

# BULK TERMINALS

SPRING 2021

*international*

THE OFFICIAL MAGAZINE OF THE ASSOCIATION OF BULK TERMINAL OPERATORS

## SUPPLY IN DEMAND

Insurers warn on threats to global vaccine rollout

## FREE STANDING

Leading the way in the UK's Freeports initiative

## GREEN GIANTS

The next generation of cranes and grabs



**abto**  
ASSOCIATION OF BULK  
TERMINAL OPERATORS

[bulkterminals.org](http://bulkterminals.org)

# THE NEMAX<sup>®</sup>

# FASTER, LIGHTER, STRONGER

ibj  
AWARDS  
2017  
WINNER  
INNOVATIVE  
TECHNOLOGY  
AWARD

reddot design award  
winner 2018

World's most productive grab for:

Iron ore \ Pelletized Bauxite \ Lead concentrates \  
Limestone \ Aggregates \ Blast furnace slag \ Sand \  
Copper concentrates and minerals (rutile/zircon), ...



Would you like more information,  
or perhaps even try the nemaX?

Feel free to contact us.  
We'll be happy to help you.

nemag 

T +31 (0)111 418 948 \ E sales@nemag.com

[www.nemag.com](http://www.nemag.com)

\ Passion  
for Performance.

# A REVEALING EPISODE

BY SANDRA SPEARES

The recent stranding of the *Ever Given* in the Suez Canal hit the world's headlines – and also gave an insight into the importance of shipping for getting goods across the globe

**M**any shipping bodies have been pushing hard to ensure that seafarers get the recognition they deserve, not least as far as the risks they are taking in pandemic conditions.

The recent stranding of the *Ever Given* in the Suez Canal has not only given an insight into the relative vulnerability of boxships transiting in difficult weather conditions, but also outlined to the general public how important shipping is to getting products to consumers around the world.

Shipping has traditionally been an invisible industry and even if the reason for its recent visibility was due to an accident, consumers will now maybe understand a little more about the difficulties under which ships and their crews have to operate.

Another issue highlighted was the importance of the bulk cargo segment, as bulkers represented the largest segment of vessels waiting to transit the canal before the *Ever Given* was re-floated.

Meanwhile, the pandemic has also revealed a less positive use of shipping,

as insurers report on cargoes of vaccines being transported around the globe coming under attack from criminals bent on profiting from the high prices these may fetch on the black market.

Turning back to the positives, the pandemic has given the industry a further push in the direction of reducing its carbon footprint, with the aim of meeting up-coming targets for phasing out the use of higher sulphur fuels.

As the scrubber versus low-sulphur fuel debate continues, companies such as Wärtsilä are looking at technological advances that would enable scrubbers to be used as a means of reducing carbon emissions. According to BIMCO statistics since the IMO 2020 global sulphur cap came into force on 1 January, 2020, the number of scrubbers installed on the world fleet has nearly doubled to 3,935 by 1 March 2021.

The UK Chamber of Shipping recently highlighted The Clean Maritime Demonstration Competition, which was launched in March. This will be used to support the development of prototype vessels and port infrastructure that could

then be rolled out widely – propelling the sector towards net-zero, as the UK prepares to host the COP26 climate change summit in November.

Aside from ensuring that their employees work in a safe environment, the pandemic has encouraged the development of more remote methods of working and has encouraged a wave of new technology in this respect. This covers a range of equipment used in ports, as well as documentation vital for shipping going electronic.

While many of us have become used to working from home or remotely, the next few months will hopefully see a relaxation of the measures aimed at combating covid-19 in order for us to get together face to face to discuss those issues affecting the industry as a whole.

All being well, we hope to be hosting our next conference in Riga in October, with the chance to socialise and exchange views.

In the meantime, we hope you enjoy our latest edition of *Bulk Terminals International*.





# RAPID DEPLOYMENT MOBILE SHIPLOADING



- ✓ Minimise Capital Investment
- ✓ Radial and telescopic features allows operator to easily and safely work within the constraints of the jetty
- ✓ Trimming of the hold achieved from one fixed feed in point
- ✓ Mobile solution perfect for multi- cargo berth (Multiple Use)
- ✓ Customised shiploading system designed specifically for the application

[www.telestack.com](http://www.telestack.com)  
[sales@telestack.com](mailto:sales@telestack.com)



#MOVINGTOMOBILE



# BULK TERMINALS *international*



**PUBLISHED BY**   
ASSOCIATION OF BULK  
TERMINAL OPERATORS

**EDITOR: SANDRA SPEARES**  
[SPEARES1@AOL.COM](mailto:SPEARES1@AOL.COM)

**DESIGNER: JUSTIN IVES**  
[JUSTINDESIGN@LIVE.CO.UK](mailto:JUSTINDESIGN@LIVE.CO.UK)

**PROJECT DIRECTOR: JONATHON FERRIS**  
[JONATHON.FERRIS@BULKTERMINALS.ORG](mailto:JONATHON.FERRIS@BULKTERMINALS.ORG)

**PROJECT MANAGER: ALEX CORBOUDE**  
[ALEX.CORBOUDE@BULKTERMINALS.ORG](mailto:ALEX.CORBOUDE@BULKTERMINALS.ORG)

**SUB-EDITOR: SAMANTHA ROBINSON**  
[SAM.ROBINSON.JOURNALIST@GMAIL.COM](mailto:SAM.ROBINSON.JOURNALIST@GMAIL.COM)

**PUBLISHER: BILL ROBINSON**  
[PRODUCTION@BULKTERMINALS.ORG](mailto:PRODUCTION@BULKTERMINALS.ORG)

**ABTO**  
35 BEACON DRIVE  
NEWTON ABBOT  
DEVON  
TQ12 1GG

**CHIEF EXECUTIVE: SIMON GUTTERIDGE**  
[CE@BULKTERMINALS.ORG](mailto:CE@BULKTERMINALS.ORG)

**TECHNICAL ADVISER: IAN ADAMS**  
[TECH@BULKTERMINALS.ORG](mailto:TECH@BULKTERMINALS.ORG)

**PR: PATRIK WHEATER**  
[PR@SEABORNECOMMS.COM](mailto:PR@SEABORNECOMMS.COM)

The views expressed in *Bulk Terminals International* are not necessarily those of ABTO or the publisher unless expressly stated to be such. ABTO disclaims any responsibility for errors or omissions or their consequences or for advertisements contained in this magazine and has no legal responsibility to deal with them.

# BULKTERMINALS.ORG

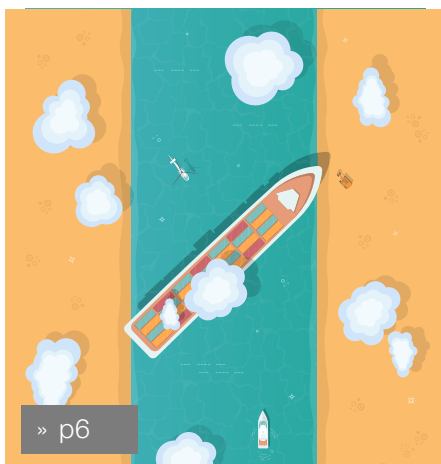


# SHIP LOADER SPECIALIST

NEUERO produces the most reliable and high-quality bulk ship loaders worldwide. Environmentally friendly with less dust, less noise and more efficiency | [neuero.de/en](https://neuero.de/en)

**NEUERO**  
Industrietechnik

# CONTENTS



» p6



» p25



» p47



» p38

## 1 EDITOR'S LETTER

Why the recent stranding of the *Ever Given* gave an insight into shipping's importance

## 6 WELCOME

ABTO CEO Simon Gutteridge looks ahead to the Bulk Terminals conference 2021

## 9 WORLD NEWS ROUND-UP

Why there has been good news for bulkers in recent months

## 16 CRANES AND GRABS

How state-of-the-art equipment is ticking all the environmental boxes, too

## 25 LOADERS

The future is looking bright, with a positive outlook forecast for the market

## 31 COAL HANDLING

Despite a global drive to reduce coal use, bulk shipments are remaining high

## 38 VIEWPOINT: CEMENT

Basil M Karatzas considers the environmental implications

## 42 VIEWPOINT: FREEPORTS

By Associated British Ports Chief Commercial Officer Julian Walker

## 44 ENCLOSED SPACES

A look at how to prevent the numerous hazards that grain storage causes

## 47 SAFETY AND SECURITY

Disruptions to the supply of covid-19 vaccines come under close scrutiny

## 51 BREAKBULK

The new players making their presence known in the market

## 53 SPOTLIGHT: UK

A number of initiatives have put the focus on cleaner ships and greener seas

## 57 SPOTLIGHT: SOUTH AMERICA

Making use of technology to improve port efficiency is continuing apace

## 59 SPOTLIGHT: ASIA

Why the region continues to dominate the global maritime trade

## 62 SPOTLIGHT: US EAST COAST

Funding opportunities have given ports a much-needed boost

## AND FINALLY...

Terminal tales from around the globe

# KEEPING IN THE KNOW

SIMON GUTTERIDGE, CHIEF EXECUTIVE ABTO

ABTO aims to keep its members firmly in the loop about global developments with its annual Bulk Terminals conference, as well as a busy programme of events throughout the year

**The pattern of the global trade in coal used for power generation and steelmaking continues to change as a result of China's continuing ban on Australian coal exports. The main coal exporting country to benefit has been Indonesia, but trade with Mongolia, Russia, South Africa and Columbia has also increased.**

India has been the main importer to benefit from the depressed Australian rates, buying less coal from its traditional suppliers Indonesia and South Africa.

China's continued approval of new coal-fired plants calls into question its stated aim to bring climate warming carbon emissions to a peak by 2030.

Others remain serious about the need to reduce emissions. For example, the *Ship-Port Interface Guide, Practical Measures to reduce GHG Emissions* focusing on eight practical measures that can support GHG (greenhouse gas) emission reduction at the ship-port interface, has been released.

Developed by the Global Industry Alliance to Support Low Carbon Shipping (Low Carbon GIA) under the IMO-Norway GreenVoyage2050 Project, the guide aims to support the maritime industry in achieving the International Maritime Organization's emission reduction goals and contribute to greener shipping. It presents several

practical measures that can be applied today with limited or low capital and operational investments, are relatively easy and quick to implement, and have the potential to contribute to GHG emission reduction with additional benefits. It can be downloaded at [greenvoyage2050.imo.org/](http://greenvoyage2050.imo.org/)

ABTO aims to keep you in the picture about these and other developments at our annual Bulk

Terminals 2021 conference and through a programme of our own and supported events throughout the year.

Assuming it is safe to do so, the ABTO Bulk Terminals 2021 conference proper will be held on Wednesday 20 and Thursday 21 October at the Freeport of Riga Authority conference venue, with a pre-conference terminal visit for early arrivals on Tuesday 19 October. While we hope to be able to meet you all





physically in Riga and are working on the assumption that this will be possible, in the event of a further recurrence of covid-19 preventing this we will split the sessions and run the conference online over four or five days during the week commencing 18 October.

Each year, the ABTO Bulk Terminals conference presents a full programme focused on the concerns of operators, offering sound practical solutions for improving safety, streamlining operations and ensuring environmental protection — as well as a market analysis and development opportunities. Autonomous operations and digitalisation have been raised as subjects of interest. Naturally, Bulk Terminals 2021 will consider the impact of covid-19 on bulk terminals. Given the importance to Latvian and Baltic ports of transit cargoes, rail and transport connectivity will also be covered.

I am grateful to BRUKS Siwertell, igus and Buttimer for repeating their support for Bulk Terminals 2021 Riga, and welcome Bedeschi on board this year.

To discuss speaking and sponsorship opportunities at Bulk Terminals 2021 Riga, or to register an interest in attending, please email [events@bulkterminals.org](mailto:events@bulkterminals.org) or call +33 (0)3 21 47 72 19. Keep an eye on the Events section

of our website at [bulkterminals.org](http://bulkterminals.org) for developments.

The Institution of Mechanical Engineers' Bulk Materials Handling Committee held a live online seminar "Material Size Reduction" on 27 April, at which ABTO members were offered the same rate as their own to attend.

Similarly, The Wolfson Centre for Bulk Solids Handling Technology, part of the University of Greenwich — whose Director Professor Mike Bradley is a regular speaker at our Bulk Terminals conference — offers a discount on its short courses to ABTO members. These will all be offered online for the foreseeable future — in particular, those dealing with the pneumatic conveying of bulk solids will be of interest to many in the bulk terminals' community.

Our partner association, the Materials Handling Engineers Association, will be holding BULKEX2021 from 12–13 October at Chesford Grange in Warwickshire, UK. BULKEX2021 is a technical conference and exhibition, with an awards dinner after the first day.

Everyone who has been to any of our annual Bulk Terminals conferences will be familiar with the highly informative and entertaining contributions of Captain Richard Brough OBE, head of our partner association, ICHCA International.

His programme advice and speaker suggestions have been invaluable to me. In July, Richard will retire, but he will always be welcome at any of our events in the future.

Richard Steele will be taking over as the new head of ICHCA International in July. Richard is a safety and skills professional with a Masters in Training and Development, who has been involved in the ports industry for more than 21 years. He is currently the chief executive at Port Skills and Safety, an organisation that he has led for 11 years. Richard is also no stranger to our annual conference. He spoke at Bulk Terminals Hamburg in 2018 about the "Hazards of handling bulk cargo and continuously improving industry's performance".

I look forward to working with Richard in the future on the co-ordination of efforts between our two organisations to promote improved safety across the maritime industry.

Enjoy our spring edition of *Bulk Terminals International*. Keep in touch and stay safe.

*Simon Gutteridge, Chief Executive, ABTO*  
Tel: +33 (0)321 47 72 19  
Mob: +44 (0)7733 242750  
Email: [ce@bulkterminals.org](mailto:ce@bulkterminals.org)  
[bulkterminals.org](http://bulkterminals.org)





**MRS  
GREIFER**

**OUR EXPERIENCE -  
YOUR ADVANTAGE**

**Rope-, Motor-, Hydraulic-Grabs**

The perfect  
grabs with  
unbeatable  
reliability,  
leading in  
efficiency  
and quality,  
expedient and  
economical.



**MRS GREIFER GmbH**

Talweg 15-17 • 74921 Helmstadt • Germany  
Tel: +49 7263 912 90 • Fax: +49 7263 912 912  
export@mrs-greifer.de • www.mrs-greifer.de

**MRS  
GREIFER**

**LESS DOWNTIME  
IS MORE UPTIME**

with **CleanScrape® Belt Cleaner**

Less Blade Replacements / More Blade Life

Less Maintenance / More Performance

Less Concern / More Confidence



visit [martin-eng.com](http://martin-eng.com)  
800.544.2947 / 309.852.2384  
[cleanscrape@martin-eng.com](mailto:cleanscrape@martin-eng.com)

© Registered trademark of Martin Engineering Company in the US and other select locations. © 2020 Martin Engineering Company. Additional information can be obtained at [www.martin-eng.com/trademarks](http://www.martin-eng.com/trademarks) and [www.martin-eng.com/patents](http://www.martin-eng.com/patents).

# WORLD NEWS ROUND-UP

When talking commodities, there has been good news for bulkers in recent months



**W**hile the Suez Canal grounding of the “Ever Given” made headlines round the world, bulk carriers represented the largest ship type of those vessels waiting to get through the canal, as BIMCO points out. There are some exciting things going on in the dry bulk sector — the second-hand market for one, is “red hot”, with new sale and purchase deals disclosure every day.

“The current strength of both the freight and the sale and purchase market inevitably leads to questions as to how long it will last,” says Peter Sand, BIMCO’s chief shipping analyst. “While there has been much talk of a new commodities super cycle, BIMCO’s expectation remains more down to earth. The current strength of the market should be enjoyed for as long as it lasts; fundamentally, the longer-term trends in the dry bulk market are not ones which support a prolonged upturn.”

The ownership of dry bulk ships has changed hands at blistering speed in the first three months of 2021. The course is now set for a record year in the bulk ship sale and purchase market.

A total of 794 ships were bought and sold in 2020, with the smaller sectors of handysize and supramax being most



popular. Not even three months into 2021, 279 dry bulk ships have been traded, with panamax bulkers being the most popular single ship size and accounting for 82 of the trades. However, the number of panamax sales comes second to the number of sales of handymax, supramax and ultramax ships when these are put together.

According to BIMCO: "The high demand for dry bulk ships at the start of this year is also reflected in the asset values, which have all grown considerably since the beginning of the year. A 15-year-old panamax ship is now worth 47.4% more than it was on 1 January 2021, an increase of almost US\$4m. While the exact growth rate and increase in value varies by ship type and age, they have all seen very impressive value growth these past three months.



The high demand for dry

bulk ships at the start of this year is also reflected in the asset values, which have all grown considerably since the beginning of the year

"The current strength of both the freight and the sale and purchase market inevitably leads to questions as to how long it will last," says Sand. "While there has been much talk of a new commodities super cycle, BIMCO's expectation remains more down to earth. The current strength of the market should be enjoyed for as long as it lasts; fundamentally the longer-term trends in the dry bulk market are not ones which support a prolonged upturn."

## COVID EFFECT ON EMISSIONS

Global shipping CO<sub>2</sub> emissions decreased 1% last year as the coronavirus pandemic curtailed 2020 shipping activity, according to maritime data provider Marine Benchmark.

CO<sub>2</sub> emissions among the 'Big-3' — tankers, bulkers and containers — actually increased 1.2%, with a 2.4% decline in container emissions offset by growth in the bulker and tanker sectors. However, the smaller sectors reversed this growth, with cruise ship emissions experiencing the greatest contraction — down 45% — and with steep declines in ferries, roro's and vehicles carriers consistent with the weak demand.

Torbjorn Rydbergh, Marine Benchmark's chief executive notes: "The coronavirus pandemic has had a varied effect on shipping, with tankers and bulkers generally performing well, while other sectors faced headwinds as consumer demand plummeted. While the overall result is a decrease in carbon emissions for the past year, the effect may be temporary as the current recovery in global economic demand points to stronger 2021 shipping activity."



## ALL CHANGE AT ICHCA

The International Cargo Handling Coordination Association (ICHCA) has appointed Richard Steele as the new head of ICHCA International. He will take over the role from 1 July 2021, on the retirement of Richard Brough OBE.

Richard is a safety and skills professional with a Masters in Training and Development who has been involved in the ports industry for over 21 years. He is currently the chief executive at Port Skills and Safety (PSS), an organisation that he has led for 11 years.

PSS is a subscriber organisation for UK ports with a remit to share best practice, develop safety guidance and standards and produce qualification frameworks for the industry. Before PSS, Richard was the senior learning and development manager for Associated British Ports for 10 years. Prior to ports, he worked in the nuclear industry on safety and skills provision.

