BULK TERMINALS *international*

SPRING 2025

THE OFFICIAL MAGAZINE OF THE ASSOCIATION OF BULK TERMINAL OPERATORS

READING BETWEEN THE LINES

How will the turbulence caused by Donald Trump's tariffs affect the dry bulk sector?

RISING STARS

The next-generation cranes and grabs that are boosting ports' eco-credentials

SMOOTH OPERATORS

Shedding light on the art of shiphandling

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RECOGNISING UNSUNG HEROES

BY SANDRA SPEARES

Seafarers' safety and wellbeing is always a priority – and the International Seafarers Awards is an opportunity to acknowledge those who make life better for the men and women working in the industry

The maritime industry continues to grapple with many challenges, from regulatory to financial, and this edition of Bulk Terminals International looks at a number of these in more detail.

One of the areas that, rightly, stays high on the agenda is the safety and wellbeing of seafarers. Seagoing operations would, of course, be impossible without the dedication and bravery of seafarers worldwide, which is why the Mission to Seafarers International Seafarers Awards have become such a highlight of the maritime calendar.

Now in their eighth year, the awards celebrate individuals and organisations that have made significant contributions to enhancing the welfare and wellbeing of seafarers globally. This year's event takes place in Singapore Friday, 31 October 2025 and nominations in a range of categories are now being accepted (see missiontoseafarers.org). The closing deadline for nominations is 7 July 2025.

Meanwhile, emission reduction continues to pose a challenge for the shipping industry as a whole and the bulk segment has its role to play in ensuring that market players meet the regulatory requirements.

The UK Department for Transport recently laid out its vision for how the UK maritime industry will reach net-zero emissions by 2050, according to a report by the UK Chamber of Shipping.

The new Maritime Decarbonisation Strategy, which is a long-awaited successor to the Clean Maritime Plan, sets out the government's ambition to align with the International Maritime Organization's stretch targets of a 30% reduction by 2030 and an 80% reduction by 2040 in emissions (both relative to 2008).

You can read more about this and the regulations and recommendations that are putting the maritime industry on the path to net zero within. We hope that you enjoy reading this edition of *Bulk Terminals International*.

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Photo: Blue Eco Hopper in Port Kembla, Australia.

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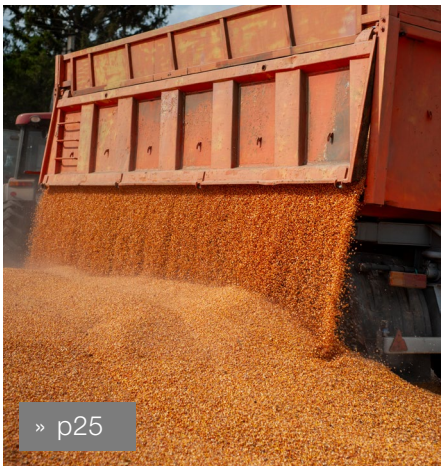
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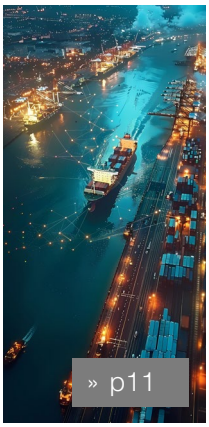
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SHIFTING SANDS

BY SIMON GUTTERIDGE, ABTO CEO

Donald Trump's tariffs have sent seismic shockwaves across the globe. How will bulk terminal operators adapt?

The chaos caused to markets and the impact on international trade by US President Donald Trump's tariff announcements will, for the foreseeable future, definitely degrade and potentially permanently finish off the international liberal world trading order, however they finally pan out.

The old certainties have gone for ever, just as Trump's defence pronouncements have done: returning America to the isolationist mentality out of which she was rudely jolted with Japan's attack on Pearl Harbour and then with the formation of NATO in 1949 ushering in 76 years of commitment to countering the threat Soviet Russia posed to Western Europe.

Of course, trade routes will re-establish themselves – on some level they always do – the question is to what extent the volume will be affected and how much they will have altered. Overall, volume will be down, but there will be some clear winners and losers.

At the time of writing, it would be foolish to speculate if the 90 day tariff pause – except for China – will either hold or be extended beyond early July.

Frankly none of us should have been surprised by Trump's tariff announcements, prior and subsequent to his 2 April 'Liberation Day' Rose Garden address – on my reckoning at the time of writing there have been 24. These are the most drastic set of tariffs increases since the Smoot-Hawley Tariff Act, the 1930 law that triggered a global trade war and deepened the Great Depression, taking America's trade policies back to the 19th century.

Trump sees this period as a golden age of prosperity: "We can be so much wealthier than any country, it's not even believable".

It was in every sense a 'black swan event'. In 2007, risk analyst Nassim Nicholas Taleb popularised the term as a surprise occurrence that has a major impact on the global trade and financial system and is rationalised after the fact as something that ought to have been expected all along – two previous examples being 9/11 and the covid-19 pandemic.

We should have seen it coming. Trump repeatedly said "Tariffs are the most beautiful word in the dictionary." Campaign videos, website posts and speeches spelled out his belief that protectionism was key to his promise to Make America Great Again. Nobody could have missed that he had been saying for decades that American industry had suffered by being short changed and that the solution was tariffs.

Most would agree that he was partly right in this analysis of the cause, although the growth of the services sector also played a part. From where I sit there is nothing wrong with wanting to beef up the industrial base in the US, as well as Europe and the free world generally, or to protect against other countries not playing by the rules.

Reinforcing the industrial base, as well as shorter and more diverse supply

chains will increase our resilience (even if at some increased cost) whether to events like covid or geopolitical threats such as tensions over increased Chinese military activity around Taiwan and deployment of new landing barges in the South China Sea, Russia's invasion of Ukraine, or the vulnerability of shipping in the Red Sea needing to transit the Suez Canal.

Shorter supply chains also have a useful role to play in combating climate change, although I doubt that was any motivation for his actions.

However, everyone thought that Trump was bluffing in the scale of what he was saying – just a negotiating position to remedy some of the trade imbalances brought about by unfair trading practices on the part of countries such as China, which in his view had caused the hollowing out of America's industrial manufacturing base.

But this was not just bluff. What he did was to overturn the liberal trading order that has for 70 years brought prosperity to America, as well as the rest of the world. Accepting the need for some readjustment of America's relationship with some of her trading partners, what Trump has done in imposing tariffs to the extent he has will harm her industry as much as everyone else's.

It's what some commentators, such as Liubomir K Topaloff and Malcom Kyeyune have referred to as a his 'Gorbachev moment'.

Gorbachev knew Russia's system had to change. Factories were told they could make their own decisions: off you go – make and sell what you want and as much as you want. But the whole Soviet system relied on central planning and removing just one element of the mix resulted in the whole edifice falling. It was like expecting a bulk carrier to make as sharp turn to port or starboard as a speedboat could – Kyeyune uses the example of attempting to do a "sharp fighter jet turn while flying a slow and fully laden passenger plane".

