions and unique support for its regional membership and brokers.

The Club says it is committed to its Middle East and African membership and is looking to build upon the successful growth and enhanced local service achieved by Julien Horn during his time in Dubai. Recognising the importance of a local contact and real-time assistance for its growing customer base in these regions, TT has therefore appointed Fahl.

Announcing the move, Mark Argentieri, TT Club's regional director, EMEA says: "Julien has done a great job increasing TT's presence in the region and providing on-the-spot support to our local membership. He has strengthened relationships with not only our members, but also brokers and local stakeholders, his success has led directly to an increase in our membership in the region. As Julien returns to London to continue his underwriting duties, our team there will benefit hugely from his 'on the ground' experience. His presence alongside his underwriters,will undoubtedly bring benefits to our goal of enhancing our tailored service."

Fahl brings a wealth of diverse experience in both claims and legal affairs. In addition to filling the roles of claims executive and senior claims executive during his seven-and-a-half year career at TT Club in London, Fahl has worked within the industry for a number of years at a major shipping line. He has a master degree in maritime law and speaks Arabic, skills which the club believes will add further benefit to the region's members.

He will be spearheading the development of TT's regional growth, while continuing the focus on local bespoke services to existing members and their brokers in the region.

FIT FOR THE FUTURE?

How the industry has been coping during the pandemic has been high on the agenda at a number of conferences and webinars in recent months

Speakers have been giving their take on the challenges and opportunities of the last few months and trying to predict the outlook for the future.

At a webinar organised by the *International Bulk Journal* to discuss the covid-19 pandemic, Paul Pathy, president and chief executive officer, Fednav, Canada, told participants that the efforts of seafarers were "humbling. The times have been challenging, but we think we are up for it," he said.

According to Sander Rijsdijk, director, bulk cargo and shipping at the Port of Rotterdam, the challenge for them was to keep the port operational and ensure that vessels could enter and leave. Everything had been done to keep to keep the port up and running — there was no lockdown as the port was a lifeline and no big decrease in vessel traffic, either. The port had been working with users to ensure those under financial pressure had access to extended payment terms for use of port services.

HK Joshi, chairperson and managing director, The Shipping Corporation of India, said the situation had been challenging for all leaders and was "a crisis for which most were unprepared". The challenge, she said is "to instil faith and build up confidence when times were not normal. The man behind the machine is the most important."

Jan Dieleman, president ocean transportation, Cargill, Switzerland, added that looking back on the past six months had been "humbling to see what we are able to do." A lot of time has been spent on mental health issues, he said, while externally the greatest challenge has been logistics and crew issues, and "people getting stuck at sea".

Morten Løvstad, global business director — bulk carriers, DNV GL, Norway, added that the biggest challenge had been ensuring business continuity, notably as far as inspections have been considered. The class society has drawn on its extensive network of surveyors and local representatives while increasing its use of remote surveys.

For Rajiv Agarwal, CEO, Essar Ports, India, while the pandemic was a global phenomenon, it also presented a huge opportunity "that is pushing us toward far-reaching changes that will be with us forever". These changes will encompass both work and lifestyle, he said: "We have all come closer — everyone is coming together and calling daily." He said that in India there was a more informal style of doing things and increased communications had shortened the time need to achieve goals. That said, the crew change crisis continues.

As Dieleman explained, this was an extremely complex problem, not only getting people off ships, but getting them home. "We have been very proactive with owners," he said. While there were cases where ships had been diverted to different ports to alleviate the process, "there are always cases where you get stuck". A lot of owners had become caught in red tape, and the issue needed to be handled at international level, he said.

Joshi added that all the company's seafarers were of Indian nationality so there was less of a problem from the point of view of crew sign-off. Signing on continued to present challenges, particularly with approval of licences.

Pathy said the Canadian government had helped in the crew situation and the company had been arranging flights for crews. The company had managed to get most crew signed off and he believed there was a need to rotate ships through friendly ports. "If crews decide to go on strike," he said. "The world will stop turning."

Another problem was that communities did not want people to go to work, Agarwal said. Safety measures in port had been increased, including regular testing. He added that after a big dip in throughput through ports at the start of the pandemic, figures had been

rising, but profitability was likely to be down about 5% on the year.

Rijsdijk, meanwhile, said revenue at Rotterdam was expected to be about 10% lower overall.

According to Pathy, most ship operators started haemorrhaging cash in the first months of the pandemic and many went under. The market has since stabilised as far as daily rates were concerned, but even if things were picking up "you won't get back what you lost".