"We are delighted to welcome someone of Richard's capability to ICHCA," comments ICHCA chairman John Beckett. "We are committed to extending ICHCA's delivery and reach and Richard's skills and experience will ensure that we move confidently forward. He has proven leadership and organisational management ability which will be invaluable to our future.

"The ICHCA board is very excited about the journey ahead as we continue to build on the exceptional work of our outgoing head, Richard Brough."

Steele says: "I am excited to join ICHCA at a time where there is real opportunity to build on the success of this internationally recognised and respected association and to create new value-add services and representation for our members."



**BEUMERGROUP**

**SOME THINK  
THAT RAW  
MATERIALS  
EXTRACTION  
MEANS TRUCK  
TRANSPORT.  
WE THINK  
DIFFERENT.**

**MADE  
DIFFERENT**

beumer.com

## GROUP URGES EU TO ACT

The EU should promote the use of green hydrogen and ammonia by ships as part of its upcoming maritime fuel law, major shipping industry players and environmentalists have told the European Commission. The FuelEU Maritime initiative will require ships carrying EU trade to progressively switch to sustainable alternative fuels.

In a letter published recently, shipping companies DFDS, CMB and Viking Cruises, commodities trader Trafigura and green group Transport & Environment say green hydrogen and ammonia are sustainable and can be produced in sufficient quantities to decarbonise the industry.

Biofuels, on the other hand, do not offer a sustainable alternative for

shipping, the groups say, as crop-based biofuels emit more than the fossil fuels they replace and there will not be enough advanced biofuels.

Instead, lawmakers must send a clear signal to potential investors to focus on renewable electricity-based hydrogen and ammonia when the EU proposes its maritime fuel policy next month, the letter states.



## RESILIENCE REPORT

The multiple drivers of change currently facing ports require a whole-systems approach before low-carbon, resilient port transformations can be realised, says a new report from The Resilience Shift.

The report closes the first phase of a dedicated project that brought together more than 30 organisations from across the port value chain to identify the current and future resilience challenges facing port ecosystems and the actions needed to realise resilience opportunities and overcome resilience threats.

*Resilience4Ports: Gateways to a resilient future can be found at [resilienceshift.org](http://resilienceshift.org)*

## VACCINATION LOTTERY

Once again, seafarers are falling victim to the lack of focus and joined-up thinking from leaders of governments and the maritime industry, which has become apparent during the current on-going crew change crisis. The vaccination lottery that is faced by the industry is beginning to hit the dry bulk sector hardest, says dry bulk shipowners association Intercargo.

"We are seeing a number of port states suggesting that all crew on board a vessel must be vaccinated as a pre-condition of entering their ports and, indeed, insisting on a particular brand of vaccine. This is, of course, a very serious problem for the industry as a whole, when we consider the high proportion of seafarers that come from developing countries with no access to any vaccine at all," says Dimitris Fafalios, chairman of Intercargo.

"The dry bulk sector is, however, bearing the brunt of this uncertainty due to the nature of its business. Bulk carriers on tramp trading call at many more ports than other shipping sectors and are at the mercy of the nationalised vaccination policy, applying at the port of call."

Fafalios adds: "Intercargo is participating in a joint industry Vaccination Taskforce, led by the International Chamber of Shipping and aimed at providing clear solutions and

practical guidance in the increasingly complex situation we currently face."

The group has produced guidance on the legal, liability and insurance issues arising from the vaccination of seafarers and is also working on developing a preliminary list of vaccination hub ports.

## CHINA FUELS IRON ORE RISE

China's one-sided recovery has driven the iron ore market back up. In the first two months of 2021, Brazilian iron ore exports rose by 9.1% to 53m tonnes, driven by China.

So far this year, 35.2m tonnes of iron ore has been exported to China, representing a 15.2% increase from the same period last year and standing in contrast to slightly declining exports to all other countries: down 1.2% to 17.8m tonnes, continuing the trend from 2020.

In 2020, which was a year filled with disruptions, the share of Brazilian iron ore exports destined for China continued its increase, jumping to 72.6% of total world exports in the full year, an increase of almost 10 percentage points from 2019.

This testifies that, despite a fall at the start of the year, exports to China finished the year up by 14.2%, while exports to the rest of the world fell by 30.0%. Combined, total Brazilian iron ore exports fell by 2.7%.

"The iron ore market has had a strong start to 2021 as exporters have rushed to sell their cargoes given the current price of iron ore which has reached levels last seen in 2010, incentivising exporters to sell whatever they can. It is also testament to the continued classic recovery in China which is always steel heavy," says Peter Sand, BIMCO's chief shipping analyst.

So far, there is little indication that the disruption in coal trade between China and Australia has spread to iron ore, with both countries dependant on this trade, regardless of the current state of their relationship. In annual volume terms, Australian iron ore exports to China are three times as high as those from Brazil, BIMCO says.

The recovery in Chinese industrial production and, in particular, steel demand, was one of the most important factors for the dry bulk shipping market recovery in the second half of 2020.

Further developments on this front will be key to watch when trying to gauge the direction of dry bulk seaborne transportation demand," says Sand.

So, what next for Chinese iron ore demand? In the first two months of 2021, Chinese iron imports have risen by 2.8%, reaching 181.5m tonnes, up 4.7m tonnes from last year, but not quite matching the record high of the first two months of 2018 when China imported 184.6m tonnes of iron ore. Despite the pandemic, Chinese iron ore imports finished 2020 at 1.17bn tonnes, its highest ever annual level, and the equivalent of 5,851 capesize loads (200,000 tonnes).

The recovery in steel production has been driven by government stimulus measures focused on a recovery in industrial production and exports and construction, driving demand for steel and thereby iron ore.

This growth has continued into 2021, with the first two months seeing steel production reportedly rise by 12.9% from the same period in 2020, which itself posted growth from 2019 (+3.1%).

Chinese demand for steel is expected to remain robust in 2021 as steel intensive industries such as construction and manufacturing are set to continue growing.

However, in the longer term, the shipping industry cannot count on Chinese iron ore imports continuing to grow at the current pace.

"China's path towards peak emissions and then onwards to carbon neutrality will be an interesting one to watch for dry bulk shipping, as well as for the wider industry, as this engine of growth looks for new solutions," says Sand.

"However, it will not be an overnight process and for this year, with a continued push on a recovery in steel heavy industries, Chinese iron ore imports are on track for another record-breaking year," he concludes.



# 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 30m<sup>3</sup> 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 GmbH**  
**Talweg 15 - 17**  
**74921 Helmstadt**  
**mrs-greifer.de**  
**export@mrs-greifer.de**  
**Phone: +49 7263 9129-15**  
**Fax: +49 7263 9129-12**



# VIGAN LESSENS THE LOAD

COMPANY NEWS



**Billions of tons of cereals circulate around the world every year to feed the world's growing population. Grains are mainly carried in bulk by sea and are then transported overland by truck or train, bringing the cargo to its final destination.**

This is where VIGAN comes in, by offering continuous ship-unloading and loading solutions, by pneumatic or mechanic systems.

Our special handling technology maintains all the physical and chemical characteristics of products during their transport. Challenges for grain bulk logistics are energy, labour and demurrage costs, while safeguarding the quality of the discharged product and ensuring reliability over a long period of time in a demanding environment. VIGAN offers tailor-made solutions to meet these challenges.

VIGAN's equipment offers a fast return on investment by optimising operational costs:

- » Low energy consumption: 0.6-0.8kW per unloaded ton
- » Highly efficient cleaning of the vessel or barge hold: maximising discharge efficiency (75% and more) leads to minimised demurrage costs
- » Reliability results in low maintenance costs and time-out reduction
- » Durability (machines with a life expectancy of 30 years and more) and cost efficiency lead to long-term investment with short-term pay-back
- » Ease of operation (simple high tech) means limited manpower and low operating cost.

Although the coronavirus pandemic has made entrepreneurs more careful in their decisions, 2021 looks more promising. As the policy of having fewer trucks on the roads spreads, the tendency of companies in Europe and other continents to use waterways for cargo transport has created more opportunities for our barge unloaders. More logistic operations will include pneumatic unloaders in the near future.

The VIGAN NIV 600 pneumatic ship unloader has now become the standard, representing on average 60% of NIV-type pneumatic ship unloaders sold by VIGAN over the past few years.

Each machine is customised and optimised according to customers' technical requirements and site specifications: gantry type (stationary, self-propelled on rubber wheels or on rails); unloading capacity (from 160 to 800 tons/hour); boom length (up to 30m); diesel/electrical power unit, and many other specific optional devices.

VIGAN NIV-type pneumatic ship unloaders are typically suitable for medium-size vessels up to post-panamax, mainly due to their boom length, which can reach up to 30m, and the high suction capacity, up to 800tph.

VIGAN's pneumatic equipment will handle most free-flowing products with densities, between 0.5 and 0.9 and a natural angle of repose less than 40°. These include all kinds of grains (corn, wheat, barleys), oilseeds, raw materials for animal feed, wood pellets, specific chemicals such as soda ash and also slightly compacting products such as soy bean meal.

As each case is specific, VIGAN helps customers to make the right choice. It is important to ensure that the selected machine is the most suitable for the required job, which is generally a rather complex matter. To unload, for example, up to five million tons of seeds per year, VIGAN usually recommends the use of one or two pneumatic ship unloaders on a gantry. For higher unloading rates, VIGAN recommends a mix between NIV and SIMPORTER (mechanical ship unloader). In this case, a pneumatic ship unloader would also be dedicated to assist in the cleaning of ship holds, which is the least efficient phase during the unloading with mechanical equipment.

Our unloaders are all designed, manufactured and pre-assembled in VIGAN's factory in Belgium. Its central position in Europe makes it possible to exploit the excellent network of top-quality suppliers in Europe.

VIGAN's international network of agents enables the engineering team to adapt its equipment to any specific local customer's requirement.

**For more information, visit: [vigan.com](http://vigan.com)**



NIV 500 AT PORT OF TAICHUNG, TAIWAN



# VERSATILITY IS KEY

Crane and grab manufacturers need to consider not only efficiency and versatility in port handling, but also whether equipment ticks environmental boxes



**K**armsund Havn IKS in Haugesund, Norway, has just signed a contract for a second Liebherr LHM 550. Only three years ago, Karmsund Havn ordered its first Liebherr mobile harbour crane, type LHM 550. The machine brought additional business to the port, so another LHM 550 is now being purchased to meet the increased demand. The second LHM 550 will enable the Haugesund Cargo Terminal to offer tandem lifts of up to 308 tonnes for the growing offshore wind industry.

The port of Karmsund is one of the largest in the region and wishes to expand capacity further, hence placing the order for another LHM 550 mobile harbour crane from Liebherr. The additional crane is required to assist with the port's ever-growing cargo business and booming offshore wind industry.

One of the big advantages of the additional crane is the possibility of using both for tandem lifts, thus even doubling the total crane capacity.

"We are deeply involved in the project market and have the best equipment fleet in Norway for heavy lifting," port director Tore Gautesen says.

"The investment in the second crane will also give us great opportunities to

position the terminal when handling modules for offshore wind turbines, as the crane offers possibilities for tandem lifts with crane number one with a total capacity of 308 tonnes.”

The harbour crane will be operated on electricity, which corresponds with Karmsund Port Authority’s vision that the port should, as far as possible, be operated under the principles “Lean – Clean – Green”.

The crane will be able to operate the entire dock area at Husøy and is equipped for handling containers, bulk cargo and project loads.

“The new mobile harbour crane will, like the first one, be powered by electricity. This is in line with the Port of Karmsund’s goal of a green port,” adds Gautesen.

The new machine has a maximum lifting capacity of up to 154 tonnes and a maximum outreach of 54m.

## HYBRID DEVELOPMENT

A Sennebogen material handler 870 hybrid with crawler tracks is being operated at the inland port of Bendorf, Germany.

Bulk goods, general cargo and timber are just some of the products being handled in the port and stevedoring companies are increasingly relying on material handlers to replace cranes on the quay, some of which are getting on in years.

There are several reasons for this, including the fact that the volume of cargo handled in inland ports has risen steadily in recent years and more goods are being transported by water.

It also becomes more difficult to purchase spare parts the older the existing crane models are. On top of that, depending on the material, a material handler completes two work cycles in the same time that a crane only manages one cycle.

Each year, the port handles around 300,000 tonnes of material with the Sennebogen 870 Hybrid. The port has a total quay length of 900m, with two docks where the 870 E is flexibly deployed, and 65,000m<sup>2</sup> of storage facilities.

For managing director Markus Stock, however, the decisive feature of the

material handler is the Sennebogen Green Hybrid System. “Thanks to the recuperation energy, fuel consumption is significantly reduced and we can now work even more efficiently. The machine works very reliably and is virtually always available. Thanks to the user-friendly electrical system, we can also do some of the work ourselves with specific guidance.”

## RECORD-BREAKING CRANES

Port Everglades in the US recently broke a record as it commissioned three new Super Post-Panamax gantry cranes — the largest of their kind in the world at 175ft and valued at \$13.8m each.

The cranes are unique because of the Port’s proximity to the airport. Shanghai Zhenhua Heavy Industries designed and manufactured the cranes as special “low-profile” models that extend out rather than up to avoid the flight path restrictions of Fort Lauderdale-Hollywood International Airport, which is less than two miles away. They are reportedly the largest low-profile container gantry cranes ever manufactured.

Each crane has the ability to handle containers stacked eight high from a ship’s deck and reach 22 across. Port Everglades’ existing seven gantry cranes in the Southport area, where most of the containerized cargo operations occur, are only 151ft high and limited to containers stacked six high, reaching 16 across.

Port Everglades is in the process of adding new cargo berths, deepening and widening waterways and expanding cargo and rail capacity, while paying close attention to environmental needs.

In addition to acquiring the new cranes, the existing low-profile Post-Panamax gantry cranes in Southport will be upgraded to a lift capacity of 65 tons from the current 46.5 tons.

With the cargo terminals proximity to a sensitive marine environment, all the cranes are fitted with lighting that reduces the impact on nearby nesting sea turtles through lower light levels and limiting the amount of lights that move beyond the work area.

The new cranes are part of the largest expansion project in the Port’s history, which includes lengthening the Southport Turning Notch from 900ft to 2,400ft to allow for up to five new cargo berths. Construction for the \$471m project is ongoing and expected to be complete by late 2022.

The project is anticipated to support an estimated 3,045 construction jobs and 5,529 direct, induced and indirect local/regional jobs, according to a study produced by maritime research firm Martin Associates.

Port Everglades is also working with the US Army Corps of Engineers to deepen the port’s navigation channels from 42ft to 48-50ft and to widen narrower sections of the channel for safer vessel passage. The port received a “New Start” designation in 2020, and anticipates the deepening and widening project to commence in 2023.

“With the cargo terminals

proximity to a sensitive marine environment, all the cranes are fitted with lighting that reduces the impact on nearby nesting sea turtles through lower light levels and limiting the amount of lights that move beyond the work area

# BULK TERMINALS 2021

THE ONLY EVENT AIMED AT THE ENTIRE BULK TERMINALS INDUSTRY

The Annual Conference of the Association of Bulk Terminal Operators (ABTO)

19-21 OCTOBER 2021  
RIGA, LATVIA

Sponsors



**BEDESCHI**



**BRUKS Siwertell**  
BULK HANDLING & WOOD PROCESSING



**BUTTIMER**  
Engineering

Celebrating 40 Years in Business

With sessions focused on the concerns of operators, **Bulk Terminals 2021** will consist of a **full two-day** programme on **Wednesday 20** and **Thursday 21** October.

**NEW for 2021**

An afternoon terminal visit for early arrivals on **Tuesday 19 October**.

## SESSIONS WILL COVER

- Bulk markets
- The impact of covid-19
- Streamlining and increasing the profitability of operations
- Development opportunities
- Driving efficiency through technology, digitalisation and automation
- Keeping abreast of increasing environmental regulation
- Improving safety and security
- Autonomous operations
- Transshipment, rail and transport connectivity

**Host Port**



**FREEPORT  
OF RIGA  
AUTHORITY**

Supporting Organisations



**ICHCA**  
INTERNATIONAL



Media Partners

**BULK TERMINALS**  
*international*  
Official magazine of Association of Bulk Terminal Operators (ABTO)



For more details, visit: [bulkterminals.org/events.html](http://bulkterminals.org/events.html)



## HOPPER SYSTEM

LINX Cargo Care's new Mobile Hopper System (MHS), which was developed in collaboration with specialist equipment supplier Mobile Conveyor Services (MCS), offers an efficient and flexible solution for discharge requirements at multiple ports and berths. It is already in operation supporting BlueScope Steel at LINX's Port Kembla site in New South Wales.

The MHS brings significant advantages particularly in safety, mobility and product handling capability, and is an alternative to the traditional large hoppers that are required at every port where bulk cargoes are imported.

Unlike the MHS, traditional hoppers require large capital expenditure and are a fixed asset that can only be operated at the nominated berth. They are also often limited by the materials that can be handled, product flow and, at times, the ability of vessel cranes to reach into them.

For BlueScope Steel, the MHS is regularly dispatched where required at Port Kembla and handles bulk cargo that could not previously be discharged at its two main bulk berths. The equipment shows its versatility by being available on-call and able to pre-set the tonnes to be loaded into trucks.

The MHS has also been further adapted to accommodate scrap shred steel to reduce the need to double handle product using front-end loaders, which further improves safety and productivity.

## PEEL PORTS ORDER

Peel Ports Group has placed an order for two new Liebherr ship-to-shore (STS) cranes for its facility at the Port of Liverpool. The port currently operates five Liebherr STS with the first STS entering service in 1999.

The new STS cranes have an outreach and lift height of 40m, a backreach of 18m, a span of 16.785m and a safe working load of 40 tonnes under single lift spreader. The Liebherr crane design utilises high tensile steel and a lattice boom and beam, resulting in a lighter crane with reduced wheel loads, a key consideration due to the narrow span and quay structure at the port.

The cranes will undergo trial assembly and testing of individual drives before shipping, to allow for a rapid and straightforward commissioning, with the two cranes ready for operation early in 2022. Simultaneous motions of all drives and mechanical anti-sway are among the standard Liebherr features included for a productive and efficient crane.

The two new cranes are replacements for two of the existing STS cranes, which will be relocated to Peel Ports' Greenock Ocean Terminal at Clydeport.

The transfer of the cranes from The Port of Liverpool will allow Clydeport to offer their customers improved services from the relocated cranes due to the increase in safe working load and operational capability.

## TURKISH INVESTMENT

Sennebogen's 9300 E mobile harbour crane with a jib length of 41m is now running in the port of Iskenderun. Turkey Kalkavan Liman Hizmetleri, a stevedoring company with several locations in Turkey, invested in the powerful mobile harbour crane for Port Limak. It can be used to handle anything from general cargo and bulk goods to containers. With a reach depth of around 20m inside the ship and equipped with a four-rope grab, the crane unloads bulk carriers up to post-panamax size.