Of course, Trump's capitalist America is not Gorbachev's Communist Russia. But the costs to US manufacturing in the short term of coming to terms with the massive increase in costs to even a small part of their component (or those raw material imports not excepted) will be similarly terminal for some.

Even if he was prepared to adopt the Chinese model of support for companies – which is very doubtful to say the least – there is not the time to set up alternative US-based component and materials supply chains to enable them to source at home before they fail.

So never mind the harm to the rest of the world economy, it does not even make domestic sense.

Even if there are downward adjustments to tariff levels – either generally or to particular countries – the disruption to world trade is going to remain severe. Given his mercurial nature, I am sure there will be – for better or worse – further bombshells to come after the time of writing.

> "As closer bilateral ties between groups of countries are built, they will not be keen to return to the old order of reliance on the American market

Naturally, there has been an immediate retaliatory response. More interesting in the longer term is how countries and trade blocks will respond to protect or enhance free trade. Not just to the tariffs imposed on them, but also to protect themselves from Chinese overcapacity being redirected from the American market.

As closer bilateral ties between groups of countries are built, they will not be keen to return to the old order of reliance on the American market and as a dumping ground for artificially low-priced Chinese products.

An example is the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, which links countries around the Pacific Rim including Australia, Canada, Chile, Japan and Mexico. Of course, the EU is another. It is keen to do a deal with Mercosur, a South American bloc including Brazil and Argentina.

Some are joining groups that include China. Indonesia, Thailand and the Philippines are members of the Regional Comprehensive Economic Partnership, which was links China to the 10 members of the Association of South-East Asian Nations, plus Australia, New Zealand, Japan and South Korea. The EU has made it clear that it is open to greater trade with China, but only on the basis of a level playing field.

The picture is patchy and will, at best, proceed slowly where interests align. The General Agreement on Tariffs and Trade started with only 23 countries in 1947 and did not mature into the more formal World Trade Organisation until 1995.

So much for the general trade position. What will be the impact of the tariffs be on dry bulk terminals worldwide?

Challenges for the dry bulk sector

The dry bulk sector, supplying the raw materials of manufacturing, will be the first victim the turbulent tariffs landscape. In short, as with the general picture of the impact of the tariffs, the effects on bulk terminals will be two-fold, mirroring the general position. These will be seen both in terms of the total volumes of terminal throughput occasioned by the downturn in world trade, the commodities targeted, the trade routes affected and the countries involved.

The newly imposed tariffs will disrupt longstanding trade relationships, compelling countries to seek alternative markets and suppliers. For instance, China's retaliatory tariffs on US agricultural products have led to a decline in US exports of commodities such as soybeans and grains to China.

According to traders, Chinese buyers are likely to source lower volumes of products such as soybeans from the US and more from Brazil. Consequently, dry bulk terminals that previously

handled these exports are experiencing reduced throughput, necessitating operational adjustments.

Two noteworthy exclusions from the general temporary pause (except for China) are the 25% tariffs on steel and aluminum imports, which are not expected to change anytime soon. US tariffs on steel and aluminium have affected imports from countries like Canada, Mexico and Brazil. The US imported $18.97bn in steel and aluminium products from Canada in 2024, while it imported $5.01bn from Mexico, according to S&P Global Market Intelligence.

The EU could lose up to 3.7m mt of steel exports to the US if all product exemptions are removed, Henrik Adam, President of trade body Eurofer said. The US is the second biggest export market for EU steel producers, representing 16% of the total EU steel exports in 2024. This will impact throughput in both export and import dry bulk terminals.

Adjusting trade flows imply some ports and terminals will see greater demand for certain products. This shift benefits South American dry bulk terminals, which are experiencing increased activity, while US terminals face declines. This may strain the capacity of existing infrastructures in South America to cope.

As we have seen, Brazil is expected to benefit from new changing agricultural trade flows. China, for example, is increasing its agricultural imports from countries like Brazil and Argentina, reducing reliance on US suppliers. Brazil's National Association of Grain Exporters exports grains to a number of countries and 29% of the country's trade flow goes through the flagship port of Santos. Whether the port can cope in the short term or will need to invest in more capacity remains to be seen.

US importers are exploring alternative sources for products previously obtained from tariffed countries. For example, instead of importing fertilisers from Canada, US buyers might turn to suppliers in Israel, or even Russia. This change naturally affects terminal operations.

The tariffs have introduced financial challenges for dry bulk terminals due to decreased cargo volumes and increased operational costs. Terminals that heavily relied on tariffed commodities are facing revenue declines, leading to potential budget cuts and deferred infrastructure investments.

For instance, US coastal warehouses near major ports, which thrived during globalisation, are now experiencing lower occupancy rates and decreased property values as international trade diminishes.

Moreover, the uncertainty surrounding trade policies has made companies hesitant to commit to long-term contracts, affecting the financial stability of terminal operators. The volatility in trade volumes complicates financial planning and investment strategies, potentially hindering future growth and development.

> "The shifting trade landscape necessitates operational adjustments for dry bulk terminals. Terminals must adapt to new logistical requirements

The shifting trade landscape necessitates operational adjustments for dry bulk terminals. Terminals must adapt to new cargo types, shipping schedules, and logistical requirements. For example, terminals previously focused on handling US soybean exports may need to reconfigure equipment and storage facilities to accommodate different commodities now in demand.

Additionally, the increased complexity of customs procedures and compliance requirements due to changing trade agreements imposes additional operational burdens. Terminals must invest in staff training and technological upgrades to ensure efficient processing of shipments under new regulatory frameworks.

The decline in trade volumes has direct implications for employment within and around dry bulk terminals. Reduced activity may lead to workforce downsizing, affecting not only terminal employees, but also ancillary services such as logistics, maintenance and local businesses that rely on port operations. For instance, the downturn in US coastal industrial real estate threatens thousands of local jobs within warehousing, shipping and supporting services.

Conversely, terminals in countries experiencing increased trade flows due to the redirection of goods may see job creation and economic benefits. However, these positive effects may be offset by the need for workforce training and infrastructure development to handle the increased demand effectively.

In light of these challenges, terminal operators are adopting various strategies to remain competitive. Diversification of services is a key approach, with terminals expanding their capabilities to handle a broader range of commodities. This flexibility allows terminals to tap into new revenue streams and reduce dependence on specific trade routes or products.

The decision as to whether to invest in equipment designed for a specific commodity producing the optimum level of throughput, or to opt for a greater degree of flexibility which inevitably means less efficient operations, has been extensively covered in our previous annual ABTO Bulk Terminal conferences by Professor Mike Bradley, Director of The Wolfson Centre for Bulk Solids Handling Technology. We are sure to be revisiting this debate in light of the developing fluid trading patterns at this year's conference at the end of October in Marseille.