As far as Cargill was concerned, the company had been doing pretty well because of its "relentless focus on managing risk", Dieleman said. "We are quick at making decisions and there is a bit of a flight to quality." There were about 500 ships in operation in April and this figure had now climbed to about 700. "Rates are picking up. We are seeing a recovery," he said.

Joshi added that demand had been contracting in some segments and the company had a diversified fleet to ensure that if a contraction occurred in one segment, it would be offset by another. There remained cash flow challenges for bulk traders.

Another trend Løvstad pointed to was a reduction in energy consumption over the past few months, which he believed would be permanent, representing a positive result on emissions.

In the short term, ship orders were at low levels, he said, and there was high use of electronic documentation and remote surveys, with an emphasis on safety and efficiency.

Rijsdijk said another issue was that of port call optimisation to minimise idle time, with development of a port call optimisation facility at Rotterdam to plan more efficiently. Pathy also said that with the emphasis on home working, use of facilities like electronic payment were set to increase and there was a "big push on communication. Joshi, meanwhile, said the industry had been slow in adapting to new technology. "The pandemic has encouraged us not to touch anything, so it has encourage digitalisation and taught us how to do digital approvals." It has also provided more time to do things. You can have back-to-back meetings across the globe and be more productive. Digitalisation is the new norm."

Agarwal agreed that digitalisation in cargo handling meant it was possible to operate skeleton staff but improve productivity. "We haven't laid off any people, but utilisation is better. Digitalisation is the way forward. Løvstad added that while digital certificates have always been there, they are now being used more effectively and there is a move to a purely digital process.

Another issue the pandemic had raised, Rijsdijk said, is concerns about supply chains and therefore the port had been investing in storage to alleviate customers concerns in this respect as availability of storage can support supply chains.

Other trends going forward continue to be signing off and on and there is a move towards a e-indenture system, according to Joshi. Digistalisation is clearly one of the biggest changes, which is set to continue. Operators will also have to show increased agility, Rijsdijk told delegates, and sourcing is more likely to move closer to home, he believed. Dieleman added that sustainability was going to be another issue and Europe will be allocating more support based on green initiatives. He added that he hoped the human aspect would be high on the agenda. There will also be a move towards being more self dependent, said Agarwal.

Only those who can best manage change will be the most nimble in the new environment, Joshi concluded.

SHIPPINGINSIGHT 20/20

One common theme throughout the discussions at SHIPPINGInsight 20/20 was how there was no "single magic silver bullet" to the problems the industry is facing — and will continue to face in the coming decade.

"There's no one-size-fits-all solution," said Sergio Garcia, head of communications at Maritime Americas.

There was a strong call for collaboration and multilateralism, both internally and externally for those in the industry. The past year has proved to be a year in which the industry has had to work harder than ever to maintain the flow of the supply chain. A point made more than once was how, although the covid-19 pandemic made drastic innovations possible, it also threatened the very integrity of the shipping industry. Before the pandemic, the industry already had challenges with communicating effectively across multicultural, multinational and multilingual platforms.

"In the past century, we've dealt with two world wars, a depression and now two pandemics," James Lawrence, chairman of Marine Money and MTI Network, said. Covid-19 compounded previous difficulties and forced companies, organisations, governments and individuals to think of creative and innovative means of communicating. It also exposed the necessity of collaboration and open, accurate, real time data with those at sea and on land.

The crews currently onboard vessels were also a top concern for speakers on the "Technical Options for Navigating the Future" panel, as they discussed the difficulties in balancing the current global health crisis with mariners' mental and physical welfare, with many voicing the need for mariners to be considered essential workers.

"Mariners need supplies and access to medical treatments and supplies. They're at the centre of the industry," said Tom Jenkins, deputy director and head of casualty and investigations at Bahamas Maritime Authority. "Identifying the importance of crews — essential status — by nations and getting them off and on [vessels] is super important."

From developing new technologies in both software and machinery, such as scrubbers that would reduce harmful carbon emissions from vessels, to debating the various risks to cyber security and viable fuel alternatives, presentations and workshops focused on solid projects.

"We can only find solutions if we work together," said Alexander Saverys, CEO of CMB Group. "We need to start on very concrete projects."

In an ever-increasingly connected maritime world, many participants also stressed the need for transparency and accurate data reporting, which

would take a multilateral effort to make a reality, and that being reactive to regulations would not be enough in the coming decade.