In the rapidly growing port environment, requirements for operators are constantly increasing. In their role as gates to Europe and the Middle East, Turkish ports in particular have recorded a positive growth trend for years. For that reason, streamlining and efficient management are the focus of all port professionals' efforts. This also applies to Kalkavan, which operates in several ports in Turkey. It uses a total of five Sennebogen material handling machines to unload ships.

Despite a maximum load of up to 1,200 tonnes of grain per hour in Iskenderun, the 9300 E operates economically and effectively thanks to its electric drive, as Kalkavan's managing partner Senai Koçyiğit emphasises: "Every day, we unload different bulk materials with high cycle rates, including grain, mineral raw materials and coal. Thanks to its intelligent design and robust construction, the Sennebogen electric mobile harbour crane was well worth the investment. The electric drive also minimises our operating costs in the long term."



SENNEBOGEN'S ROBUST, STAR-SHAPED MOBILE UNDERCARRIAGE HAS 56 TYRES AND A MOTORIZED CABLE REEL FOR EASY E-MOBILITY IN THE PORT. © SENNEBOGEN



THANKS TO THE ERGONOMIALLY DESIGNED PORTCAB, THE OPERATOR CAN ENJOY A CLEAR VIEW OF THEIR WORK AREA. AS AN ADDITIONAL FEATURE, THE ZOOM CAMERA SUPPORTS THE OPERATOR WHEN LOADING THE GRAB INSIDE THE SHIP HULL, CONVENIENTLY VISIBLE ON SCREENS FROM THE OPERATOR'S SEAT © SENNEBOGEN

# “CLEARLY A GAME CHANGER”

## COMPANY NEWS

**“At Nemag, we have always had this intrinsic drive to improve, to do things better,” says Riny Stoutjesdijk, Sales Manager at Nemag. This dedication to perfection has clearly paid off in the nemaX. The highly innovative and advanced dry bulk handling grab has received a Red Dot Award for Excellent Product Design and was twice awarded the Innovative Technology Award issued by *International Bulk Journal* magazine. Stoutjesdijk: “We are particularly proud of the latter. To compete with other highly renowned brands and manufacturers and then take home an innovation award is just fantastic!”**

All these awards merely confirm what many customers around the world already know: the nemaX grab is, quite simply, a wonderful addition to any bulk terminal. Among other things, it guarantees increased productivity, lower maintenance costs, energy savings and more sustainable operations. Furthermore, the innovative design also lends itself perfectly to transshipment using floating cranes.

“Last year, we transported a nemaX grab to a steel terminal for demonstration purposes, Stoutjesdijk says. “Ten minutes after it had been installed, their production was up by 15%. And productivity has a major impact on the energy consumption of a crane, which means additional cost savings. Our business cases show that the nemaX pays for itself in a year or less. Bearing this in mind, you can see why the nemaX is clearly a game changer.”



“Nemag has become a valued business partner for the Voestalpine Texas Group. We greatly appreciate its support, leadership, and commitment to operational excellence. Compared to our previous grab design, the nemaX grab has helped us to achieve operational success. Among other things, we have noticed an increase in our hourly unloading rate, average hourly cycles and maximum unit reclaiming volume.

**Jonas Chupe**  
Head of Procurement,  
Voestalpine Texas Group

## MORE THAN JUST IRON ORE

The nemaX was first embraced by iron ore terminals. Stoutjesdijk explains that the grab constitutes a perfect solution for a wide variety of bulk cargo, though. “Given Nemag’s existing strong presence in the iron ore segment, we geared our first modelling and circulations to that sector. The nemaX was therefore quickly labelled the perfect iron ore grab. However, partly due to feedback from customers, we found that it works perfectly well for various other dry bulk flows as well. Iron ore, limestone, pelletised bauxite, blast furnace sand, aggregates, lead concentrates, copper concentrates and minerals (rutile/zircon) pose no problems for the nemaX.”

More and more dry bulk terminals are now discovering the versatility of the nemaX, avoiding the need to purchase and use different kinds of grabs for different bulk flows; in many cases, the nemaX is all the grab they need.

## THINKING OUT OF THE BOX

Since its foundation in 1924, Nemag has always strongly believed in the power of innovation. Stoutjesdijk says: “If something works, it works. So why change it? However, as part of our passion for performance, we always ask ourselves a different question: how can the product be improved?”

To prevent us from being stuck in the same mindset and doing things in the same manner, we decided to involve the Delft University of Technology. It is extremely capable and knowledgeable, but also completely independent. That allows you to start thinking out of the box.”

## CUSTOMER SATISFACTION FIRST

Customer satisfaction is crucial to Nemag. So confident is the company about the qualities of its nemaX that it is offering potential customers the opportunity to try out the grab. “That’s correct, the nemaX world tour is still ongoing,” smiles Stoutjesdijk. “The grab has been all over the world. Only this morning, a customer who had bought a nemaX after trying it out sent me a clip. They are very happy. I

can explain the benefits of the nemaX and substantiate this with research and stats, but having customers experience these benefits in person is much more powerful.”

After-sales service is also an important focal point for Nemag. “You may need to provide after-sales service because there is a problem with the product. We, however, also use it as part of our drive for continuous improvement,” says Stoutjesdijk.

“We do not just want our customers to be satisfied — we want them to be extremely satisfied. We are always looking for ways to turn a seven into a nine or perhaps even a 10. That is truly part of Nemag’s DNA. Not always easy, but it does make our jobs much more interesting. At Nemag, we will not settle for mediocracy.”

## NEMAX<sup>®</sup> OFFERS YOU:

- » Highest productivity during all stages of unloading
- » 10% lighter than any comparable lightweight clamshell grab
- » 10-20% reduction of trimming and cleaning up time
- » Reduced energy cost per ton of material handled



**For more information, contact:**  
**Phone: +31 (0)111 418 948**  
**nemag.com**



# STAYING POSITIVE IN THE PANDEMIC

## COMPANY NEWS



**Despite its well-publicised challenges, 2020 has been a very positive year for Negrini srl. We have been working non-stop during the pandemic to provide our customers with assistance and technical expertise on a daily basis.**

One of our important customers is Italgru, with whom we have been collaborating for several years to provide grabs, which are used for various handling jobs carried out by Italgru's equipment. The photographs show our buckets just equipped and in testing phase.

### THE RIGHT CHOICE

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



**NEGRINI**  
SINCE 1967

Negrini company, established in 1967, specialises in engineering and manufacturing a comprehensive range of grabs and buckets for hoist machines and crawler mounted cranes. They are employed to do many jobs. Negrini buckets and grabs are very well-known for quality as well as for the very standard and skilful engineering work. In fact Negrini supports their clients by analysing the job to be done and, if needed, by adjusting the standard design of grabs and buckets to enhance their performance once in operation.

VIA TORRICELLI 4 - CASTELFRANCO E. (MI) - ITALY



[www.negrini.org](http://www.negrini.org)

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, thereby 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 states 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 technical specifications and drawings, and the company uses only reliable suppliers and also has its own qualified welders. 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.

**For more information, visit:**  
[negrini.org](http://negrini.org)



Handle bulk with  
efficiency and reliability

**Pneumatic and mechanical ship (un)loaders**

Up to 2500 tph for loaders and up to 1200 tph for unloaders.

**Low noise & dust emission machine within reach**

Turnkey solutions for cereals, soy flour, fertilizer, pellets and more...



 **VIGAN**



# GOING FOR GROWTH

The global market for loaders does not appear to have been massively affected by the pandemic, with a positive outlook forecast for the coming years



**A**ccording to a recent report by Dublin-based Research and Markets, in the midst of the covid-19 crisis, the global market for shiploaders and unloaders was estimated at US\$53.8bn in the year 2020, and is projected to reach a revised size of US\$61bn by 2027, growing at a compound annual growth rate (CAGR) of 1.8% over the period 2020-2027.

Dry product handling, one of the segments analysed in the report, is projected to record 1.9% CAGR and reach US\$43.2bn by the end of the analysis period. After an early analysis of the business implications of the pandemic and its induced economic crisis, growth in the liquid segment is readjusted to a revised 1.6% CAGR for the next seven-year period.

The shiploader and unloader market in the US is estimated at US\$14.6bn for 2020. China is forecast to reach a projected market size of US\$11.8bn by 2027. Among the other noteworthy markets are Japan and Canada, each forecast to grow at 0.3% and 1.3% respectively over the 2020-2027 period. Within Europe, Germany is forecast to grow at approximately 0.7% CAGR.

## CEMENT OPERATIONS

Bruks Siwertell has recently secured a new Siwertell road-mobile ship unloader order for cement handling operations in the Gulf of Mexico region of the US. Its new, undisclosed owners already operate Siwertell screw-type technology, recognising its ability to protect the environment from dust and spillage, and to offer a cost-effective dry bulk handling solution, with low operating costs in comparison with other technologies.

“Our Siwertell screw-type unloaders are totally enclosed, delivering a dust-tight system, which is critical for protecting the environment, but is particularly essential for operations that are situated near and within populated areas,” explains Christopher Duffy, area sales manager at the company.

“The customer already operates several Siwertell road-mobile unloaders, at different locations in the US, as well as large-scale bulk terminal unloaders,” Duffy notes. “This familiarity with our technology and confidence with the equipment and its long-term performance, were critical factors in securing this new contract. Additionally, so were our service capabilities and the fact that we are able to deliver the new unloader within 10 weeks of order confirmation.

The unit will move from place to place within the Gulf of Mexico, but is initially planned to work along the Mississippi River in the state of Louisiana. To achieve this, its owners plan to mount the unloader onto a barge, absolutely minimising the requirements for any dock infrastructure.

“The barge, along with the unloader and auxiliary equipment, can — depending on agreements at various sites — technically be transported on the water to different locations. So, it’s not only road-mobile, but also light enough to be barge-mounted and mobile on the water as well,” Duffy says.

The 10 000 S-type road-mobile unit was selected for its unloading capacity and ability to accommodate and discharge barges as well as vessels up to 10,000dwt. It will offer a continuous rated capacity of 300t/h for the totally

enclosed, dust-free handling of cement. The unloader will be delivered to the US fully assembled from Sweden, with training commencing immediately. Full-scale operations are scheduled to start by mid-June, 2021.

## TAIWAN CONTRACT

Bruks Siwertell has also received an order for two 640 D-type Siwertell ship unloaders from Formosa Plastics Corporation (FPC), part of the Taiwanese conglomerate, Formosa Plastics Group, which will bring the total number of continuous screw-type Siwertell unloaders operated by the company to 13.

The new, totally enclosed unloaders will be installed at Kaohsiung Port in southern Taiwan, where they will offer the efficient, environment-friendly handling of salt.

The new rail-mounted units will be used to unload salt, a source of chlorine that is used in the manufacture of many types of plastics. They offer a continuous rated capacity of 1,000t/h and will discharge vessels up to 80,000 dwt.

The new unloaders will feature design additions to enhance their efficiency and enable them to withstand the corrosive effects of salt. These will include an optimised inlet feeder, specifically developed for unloading salt and making it ideal for handling compacted materials at a high discharge rate.

The two unloaders will arrive fully assembled at Kaohsiung Port’s jetty number 16 on a heavy lift vessel and are due to be mounted on the rails, commissioned and fully operational by the end of 2022.

The company also recently won a service order for the total replacement of the electrical control system, including programmable logic controllers (PLCs), on one of two Siwertell 490-M type ship unloaders that serve the diversified agribulk company, Flour Mills of Nigeria, in Apapa Port, Lagos, Nigeria.

The units have a rated capacity of 800t/h and are key machines, securing the import of grains for Lagos’ buoyant pasta manufacturing industry, which serves local and international markets.



640 D-TYPE SIWERTELL

## TELESTACK AGREEMENT

Telestack has announced a new agreement with Cooper Specialised Handling to represent it in ports, inland terminals and scrap sectors across the UK.

Telestack has been established for over 30 years in the material handling industry from their base in Omagh, Northern Ireland. Telestack specialises in the complete design, manufacture, installation, and commissioning of mobile, bulk material handling conveying systems.

The intention is for the Telestack range to complement a complete handling supply portfolio. David Cooper, executive director of Cooper Specialised Handling explains: "We have come a long way in the last eight years when our entry into the port-related market was geared around forklift supply only. We recognised then the need to become a complete supplier and embrace an approach to that of a solutions provider, which fits well with the consultative approach we have to business.

"Our supply partners are carefully selected over many years. In the case of Telestack we recognise their market-positioning as well as their solutions-led approach to business. In this latter case, we share many similar ideologies and business models."

## CARGILL COLLABORATION

Bedeschi has recently been involved in a collaboration with Cargill involving a pre-processing mobile unit rather than a conventional shiploader, the company says. The project has been updated to reflect current covid-19 constraints.

The shiploader features a double track drive over hopper, grains sampling, weighing and scalping able to load ships up to Panamax size at a capacity of 1,000t/h on grain and oilseeds. The system has been designed to fully meet Australian standards (from a structural and electrical point of view) and Cargill's best practices rules.

To comply with Cargill's safety requirements, instead of using the traditional bucket elevators, Bedeschi

designed a special version of its chain elevator (normally applied to ship unloading) granting superior safety and dust tight operations.

With this application of a known technology in a completely different scenario, we have also provided a solution to the very narrow quay available, that would have allowed for loading just small barges and concentrate in a single machine what would have required several individual equipment with great decrease of operational efficiency.

The advent of the covid-19 pandemic during project execution led to a full project review process. This consisted of a detailed reorganisation of all project phases, from those that were yet to be completed, to the final step of the shiploader commissioning in Australia.

An additional challenge added to the project was the difficult visa-obtaining procedures, due to the regulation changes caused by covid-19, and the travel logistics for the Bedeschi field engineers.



BEDESCHI'S SHIPLOADER FEATURES A DOUBLE TRACK DRIVE OVER HOPPER, GRAINS SAMPLING, WEIGHING AND SCALPING





# BULK TERMINALS 2021

THE ONLY EVENT AIMED AT THE ENTIRE BULK TERMINALS INDUSTRY

The Annual Conference of the Association of Bulk Terminal Operators (ABTO)

19-21 OCTOBER 2021  
RIGA, LATVIA

## Sponsors



**BEDESCHI**



**BRUKS Siwertell**  
BULK HANDLING & WOOD PROCESSING



**BUTTIMER**  
Engineering

Celebrating 40 Years in Business

With sessions focused on the concerns of operators, **Bulk Terminals 2021** will consist of a **full two-day** programme on **Wednesday 20** and **Thursday 21** October.

**NEW for 2021**

An afternoon terminal visit for early arrivals on **Tuesday 19 October**.

## SESSIONS WILL COVER

- Bulk markets
- The impact of covid-19
- Streamlining and increasing the profitability of operations
- Development opportunities
- Driving efficiency through technology, digitalisation and automation
- Keeping abreast of increasing environmental regulation
- Improving safety and security
- Autonomous operations
- Transshipment, rail and transport connectivity

## Host Port



**FREEPORT  
OF RIGA  
AUTHORITY**

### Supporting Organisations



### Media Partners



For more details, visit: [bulkterminals.org/events.html](http://bulkterminals.org/events.html)

# 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](http://neuero.de/en)**





# Since 1908, taking the best from the past to build a better future.

Providing reliable and innovative  
solutions for our customers  
is our mission since 1908.



▲  
Shiploader for grain and  
oilseeds with a capacity  
of 1000 t/h

[www.bedeschi.com](http://www.bedeschi.com)





# COAL DEMAND REMAINS HIGH

While there may be a drive to reduce dependence on coal going forward, there continues to be a demand and bulk shipments remain high, as do sales of bulk handling equipment



**T**he Russian port of Shakhtersk, operated by the East Mining Company (EMCO), shipped 10.7m tons of coal last year, some 21% more than in the same period in 2019.

Asia-Pacific countries such as China and Korea remain the key consumers for supplies of coal by the East Mining Company, which has said that it plans to raise its profile in countries like India, Vietnam, and Thailand, increasing its shipment volumes to 20m tons per year through the port. This has led to increased investment in onshore resources.

“In 2020, we had to work in a new reality, applying the approved security protocol in the framework of prevention of coronavirus infection spread,” says Anatoly Balakin, director of the port.

“Nevertheless, we were able not only to maintain the regular mode of operation, but also to increase cargo turnover in 2020. Optimisation of production processes and well-co-ordinated work in all areas allow us to demonstrate an annual increase in shipments.

“Starting next year, we are beginning a complete reconstruction of the port, which will allow us to almost double the volume of shipments in the future.”

EMCO was established in 2013 and now is a leading producer of thermal coal marks mined on Sakhalin, the largest island in Russia. It is one of the 10 largest companies in the Russian coal industry in terms of product sales for 2019.

The company operates in line with the principle of the full production cycle, from extraction to shipment of products.

The key industrial assets in the Sakhalin Oblast are the Solntsevsky Coal Mine in the Ulegorsky District and the Coal Sea Port of Shakhtersk, which has a free port status.

EMCO is implementing a project for the construction of the longest main coal conveyor in the Russian Federation. It has over 300m tonnes of coal reserve on Sakhalin approved by the state register of national resources, as well as discovered reserves of more than 100m tonnes in the Magadan Region.

## COAL PUZZLE

With the Chinese ban on coal imports from Australia, other exporters have been stepping in to fulfil China's coal demand. As a result, some countries are lacking their usual coal imports, a gap that Australia, on the other hand, is trying to fill, according to BIMCO.

For example, South Africa started exporting coal to China in December 2020 and, since then, exports have averaged 760,000 tonnes a month, about a sixth of total South African coal exports in that period.

Meanwhile, exports to India and Pakistan, which together took almost 70% of South African seaborne coal exports in 2020, have fallen by 44.5% in the first two months of the year to 5.6m tonnes.

According to BIMCO, total seaborne South African coal exports have fallen by 24.3% in the first two months of the year compared to the start of 2020, with exports totalling 9.3m tonnes, down from 12.4m last year.

The drop in volumes has seen the number of ships catering to South African coal exports fall from 160 in the first two months of 2020 to 104 in the same months of this year.

Indonesian exporters have also increased focus on China. The

country's exports to China have risen significantly, while exports to the rest of the world have fallen, in particular to India. The drop in Indian imports from South Africa and Indonesia has been compensated for by Australia.

"Shipowners have been fast to react to the changes in the coal trade, as importers and exporters have scrambled to find new buyers and new sources," says Peter Sand, BIMCO's chief shipping analyst. "This situation has been easier to manage than the last time there was a major shake-up in dry bulk trades, after China imposed tariffs on imports of US soya beans, when seasonality and ship positioning complicated matters.