Long term, the current tariff-induced disruptions will in all probability have

lasting effects on global trade patterns and the dry bulk terminal industry. The move towards diversified supply chains and regional trade agreements will, to a lesser or further extent, result in a more fragmented global trade landscape. Terminals that can adapt to these changes by offering versatile and efficient services will be better positioned for long term success.

Furthermore, the emphasis on resilience over cost efficiency may lead to increased demand for terminals located in geopolitically stable regions with robust infrastructure. This shift could influence future investment decisions and the development of new trade hubs.

Navigating uncertainty

In conclusion, Trump's latest tariffs have set off a chain reaction affecting dry bulk terminals worldwide. The disruption of established trade routes, financial strains, operational challenges and the need for strategic adaptation underscore the complex interplay between trade policies and the logistics industry.

As the global trade environment continues to evolve, dry bulk terminals must remain agile and innovative to navigate the uncertainties and capitalise on emerging opportunities.

Conference call

The theme of Bulk Terminals 2025 in Marseille 29-30 October will be 'Responding to the New Age of Chaos'. Our regular coverage of bulk markets, improving – or at least maintaining – profitability, streamlining operations, improving safety, online security and ensuring environmental compliance and protection will be examined against the backdrop the volatile situation surrounding the imposition of Trump's tariffs and the impact that these have on bulk terminal operations.

Keep an eye on programme developments and registration details on our website: bulkterminals.org/events

I hope you will enjoy our Spring edition of *Bulk Terminals International* and look forward to welcoming old friends and new to the conference in Marseille this October.

Simon Gutteridge
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MACHINE, REPAIR AND SERVICES

COMPANY NEWS

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

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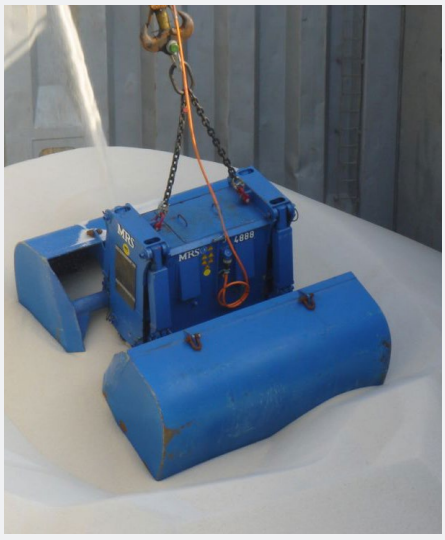

WORLD NEWS ROUND-UP

The UK government's vision for a net-zero industry and an in-depth look at how to encourage more women into shipping are just two areas that have been making the news in recent months

The UK Department for Transport has laid out its vision for how the UK maritime industry will reach net-zero emissions by 2050.

The new Maritime Decarbonisation Strategy sets out the government's ambition to align with International Maritime Organization (IMO) stretch targets of a 30% reduction by 2030 and an 80% reduction by 2040 in emissions (both relative to 2008).

The strategy covers five key areas: fuel regulation; emissions pricing; emissions at berth and net-zero ports; reducing emissions for small vessels (sub 400GT); and energy efficiency aligned with IMO short-term measures.

Alongside the strategy, the government published two calls for evidence. The first is focused on small vessels and seeks input on how interventions can be "effective, proportionate, well timed and meet emission reduction goals". It will close on 25 July 2025.

The second is focused on net-zero ports, and seeks views on activities, challenges and developments now and in the future for the net-zero carbon practices of vessels docked at ports, including the current infrastructure, refuelling capabilities, electricity requirements and growth opportunities. It will close a month prior to the small vessels one (on 24 June).

The strategy also highlights the government's intention to consult further next year on the issue of fuel regulation.

Alongside the consultations, it is also noted that primary legislation will be required this year and next year, in order to implement the proposed changes.

Find out more at: tinyurl.com/BTI-Consultations

SUSTAINABLE SUPPLY

A new report published by Lloyd's Register Foundation highlights opportunities to make the number of seafarers more sustainable by investing in Africa's emerging talent and supporting women in maritime roles.

Deep dive on seafarer sustainability: Supporting the opportunity for Africa and women to create a sustainable supply of seafarers for the future, was carried out by the World Maritime University. It highlights that investment in Africa and support for more women to play a significant part in maritime roles provides a viable option in a sustainable future for seafarers.

It is the first report in a series exploring the challenges faced by the global maritime sector as part of Lloyd's Register (LR) and Lloyd's Register Foundation's Global Maritime Trends research programme, which aims to address major maritime challenges in the coming years.

Launched in 2023 with the Global Maritime Trends 2050 Report, it includes 'deep dive' reports providing expert analysis on critical maritime issues. The first report on seafarers' sustainability was released in London in March.

The report examines entry barriers for careers in maritime, many of which intersect for both women and those living on the African continent.

In some countries, the report outlines, women were banned from enrolling in nautical courses, while false beliefs have persisted through the decades that they would be less effective at sea, both for physical and emotional reasons.

Yet, the report highlights that reaching 25% women seafarers by 2050 could be possible by following several steps, which the report breaks down, ranging from awareness campaigns to encourage more girls into STEM, to gender equality policies and targeted scholarships.

While the skills shortage in the industry is not a new issue, it has become an increasingly pressing one in recent years. Back in 2023, the *Global Maritime Trends 2050* report described two possible scenarios to tackle it by having Africa's young and talented demographic play a pivotal role, or by increasing the number of women seafarers to 25% of the total workforce in shipping.

To understand how that could work, a baseline of what training and education, as well as the number of seafarers, was required to assess what needs to change to make that happen.

The deep dive report concludes that based on the evidence, both are possible, and outlines a clear road map and tangible steps towards each of the targets, including awareness campaigns to get more girls into STEM, gender equality policies and targeted scholarships.

Professor Momoko Kitada, Head of Maritime Education and Training, World Maritime University, one of the report's authors, says: "Diversity has been a challenge across several skills shortage-ridden sectors, but few are experiencing it to the same extent as maritime.

"Given the growing demands on the sector and other challenges ahead, including the switch to greener energies and sustainability, we felt it was essential to provide governments and industry stakeholders with a clear roadmap to meet maritime's ambitious workforce targets by tapping onto one key overlooked demographic – the rich talent pool found in Africa and the skills of women.

"That's where our *Deep Dive* report comes in, along with the clear roadmaps developed by experts, breaking down the necessary steps to achieve a diverse, sustainable workforce."

The report also dives into entry barriers into the industry for people living in Africa. It found a combination of enrolment disparities for maritime education and training institutions across the continent, combined with low graduation rates (22% at Durban University of Technology, for example) mostly down to limited sea time, prevented potential seafarers from reaching their potential.

To bridge the gap, several recommendations are included in the report – such as the funding and establishment of seafarer development programmes, as well as global partnerships.