"The more advances in technology, the more vulnerabilities there are," Rob Hughes, chief operating officer of Genco Shipping and Trading said. "It's something you have to monitor, and it takes a village."

On day two of the conference, one common theme throughout the discussions was how there was a clear need to stop thinking of the maritime industry as one "monolithic entity" and instead take approaches from all sides. Angela Chao, chief executive of Foremost Group, said that shipowners had to "have a seat at the table" when discussing new regulations so that they could make sure they weren't too unrealistic. "We need to have a say in our own industry," added Jan-Willem Van den Dijssel of Cargill.

There was a strong call for collaboration from all companies and organisations in the industry, from ship owners to developers. Collaboration throughout the industry is what many panellists said would lead to concrete solutions to the problems the industry is facing now, and how goals would be reached in the years to come, saying members didn't have to "go it alone".

Panellists emphasised the human element throughout the conference, both from a humanitarian perspective as well as a business one. "We keep thinking about digitalisation, but we forget about people," said Sanjam Gupta of Sitar Shipping.

Several shipowners, presidents and organisation leaders called for seafarers, both at sea and on land, be thought of as essential workers by nations as the crew changing crisis continues.

"They are essential workers and should be treated as such," said Chao. "It's not just members on board vessels who are affected, but also seafarers on shore who have families and don't have that income coming in."

"I don't think we live in an era of change, but a changing era," said Jones Alexandre Barros Soares, executive manager at Transpetro.

Although many representatives of companies and organisations were concerned with making sure goals remained realistic and attainable, panellists expressed a willingness to collaborate with others to reach those goals. Even when discussing solutions that would not work with them specifically, such as big ships relying solely on battery power, panellists in the "Future-Proof Your Fleet" workshop hosted by Sterling PBES said they were "ready for all kinds of developments" and eager to see how they could apply them. "There is always scope for joint research," said Brent Perry, CEO of Sterling PBES.

Throughout Tuesday's conference, panellists discussed alternative fuels, "plug and play" options versus full installations and retrofitting vessels versus building new ones, going into detail about each one's advantages and disadvantages.

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ABS's chief executive Chris Wiernicki opened day three by discussing how shipping needs to "Lean into the Future" by addressing how all stakeholders will be required to remain vigilant to changes required to stay aligned. "[The industry is] a team sport," he said, "even if not all the players see it that way."

He particularly referenced the need to update International Convention for the Safety of Life at Sea and International Safety Management Code regulations to reflect changing technologies and incorporate more comprehensive seafarer training.

"Whatever we build, whatever we invent, will not work without a properly trained crew," Wiernicki said. "As we lean into the future and look at decarbonisation in the industry, we cannot forget people. It is the people who will turn our dreams into reality. They are the heroes of our story."

An entire panel was devoted to the "Decade of Disruption," as panellists discussed how technological innovations would disrupt the industry, usually in a positive way. Throughout the conference, many panellists echoed the sentiments that innovation and disruption often went together.

"Innovation and disruption happen in these little tiny increments and then suddenly all at once," Rob Walker of Surveys and Forecasts said.

Knut Ørbeck-Nilssen of DNV GL called this period a "renaissance" for the maritime industry as it takes a closer look at innovative technology and takes inspiration from other industries. Walker even made a reference to how electric car technology was considered obsolete by the end of the 19th century and is now being revisited as a viable technology. "What is old can be made new again," he said.

Another point discussed by several panellists was the need to focus on what technologies and solutions are currently viable and would work as stepping-stones to greener power and zero emissions.

Ørbeck-Nilssen said that as innovations for the future were being explored, leaders needed to "look at what's working now".

TERMINAL TALES

MENTORS MAKE THEIR MARK

The Nautical Institute is launching an online campaign promoting mentoring at sea, thanks to generous funding from the TK Foundation.

Entitled "Mentoring at Sea — The 10 Minute Challenge", the campaign features a series of five short films that cast a spotlight on the many ways in which mentoring improves life at sea, while helping mariners to grow professionally.

Released fortnightly, each film documents seafarers of all ages, nationalities and ranks discussing the fundamental aspects of mentoring, whether giving or receiving. Participants speak passionately about the positive impact of sharing knowledge and experience with others.

SURVIVAL UNDER THE SPOTLIGHT

Survival solutions provider Survitec has partnered with the Museum of Godalming, in Surrey, UK, to curate a first-of-its-kind virtual museum to mark the company's 100-year anniversary.