"In addition to South Africa and Indonesia, countries such as Russia and Mongolia are set to benefit from the Australian coal ban in China.

"In this fast-moving environment with import restrictions disrupting established trades, it is important to follow data from both the exporting and importing countries, especially when the discrepancy between them is as big as it has been at the start of this year," he says.

According to BIMCO: "While shipowners and operators have been quick to adapt to the changing trade patterns, the wider question of how the restrictions will affect shipping demand still needs addressing. Looking at China in isolation, the average sailing distance so far this year for a cargo from Indonesia is about half that of a cargo coming from Australia, while coal from South Africa sails 1.5 times longer.

"Imports from Russia provide a tonne mile boost compared to Australia if they come from the Baltic of Black Seas. However, the vast majority of Russian seaborne coal exports to China are shipped from East Russia, lowering tonne mile demand. Any increase in imports from Mongolia is also bad news for shipping as they are all imported by land."

One issue to be addressed is the distances covered by ships bring supplies from changing markets. "Seaborne coal has traditionally had the lowest average haul of the major dry bulk trades, and the changes

currently happening are unlikely to change that, as some trades are replaced by longer hauls and other by shorter ones," says Sand.

"It will be more important to see how demand for Chinese coal imports develops and how tensions between China and Australia unwinds in the future."

## HANDLING SYSTEMS SALES

Global coal handling system sales are set to grow at 4.2% year on year in 2021, and surpass US\$6.5bn in value, according to a new report by Fact MR. Demand from thermal power generation will continue to be maintained, however, long-term prospects of coal handling equipment industry will contract as a shift toward renewable energy sources is underway.

Fact.MR says in its latest study that market revenues will continue to grow at more than 4% during the period 2020-2030.

"While the US and Europe are making a gradual exit from coal energy, cost-efficiency will continue to drive demand in China and India", says Fact.MR in the latest 2020-2030 edition of the study.

"To boost efficiency and mitigate energy losses, use of integrated coal handling management systems is likely to grow in these countries. Especially, material handling and stockyard management will witness an increasing level of automation in the next decade."

Worker safety standards are influencing the design of coal handling systems and the survey suggests equipment design is being driven by a "safety-first approach", it says. Equipment manufacturers have responded positively to the evolving standards, and in the last couple of years, safer machines and components have been launched.

While implementing the design changes, manufacturers are taking a two-pronged approach – increased safety and reduced maintenance requirement. This two-pronged approach is most widely seen in conveyors, according to the study.

Conveyors remain the top-selling category in the coal handling

system market. In 2019, conveyors accounted for 50% of all coal handling equipment sales. "Although conveyors are ubiquitous at a coal plant, they remain one of the least maintained components," says Fact.MR. Conveyor maintenance requires a lucid understanding of the installed hardware and its working, which continues to be a challenge owing to the growing 'knowledge gap' in the industry.

Future coal handling equipment demand will be heavily influenced by broader developments in thermal power generation. The thermal power industry is likely to grow at nearly 3% through 2030; any major decline in growth can severely limit the prospects of equipment manufacturers.

Coal handling system manufacturers have to contend with waning demand, as focus on exiting fossil fuels gradually gains traction in North America and Europe. According to Fact.MR's analysis, bulk handling equipment manufacturers are looking eastward as fossil fuel phase-out will be slower there.

Coal generation mega-projects in China and India will be pivotal to driving future sales. These two countries collectively drive a majority of coal handling equipment in APEJ, a region that accounts for 70% share of total market.

Declining coal production in the US is limiting opportunities, although it still remains a lucrative market, the report suggests. Another major contraction in US coal production can be expected, as policy-makers turn to natural gas, and other renewables. The US only accounts for 10% of total coal handling system sales. A similar decline can be expected in the EU, with Germany, France, Spain, and Italy phasing out coal power generation gradually. The UK, for example, accounts for less than 2% of the global coal handling system market.

While China, India, and South-east Asia present stable opportunities, demand for coal handling equipment in Japan and South Korea will continue to witness a decline. Governments in these countries are focusing on clean energy, which will lead to diminishing opportunities for market players, the report says.

## GREEN BULKER

Meanwhile, as the shipping industry seeks to become greener, the world's largest LNG-powered bulker recently visited Australia to load coal bound for Korea at Dalrymple Bay.

*HL Eco* launched in December 2020 with its maiden voyage from Korea to Australia.

The ship was built by Hyundai Samho Heavy Industries and can carry 180,000 tonnes and is 292m in length. The gas-tanks are built using 9% nickel, ensuring its strength at low temperatures. The tanks can heat to 195 degrees Celsius when the gas is converted to liquid.

DBCT P/L's executive manager operations Kelvin Lockyer said he was very excited to accept *HL Eco* for loading at Dalrymple Bay.

Hyundai Samho says the ship should produce 30% less green house gas than an identical ship that is fuelled by oil.

*HL Eco* and its sister ship *HL Green* are the first of its kind. However, Hyundai Line has placed an order for an additional four bulk carriers.



HL ECO AND ITS SISTER SHIP HL GREEN © HL GREEN



# ECO-FRIENDLY SOLUTIONS

## COMPANY NEWS

Nowadays, concern for the environment is a key issue to consider during any project. Reducing the impact of coal handling and storage requires advanced technologies. Bedeschi, thanks to its long experience and know-how in the handling sector, is able to guarantee eco-friendly solutions, from train receiving to crushing, stacking, reclaiming (either with scraper or bucket wheel reclaimers), ship loading or transshipping systems. We can design, engineer, manufacture and deliver turnkey solutions for any plant capacity meeting the most stringent environmental and safety standards worldwide.

### CASE HISTORIES

The new greenfield coal power plant in Punta Catalina, Dominican Republic, supplied by Bedeschi is a complete material handling equipment set, from coal receiving rail Mobile Hopper on jetty, to coal storage and delivery, right up to the loading point at boiler area. The total plant capacity is 2x360 MW. The main characteristic of this supply is a 2,150m long pipe conveyor (D.700mm) with a capacity of 3000tph.

The project's environmental conditions were very stringent, leading to an extremely challenging design phase of equipment and structures due to heavy

winds (due to it being in a hurricane and tsunami area), soil (instability and potential liquefaction) and earthquake conditions typical of the area.

In Italy, Bedeschi supplied to two circular storages to energy group Enel. The project, which is considered one of the most innovative in Europe, consisted of two indoor domes completely computerised for the storage and reclaiming of coal, feeding the whole plant. The domes, with a diameter of 150m and a height of 45m each, are one of the biggest in Europe. The handling system supplied by Bedeschi satisfies the design, functional and safety standards.

PIPE CONVEYORS IN PUNTA CATALINA, DOMINICAN REPUBLIC





BEDESCHI SHIPLADING SYSTEM FOR COAL IN LOUISIANA, US

To Convent Marine Terminal coal yard in Louisiana, US, Bedeschi supplied three shiploaders with radial-tower type loading booms and two connecting conveyors. The shiploaders are designed to operate at a maximum rate of 6,000tph each. This maximum combined loading rate can be achieved by operating one or a combination of the three shiploaders. All of the conveyors have been designed for a 84in belt. The link belts are also rated for 6,000tph with 84in belts.

Bedeschi has designed all of the belt conveyors for the same belt width to ensure continuity of operation and spare part sharing. Dust control systems and drip trays will be provided for each conveyor to control environmental contamination. The shiploaders are equipped with safety clamps or tie-down mechanisms, in order to avoid undesirable movement during windy or storming conditions. A micro switch will give a signal to a local distributed control system that the machine is in locked position.

**For more information, visit:**  
**[bedeschi.com](http://bedeschi.com)**



BEDESCHI EQUIPMENT FOR ENEL IN BRINDISI, ITALY

# PORT AND TERMINAL OPERATIONS FOR BULK CARGOES – Short Course



on-line delivery - call to arrange an in-company course

## Subjects covered include:

- » Ship unloading technologies
- » Conveying technologies
- » Storage and discharge technologies
- » Loading and unloading control
- » Rail and road out loading equipment and control
- » Explosion and fire risks and management
- » Mobile plant and safety
- » Developments in automation and autonomous vehicles
- » Dust control and environmental protection
- » Controlling cargo damage
- » Wear protection and maintenance
- » Cargo characterisation for handleability and other issues

**Next open course – March 2022**

For anyone concerned about or responsible for the safe handling and storage of bulk materials in ports and on the sea

**Course Leader:** Mike Bradley,  
Professor of Bulk and Particulate  
Technologies and  
Director of The Wolfson Centre,  
University of Greenwich

**abto**  
ASSOCIATION OF BULK  
TERMINAL OPERATORS



**UNIVERSITY of  
GREENWICH**

The Wolfson Centre  
for Bulk Solids Handling Technology

To register an interest in attending and further course details, please contact  
Simon Gutteridge [events@bulkterminals.org](mailto:events@bulkterminals.org) +33 (0)321 47 72 19  
or see [bulkterminals.org/events/courses-and-training.html](http://bulkterminals.org/events/courses-and-training.html)



# MAKING A CLEANER, GREENER TRANSPORT CHOICE

## COMPANY NEWS

**When recovered raw materials are transported from the quarry to the factory or port, it is often over uneven ground and across populated areas. Companies often choose trucks for transportation, but as an alternative, system supplier BEUMER Group offers open troughed belt conveyors or closed pipe conveyors. These solutions are more environmentally friendly and can be far more economical.**

BEUMER Group's belt conveyors, closed pipe conveyors and open troughed belt conveyors, are particularly suited to transporting bulk material through rough terrain. The overland conveyors come with horizontal and vertical curves, depending on the topography, and can be more than 10km long. Angles inclined up to 15° are possible,

depending on the characteristics of the material to be transported. The throughput capacity of BEUMER Group conveying systems can be up to 10,000 tons per hour.

Trucks are still frequently used for greater distances. Depending on the nature of the terrain, however, they can rapidly reach their limits as they require well-developed roads and fuel, for example. The costs arising for construction, maintenance and possible extension of these roads are not insignificant. In addition, all of this implies serious landscape changes. The emissions caused by truck traffic are high, both with regard to toxic substances and to noise and dust.

BEUMER Group's belt conveyors are provided with environmentally safe electric

drives and low-energy belts. Therefore, especially in times of climate change and increasing greenhouse gas emissions, they are considered a "preferred option". The motors – which, depending on the topography are run in motor-driven and regeneration mode – are mostly adjustable. This permits an optimum load distribution on the drive unit in different operating conditions. If the belt conveying system conveys downhill, the system works in generative operation. The generated electric energy is fed back into the public network by a regenerative feedback unit. This way the operating costs of the complete system can be further reduced.

**For more information, visit:**  
**[beumer.com](https://www.beumer.com)**



THE OVERLAND CONVEYOR TRANSPORTS THE COAL FROM THE MINE TO THE MAIN PROCESSING PLANT (© BEUMER GROUP GMBH & CO. KG)



A PIPE CONVEYOR: THE ENCLOSED SYSTEM ENSURES ENVIRONMENTALLY SAFE, DUST-FREE AND LOW-ENERGY TRANSPORT OF THE ALTERNATIVE FUELS (© BEUMER GROUP GMBH & CO. KG)

# HARD LESSONS

BY BASIL M KARATZAS

A look at the cement industry, carbon emissions and their impact on the maritime sector

**T**he Paris Agreement of 2015 is a well-commended effort by 196 countries around the world to enforce policies that will limit the increase of average global temperatures to a maximum of 2°C from pre-industrial levels temperatures. As lofty as this target as it seems, it's a belated necessity and calling-cry that all countries and peoples have to come together and work hard, with little time to spare if future generations are to be ensured any chance to a world that recent generations got to enjoy.

Typically — and especially pre-covid-19 — for most of us, all such objectives would mean that some eggheads and high-falutin politicians got a pet project to look after and, like anything else on this planet, for some organisations to push their agendas and some companies to use such an aspiring goal to piggyback for more profits.

However, we would think that

the covid-19 pandemic had made abundantly clear to any concerned citizen that we live on borrowed time as far as the environment is concerned and we have all have to act efficiently and fast if such goals are to be achieved. The task ahead of us is just monstrous.

In achieving the Paris Agreement targets, each and every country and each and every industry worldwide will have to reconsider its ways and practices. For smaller (and poorer) countries and for industries that are relatively low on emissions, there may be less of an urgency seemingly, or even institutional pressure that countries and industries dominating the carbon emissions list, but the pressures can already be felt.

By some accounts, the world emits annually almost 51bn tons of carbon (the equivalent of the load of 200,000 supertankers, with the world's supertanker fleet being just 900 vessels). This is such a titanic figure that the

human brain stretches to comprehend in practical terms. And, to comply with the Paris Agreement and keep changes to temperatures in check, we have to find ways to maintain our lifestyles by not emitting exactly 51bn tons of carbon annually (and higher in the future as human population increases and our energy demands increase), and thus the "zero emissions" targets, whether by 2030 or 2050, as they came to be memorialised.

For those in the shipping industry, the "IMO 2020" and scrubber technology and cleaner fuels debates were just the first steps for an energy-intensive industry to be minimise its approximate share of 2.5% of carbon emissions from the global total. Still, the shipping industry emits close to 1bn tons of carbon per year, which is the equivalent weight of 4,000 supertankers in the above referenced calculation. Many in the shipping industry complain that



the burden (financial, technological or otherwise) is just too big for the industry to bear alone, especially since the maritime industry moves more than 80% of the world's trade, and it's cleaner than many other transport alternatives. However, again, such large emissions numbers stick out and are easy to attract attention.

Even larger numbers than the maritime industry when it comes to carbon emissions can be seen in the cement industry, which is responsible for 8% of global carbon emissions or 4bn tons annually (or 16,000 supertankers). Only the agricultural industry emits more carbon (12% of the global amount) and, if the cement industry were accounted as a country, only the US or China emit more carbon than the cement industry.

Just like the maritime industry, no-one doubts how critical to modern society and how convenient to middle-class lifestyles worldwide cement is, given that demand for cement is projected to grow to approximately 5bn tons by 2040 (a 20% increase in two decades), one can appreciate the environmental challenges phasing the industry.

Cement production is an energy-intensive process, where carbon is produced at every stage of production; however, most of carbon emissions are generated during the process and chemical reaction of producing clinker — the main ingredient of cement — emissions produced at a phase that would not easily be lowered by just using alternative (cleaner) fuels, and

so on. There have been calls for “novel cements” and the substitution of clinker with alternative materials\*, a process that will help the industry with lower emissions.

Burning crushed rock and clay in the cement kiln at 2,700°F to produce clinker is the most energy-intensive step in the cement producing process, which requires three barrels of oil energy equivalent one cubic meter (approximately 35 cubic feet) of cement. Given that more than 4bn tons of cement are produced globally each year, the enormity of the numbers is clear.

Just like shipping, there have been calls for the industry to switch to cleaner fuels in order to lower its carbon footprint, with calls for making the cement production process more efficient at every step in the way in order to lower to its carbon footprint.

There have also been calls for emphasis on carbon capture and storage (CSS) given that most of the carbon emitted in the cement production is geographically, and also logistically concentrated, in the kiln heating process.

But — and most critically — there have been calls for the industry to seek alternative substances to clinker that would reduce its carbon footprint. The concrete industry has been taking steps to “clean up its act”, but no doubt calls for more drastic action will intensify. The industry makes for an obvious target, given the size of its footprint and the industry owes it to its

customers and stakeholders — and to future generations.

In a previous article in *Bulk Terminals International*, we had explored the maritime shipping demand for cement, and that, given the fact that building new cement plants in developed countries has been highly regulated and expensive, there have been economic reasons to import cement from far away distances, a positive factor for the cement marine industry.

Although tighter regulations globally, which could put all cement producers on an even keel, mean that building new cement plants will be equally cumbersome worldwide, we are of the opinion certain production locations and countries will have a competitive advantage and it will be easier for such locations to lower the carbon footprint than at other locations.

Such advantages will act as a driver to increase production in a few mega-sites and spend more money on (maritime) transport. Thus, the tighter regulations for the cement industry will be a net positive for the cement maritime industry.

However, that will make the cement maritime industry and its fleet in need of upgrades in order to keep its own carbon footprint to as close to zero as possible.

*\* Making Concrete Change: Innovation in Low-carbon Cement and Concrete, Chatham House Report, 2018  
Johanna Lehne and Felix Preston.*



Basil M Karatzas is the Founder of Karatzas Marine Advisors & Co and Karatzas Auctions, active in the maritime industry as financial advisors, shipbrokers and marine appraisers. He is a Certified Marine Surveyor, an Accredited Senior Appraiser for marine assets, and a Fellow with the Institute of Chartered Shipbrokers in the UK. For more information, visit: [karatzas.com](http://karatzas.com)



# AUTOMATED CONVEYOR BELT CLEANER TENSIONER REDUCES MAINTENANCE AND GUESSWORK

## COMPANY NEWS

A global innovator of conveyor belt cleaning technology has introduced an autonomous tensioning system that continuously monitors and delivers proper cleaner tension. By utilising Martin Engineering's intuitive new smart technology platform to maintain proper blade-to-belt pressure, the N2<sup>®</sup> Twist™ Tensioner provides the best possible cleaning performance throughout the life of the blade. The system also alerts operators on the Martin Smart Device Manager App when the blade needs changing or if there is an abnormal condition. The result is efficient cleaning, increased safety, reduced labour and a lower cost of operation.

"We designed the unit for heavy-duty applications and tested it outdoors in punishing environments and applications," says Andrew Timmerman, PE and Product Development Engineer at Martin Engineering. "The N2 Twist Tensioner has proven itself to be a rugged and highly effective way to maximise both cleaning efficiency and blade life."

### PROPER TENSIONING

Located on the head pulley, primary belt cleaners commonly have a twist, ratchet or spring tensioner to ensure the cleaner blade stays in consistent contact with the conveyor belt for proper cleaning and material discharge. Prior to the new design, belt tensioners had to be monitored and adjusted manually – on a daily basis in some applications – so they would maintain optimum pressure and carryback removal. Estimating when blades needed changing was often a guessing game that, if left too long, could lead to belt damage.