Olivia Swift, Head of Maritime at Lloyd's Register Foundation, adds: "Clearly, there are vast and largely

untapped numbers of female and African seafarers with much to offer the maritime economy.

"What has been less clear, is how the potential of women and African seafarers can be realised on a large scale, which is what this report focuses on answering.

"Researchers at the World Maritime University have obtained and collated data, unseen elsewhere, on African Maritime Education and Training enrolment and graduation, good practice, and on subsequent employment, as well as data and good practice relating to the employment of women seafarers, globally. Their analysis allows policy makers and other stakeholders to understand the current state of play, and where to focus efforts to improve it."

To download the report, visit: global-maritime-trends.org

CHINA INSPECTION ALERT

Insurer Gard has brought to operators' attention the fact that Chinese port authorities will inspect visiting vessels this year to ensure that personnel involved in enclosed space entry activity understand the risks involved and are properly trained and equipped to control them.

According to Gard's Chinese correspondents Huatai Marine and Oasis P&I: "The China Maritime Safety Administration (MSA) has launched a special safety inspection campaign aimed at preventing enclosed space accidents onboard vessels. The campaign targets all visiting vessels and runs until 14 October 2025.

"During the campaign period, Chinese port state officers will conduct special enclosed space entry inspections when onboard, and the correspondents report that inspectors will pay particular attention to topics such as:

- Crew training and hazard awareness, including identification of all onboard locations/spaces in which a hazardous atmosphere could develop.
- Permit to work system, including barriers and markings to prevent unauthorized entry.
- Availability of relevant and well-maintained atmosphere testing and rescue equipment, as well as crews' familiarity with the equipment.
- Conducted enclosed space entry drills in accordance with SOLAS Reg. III/19.3.3.

For additional information and advice concerning the inspection campaign, refer to Huatai Marine's circular No. PNI[2025]01 and Oasis' circular No. 2501

As highlighted in Gard's recent alert

'Improved safety recommendations for entering enclosed spaces onboard ships', enclosed space entry accidents occur on all types of vessels and involve people of all ranks.

"There appear to be certain recurring patterns in how these accidents continue to occur in the same way and in the same onboard locations. However, the underlying causes are not always evident, as a number of operational, commercial, technical, and training-related factors may impact these types of accidents," Gard says.

"We therefore encourage vessel operators to use China MSA's special safety campaign as a timely reminder of the necessity of ensuring that persons involved in enclosed space entry activity are aware of the risks and are properly trained and equipped to manage them.

Operators and masters should review their enclosed space entry procedures to verify compliance with SOLAS, the ISM Code, relevant IMO and flag state recommendations, and industry best practices. It is also important to verify that the procedures are fully understood and followed by those working onboard."

Gard's enclosed space entry safety awareness campaign provides additional guidance and links to videos and other training materials at: gard.no/document/enclosed-space-entry-training

WASTE MANAGEMENT

Evac Group, a global leader in sustainability technologies and solutions, has launched Dehydro, an innovative onboard waste management system designed to meet the specific needs of smaller vessels.

Evac's Dehydro system brings advanced waste management treatments to smaller vessels by using dehydration technology. Traditional onboard waste systems typically require high volumes of wet waste to be cost-effective, which makes them impractical for smaller vessels.

The Dehydro system makes onboard waste treatment viable for smaller ships, reducing the need for overboard discharge or costly offloading to land-based facilities. This significantly reduces waste volume, helping vessels meet increasingly stringent environmental standards and delivering a cost-effective solution.

Evac's Dehydro system reduces wet waste volume by approximately 80% through its dehydration process, transforming wet waste into a sterile, dry powder. This eliminates the need for additional treatment and simplifies offloading, making waste management easier and more cost-effective through its compact design, which is suited to vessels producing between 50 and 1,000 kg of wet waste per day. This includes small merchant vessels, OSVs, ferries and passenger vessels, and large yachts.

Many smaller vessels rely on outdated, unsustainable waste disposal options, requiring them to either discharge waste into the sea where permitted or transport it to land-based facilities, both of which have significant environmental and financial costs.

The launch of Dehydro also comes at a time of stricter regulations on waste disposal to protect marine ecosystems, underlining the need for more innovative waste management solutions for smaller vessels that are more likely to operate closer to shore, where the environmental consequences of non-compliant waste discharge can be extremely serious.

Björn Ullbro, CEO of Evac Group comments: "Direct discharge of untreated waste poses a serious threat to aquatic life by depleting oxygen levels. Most onboard waste treatment systems require high volumes to be cost-effective, leaving smaller vessels without viable options. With increasing regulatory pressures, owners are calling for more innovative and sustainable solutions to the challenge of onboard waste treatment and storage. Dehydro answers that call, with advanced dehydration technology to operators of smaller vessels.

"The launch of this product marks a key moment for Evac. Traditionally, innovation in our industry meant developing a great product and then bringing it to market. This time, we reversed that. We started with the customer's operational reality and identified the best solutions on the market.

"Complementing in-house innovation with strong partnerships is a clear example of how we're delivering on our ambition to offer the industry's most comprehensive water and waste management portfolio."

Dehydro is a significant step toward helping smaller vessels meet evolving environmental standards, including compliance with MARPOL Annex IV and Annex V regulations, which govern sewage and garbage discharge, including food waste, from ships, as well as EU waste management rules on port reception facilities, and other local and national regulations.

There are also a growing number of Special Areas under MARPOL, which are subject to higher levels of protection from pollution risks, placing more stringent obligations on vessels in these locations.

DNV DELIVERY

DNV's latest white paper uncovers key insights on how DNV assists shipowners in obtaining approvals and ensuring the safe adoption of ammonia and hydrogen as ship fuels.

Safe introduction of alternative fuels – Focus on ammonia and hydrogen as ship fuels includes:

- An overview of the order book and the technological development status of ammonia and hydrogen as marine fuels
- Important safety considerations specific to ammonia and hydrogen
- A detailed breakdown of roles and responsibilities to help to navigate regulatory compliance
- Key steps needed to ensure safe adoption of ammonia and hydrogen on ships.

For more information, visit: dnv.com

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ONWARDS AND UPWARDS

Efficient use of cranes and grabs is an essential part of bulk terminal operations and there have been a number of orders in recent times to replace existing cranes and introduce new and more powerful models, as well as repairing those already in operation

The recent supervision and procedural guidance provided by Alatas for repairing and servicing two Liebherr CBW 40/24.8 deck cranes marks another milestone in Alatas' commitment to excellence in crane maintenance. This project, conducted in Viana do Castelo, Portugal, underscores the meticulous approach required for structural repairs, hydraulic system upgrades, and operational testing.

The primary focus was supervising and repairing two deck cranes that exhibited extensive structural damage and hydraulic issues. Both cranes, originally installed in 1998, required significant intervention to restore operational efficiency and ensure compliance with safety regulations.