The museum showcases inventions and patents that have played a pivotal role in maritime, energy, defence and aviation safety, often helping to shape international safety rules and guidelines.

Ron Krisanda, executive chairman, Survitec, says: "The virtual history museum highlights key milestones in the maritime and aviation industry, starting with our company founder's invention of liferafts in the 1920s. Working with the Museum of Godalming, we've been able to chronicle the early years of survival products, including the world's first marine evacuation and submarine escape suit. At Survitec, we have a long history of saving lives ,so it is with enormous pride we mark this important contribution to maritime, energy, defence and aviation industries."

The Godalming Museum is located where Survitec's founder, Reginald Foster Dagnall, established his first liferaft production facility. Survitec, then known as RFD, supplied survival products during the First World War and is credited with inventing the world's first infant lifejacket, the first fast jet anti-G trousers, and even helped develop the first Apollo space suit for NASA.

MERCY MISSION

Mercy Ships, the leading humanitarian mission delivering vital healthcare and medical training in some of the world's most economically deprived regions, has announced it will be using life-saving connectivity solutions provided by SES Networks to provide better healthcare services

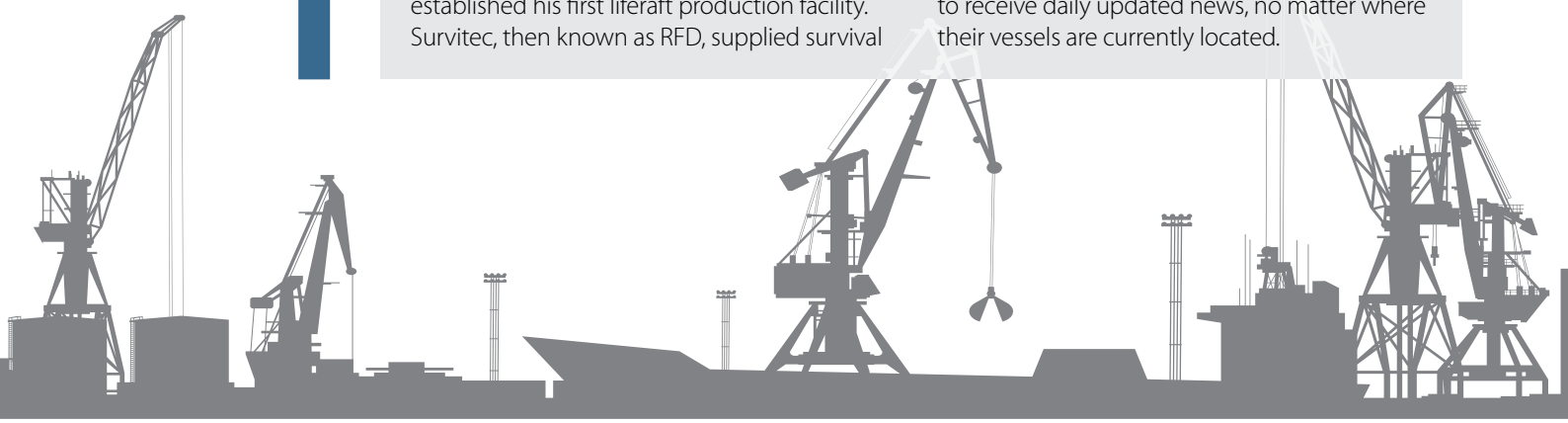
The *Global Mercy*, the newest and the world's largest civilian hospital ship, will leverage SES Networks' Signature Maritime Solution, bringing about a substantial change in diagnostics and treatment onboard for its patients. The high-performance connectivity services will enable the *Global Mercy* to fully implement remote viewing for a compact digital scope and CT scanner that enables specialist pathologists to remotely diagnose a raft of complex, life threatening, or deadly diseases onboard.

Mercy Ships will also leverage the connectivity to expand services and leave local communities with sustainable skills to care for their own. The *Global Mercy* medical staff will have the possibility to run live HD video training sessions from the operating room on board.

NEWS ON TAP

Marlink, the world's leading provider of end-to-end managed smart network solutions, has extended its partnership with software and service provider Quadrille to provide a dedicated news and information channel to Marlink maritime customers.

The multi-language news service can be subscribed to through Marlink's XChange platform. Marlink has integrated Quadrille's broadcast technology into its own smart hybrid network to enable XChange Media subscribers to receive daily updated news, no matter where their vessels are currently located.



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