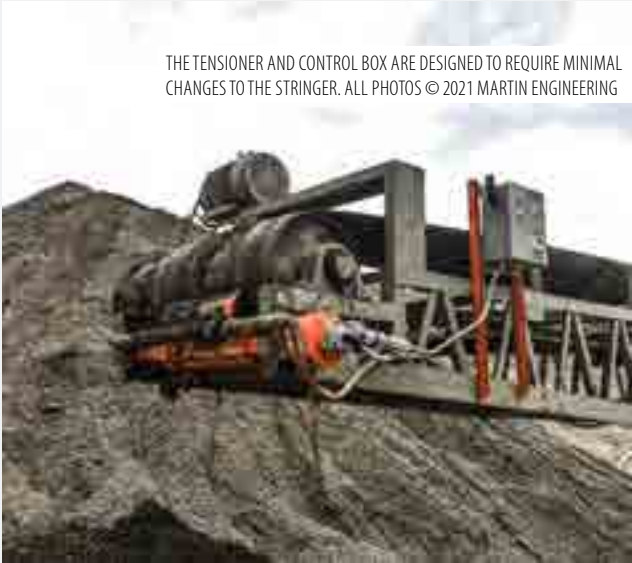


THE MARTIN N2 TWIST TENSIONER AND CONTROL BOX

EXTERNAL HOUSINGS AND CONNECTIONS ARE ENGINEERED TO WITHSTAND PUNISHING CONDITIONS



THE TENSIONER AND CONTROL BOX ARE DESIGNED TO REQUIRE MINIMAL CHANGES TO THE STRINGER. ALL PHOTOS © 2021 MARTIN ENGINEERING



Inadequate tensioning causes carryback to cling to the belt and spill along its path, piling up under the conveyor and emitting excessive dust. This requires extra labour for cleanup and can affect air quality. Over-tensioning leads to friction damage on the carrying side of the belt, premature blade wear and potential splice damage. Both scenarios create unsafe work conditions and raise operation costs significantly.

**NEXT STEP**

The N2 Twist Tensioner automatically maintains precise cleaning pressure throughout the entire life of the blade, without maintenance. The tensioner applies the proper amount of torque to deliver optimum cleaning pressure at the blade tip, supporting the Constant Angle Radial Pressure (CARP) cleaner design that withstands the force of heavy bulk cargo, but maintains a consistently tight seal across the belt profile.

Martin Engineering’s smart technology platform monitors blade wear and informs operators when the blade needs changing from control systems that are housed in a durable weather-resistant NEMA 4 control box. Experts recommend changing blades before there is a chance of detachment or a “pull-through” (inversion under the head pulley). In the event of a premature pull-through, operators are alerted, and the tensioner’s internal self-relieving coupling rolls over. A blade detachment

also triggers an alert allowing operators to quickly shut down the system and avoid expensive belt damage.

The electrical system runs both the tensioning system and the sensors. The unit is powered by a rechargeable 12-volt battery and can also be specified to run on 110-220 VAC. The system includes all necessary components for installation based on the power supply option.

**HIGH PERFORMANCE**

The N2 Twist Tensioner and Smart Device Manager App ease the burden on managers and workers so they can focus their attention on other critical details of the operation. Precise tensioning and improved belt cleaning reduce the volume of dust and spillage from carryback, improving workplace safety and decreasing the labour needed to maintain and clean around the discharge zone.

“This is a game-changer for most bulk handling operations that struggle with tensioning and carryback,” Timmerman concludes.

**GLOBAL INNOVATOR**

Martin Engineering is a global innovator in the bulk material handling industry, developing new solutions to common problems and participating in industry organisations to improve safety and productivity. The company’s series of

Foundations books is an internationally-recognised resource for safety, maintenance and operations training, with more than 20,000 print copies in circulation around the world. The entire 500+ page volumes can also be downloaded as free PDFs from Martin’s website.

Martin Engineering products, sales, service and training are available from 19 factory-owned facilities worldwide, with wholly-owned business units in Australia, Brazil, Chile, China, Colombia, France, Germany, India, Indonesia, Italy, Japan, Mexico, Peru, Russia, Spain, South Africa, Turkey, the US and the UK. The company employs more than 1,000 people, approximately 400 of whom hold advanced degrees.

© 2021 Martin Engineering Company. All rights reserved. Martin Engineering products are protected by U.S. Patents, corresponding foreign patents and patents pending. Additional information can be obtained at [martin-eng.com/trademarks](http://martin-eng.com/trademarks).

**For product information,  
Martin Engineering  
One Martin Place  
Neponset, IL 61345  
Tel: (309) 852-2384  
Toll-free: (800) 544-2947  
Fax: (800) 814-1553  
Email: [info@martin-eng.com](mailto:info@martin-eng.com)  
[www.martin-eng.com](http://www.martin-eng.com)**

# LEADING THE WAY IN THE UK

BY JULIAN WALKER

Associated British Ports Chief Commercial Officer looks at how the UK's largest ports operator has a significant role to play in delivering the first Freeports across the country

**In the March Budget, Chancellor Rishi Sunak announced the locations of eight Freeports in England, marking a significant milestone for one of the government's flagship policies. As the UK's largest port owner and operator, Associated British Ports (ABP) has a significant role to play in turning this policy ambition into reality.**

The successful bids included the Humber and Solent Freeports, where ABP is a leading partner in the proposals, as well as the Liverpool City Region and Plymouth, where ABP's ports of Garston and Plymouth also stand to benefit. Work is already underway to prepare to establish the new Freeports before the end of the year, providing a significant and timely boost to the UK's economic recovery from the pandemic.

The UK's ports are already central to our economy, handling some 95% of the nation's trade in goods. ABP's 21 ports around Britain serve as vital trading gateways that connect businesses, manufacturers and industry to global markets. Together with our customers, our ports support 119,000 jobs and contribute £7.5bn to the UK economy

every year. Freeports have the potential to further enhance the ability of ports to serve UK businesses, but they can also deliver other important goals with a focus on boosting exports, reducing carbon emissions to reach net zero by 2050 and supporting regional growth to level up the UK economy.

Our ports sit at the heart of coastal communities with proud maritime traditions. In addition to facilitating the free flow of trade, ports are also hubs for economic activity and drivers of local and regional growth. Many ports have a long history of supporting manufacturing, having been built and expanded to support these growing industries. These ports now have a critical role to play in supporting the energy transition of existing industries, while hosting the establishment and growth of new and varied businesses.

By eliminating tariffs and duties, simplifying customs processes, reducing operating costs and streamlining planning, Freeports have the potential to become magnets for inward investment in new manufacturing and innovation,

helping to create thousands of quality long-term, high-skilled jobs.

ABP's ports are well placed to deliver on the stated objectives of the Freeports policy: establishing hubs for global trade and investment, supporting regeneration and job creation, and creating hotbeds for innovation. The Humber and the Solent Freeports have the necessary scale, infrastructure and connectivity to deliver on these key objectives. ABP's ports are located on key global and European trade routes and in close proximity to important domestic industrial clusters and logistics hubs.

The ports of Hull, Goole, Grimsby and Immingham collectively handle £75bn of trade each year for businesses across the North and the Midlands. Southampton is the UK's number one export port, handling £40bn of exports every year on behalf of UK manufacturers. Freeport status can further strengthen the role of these vital trading gateways in driving trade and exports both with the EU and the rest of the world.

Freeports can also serve to accelerate the growth of renewable energy clusters and innovation hubs, helping to deliver



shared objectives on environmental protection and decarbonisation. The Humber ports already constitute an important industrial cluster which is at the forefront of renewable energy, driving the continued growth of the offshore wind sector through manufacturing, assembly, installation, operations and maintenance.

This role in supporting the offshore wind sector is set to grow in importance as the UK sets ambitious targets to reach 40GW of installed capacity by 2030.

The Humber ports are also critical to the development of the emerging green technologies like carbon capture, utilisation and storage and hydrogen, which are central to the Zero Carbon Humber initiative.

ABP is committed to the highest standards of marine and environmental protection and this will not change in areas that are granted Freeport status. As a responsible port operator, ensuring the health and safety of employees is our priority and we will remain committed to safeguarding the

rights of our colleagues wherever we operate. We strive to create a great place to work for all our employees as we encourage more people from diverse backgrounds to seek rewarding careers in the sector.

While national and international regulations will continue to apply within Freeports, these zones can potentially serve as useful testbeds for simplified planning procedures that facilitate development and deliver improved environmental outcomes. Across ABP's group, 17 of our 21 ports already have renewable energy projects and we continue to develop new ways to reduce the impact of our operations and support decarbonisation in the wider supply chain.

It is now vitally important that the benefits of Freeports are extended across the nations of the UK. In South Wales, ABP's five ports form an important part of the South Wales Industrial Cluster and have historically served both as gateways for trade and as important strategic sites for industry and manufacturing.

As a result, these ports are particularly well placed to deliver and benefit from the opportunities that Freeport status can offer, helping to drive innovation and trade while boosting economic regeneration. The faster delivery of the policy in England means that a clear policy framework and timeline should be a priority for new governments in the Devolved Administrations following the upcoming elections.

ABP has a strong track record of investment in state-of-the-art port infrastructure, facilities and services to support the sustainable growth of trade and our customers' businesses. In recent years this investment has delivered major projects to support the growth of trade for our customer and the wider economy.

Freeport status will see this commitment magnified by increased inward investment in new industries and green technologies that can help accelerate the green transition and drive economic recovery in coastal communities.



# HALTING HAZARDS

Grain is just one of the products that presents dangers, particularly in storage or enclosed space environments

**U**s-based organisation the National Grain and Feed Association (NGFA) recently launched its fifth annual, week-long safety outreach effort — Stand Up 4 Grain Safety Week — to help raise awareness about grain handling and storage hazards and provide safety education and training.

Throughout the Stand Up 4 Grain Safety Week, which ran at the end of March, companies could participate by providing presentations and activities for employees on any hazard-prevention measure. Featured topics that NGFA and its safety partners were highlighting throughout the week included near-miss reporting, grain quality, bin safety and emergency action plans.

“The past year has been notable — to say the least — when it comes to health and safety in all aspects of our lives,” said NGFA president and chief Mike Seyfert at the start of the week’s events. “We’ve learned that small changes can make a big impact.”

NGFA, which was established in 1896, consists of more than 1,000 grain, feed, processing, exporting and other grain-related companies that operate more than 7,000 facilities and handle more than 70% of all US grains and oilseeds.

## GRAIN IN CONFINED SPACES

In Indiana, US, Purdue University’s Agricultural Safety and Health Program recently released its 2020 Summary of US Agricultural and Confined-Space Related Injuries and Fatalities report, which documents 35 grain entrapment cases that occurred in the past year in the US.

The 35 cases represent an almost 8% decline in grain entrapments from 2019, when 38 entrapments were recorded. The total number of fatal and non-fatal entrapments is the second highest in the past six years. In 2020, the state with the most documented grain entrapments — fatal and non-fatal — was Illinois, with 10 cases in total. In 2019, Minnesota had the highest with seven cases. Notably, Purdue does not specifically identify the number of grain entrapment cases that occurred on farm versus at commercial facilities.

When it comes to all confined space-related incidents — including those not involving grain entrapment — 64 fatal and non-fatal cases were documented in 2020. This is a nearly 5% decrease from the number of cases documented in 2019, when 64 were recorded. Of these, 32 (50%) were fatal and 55% of all cases were directly related to grain entrapments. In addition, there were 12 incidents resulting from entanglements (ie, exposure to powered mechanical components, such as augers). Of these incidents, three were fatal.

The summary is based on data gathered, documented and entered into Purdue's Agricultural Confined Space Incident Database.

The reason behind the significant drop in non-fatal cases is unknown, but it is believed that most confined space incidents are under-reported, especially those resulting in non-fatal grain entrapments, the report suggests. Based upon prior research, Purdue estimates that the documented annual cases represent 70% of the total number of cases that have occurred annually in the corn belt.

NGFA and its safety partners have the resources — including videos and regional safety seminars — to assist employers in preventing common grain entrapment hazards, as well as providing the appropriate safety standards for farms and commercial facilities, the association emphasizes.

## INSURANCE ADVICE

As P&I Club Gard pointed out recently “there is never a wrong time to revisit your enclosed space entry procedures”.

Recurring enclosed space incidents serve as a stark reminder that entry into such spaces without following proper procedures can result in seafarers being killed or seriously injured and this point was reiterated in advice put out by the Marshall Islands last year, Gard said in a recent article.

The Marshall Islands (RMI) published a Marine Safety Advisory (MSA 23-20) last year warning that shipboard incidents relating to improper entry of and rescue from enclosed spaces continue to occur. Both tankers and bulk carriers have experienced such incidents and although the details of each incident differ, the RMI noted some similarities, including:

- » Crew members lacking awareness of the potential hazards posed by the improper entry into enclosed spaces
- » Senior crew members failing to ensure that the ship management's enclosed space entry procedures are followed prior to directing junior crew members to enter an enclosed space
- » Masters not being notified in advance that an enclosed space was going to be entered.

As highlighted by the RMI, these incidents serve as a stark reminder that failure to observe and understand simple enclosed space entry procedures

can result in seafarers being killed or seriously injured, Gard warns in its article. “They are also reminders that a well-intentioned seafarer who enters an enclosed space to assist a fellow crewmember is likely to become a victim requiring assistance, as well as delay a proper rescue operation and increase the potential for additional deaths.”

Dangerous enclosed spaces may not be easily identifiable, involving limited openings or exits, inadequate ventilation and spaces that have not been designed for continuous worker occupancy. Any enclosed space could become dangerous if it lacks oxygen, or contains toxic fumes which could come from many different sources, including the cargo itself.

Some enclosed spaces are dangerous only temporarily, perhaps due to the type of cargo carried or the work undertaken, for example a compartment during spray painting. Cargo under fumigation can also be a source of toxic gases.

Spaces may become dangerous even if they are not enclosed on all sides. Ships' cargo holds, for example, may have open tops, but the nature of the cargo carried can make the atmosphere in the lower hold dangerous. Often apparently harmless cargoes such as wood chips, wood pellets or pulp wood can be the cause of such accidents.

Fumes and gases in paint/chemical lockers and battery rooms can make





these spaces dangerous, despite being arranged with ordinary openings/doors for entry and exit. Due consideration should also be taken of the possibility of an oxygen deficient atmosphere when entering CO<sup>2</sup> rooms.

The Marshall Islands has made a number of recommendations, including reviewing enclosed space entry procedures, checking that such procedures are properly understood and ensuring adequate training is provided.

The International Maritime Organization's recommendations for entering enclosed spaces aboard ships are outlined in Resolution A.1050 (27) and its guidelines for selecting portable atmosphere testing instruments can be found in MSC.1/Circ.1477.

For RMI-flagged ships, the requirements and safety standards that must be followed by personnel entering enclosed spaces can be found in RMI Marine Notice 7-041-1.

Other flag states will have similar requirements and one example is the UK Code of Safe Working Practices for Merchant Seamen .

Section 10 of the International Labour Organisation's (ILO) Code of practice for accident prevention on board ship at sea and in port provides similar practical recommendations and guidance.

Ship managers should ensure that a risk assessment is conducted to identify all enclosed spaces on board the ship and periodically revisit the assessment to ensure its continued validity.

It is also recommended that an inventory is made of all enclosed spaces on board that seafarers may enter and where there is any likelihood that they might become dangerous. The inventory should record the particular characteristics of the space, the likely hazard involved, and the measures taken to prevent entry unless safety procedures are followed.

Any difficulties inherent in a rescue from the space should also be considered and solutions identified, so that in the event of an emergency, the crew is in the best position to respond quickly. Many incidents in the past have involved crew members going to the assistance of a colleague without ensuring that they had adequate

protection to carry out a rescue safely.

The RMI recommends that ship managers send a letter or bulletin to all ships in their managed fleet addressing:

- » the dangers of improperly entering an enclosed space
- » how to recognise an enclosed space and examples of the different types of enclosed spaces a seafarer might encounter while performing their day-to-day shipboard tasks
- » the fact that all seafarers, regardless of seniority, must not enter an enclosed space without permission and then only in accordance with the ship management's established procedure
- » who on board is authorised to permit entry into an enclosed space
- » the best way for a seafarer to assist a fellow seafarer inside an enclosed space is to immediately raise the alarm so that an organised rescue can be conducted in accordance with ship management's established procedure.

Proper training is evidently a key element. Gard regularly publishes case studies for safety meetings focusing on the risk assessment process and identification of the chain of errors that led to an incident. One of these addresses entry into enclosed spaces.

Gard says that, over the years, the club has handled numerous cases of death

and injury resulting from enclosed space entries and in most such cases, a lack of knowledge of the hazards present and/or taking procedural short cuts seem to be the prevalent causes.

"A near fatal accident involving one of Gard's own surveyors has also served as a real-life reminder to us that any enclosed space is potentially life threatening — and that even trained professionals make mistakes. Our surveyor entered a void space on board a barge without testing the atmosphere first and collapsed due to the lack of oxygen inside the space."

The story of the surveyor has been captured in one of Gard's loss prevention awareness videos. "By sharing an experienced surveyor's near fatal-mistake we aim to warn crews not to become complacent about the risks associated with enclosed space entries and to emphasise the importance of training and following established procedures – even for those that 'have done this a thousand times' and are certain that they know the procedure from A to Z."

The link below will take readers to the safety awareness campaign website, which contains the Gard video, a case study and additional loss prevention material addressing entry into enclosed spaces:

[gard.no/web/content/enclosed-space-entry-training](http://gard.no/web/content/enclosed-space-entry-training).



# SAFETY COMES UNDER SCRUTINY

While there has been considerable concentration on rolling out vaccines during the pandemic, disruptions to their supply has perhaps received less scrutiny — except on a political level, where the question seems to concentrate on who gets the vaccine first



**I**nternational freight insurer the TT Club has been warning for several months on different threats to the distribution of vaccines on a global basis.

The club says that all links in the global supply chain must be increasingly alert to a range of risks due to criminal activity targeting vaccine supply. This includes not only theft and illegal sale of authentic vaccines, but counterfeiting, substitution with fake pharmaceuticals and contamination as criminals try to turn a buck with a very high value cargo.

Mike Yarwood, TT Club's managing director of loss prevention, warns the risks should not be underestimated. "It is probable that the market for counterfeit pharmaceuticals is worth US\$400bn a year and the World Health Organisation estimates that up to one million people die annually from counterfeited drugs," he points out.

"The current and future supply chain challenge to distribute the covid-19 vaccines, in all their forms, from various countries of production, will mean that these figures are likely to grow. Multiple incidents have already been reported," says Yarwood.

There have been a number of incidents recently where cargoes of

pharmaceuticals were contaminated or destroyed by illegal entries into trucks in transit. In the UK, three arrests were made following the theft from a truck of covid-19 lateral flow testing kits worth more than £100,000.

Two counterfeiting organisations focusing on covid-19 vaccines were successfully broken up recently. In one case, more than 3,000 saline filled vials were being sold as authentic vaccines and seized in Chinese police raids. Another report noted that 400 vials, the equivalent of around 2,400 doses, were discovered as containing fake vaccine in a warehouse in Gauteng, South Africa. While in both cases a quantity of counterfeit goods was seized and arrests made, it remains unclear what volume of fakes had already been manufactured and shipped.

There needs to be appropriate investment in the security of the subsequent supply chains, maintaining the integrity of the cargo, the TT Club says. TT urges equal attention by all governmental agencies to the end-to-end vaccine supply chain to avert fatal undermining of the substantial R&D efforts globally.