Through detailed inspections, precise structural repairs and rigorous testing, the Atalas team ensured that the cranes were restored to optimal performance. This project not only highlighted Alatas' technical capabilities, but also underscored their dedication to ensuring the highest standards of safety and reliability in maritime operations.

The job involved new plates; outlined and ensured non-destructive testing (NDT) for all welds; advice on hydraulic tank flushing, oil replacement and hose installations; supervised load testing and ensured proper adjustments for pressure and limit switches; troubleshooting guidance for operational malfunctions, including reversed functions and slow slewing and recommended adjustments and replacements for damaged limit switches and faulty components.

Both crane jibs exhibited extensive corrosion, with damage extending beyond the initial repair scope. Critical areas, such as the thimble clevis and centre sheave pin, showed significant wear and deformation.

Both cranes had partially disassembled hydraulic systems. Crane number one's hoisting winch was missing and water contamination was identified in the hydraulic tank.

Initial testing revealed reversed functions in crane number one and a non-responsive hoisting system in crane number two. These issues were traced to missing components and faulty switches.

The repairs were completed in multiple phases during a series of site visits from October to December 2024:

KONECRANES ORDER BOOST

The Saguenay Port Authority in Quebec has ordered a Konecranes Gottwald ESP.6B Mobile Harbour Crane for a new cargo handling system currently under development. The order was booked in early 2025, with handover scheduled for the third quarter of this year.

Situated on North America's only navigable fjord, Port Saguenay provides cargo ships with year-round access to north-central Quebec. The natural deepwater port can accommodate vessels of up to 100,000 tonnes. Capitalising on this strategic location, the port authority is now expanding its facilities to handle more cargo traffic.

This deal marks the start of a new partnership with the Saguenay Port Authority, which chose Konecranes for the flexibility, eco-efficiency and strong performance of its electric drives. The mobile harbour crane will run mainly on an external power supply, significantly reducing emissions compared to diesel-powered alternatives.

The ESP.6B comes equipped with an electric cable reel at the boom top to operate an electric hook rotator and spreaders. With these special features and its 125-tonne maximum lifting capacity, the crane can handle bulk materials – like de-icing salt and iron ore – as well as containers and general cargo.

"By enabling the use of electricity, the Konecranes equipment will be instrumental in helping us to reduce our carbon footprint. With the extra handling features we've chosen, the crane is a true asset for the planned growth of the port and the world-class industrial port zone, one of the largest In North America," says Carl Laberge, Chief Executive Officer at Saguenay Port Authority.

"Konecranes' industry-leading electric drive concept played a decisive role in securing this agreement. We are very happy to have the Saguenay Port Authority on board as we help more and more customers to reduce emissions while maintaining high operational performance," says Andreas Moeller, Senior Sales Manager, Konecranes Port Solutions.

Meanwhile, building on strong sales momentum with Spanish port operators, Konecranes has secured a new order with CSP Iberian Valencia Terminal . for seven Konecranes hybrid rubber-tyed gantry (RTG) cranes. The order was booked in February 2025, with delivery to the Port of Valencia scheduled for March 2026.

> "We have a very strong relationship with Konecranes, built over many years of reliable performance. The company's hybrid technology is the solution that modern ports need

The new cranes will add to the fleet of 11 Konecranes hybrid RTGs that CSP Valencia already has in operation at its terminals in Valencia and Bilbao. The port operator's decision to invest in additional Konecranes hybrid RTGs underscores its long-term commitment to reduce emissions in container handling.

Featuring Konecranes' hybrid drive technology, the hybrid RTGs significantly reduce fuel consumption and CO_2 emissions compared with conventional diesel-powered RTGs. The seven new cranes come equipped with active load control, gantry collision prevention and truck lift prevention, enhancing

operational efficiency and safety at the Valencia terminal.

"This investment is another important step in our journey towards zero tailpipe port operations. We have a very strong relationship with Konecranes, built over many years of reliable performance. The company's hybrid technology is the solution that modern ports need," says Gustavo Ferrer Soriano, General Manager at CSP Iberian Valencia.

The Konecranes Port Services operation in Valencia plays a key role in supporting CSP Valencia, with maintenance experts on hand to ensure the long-term reliability and performance of Konecranes equipment. The services operation has significantly expanded its footprint and capabilities over the past decade, serving customers across the region.

Other work includes Europea Servizi Terminalistici), a subsidiary of the Italian Shipping and Logistics Agency Srl (ISLA), has ordered a new hybrid drive Konecranes Gottwald ESP.8 Mobile Harbuor Crane for the fast-developing Port of Augusta, Sicily. The order was booked in Q1 2025, with delivery and commissioning expected by the end of summer.

Equipped with a 5.3m tower extension and 65-tonne twin-lift spreaders, the crane will improve EST's ability to handle containers and specialised heavy cargo, such as wind energy components.

The hybrid drive combines a diesel engine with two ultracapacitors to reduce fuel consumption and tailpipe emissions. The crane is also prepared for an external power supply, enabling full electrification and zero onsite tailpipe emissions once the necessary infrastructure is in place at the Port of Augusta.

Long-standing customer Port Newark Container Terminal in the US has ordered a further 15 Hybrid Konecranes Noell straddle carriers. The order was booked in Q4 2024 and deliveries are underway, with the last cranes scheduled for handover in April 2026. The new straddle carriers will be assembled and commissioned between Q4 2025 and Q1 2026.

Konecranes has also received an order to supply its latest X-series crane to Peikko's new facility in Bila Tserkva, Ukraine, where it will support the production of concrete connections and floor structures for the construction industry. The order was placed at the end of December 2024, followed by an additional order for a 100m runway in January 2025. Installation is scheduled for early to mid-April 2025.

The crane will feature a ive-ton Konecranes S-series low-headroom hoist with synthetic rope, Canman radio and an energy chain for the trolley, supporting efficient and safe operations. It also includes integrated smart features to enhance safety and help increase productivity with shorter load cycle times.

Peikko is expanding in Ukraine and its new facility, which is close to the capital Kyiv, is expected to open between April and May 2025. The company has indicated plans to order a second similar crane within the next year.