Yarwood concludes: "Should the responsibilities of the pharmaceutical companies and organisations funding the supply end at the point of production and sale, leaving local governments to manage security through the supply chain? A degree of uncertainty will prevail and security effectiveness differs from region to region. Operators who are called upon to transport, store and deliver such vital supplies therefore must be super vigilant in guarding against loss through theft and the infiltration of fakes into the supply chain."

## FAKE FORMS

Much of the shipping industry relies on BIMCO standard contracts. The contracts provide a familiar and secure contractual base on which parties can freely negotiate. However, the trust in the standard forms is undermined by fake copies that contain errors, or even deliberately hidden changes to the wording, BIMCO has warned.

BIMCO will add BIMCO's Contract Authenticity Clause to all the association's new and revised BIMCO contracts. Users can also incorporate the clause in their contracts now as a means of reducing their risk and saving time and effort in proof checking agreements offered by their counterparty.

The clause is straight forward and needs little explanation: whichever party issues the final execution copy of a contract based on a BIMCO contract template warrants that an authentic template from an authorised source was used.

Using the BIMCO Authenticity Clause or not, users should only use BIMCO contracts obtained from an authorised source.

In addition to contracts being available through BIMCO's own contract editor SmartCon, BIMCO has authorised Sea Contracts and Chinsay to issue its contracts.

## CONVEYOR RISKS

Meanwhile Martin Engineering has been emphasising the dangers to personnel working near conveyors and is offering advice on how to limit the risk of accidents.

"Accidents are typically a result of a complex combination of probabilities, rather than a single unsafe act," observes Martin Engineering process engineer Daniel Marshall. "Except for the unsafe

act, it can be said that the accident would not have occurred if there was a safer design, better maintenance or less pressure for production."

A thorough risk assessment by trained professionals is the ideal way to bridge the gap between workers and managers when the rules need review, to identify hazards and implement controls to reduce risks. "A belt conveyor is a powerful machine with thousands of moving parts," Marshall continues. "These moving components might severely injure a worker, and can produce that injury in a fraction of a second."

The results from accidentally touching a moving conveyor belt are often disastrous, the company warns. It has been estimated that two-thirds of the fatalities involving conveyor belts take place while the belt is moving, usually as a result of a worker becoming entangled or crushed by moving equipment. The majority of these take place when maintenance or housekeeping is being done on or around an energised conveyor.

These fatalities are generally caused by two compounding practices. The first is performing maintenance without thoroughly locking, tagging, blocking and testing the conveyor. Another unsafe practice is touching a moving conveyor belt with a tool or implement of any kind. When these two choices are combined, the results are usually



CONVEYOR SERVICE SHOULD BE PERFORMED ONLY WHEN THE BELT IS PROPERLY LOCKED, TAGGED, BLOCKED AND TESTED  
© MARTIN ENGINEERING 2021



severe and often fatal. Even working on a conveyor that is turned off — but not locked out — can lead to tragedy.

“An intelligent and creative worker will often invent or discover ways to expedite certain functions or make work easier,” Marshall says. “Unfortunately, some of these shortcuts bypass safety hardware and/or best practices, putting the worker in harm’s way.”

Failure to properly lockout can exist in many forms, varying from disregarding lockout requirements, to working on a moving conveyor, to improperly stopping the conveyor. An example would be pulling the emergency-stop cord and assuming that the conveyor is de-energised.

Another common workaround involves entering a confined space without following established procedures. Other potential unsafe behaviour includes crossing a conveyor in a risky manner.



TAKING A SHORTCUT BY CROSSING OVER OR UNDER A CONVEYOR CAN LEAD TO INJURY  
© MARTIN ENGINEERING 2021

It can be dangerous to cross over a conveyor without using a designed and designated crossover structure. There is a high potential for a slip and fall. The worker may fall on the ground; if not, the worker will fall on to the conveyor belt.



OBSTRUCTIONS SUCH AS DISCARDED COMPONENTS, TOOLS OR SPILLAGE CAN CAUSE A SLIP, TRIP OR FALL INJURY  
© MARTIN ENGINEERING 2021

“Emergency-stop pull cords are the last line of defence if the belt needs to be stopped quickly in response to an entrapment or impending equipment failure,” Marshall adds. “The reaction time when such an event occurs is usually extremely brief, so workers need a way to stop the conveyor as fast as possible. In addition, the belt will not halt immediately and must coast to a stop. If the cord is broken, the switch is not working or the system is disabled, workers have lost the one final tool they have to protect themselves.”



SAFETY EQUIPMENT SUCH AS PULL STOPS AND EMERGENCY SWITCHES ARE VITAL TO CONVEYOR SAFETY  
© MARTIN ENGINEERING 2021

Often an accident occurs due to a combination of several poor work practices. In a 2003 study, ConocoPhillips Marine found a correlation between fatalities and unsafe practices. The study showed that for every fatality there are an estimated 300,000 unsafe behaviours.

“While even one unsafe practice has the statistical potential to lead to serious repercussions, conveyor accidents are rarely the result of a single action,” Marshall concludes. “More often, they result from a combination of company culture and unwise decisions. If workers can eliminate these unsafe practices and minimise their presence in danger zones, their chances of avoiding an accident will improve considerably.”

## ILLEGAL HEAVING LINE USE

The British Tugowners Association (BTA), along with seven other organisations including the UK Chamber of Shipping, has issued a notice against the continued illegal use of Dangerously Weighted Heaving Lines (DWHLs) in UK ports and harbours.

The use of DWHLs is a significant concern to the maritime community. The use of DWHL when thrown by ship’s crew passing mooring ropes or retrieving a messenger line is dangerous and has caused serious injury.

DWHLs are a significant safety hazard and have the potential to cause serious or fatal injury and cannot be an accepted activity in UK ports and harbours, the BTA says. Indeed, instances could lead to a fine or criminal prosecution of a ship’s master.

Commenting on the reissued notice, Scott Baker, chair of the BTA, says: “Regrettably, this is an issue that continues to affect tug crews and stevedores around the country and indeed globally. Safety to personnel must override convenience and the BTA welcomes the collaborative and co-operative approach the whole UK maritime sector is taking in raising awareness of this illegal practice.”

UK Chamber of Shipping chief executive Bob Sanguinetti adds: “Safety is and must continue to be of paramount importance for those across the shipping and maritime sector. There is no necessity or justification for the use

of DWHLs in UK ports and harbours, and vessels found to be using them may expect follow-up action from the Maritime & Coastguard Agency. The new notice demonstrates the maritime sector's commitment to call out bad practice and to strive for the safety of those working on board tugs or in ports."

The signatories call for shipowners, managers, agents, port operators and pilots to assist in eradicating the use of DWHL by the following:

- » Informing all incoming vessels of their duty to follow the Code of Safe Working Practices (COSWP)
- » Issuing them with MCA Safety Bulletin No. 2
- » Stressing that fines, Port State Control Inspections, and criminal prosecution are likely, especially should a vessel persist in their use.

The full document can be read at: [ukchamberofshipping.com/documents/2705/Joint\\_Industry\\_Second\\_Notice\\_Against\\_DWHLs\\_-\\_March\\_2021.pdf](https://ukchamberofshipping.com/documents/2705/Joint_Industry_Second_Notice_Against_DWHLs_-_March_2021.pdf)

## FACING THE FUTURE

Global safety solutions leader Survitec has unveiled a new face covering with protective features designed to reduce the spread of viral and bacterial infection, helping maritime workers follow social distancing rules more confidently.

Developed in co-operation with oil majors and asset owners, Survitec Protect 360 is a hydrophilic snood-type face covering that incorporates Polygiene ViralOff®, a self-cleaning textile treatment technology proven to reduce 99% of known viruses from adhering to material surfaces. The Survitec Protect 360 has been tested to protect against SARS-CoV-2, H3N2 and H1N1 and is compliant with ISO18184:2019.

Christina Bracken, Survitec product category manager, life-saving appliances, explains: "Conventional surgical masks and N99-, N95 – or N90-type face coverings are usually disposable and uncomfortable to wear. Survitec Protect 360 is self-cleaning, reusable and washable — it can be machine washed up to 15 times," she says.

"Other virus protection masks on the market are typically hydrophobic in that they are designed to provide a barrier between the wearer and the microscopic water particles and mucus splatter caught on the masks external surface. This splatter can stay alive on the material, going on to cause infection when the mask is touched or removed," says Bracken.

"However, the hydrophilic nature of Survitec Protect 360 will wick away moisture while an inner three-ply laminate ensures any droplets are dispersed into the fabric structure. Any bacteria and virus is 'de-natured' within two hours as per ISO18184:2019 requirements.

"The silver chloride treatment intrinsic to the material's anti-viral properties allows the face covering to be handled without transferring the virus. Additionally, this means that it is safe to dispose through the standard textile recycling process," Bracken says.



SURVITEC PROTECT 360 IS A HYDROPHILIC SNOOD-TYPE FACE COVERING THAT INCORPORATES POLYGIENE VIRALOFF®



SURVITEC BRAND, CREWSAVER, HAS ALSO LAUNCHED EXOLOK, A NEW CYLINDER LOCKING SYSTEM THAT PROVIDES INCREASED SECURITY FOR GAS CYLINDERS ATTACHED TO LIFEJACKETS





# ALL CHANGE

Variety is the spice of life as far as breakbulk cargoes are concerned, with new players making their presence known in the market

**S**ome players are understood to be turning to the breakbulk business as an alternative to the container business because of the cost savings involved. One such is Estonia-based operation CF&S, which said recently that it had made substantial savings on shifting cargo as breakbulk on a multi-purpose vessel and planned to continue using this method to avoid container charges.

The company trialled a new approach in January, when it shipped 700 tons of cargo from the Port of Xingang to Hamburg because it was having trouble finding container space. It now plans to ramp up its use of breakbulk going forward.

## NEW CALLS AT DOVER

Port of Dover Cargo has announced a regular string of calls for Soreidom & Caribbean Line, which will become its first scheduled breakbulk customer.

A leader in the general cargo transport industry, the port's latest regular customer will use Dover for a series of scheduled calls for the transportation of breakbulk cargo between Europe and the Caribbean and North-East Coast of South America.

Nik Scott-Gray, general manager at

Port of Dover Cargo comments: "We are delighted to be welcoming Soreidom & Caribbean Line to Dover for a set of regular calls in the future and are really pleased that it considers the port as best placed to handle its shipments after successful calls here in the past.

"We are now processing every range of cargo in the industry and with more customers securing the port for a set of future confirmed visits, I have no doubt that our business and its opportunities will grow even further."

Robert Steptoe, general manager at Soreidom & Caribbean Line adds: "Caribbean Line UK is delighted to announce that, with immediate effect, its service into the Caribbean and North-East Coast of South America will now be served by the port of Dover.

"This move is designed to ensure our customers continue to receive superlative service throughout the shipment cycle."

Since the new Dover cargo terminal became fully operational just over a year ago, its customer base has continued to grow, highlighting the opportunities it can offer the logistics industry to ensure the efficient and expert distribution of a wide range of cargo.



## SIERRA LEONE EXPANSION

Joint venture company Nectar Sierra Leone Bulk Terminal (NSBT) started managing the QEII terminal in Freetown, Sierra Leone in 2015.

Over recent years, Nectar and its partners have made significant investments to successfully improve the operational capacity of the port.

Located in the largest harbour on the African continent, the port now efficiently handles a variety of cargo types and is Sierra Leone's primary multi-user bulk and breakbulk port.

New handling equipment, improved warehouses, security and lighting are all being implemented to provide a better user experience.

In 2017, NSBT also took over a 5.4 acre piece of land at the rear of the port on a long-term lease and is currently redeveloping this area for agricultural imports and exports.

Most recently, *Ocean Royal* visited the terminal, carrying 43,000 tonnes of breakbulk – the largest cargo the terminal has handled at its berth since operations commenced.

## SPACE VENTURE

Aiding the construction of a spaceport is not something many companies get to be a part of. It is complex and specialised work that requires experience, precision and an iron-clad plan. It also leaves no room for error.

The Vostochny Cosmodrome, a spaceport on Russian territory, is currently being built in the Amur region in the Russian Far East. As part of the project, Mammoet was contracted to unload 14 pieces of heavy and oversized equipment from a barge and transport them to the construction site 60km away.

The cargo included parts of two different big structures – the launch pad and a vacuum chamber for the launch complex of the Angara space rocket complex, with a total weight of about 600 tons. The vacuum chamber alone had a diameter of 9m.

"This was a very big and important project for us," says Alexey Zhugan,

Mammoet's project manager on site. "Our client trusted us to deliver multiple crucial pieces of equipment to the construction site over a rather large distance. We did so not only in the safest, but also in the most efficient way possible, adhering to the given time frame."

The transport of the cargo took place in two parts and over a total of four days.

For unloading the cargo, the company used two heavy-lift cranes, the LR-11350 and LR-1750, and Goldhofer trailers and semi-trailers for delivering it to the construction site.

While 60km may not sound like a long distance, it is when transporting heavy and oversized cargo. It is very precise work, and also requires a lot of clear co-ordination of all details, the company said.

"For every piece of equipment, we needed special permits," says Zhugan. "There are also quite complex logistics involved in moving such large cargo. We had to block regional roads as well as the federal road that connects Moscow with Vladivostok for a couple of hours during the night to transport the loads. All this requires careful planning and approval of every detail of the project."

Supporting the construction of the Russian spaceport has been a unique project in itself and it is a project that is sure to contribute to the development of the local economy in the future.

Mammoet has been active locally for several years now, particularly as part of the construction of the Amur Gas Processing Plant (AGPP).

## MSC PROJECTS

After completing a sea voyage of 7,590 nautical miles from Antwerp to Montevideo, 11 ballast wagons were successfully discharged in Uruguay from container vessel *MSC Sofia Celeste*.

This breakbulk cargo was loaded on MSC's NWC String I service, which from North Europe at Sines, Rio de Janeiro, Santos, Navegantes, Buenos Aires, Montevideo and Rio Grande. The

wagons – each 14m in length, with a width and height in excess of 3m and a combined weight of 290 tonnes – arrived safely in Montevideo on Tuesday, 9 March.

Ben Collins, MSC global project cargo manager, says: "The successful execution of this shipment is a further demonstration of MSC's capabilities and of our continued commitment to carrying breakbulk cargo on our services."

"In order to accommodate these ballast wagons, a bed of 24x40ft flat racks was created, generating a surface area of nearly 675m<sup>2</sup> on which the cargo was stowed."

The ballast wagons represent part of a very important project for Uruguay, which is currently building a viaduct as part of Rambla Sudamérica, a project that aims to future-proof the port of Montevideo.

The viaduct is designed and built to support the circulation of loaded trucks and passenger cars. At completion, it will be approximately 1,800m long, with three entry and exit lanes and a 160m-long arched bridge.

With this project, the port is expected to gain nine hectares of essential surface area, two-way rail access to the port, and greater traffic fluidity.

"This project comes at a time when the entire market remains under considerable systemic pressure due to the global pandemic and unparalleled disruptions continue to affect all the major actors in the international supply chain," comments Collins.

"Our project cargo team is going above and beyond to ensure the planning and execution of special loadings continue uninterrupted, offering the maximum safety and security for each and every cargo project."

Despite the well-documented congestion at some key trade centres worldwide, a dedicated area of 1,000m<sup>2</sup> of terminal space was provided to store the cargo at MPET terminal in Antwerp in preparation for loading before the arrival of *MSC Sofia Celeste*.

# MAKING A CLEAN SWEEP

Cleaner ships and greener seas have been an ongoing theme this year, with a number of important initiatives in the UK



**T**he UK Chamber of Shipping has explained that the Clean Maritime Demonstration Competition, which was launched on 22 March 2021, will be used to support the development of prototype vessels and port infrastructure that could then be rolled out widely, propelling the sector towards net-zero as the UK prepares to host the 2021 United Nations Climate Change Conference (COP26) in November.

The Department for Transport and the UK Ship Register see the future of clean maritime technology taking a big step forward, bringing benefits and opportunities for vessel owners and operators. Through the UK Ship Register's Maritime Future Technologies team, they are acting as a technical partner for this competition, which is set to help shape the future for decarbonising UK maritime.

The government is encouraging scientists and academics to collaborate with UK shipping, ports and shipbuilders to enter ambitious proposals into the competition:

- » driving economic growth
- » revitalising coastal communities
- » creating thousands of jobs
- » positioning the country as a leader in the field.

The trials will enable companies to test the new technologies, with a view to them being developed commercially if proven to be successful, helping to build back greener from the pandemic.

To find out more about the Clean Maritime Demonstration Competition, visit: [maritimeuk.org](http://maritimeuk.org)

## ENERGY FROM WASTE

Low Carbon, in partnership with PMAC Energy, has announced that planning consent has been granted for its state-of-the-art waste-to-energy facility: the Redcar Energy Centre.

Set for completion in 2025, the Redcar Energy Centre will divert between 350,000 and 450,000 tonnes per annum of refuse away from UK landfill. It will generate up to 49.9MW of low-carbon electricity for the local grid — enough to power more than 100,000 homes — and deliver more than £300m of inward investment to the region.

The Materials Recovery Facility will have the ability to process and recycle up to 200,000 tonnes of municipal, commercial and industrial waste each year, extracting valuable metals for recovery.

The Redcar Energy Centre is expected to become a cornerstone development for the UK's largest industrial zone as part of the South Tees Development Corporation's ambitious redevelopment

objectives, providing heat and electricity to advanced manufacturing facilities in the local area.

Occupying a 25-acre brownfield site within the Redcar Bulk Terminal (RBT) on the River Tees, the project will benefit from the existing strong road, rail and port links, which means the centre can participate in both UK and European waste-derived fuel markets.

In line with its ambitions to be a greener, more efficient and lower-cost solution to landfill and export, it will also offer zero emission energy from waste in partnership with the Net Zero Teeside Carbon Capture project which is located next door to the site.

The development is also keen to tap into the highly skilled local workforce, which is expected to employ more than 400 workers during the 36-month construction phase and require more than 100 full time positions once operational. The project will also require the support of many local businesses indirectly, creating further local employment.

Robert Lewis, founder of PMAC Energy says: "It has been a long-term goal of PMAC Energy to develop a large-scale sustainable Energy from Waste recovery centre in the North East and we are proud to have Low Carbon's support in developing the Redcar Energy Centre. We have used our extensive experience

handling and processing waste derived fuels throughout Europe to design a flexible solution for both waste management and energy recovery to support the growing list of future developments in the neighbouring South Tees area that require renewable energy direct."

## GRAIN INITIATIVE

Associated British Ports has signed a new long-term agreement with Clarksons Port Services, one of the UK's largest port services and vessel agency businesses.

This new agreement relates to a grain and biomass terminal at the Port of Ipswich and will see Clarksons carry out a significant range of additional investments in its handling and storage capabilities.

Clarksons' activity in the agribulks sector has grown substantially over the past few years. The company will utilise almost six acres of covered bulk storage space, handling around 400,000 tonnes of cargo every year.

David Rumsey, managing director at Clarksons Port Services, says: "We have a long-standing relationship with ABP, having been in the Port of Ipswich for almost 30 years. In that time we have handled approximately 10m tonnes of cargo.

"We are delighted to have once again extended our lease with ABP, as we look to develop and expand both our import and export business."

Andrew Harston, ABP Wales and Short Sea Ports director, says: "We are delighted to have secured this new deal with Clarksons Port Services, which has an enviable reputation for service delivery in their industry. We look forward to seeing the Port of Ipswich build upon its role as the premier UK agribulk export handling port."

Since 2015, ABP has invested in the construction of around 130,000sq ft of additional modern TASC & Organic Certified bulk warehousing space at the Port of Ipswich, including in its Orwell Bulk and Cliff Bulk Terminals, in order to meet demand as a result of substantial growth in import cargoes. The Port of Ipswich,



AERIAL PHOTOGRAPH OF SENTINEL QUAY



meanwhile, has reached a milestone of handling 2m tonnes of cargo since the beginning of the first lockdown in 2020.

Exports and imports of various products including agribulks, construction materials and timber make up the total.

Around 9000 tonnes of aggregate, which enabled the port to break through the milestone recently, arrived on board the Hopper Dredger *Charlemagne*, which self-discharged at Ipswich's West Bank Terminal.

Harston comments: "It is fantastic to see our Port of Ipswich defending its title as the UK's number one grain export port with this tonnage milestone and we are looking forward to a strong year ahead in terms of cargo volumes."

## TRUCK TECH

Elandbridge has announced the launch of its TruckPass technology, specifically designed to enable frictionless, digital borders and to address the challenges being faced by the haulage industry post-Brexit — including those presented by the border crossings between the UK mainland, Northern Ireland and the Republic of Ireland.

TruckPass is an effortless, secure solution to getting freight across borders without delays, which can typically be anywhere from 15 minutes to several days.

Elandbridge is a consortium comprising border security professionals, haulage industry experts and leading IT, communications and systems development specialists. Using intelligent electronic seals, blockchain ledger, GPS tracking, secure facial recognition, IoT technology, enhanced communication systems and specifically-designed applications, Elandbridge is providing a proven and deliverable solution for frictionless borders.

The innovative solution is thought to be the only technology that fully meets government, customs and security needs of the regulators and all the compliance requirements of the haulage industry.

Charles Le Gallais, chief executive of Elandbridge, comments: "The logistics



MV CHARLEMAGNE AT THE PORT OF IPSWICH

problems in Northern Ireland are not going to go away unless something changes and I believe TruckPass is that change.

"We have been developing the solution for some time now and have benefited greatly from collaboration with and input from major haulage businesses, both in Northern Ireland, the Republic of Ireland and across Europe."

In the simplest terms, the company says, the challenge lies in the control of goods being transported between two countries where there are import/export tariffs, border controls and the requirement to remove or reduce delays and the related additional costs on consignments to as little as possible.

The system combines four existing technologies:

- » An electronic seal – developed and being used by the airline sector
- » Blockchain
- » Secure messaging app which uses biometric face recognition — developed and being trialled
- » Global Positioning Systems (GPS).

## PLASTERBOARD PROJECT

A project to build a new plasterboard factory at the Port of Newport, which will help create around 60 new full-time jobs in the area has begun.

The new facility will be used to store gypsum, which will be delivered by ship before being used for the manufacture of plasterboard. This will eliminate the need to transport raw materials from the

port to an in-land factory by road, which will help reduce CO<sub>2</sub> emissions.

Furthermore, the factory will benefit from green power generated by ABP's on-site renewables, including wind and solar sources.

As part of the project, ABP, together with a number of European-based inward investors, has invested around £23m to create the new manufacturing facility in Newport. The Welsh government has also contributed £750,000 in support of the project.

Andrew Harston, ABP director for Wales and Short Sea Ports, says: "We're delighted to welcome this inward investment opportunity to the Port of Newport, as the first major project in our port-centric manufacturing strategy.

"This project, which combines the use of brownfield development land, deep water shipping, rail transport and renewable energy is a fantastic example of the solution we can offer. We look forward to working with our contractor Knights Brown to deliver the facility, which will create around 60 jobs for the regional economy."

## RHA CONDITIONS OF CARRIAGE

Freight transport liability insurer TT Club has provided important insight to recent changes to the UK's Road Haulage association's (RHA) Conditions of Carriage (2020) that have ramifications to carriers' liabilities.

The latest version of the RHA conditions of carriage (2020)\* were

released last year, effective from 1 September.

TT highlights changes to three clauses in particular:

- » protecting carriers' obligations if delays in transit result from the customer's omission
- » clarifying the issue of liabilities for loading and unloading cargo from the vehicle
- » providing a useful definition of "commencement of transit" with its implications on liability in the event of damage or loss prior to that point.

"Although relatively small, these changes can have significant impact on the liabilities sustained by carriers under certain circumstances," says TT Club's Mike Yarwood.

"Since Brexit, for example, there have been a number of occasions of hauliers arriving at UK ports seeking to cross the EU border without the necessary documentation or permits. Documentary errors, potentially by the customer, cause delay, which if perishable cargoes are involved can result in extensive losses.

"Under clause 5 (4) of the new conditions, a carrier has the right to

suspend or possibly even terminate the performance of the service, and in addition damages such as loss of business and driver's wages could be claimed from the customer," he explains.

TT Club and commercial law firm Hill Dickinson have worked together to outline the important clause changes that effect the customer-carrier contractual relationship.

Hauliers and other stakeholders who incorporate the terms of the earlier, 2009 version are encouraged to alter their own Standard Trading Conditions (STCs) in line with the new provisions.

### 5G FIRST FOR SOUTHAMPTON

Verizon Business has announced it is working with Associated British Ports (ABP) to deploy private 5G at the Port of Southampton.

Delivered in partnership with Nokia, Verizon's private 5G platform will provide one of the UK's busiest ports with a secure, low-latency private network connection.

With this new contract, the Port of Southampton will become the first UK mainland port with a private 5G network.

"Verizon's private 5G is the foundation for a completely dedicated edge

compute infrastructure, enabling ultra-low latency at the premise, higher levels of security and deeper customization for our partners," comments Tami Erwin, chief executive of Verizon Business.

"Businesses such as ABP are coming under more pressure to evolve their services at tremendous speeds in order to take advantage of new commercial opportunities.

"Along with Nokia, we have been able to equip ABP to take advantage of the immediate benefits private 5G offers, and most importantly prepare the Port of Southampton to take full advantage of new technology applications and real-time analytics which will digitally transform its services in the future."

The Verizon private 5G platform will provide ABP with a reliable and secure private wireless data network across selected areas within the East and West Docks of the Port.

This will enable data communications to be consolidated on to a single network, reducing previous complexity as well as helping to improve the reliability and security of terminal communications.



Since  
Brexit,  
there

have been a number of occasions of hauliers arriving at UK ports seeking to cross the EU border without the necessary documentation or permits. Documentary errors, potentially by the customer, cause delay



# TAKING A HIGH-TECH APPROACH

Making use of technology to improve port efficiency is continuing apace

**B**razilian port operator *Wilson Sons* is to make use of Israeli firm *Docktech* maritime technology to assess the viability of port areas and how they may be affected by issues such as silt build-up.

The Brazilian concern has bought a minority stake in *Docktech* and will use the company's information to improve its picture of conditions in ports for berthing conditions and waterway depth.

*Wilson Sons* operates a fleet of port tugs and, using the *Docktech* technology, will be able to use existing resources better, including dredging solutions, the company says. The technology is being used in ports including Rio Grande and Santos and is being rolled out to other ports including Rio de Janeiro, where *Wilson* operates.

Using the equipment will enable the company to assess the conditions in the port in real time and is part of a general drive by the company to explore high-tech solutions. *Wilson* bought a share in *AIDrivers*, which specialises in remote systems for port equipment last year.

It has also been considering other start-ups with a view to potential investments as a means of improving port operations that it handles.

## TIMELY RESPONSE

Meanwhile, *PortXchange* is hooking up with South American ports with a view to collaboration on the use of its CO<sub>2</sub> reduction and port call optimisation platform.

*PortXchange* recently announced a partnership with *Albatroz Energia* with a view to improving digitalisation in Brazilian ports and improving collaboration between all interested parties during port calls.

The aim is to provide more accurate port call information to co-ordinate services such as bunkering and taking on provisions so that ships visiting ports can optimise their time in port, thus reducing costs and increasing efficiency.

A number of ports in Brazil are undergoing privatisation and there is a move towards port digitalisation as efforts to cut the use of paper in ports continue.

*PortXchange* enables vessels to arrive "just in time" so they can significantly reduce operational cost and CO<sub>2</sub> and NO<sub>x</sub> emissions with every port call. Peruvian shipping consultancy *FIS* announced plans to launch the platform in the Peruvian market last year.

The platform can be used by shipping lines, agents, terminals and other

service providers, for exchanging information regarding port calls based on global standards.

As soon as the estimated time of arrival is allocated, the platform assigns a timeline to each vessel, showing all the events during the port call. The progress and status of events are constantly updated in the control panel. Users are able to monitor all events and are able to make adjustments where necessary, as well as receive notifications and warnings when a status changes, there are delays or a planning conflict occurs, all in real time. Also, the interface allows for calculation of emissions and savings potential for each port call during and after arrival to the port.

*PortXchange* started as the *PRONTO* project in Rotterdam. After successful trials, *PortXchange* was launched as an independent organisation in August 2019. Since then the platform has been implemented in the ports of Felixstowe, Moerdijk, Algeciras and Houston. *Maersk* and *Shell* are the launching customers of *PortXchange*, they are exploring the potential of this platform for the reduction of gas house emissions in the global maritime world. The first results in Rotterdam already show a 30% reduction in idle time of the ships.



## HYDROGEN PARTNERSHIP

Fortescue Future Industries (FFI) — a wholly owned subsidiary of Fortescue Metals Group — and the Port of Açu have signed a Memorandum of Understanding (MOU) to assess the opportunity to develop hydrogen-based green industrial projects in Rio de Janeiro, Brazil.

Signed in February, the MOU will mean FFI and the port can conduct development studies into the feasibility of installing a green hydrogen plant at the port, which is Latin America's largest privately owned deep water port and industrial complex. Subject to the outcome of the studies, a 300 megawatt green hydrogen plant will be built at the port, with the ability to produce 250,000 tonnes of green ammonia a year.

With the availability of renewable power and green hydrogen at the port, it is expected to expand into the production of green steel, fertilisers, chemicals, fuels and other sustainable products. Plans also include the development of solar and offshore wind projects in the regions.

According to FFI chief executive Julie Shuttleworth: "FFI is assessing renewable energy and green hydrogen opportunities globally and will lead and drive the green energy and product industry as we transition away from fossil fuels."

The opportunity to establish totally new and future large-scale industries will drive growth in the Brazilian economy. According to the port's chief executive Jose Firmo: "One of the pillars of our vision for the port's industrialisation are today's operational energy transition projects and the renewable energy fuelled green industries of tomorrow. Açu is a gateway between the growing Brazilian economy and rapidly expanding low carbon business around the globe."

## FERTILISING GROWTH

A new fertiliser terminal at the Brazilian port of Itaquí started operations recently, with the aim of boosting product handling up to 3.5m tonnes in the future. The terminal facilities are

expected to be able to store about 70,000 tonnes of bulk cargo and will be able to operate as a bonded warehouse for bulk product.

Investment in the fertiliser segment is continuing apace and the plan is to invest in rail infrastructure to link the new terminal facilities with the interior of the country.

## GREEN BOOST

Chilean energy minister Juan Carlos Jobet recently signed a MOU with Allard Castelein, chief executive of Rotterdam port, covering green hydrogen.

As Europe seeks to move energy uses towards zero emissions, Rotterdam has been positioning itself as an energy gateway for Europe and a hydrogen hub. As the port develops its infrastructure and distribution network to receive hydrogen from around the world, it had identified Chile as being a good partner in the field.

The aim is to ensure that countries work together to co-ordinate supply and demand for hydrogen going forward.

"In Chile, we have enormous comparative advantages in the production of green hydrogen, and that is what we address in our National Strategy: we want to produce the cheapest green hydrogen in the world by 2030 and be among the top three exporters by 2040", Jobet said recently.

## SANTOS BREAKS RECORDS

Total cargo handling at the Port of Santos set a new record for the period in February, at 10.9m tons. As a result, it maintained the growth trend seen in the last months of 2020 and in January this year. The result is 2.5% above the same period last year, when just over 10.6m tons were handled.

Shipments through the port grew 2.3%, totalling 7.5m tons. Sugar shipments increased 26.6%; diesel oil and diesel 195.9%; citrus juices 20.3%; and coffee beans 12.3%. Imports registered growth of 3.1%, totalling 3.4m tons. The highlights were fertiliser (82.2%) and caustic soda (66.2%).

Shipments reached 13.2m tons in the

first two months, 5.1% above the same period in 2020. Sugar stood out (31.4%); coffee beans (16.6%); alcohol (18.2%); soybean meal (15.8%); corn (13.3%); diesel oil and diesel (109.3%); and citrus juices (35.0%).

Landings in this period reached 6.8m tons, 7.9% above the first two months of 2020. There were fertiliser discharges (80.1%) and liquefied petroleum gas (97.4%).

General cargo amounted to 955.8 thousand tons, up 12.0% compared to the same period last year.

The lower number of ships in the period — a decrease of 5.7% — coupled with the growth in physical movement denote the tendency to increase in average consignment, with more cargo volumes per vessel.

## ECO-HOPPER CONTRACT

MELON has awarded Bedeschi a contract for the supply of a new eco-hopper to be operated in the Chilean port of Punta Arenas.

The eco-hopper is designed for direct unloading of clinker to trucks at a rate of 600t/h and is designed to work with 12m<sup>3</sup> grabs. The machine is equipped with pulse-jet bag filters with high filtration capacity and performance and with low compressed air consumption: an economical and flexible solution to satisfy the stringent environmental standards required.

The eco-hopper is designed with a special support structure that allows a solid anchoring of the hopper to the pier structures during unloading operations, but at the same time allows the machine to be moved by means of a self-propelled modular transporter when not in use.

This configuration is made necessary by the multi-purpose nature of the Punta Arenas port and due to structural limitations of the existing pier, with flexibility of use, weight limitation and structural strength as key considerations.

The eco-hopper will be delivered complete with electrical plant and control system and will be assembled at Punta Arenas.

# WEATHERING THE STORMS

UNCTAD recently released its review of maritime transport 2020, which points to the dominant role of Asia in global maritime trade despite the negative impact of covid-19 on the region as a whole



**A**ccording to estimates by the United Nations Conference on Trade and Development (UNCTAD), trade in East Asia fared relatively better than in other regions following the arrival of the covid-19 pandemic. This trend is even more evident for the month of July last year, with imports falling by 4% and exports by 1%, a sharp contrast with the double-digit decline rates in other regions. Meanwhile, sharp declines have been recorded in west and south Asia sub-regions, where imports have dropped by 23% and exports by 29%.

Constraints on transportation and logistics and lack of workers have prevented the timely delivery of components from China and other countries to factories in South-East Asia during the pandemic. As a result, response measures such as sourcing directly from Vietnam, switching from land to air freight and rerouting shipping lanes that previously included stops at Chinese factories have been implemented.

Growing e-commerce will put more pressure on warehousing and distribution capacity, as business will want to ensure the availability of safety stocks and buffers. In turn, this will

increase demand for storage and space, which is already outpacing the supply in Asia, the report suggests.

The impact of the pandemic may be longer lasting and more critical on small island developing states of the Pacific region, which have also been suffering from extreme weather.

A major impact of the covid-19 pandemic in various parts of the world was port congestion, caused by limitations on cargo movements in and out of ports.

Asian countries active in shipbuilding, seafaring and ship recycling have been affected by the pandemic due to reductions and delays in newbuilding delivery and the freeze in ship recycling activity, in addition to lockdown measures and travel restrictions.

Some actors have already taken steps towards risk management and resilience-building. One example is an initiative launched by the Maritime and Port Authority of Singapore, Singapore Shipping Association and Infocomm Media Development Authority to support maritime companies in digital transformation.

This includes support in formulating their digitalisation roadmaps, in guiding execution as well as benefiting from maritime digital platforms covering port clearances and services, trade documentation, trade operations and financing.

China, Japan and the Republic of Korea maintained their traditional leadership in shipbuilding, representing 92.5% of the newbuilding deliveries in 2019. The Republic of Korea's market share increased by 7.3%, while China's share fell by 5.1%.

Each country specialises in different shipping segments: China is the leading builder of bulk carriers (56.2%), offshore vessels (58%) and general cargo ships (34.6%).

Bangladesh remains the country with the largest global share of recycled tonnage, accounting for more than half of the ships recycled in 2019. Together with India and Turkey, these three countries represented 90.3% of the ship recycling activity in 2019.

In 2020, five of the top 10 ports are located in China (Hong Kong, Ningbo,

Qingdao, Shanghai and Xiamen), three are in other Asian countries (Malaysia, the Republic of Korea and Singapore), and two are in Europe (Belgium and the Netherlands).

The liner shipping connectivity index of almost all the top 10 ports has risen significantly since 2006, except for Hong Kong, China, which has been overtaken by four other ports.

The top 50 best-connected port pairs are on intraregional routes, almost exclusively within Asia, except for two connections within Europe.

According to the report: "Future work in the maritime sector will look very different from how it does today. There will be less jobs on board ships and more onshore jobs, requiring a more adaptable workforce.

Reskilling and retraining will be crucial in preparing workers for the transformations that will arise due to advanced technologies and automation.

"This is of particular importance to those Asian countries that are suppliers of global maritime shipping labour such as – by order of ranking – China, the Philippines, Indonesia and India."

## JOINT OPERATIONS

The Port of Singapore Authority (MPA) and Yara International have joined Joint Development Project (JDP) partners MISC Berhad (MISC), Lloyd's Register (LR), Samsung Heavy Industries (SHI) and MAN Energy Solutions (MAN) in the coalition that has now been renamed the Castor Initiative.

Leading fertiliser company Yara will work alongside MISC, LR, SHI and MAN to develop ammonia propulsion ships to support the maritime industry's drive to decarbonisation.

In addition, the consortium will be able to tap into MPA's experience as a bunkering hub and flag state to gather insights on safety issues and ammonia bunkering procedures, and gain access to research capabilities in Singapore.