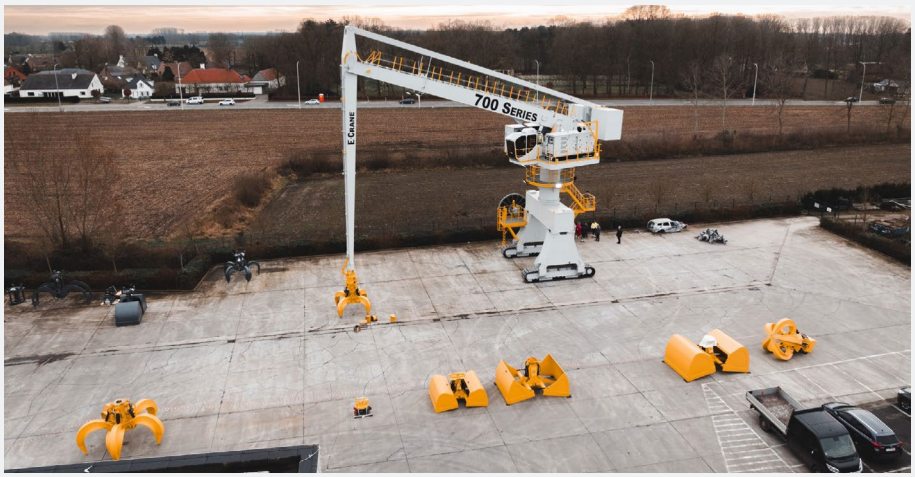
"We've had the opportunity to work with Peikko in several countries over the years, and its decision to invest in our latest X-series crane for their new facility in Ukraine reflects the strong working relationship we've developed. This collaboration is rewarding, as it has the potential to contribute to the rebuilding efforts in Ukraine," says Dmytro Gerasymenko, Director of Industrial Equipment and Service Sales, Konecranes, Ukraine.

A strong focus on customers and commitment to business growth and continuous improvement make Konecranes a material handling industry leader. This is underpinned by investments in digitalisation and technology, plus its work to make material flows more efficient with solutions that decarbonise the economy and advance circularity and safety.

E-CRANE: REVEALING THE HIDDEN POWER OF CRANE DIMENSIONS

COMPANY NEWS

In the world of material handling, capacity and reach are equally important, but it isn't everything. For Belgian crane manufacturer E-Crane, innovation lies also in precision, adaptability, and listening to what clients truly need. As the company celebrates its 35th anniversary, it isn't a towering mega E-Crane that takes centre stage, but rather its smallest model: a 700 Series lifting more than nine tons at 32m outreach.



E-Crane takes pride in sharing the values that set it apart as an organisation:

- Premium quality
- Customised solutions
- Long-term investment
- Exceptional service

The company continually strives to enhance its products and services to support a circular economy and minimise emissions. Its innovative equilibrium cranes are designed with energy efficiency in mind, featuring a balanced design that significantly lowers CO_2 emissions, compared with conventional equipment.

Electric motors use energy far more efficiently than their internal combustion counterparts, which waste a huge amount of energy through friction. Electric motors can convert up to 85% of the energy they burn into motion, compared with less than 40% with a combustion engine.

Every crane built by the company is customised to meet client needs and requirements. From fabrication at E-Crane's Polish construction facility to final assembly and customisation in Adegem, Belgium, each step is handled with care, precision and an unwavering commitment to quality.

Tipping the scales in the 120-150 tons class, the new heavyweight 700B-Series E-Crane is driven by a single 132 kW main electric motor and boasts new motor-pump controls that optimise hydraulic flow logic and increased swing torque to deliver even faster cycle times than the legendary 700A-Series. The chassis, boom, stick, link, counterweight and undercarriage are all designed to ensure maximum uptime in even the most extreme bulk and scrap handling applications.

The newly updated 700B-Series crane is packed with potential. The crane proves that a reach and capacity doesn't reduce speed nor accuracy. As a matter of fact, operators appreciate its intuitive controls and enhanced maneuverability.

For more information, visit:
e-crane.com

MOVING AHEAD

Eficient loading and unloading of vessels is essential for the smooth running of ports, not just in terms of safety but also to ensure maximum efficiency

Bruks Siwertell has received an order for a next-generation Siwertell 15 000 S road-mobile unloader. The largest model Siwertell road-mobile ship unloading solution will offer environment-friendly, efficient grain handling and comply with European Union (EU) directives for ATEX-classification, ensuring the safe handling of organic commodities.

"In mobile ship unloading terms, this is a significant contract, with a specialised configuration," sayss Jörgen Ojeda, Sales Director, Mobile Unloaders, Bruks Siwertell. "The Siwertell 15 000 S road-mobile ship unloader is the largest mobile ship unloading solution on the market today. This particular model also has ATEX-classified components and systems, enabling it to meet the highest safety standards for handling organic dry bulk materials, such as wheat and grain.

"Siwertell road-mobile unloaders have unrivaled performance capabilities," continues Ojeda. "They not only offer high through-ship capacities, no spillage and dust-free unloading, but also handle sensitive organic materials, such as grain, very carefully. This means that all our screw-type Siwertell ship unloaders minimise material degradation and preserve the quality of grain shipments.

"The good reputation of our road-mobile ship unloading technology was fundamental in securing the order, along with the fact that we are the only manufacturer capable of delivering such a large, efficient mobile ship unloading system," he adds.

Diesel-powered, next-generation Siwertell 15 000 S road-mobile unloaders feature Stage V/Tier 4F diesel engines, which comply with the latest EU emissions regulations, and are fitted with a double-bellows discharge arrangement and dust filters, ensuring efficient, environment-friendly material transfers.

Next-generation units also have advanced digital solutions and an integrated communications system that enables remote access, troubleshooting and support. This can be upgraded if, in the future, owners want to take advantage of Bruks Siwertell's latest service support packages, which include the use of an augmented reality (AR)-kit.

The Siwertell 15 000 S road-mobile unit will offer a continuous rated wheat unloading capacity of 400t/h, discharging vessels up to 15,000 dwt. It will be delivered fully assembled towards the end of 2025.

Cement handling

Bruks Siwertell has also delivered a fourth Siwertell road-mobile ship unloader to a long-standing, undisclosed cement-handling customer. Its latest unit is a next-generation Siwertell 10 000 S road-mobile ship unloader, further strengthening the technology's reputation and market-leading position in the cement handling sector.

> "Siwertell road-mobile ship unloading technology continues to set the standard for flexible, efficient, environment-friendly cement handling

"Siwertell road-mobile ship unloading technology continues to set the standard for flexible, efficient, environment-friendly cement handling," says Jörgen Ojeda, Sales Director, Mobile Unloaders, Bruks Siwertell.

"The 10 000 S model, in particular, has become a favourite choice worldwide for cement operators. Over the past decade, a significant portion of road-mobile ship unloading system sales have been within this category."

The customer already operates three Siwertell 10 000 S road-mobile ship unloaders, which offer a continuous rated capacity of 300t/h and can discharge vessels of around 10,000 dwt. Its current equipment trio includes one older-generation unit. With this latest addition, it will have three next-generation models.

Next-generation road-mobile unloaders feature advanced digital technology that enables remote access, troubleshooting and service support; especially valuable for operators in remote or demanding locations. They are also equipped with Stage V/Tier 4F diesel engines, ensuring compliance with the latest European Union (UN) emissions regulations.

"With its extensive experience operating Siwertell road-mobile unloaders, the customer has developed a high level of trust and confidence in both the equipment and Bruks Siwertell's ability to deliver ongoing operational support," notes Ojeda.

"Our road-mobile unloaders offer unparalleled reliability and adaptability," he adds. "They require minimal infrastructure, are operational within an hour of arrival and can effortlessly serve multiple port locations."

Siwertell ship unloaders offer the highest levels of environmental protection as well. They have a fully enclosed material handling system that eliminates spillage and minimises dust emissions, along with integrated dust filters that capture fugitive dust at transfer points; essential capabilities when handling powdery dry bulks, such as cement.

LIEBHERR'S ELECTRIC OFFER

The L 507 E battery-electric wheel loader has been available from Liebherr sales partners in several European countries since October 2023. The model is the first electric wheel loader in the group. It combines the demonstrable advantages of a Liebherr Stereoloader with a battery-electric drive design developed by Liebherr.

The performance of the L 507 E is equal to that of a conventionally powered Liebherr wheel loader in the same size class, but it emits no CO_2 onsite. In addition, noise emissions are kept to a minimum, which makes the

wheel loader particularly suitable for any application where one has to consider noise or exhaust fumes, such as in inner-city areas or in halls.

Liebherr relies on a high-voltage battery system – specially developed for L 507 E wheel loader applications – which ensures powerful performance and efficient charging.

Depending on the respective operating conditions, the L 507 E offers a running time of up to eight hours. Liebherr's modular battery design also makes it possible to install a second lithium-ion battery ex works at the customer's request, which further increases the running time. Depending on the on-board charging technology and power rating, the battery can be fully charged in about one and a half to three hours.

With the 507 E, the battery-electric drive means that full power is available at all times. The operator thus benefits from dynamic working movements and responsive handling. As standard, the wheel loader has a final speed of 20 km/h.

However, the L 507 E is also optionally available as a 'speeder' and in this version reaches a speed of up to 30 km/h, which makes it easier to move the wheel loader, from one job site to another. To increase efficiency, the energy generated downhill and during braking is fed back into the battery through recuperation.

The L 507 E is based on the conventional Liebherr L 507 Stereo wheel loader. This means that the battery-electric wheel loader also features stereo steering.

This combination of articulated steering and steered rear axle combines the advantages of conventional articulated steering with those of all-wheel steering.

This results in a minimal turning circle and a reduced articulation angle of 30°, which increases the stability of the wheel loader.

Liebherr has also installed its reputable articulated pendulum joint in the L 507 E, which compensates for uneven ground and ensures that the wheel loader has excellent stability.

Liebherr's battery-powered wheel loader uses the same lift arms of the conventionally powered L 507 Stereo. They showcase powerful z-bar kinematics, which also work safely in fork operation without manual readjustment. Here, the electro-hydraulic pilot control of the L 507 E ensures highly responsive and precise movements on the lift arms.

The fully automatic LIKUFIX quick-coupler system is also available. This allows the operator to change between mechanical and hydraulic attachment tools from the cab within seconds at the touch of a button.

The extensive use of glass in the operator's cab means that the operator has excellent visibility and the cab is also extremely ergonomic and comfortable. Various setting options as well as operation-relevant data, for example the charge status of the battery, can be found on the height-adjustable display with a touch function.

In addition, the operator has the option of adjusting the steering wheel and seat individually as desired.

The L 507 E can be used intuitively and hardly differs from a conventional wheel loader. Therefore, even less experienced operators can work safely and efficiently with Liebherr's battery-electric wheel loader.

L 507 E: LIEBHERR'S BATTERY-ELECTRIC WHEEL LOADER © LIEBHERR

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CONSULTANCY SERVICES

Some of our Consultancy services include advising on:

- Storage and Discharge of bulk materials
- Pneumatic Conveying of bulk solids
- Spoiling of materials in storage and in transit
- Plant and Equipment design/redesign
- Ship Unloading/ quayside operations
- Control of plant wear
- Dust control
- Bulk Materials characterisation
- ATEX/DSEAR compliance
- Expert Witness services

SHORT COURSES FOR INDUSTRY

We also provide a range of short courses to help delegates identify potential bulk materials handling problems and advise on how to avoid and/or overcome these issues. They fall under 4 main categories

Pneumatic Conveying:

- Pneumatic Conveying of Bulk Materials
- Pneumatic Conveying System Design
- Rotary Valves; Design, Selection and Operational Issues
- Commissioning and Troubleshooting 'Hand's On' Pneumatic Conveying Systems

Storage of Bulk Materials:

- Storage and Discharge of Powders and Bulk Solids
- Design of Equipment for Storing and Handling Bulk Materials
- Biomass Handling, Feeding and Storage (can be adapted to other materials such as waste, recycled goods, pellets)

General bulk materials handling:

- Overview of Particulate Handling Technology
- Port and Terminal Operations for Bulk Cargoes
- Measurement of the Properties and Bulk Behaviour of Particulate Materials
- Dust Control in Processes

Specialist areas of concern:

- Caking and Lump Formation in Powders and Bulk Solids
- Undesired De-blending and Separation in Processes and Equipment
- Electrostatics in Powder Handling
- Numerical Modelling of Solids Handling and Processing
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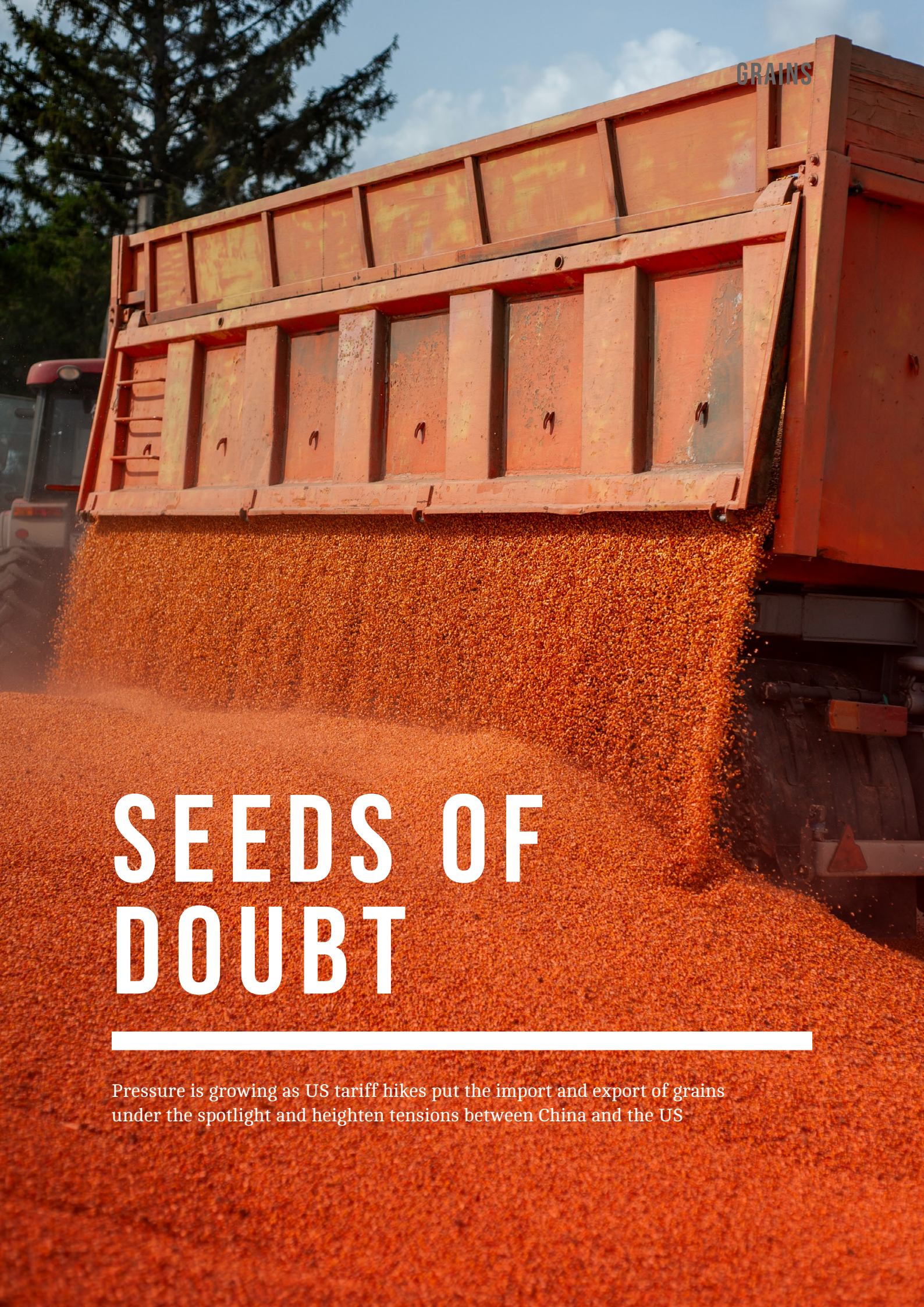