The addition of MPA and Yara means that the alliance, which was first unveiled in January 2020, now

has complete representation from all areas of the maritime ecosystem. The experience and expertise of each partner will be central to the success of the initiative, from conception to project realisation.

This announcement follows a key project milestone in September 2020, when LR awarded Approval in Principle to SHI for its ammonia-fuelled tanker design with the aim of commercialising these developments by 2024.

To meet the International Maritime Organization's 2050 ambitions on halving greenhouse gas (GHG) emissions from 2008 levels, zero-carbon vessels need to enter the world fleet by 2030. The JDP was motivated by the partners' shared belief that the maritime industry needs leadership and greater collaboration if shipping is to meet the IMO's GHG ambitions.

While ammonia is one of the fuels being considered by maritime stakeholders, the partners also recognise that the shipping industry will need to explore multiple decarbonisation pathways and hope their collaboration will spur others in the maritime industry to join forces on addressing this global challenge.

Singapore port authority chief executive Quah Ley Hoon says: "Decarbonisation remains a key priority for the maritime sector, not just in Singapore but globally. As a transshipment and bunkering hub, we are committed to meet IMO2030/2050 decarbonisation goals.

"We are also looking forward to collaborating with like-minded industry partners to support the development and trials of alternative future marine fuels such as ammonia."

"Supporting the enabling role of ammonia in the energy transition, we recognize the need for value chain collaboration to make zero emission shipping by using ammonia as a fuel a reality," says Magnus Ankarstrand, executive vice president of clean ammonia at Yara.



## CONVENTION RATIFICATION

On 9 March 2021, Singapore ratified the Convention on the International Organization for Marine Aids to Navigation — the first country to do so shortly after it signed the Convention on 1 March 2021. Ratifying the Convention will support the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) to become an intergovernmental organisation.

As a major hub port and a coastal state situated along one of the world's busiest waterways for international shipping, Singapore recognises the importance of IALA's efforts to establish common technical standards for VTS and e-Navigation in promoting safe and efficient shipping.

## LIQUID COMMODITIES

Meanwhile, the International Liquid Terminals Association and the Indian Ports Association signed an agreement to “collaborate to share best practices on handling and management of liquid commodities to achieve the highest levels of operational excellence”.

The IPA-ILTA agreement will facilitate information exchange about operational best practices and workforce training. The MOU focuses on the following elements:

- » Exchange of operational best practices, human resources and management topics, as well as benchmarking industry performance
- » Information sharing related to training activities, including safety and emergency response preparedness
- » Jointly organising sessions on facility integrity, asset protection, management systems and contractor management.

## FUND BOOST TO PORTS

Bangladesh has established a new fund using foreign exchange reserves to finance infrastructure projects through the Bangladesh Infrastructure Development Fund. The first project to receive financing is one to dredge a channel for the Payra port in southern Bangladesh. A three-way loan agreement was signed for the project in Dhaka.

Foreign exchange reserves in the country have grown despite the

pandemic and, consequently, some of the money is now to be used on projects within the country.

Aside from the Payra port project, which includes its development as a deep sea facility, the government has already re-opened Mongla Port and another port in Matarbari has been completed.

## GOING FOR GREEN

The Port of Singapore has been recognised as an Asia-Pacific Economic Cooperation (APEC) Port Services Network (APSN) Green Port in 2020. This is the third consecutive time that MPA has received the accolade since it was launched in 2016.

The Green Port Award System (GPAS) programme is a green evaluation system for ports in the APEC region developed by APSN with the endorsement of the APEC forum. The programme promotes the sustainable development of ports in the Asia-Pacific region.

This accolade affirms the Maritime and Port Authority of Singapore's (MPA) efforts on decarbonisation. MPA undertook a series of sustainability initiatives in 2020 to reduce greenhouse gas emissions in the port.

These included establishing a S\$40m Maritime GreenFuture Fund for research, testing and adoption of low-carbon technologies last year. MPA also embarked on efforts to enable the Port of Singapore to supply LNG as a marine fuel. In addition, MPA established the Future Fuels Port Network with international partners to collectively drive the research and development of clean marine fuels across participating ports in support of industry decarbonisation.

Quah Ley Hoon, Chief Executive of MPA, says: “MPA would like to thank APSN for recognising our efforts in championing sustainable port activities. In Singapore, we see opportunities to grow the industry in a greener and more sustainable way. We will continue to work closely with our stakeholders and partners, to reduce the impact of port activities on the environment.”

## EQUIPMENT INVESTMENT

The Port of Tanjung Pelepas (PTP) in Malaysia has been investing in port equipment and is planning to

increase throughput in the port over the coming years. This is expected to include upgrading equipment and purchasing more ship-to-shore cranes and other equipment as well as improving efficiency through the use of digitalisation and automation.

PTP currently has a total of 24 ship-to-shore (STS) super post-panamax quay cranes out of its total fleet of 66 quay cranes along its 14 berths

In 2021, the port plans to procure an additional seven STS quay cranes, which are projected to be fully delivered by mid-2022 and are expected to serve feeder vessels. PTP will also procure 11 new 61T twin lift electrified rubber tyred gantry cranes (E-RTG) as part of its equipment modernisation plan. All equipment is expected to be put into operation by the third quarter of next year.

Digitalisation moves will include the use of the TradeLens platform – a blockchain that is able to provide PTP with a secure and collaborative digital tool to enable the port to view millions of shipment events and documents, helping to simplify the process.

## THAILAND BRIDGES GAP

The Thai government is set to unveil its land bridge rail and port project in June as well as the precise location of the link between the Gulf of Thailand and the Andaman Sea, according to transport minister Saksayam Chidchob.

The plan is to build two deepwater ports on either side of one of Thailand's narrowest regions, linked by a 100km railway and motorway, so that cargo ships sailing between the west Pacific and the Middle East can use the land bridge as a relay, allowing them to avoid the Malacca Strait at Singapore, the world's most congested sea corridor.

The project is, in particular, targeting oil shipments from the Gulf to China, Japan and South Korea, Saksayam Chidchob said recently. It will involve the construction of a deep-sea port in Chumphon Province on the Gulf of Thailand and the upgrading of the small port of Ranong on the Andaman Sea into a deep-sea port. These would be connected by a dual-track railway and a motorway.

# MAKING PROGRESS

Ports throughout the US have felt the impact of the pandemic, but funding opportunities have given a much-needed boost



**T**he US Department of Transportation's Maritime Administration has announced funding opportunities encouraging states and port authorities to apply for \$230m in discretionary grant funding for port and intermodal infrastructure-related projects through the Port Infrastructure Development Program (PIDP).

"Our nation's ports are a key part of our critical infrastructure. They create jobs and make our economy more resilient and sustainable," says US Secretary of Transportation Pete Buttigieg. "This funding will build upon local investments in infrastructure to deliver long-term economic benefits to American workers and communities, while also addressing climate and equity."

Secretary Buttigieg announced the funding at a White House event focused on the development of offshore wind energy programs. Over the past two years, 12% of PIDP grant applicants included the anticipated development of wind energy facilities and the movement of wind energy components as part of their project proposals. This year's grant funding will bolster these efforts.

The grants will be awarded on a competitive basis to support projects

that strengthen and modernise port infrastructure and support the country's long-term economic vitality.

"State and local authorities are working to position ports to take advantage of a clean energy economy," says Acting Maritime Administrator Lucinda Lessley. "These grants will continue to bolster their efforts while creating jobs in these communities and the US maritime industry as a whole."

Previous grants have supported projects such as infrastructure resiliency and shore-side improvements to facilitate wind energy projects.

The Consolidated Appropriations Act 2021, made \$230m available for the PIDP, with \$205m reserved for grants to coastal seaports and Great Lakes ports. The minimum award size is \$1m, with a Federal cost-share not to exceed eighty percent. The Federal cost share can be higher for certain categories of projects.

The deadline to submit an application for the PIDP is 30 July. For more information, visit [maritime.dot.gov/PIDPgrants](http://maritime.dot.gov/PIDPgrants)

## COVID IMPACT

The Port Authority of New York and New Jersey reported that in February 2021, covid-19 has continued to impact volumes across its transportation facilities.

The seaport continued to demonstrate strength and resilience amid the pandemic and the impacts it has had to global supply chains, ending February 2021 with a cargo activity increase of 6.8% from February 2019. This sets a new February record for the port.

The seaport continued to demonstrate the same resilience it has shown throughout the pandemic, with December cargo volumes up 21.3% from December 2019.

With the release of its December 2020 data, the agency also released annual total volumes for 2020, which reflect data from the first two months of the year when the trend of record-breaking volumes continued across facilities prior to seeing the severe impact of the pandemic.

For the full 2020 calendar year, the seaport, which saw robust demand

for goods during the pandemic after experiencing a dip during the spring, held steady overall with an estimated 1.5% increase from 2019 in cargo volume.

Due to the adverse financial impacts of the pandemic, the agency estimates a revenue loss of approximately \$3bn for the 24-month period beginning in March 2020 compared to budgeted amounts. This loss in revenue is reflected in the Port Authority's estimated revenue loss for 2020 of \$1.7bn.

## BALTIMORE BAROMETER

Port of Baltimore's state-owned, public marine terminals finished a challenging 2020 with key cargo commodities showing gains in recent months despite the continued impact of covid-19, the port said.

December totals for general cargo, containers and roll on/roll off (farm and construction equipment) each posted double-digit jumps for the sixth month in a row. December figures for general cargo, containers and roll on/roll off categories represent year-over-year monthly gains versus December 2019.

"Throughout the pandemic, the Port of Baltimore has been a barometer of Maryland's economic recovery and the latest figures give us great optimism," governor Larry Hogan says. "The Port's healthy rebound is an indicator of increased consumer demand and we have the talented workforce and the infrastructure to answer that demand."

December saw continued significant increases for general cargo, containers and roll on/roll off, among other sectors, compared to the covid-19 low points in May and June last year, the port said. General cargo, at 946,355 tons, was up 29% over the low point in June. General cargo's December 2020 numbers represent an 8% increase over December 2019 — the third month in a row for year-over-year gains.

Key cargo commodities at the Port of Baltimore's public terminals were down for the year compared to 2019, but the Port's strong recovery in the second half of the year helped narrow those declines dramatically. General cargo was down 6.4% from 2019 with 10,387,723 tons.

"When you consider the global economic impact of covid-19 throughout the year, the rebound we've seen in recent months at the Port of Baltimore is nothing short of tremendous," says Maryland Department of Transportation (MDOT) secretary Greg Slater. "Our strong finish to 2020 reflects highly on Maryland's economy, the dedication of our port workforce and the maritime industry's confidence in our ability to safely and efficiently deliver their cargo to the marketplace."

"Last year was an extremely challenging year for our industry, but we have great momentum at the Port of Baltimore and a lot of positive trends taking us into 2021," says MDOT Maryland Port Administration executive director William Doyle. "The rise in



BALTIMORE HAS SEEN GAINS IN CARGO COMMODITIES



e-commerce is a significant factor in our recovery, and the Port of Baltimore is well-equipped to handle continued e-commerce increases because of the number of distribution, fulfilment and sorting centres in close proximity.

“While our December numbers are encouraging, we are still in a covid-19 environment and that continues to make this an unpredictable international maritime trade industry,” he says.

As part of the port’s continuing public-private partnership with Ports America Chesapeake, construction for a second, 50ft-deep berth at the Seagirt Marine Terminal is moving forward. The additional berth will allow the port to handle two supersized ships simultaneously. Four additional neopanamax cranes are scheduled to arrive in July and will be operational later this year.

## CARGO BUSINESS

Yara North America, a leading crop nutrition solutions provider, has launched an expansion of its southeast US distribution of premium crop nutrition products from Port

Canaveral on Florida’s east coast, in partnership with Ambassador Services International (ASI).

“This is solid cargo business for our Port and a great business win for our partners at Ambassador,” says Port CEO Captain John Murray. “Our central east coast of Florida location and ASI’s recent expansion at our Port provided Yara with a winning opportunity to more efficiently support crop growers throughout the southeastern United States.”

ASI, one of Port Canaveral’s largest terminal operators, will enable Yara to improve storage and handling of bulk materials and bagging in both bulk and 50lb bags to deliver the company’s high-quality premium products, such as YaraLiva Tropicote that meet the crop nutrition needs of all end-users.

Additionally, ASI’s convenient ground transportation and loading facilities are expected to keep load time at a minimum.

“We’re committed to providing our customers and end-users with high-quality products, as well as efficient, reliable and safe operations related to

product handling and distribution,” says Steve Rodgers, VP supply chain Yara North America.

“Ambassador’s high-quality, well managed assets at Port Canaveral supports our efforts to improve quality, storage and distribution of premium products.”

## OPERATIONS UNDERWAY

Meanwhile, agents AR Savage & Son have begun operations at Port Canaveral after 75 years operating in the wider Tampa Bay region. The new Port Canaveral service gives the shipping agent the opportunity to serve ships and cargoes on both sides of Central Florida, one of the fastest-growing regions in the country.

Commenting on its expansion plan, Savage says: “Port Canaveral is vital for cargoes crucial to the economy of central Florida and the company is proud to play a part in supporting industry and jobs in this state.”

He expects to handle shipments in Port Canaveral on a regular basis and is exploring new ways to serve customers with operations there.



# TERMINAL TALES

## RUSSIAN ROULETTE

Effects of the pandemic have been many and varied. Not only have we heard warnings about the risks of thieves getting hold of vaccines in transit or touting fake vaccines worldwide, but insurers the TT Club have also delivered a report about Russian cargo theft trends.

At issue are road theft trends. Unsurprisingly, thieves' modus operandi has had to change as a result of the pandemic because movement has been more difficult because of lockdowns. According to the report, food and beverages remain the most common type of commodities targeted. The volume of incidents fell by nearly a third, but these goods still made up 28% of total losses. Interestingly, the average value of goods taken fell by 22%, indicating a focus on essentials rather than more attractive products of higher value.

TT Club's Russian partner Panditrans' managing director Kiril Berezov emphasises the dominant role that fraud plays in losses overall in the report. "In contrast with many other countries, data from our 2020 report highlights that thieves in Russia rely heavily on fraud as a means of accessing cargo. The methodology of criminal organisations is distinct and falls into two primary categories: the driver being diverted by phone to unload at an unauthorised location and the use of fraudulent identities to access cargo. The ingenuity of the fraudsters is remarkable. They have sound knowledge of how the supply chain operates," he said. So now we know.

## JUST SAY NO

Many ships have suffered from the effects of drug smuggling – whether the crew were aware of the smuggling or not. Dryad Maritime has recently put out a report that gives advice to shipowners, crews and operators on measures they can take to avoid becoming a victim of drug smuggling operations. The report covers risk mitigation measures across commercial shipping transits prior to port call, while in port,

during cargo operations, on completion of cargo operations, leaving port and actions to take if drugs are found.

## SOLO ROW FOR CHARITY

Leading Survitec brand Crewsaver is keeping Dave "Dinger" Bell safe on his unassisted charity solo row across the North Atlantic with an array of specialist equipment, some of which has been designed specifically for the treacherous crossing.

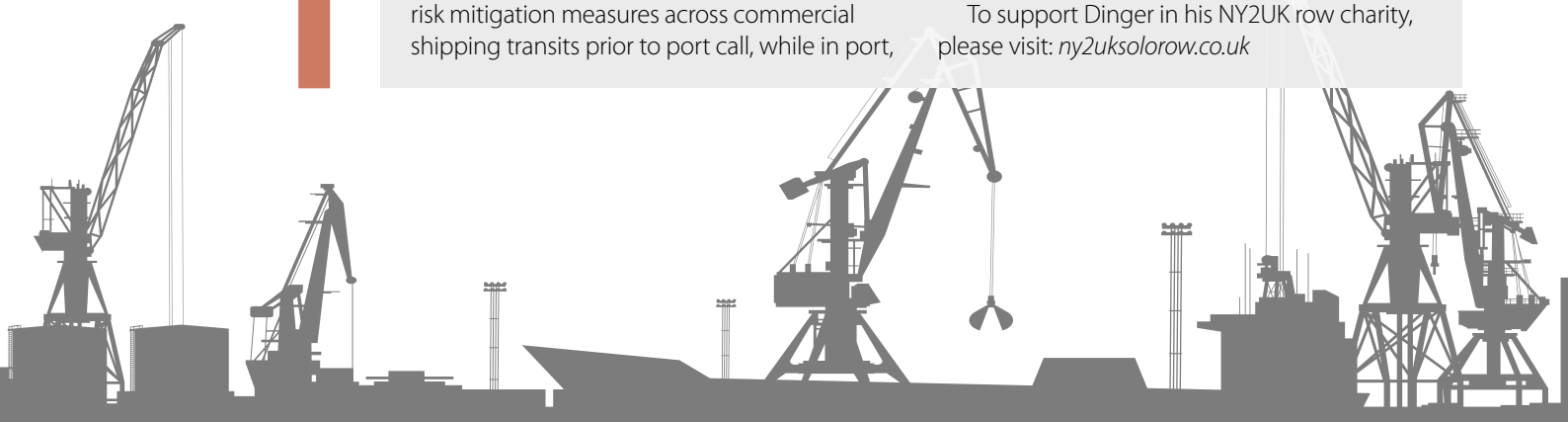
Weather permitting, Bell, 49, a former Royal Marine, believes the May 2021 row from New Jersey, to Falmouth, UK – a 2,710 nautical mile route that will pass over *RMS Titanic* – will take between 90 and 120 days.

While the mainly self-funded NY2UK row started off as a personal challenge with Bell reluctant to tell anyone about the planned crossing, close friends encouraged him to row for charity.

So far, he has raised £7,500 for the Special Boat Service Association and Rock2Recovery. Bell is also using his row to promote Bravery ([bravery.org.uk](http://bravery.org.uk)), the extreme sports clothing company founded by his veteran friend Toby Gutteridge, who was shot and paralysed on a tour of duty in Afghanistan.

"Sponsorship support is a vital contribution to the NY2UK challenge," says Survitec commercial director Matthew Bridge. "Dinger's Crewsaver lifejacket has been specially adapted not to activate upon contact with water, so as to avoid inflation in the exposed cockpit of his one-man ocean rowing boat. It has also been fitted with a hood in anticipation of the huge swells he faces in the North Atlantic. The route takes him across the lower part of 'Iceberg Alley' where the water is very cold and survival times can be short. This is a very difficult and commendable challenge for some very worthy charities. I encourage everyone to donate what they can in support of these important causes.

To support Dinger in his NY2UK row charity, please visit: [ny2uksolorow.co.uk](http://ny2uksolorow.co.uk)





---

# The Incredible Bulk

---

The secret is quality in everything we do. There is nothing supernatural about it.  
[liebherr.com](http://liebherr.com)

# LIEBHERR

Port Equipment  
LHM 550