SEEDS OF DOUBT

Pressure is growing as US tariff hikes put the import and export of grains under the spotlight and heighten tensions between China and the US

Grains are one area that has been hit hard by US President Donald Trump's controversial tariffs, with potentially shifting market action by China after he announced fresh tariffs on US imports.

Analysts S&P has suggested that China may well look to Brazil rather than the US for sourcing grains such as soybeans. According to S&P: "Declines in soybeans futures reflect an estimated loss in the value of unsold 2024 crop of nearly $300m, costing US farmers amost $1.4bn on the 2025 crop."

According to the Agriculture and Horticulture Develpment Board (AHDB,) recent figures published on UK trade date by HMRC, which cover up to the end of February, suggest "shorter domestic grain supplies this season, as well as a strengthening Sterling, saw a particularly strong pace of wheat and maize imports for the first half of this marketing year (2024/25). However, as we progress towards the end of the season, and with less competitive imports, are we seeing pace slow in line with expectations?"

AHDB continues: "Wheat imports (including durum wheat) totalled 2.16Mt from July – February, up 50% on the same period last year, and up 78% on the five-year average. However, for the first time this season, monthly imports fell below 200Kt, at 194.6Kt in February. This is well below the average monthly pace of 269.7 Kt for this season so far."

In March, AHDB estimated that full-season wheat imports would reach 2.70Mt. As such, in order to reach this estimate, imports would need to average 135.6Kt a month for the remainder of the season.

With the majority of imports expected to be of milling quality, reports that suggest importers 'front loaded' stocks, and the fact that millers are now well supplied, means it is likely we will see pace pull back further, in line with expectations, AHDB says.

"Season-to-date (Jul-Feb) maize imports totalled 1.99Mt, up 12% on year earlier levels, and 19% on the five-year average. In March, AHDB estimated full-season imports would total 2.65Mt. To reach this figure, the import pace would need to average 165.4Kt, well below the 260.8Kt imported in February.

"The flow of imports over the next few months will remain a key focus for the domestic supply and demand balance and will impact how much grain we carry into the new season. Focus now also turns to new crop expectations in the UK, and what this will mean for import requirements in the 2025/26 season."

The AHDB Planting and Variety Survey (PVS) is an annual pre-harvest survey that provides an estimate of what might be available from the upcoming cereals and oilseed rape harvest in the UK. AHDB will be conducting its harvest 2025 survey earlier than usual and will release results online on 10 June 2025 .

The International Grains Council has recently released new global supply and demand forecases showing that grain production is set to be higher both in the current season and for 2025/26.

> Mexico overtook China to become the largest grain importer in 2024, with the latter's imports declining 13% YoY. This decline could persist in 2025 as well, signalling the country's shift toward greater self-sufficiency

CHINA TAKES ACTION

China's evolving grain import strategy reflects its increasing focus on domestic production to enhance food security and support local farmers, according to a report by Drewry. "This shift is reshaping the global grain trade, particularly the tonne-mile demand for Panamax vessels, by reducing their rates on specific trade routes.

"China's grain imports have been on a rise through 2020 to 2023, with a peak – 60 million tonnes imported in 2021. However, Mexico overtook China to become the largest grain importer in 2024, with the latter's imports declining 13% YoY. This decline could persist in 2025 as well, signalling the country's shift toward greater self-sufficiency. "

By 2035, China plans to develop a more diversified food system that aligns with the evolving nutritional and consumer preferences of its population Drewry suggests.

As China shifted to a supply-side approach to support domestic corn prices by limiting imports, the US Department of Agriculture revised China's corn import estimates to 10 million tonnes for the marketing year 2024-25, down nearly 25% from earlier projections. Due to the strong corn harvest, China's production rose 12 million tonnes in 2023-24, allowing it to build a surplus for feed and further reducing the need for imports in 2024-25, as production continues to rise, the report suggests. This was produced before the most recent US political action which is bound to affect strategies and statistics going forward.

AD PORTS BOOSTS STORAGE

AD Ports Group has recently signed a land lease agreement with Al Ain Mills to develop a grain storage and processing facility at Khalifa Port at South Quay, which is expected to boost the port's capabilities as a major trade hub in the region.

The 50,000m^2 facility will aim to have a storage facility of approaximately 300,000 metric tonnes and is expected to start production within two and a half years of construction starting.

The leased polot will give Al Ain Mills access to deep water berths and facilities at Khalifa Port with the aim of boosting the providion of grain products to the GCC and beyond, using the port's grain storge and handling facilities.

AD Ports Group has also signed a Foundation Agreement with Semurg Invest, the owner and developer of the Sarzha Multifunctional Marine Terminal at Kuryk Port, Kazakhstan.

Under the terms of this agreement, AD Ports Group owns a 51% stake and Semurg owns a 49% stake in the partnership Sarzha Grain Terminal. The partnership has commenced constructing a greenfield grain terminal at Kuryk Port. Following the completion of phase one, this grain terminal will have the capacity to handle 570,000 tons of grain cargo per year. With the construction of phase two, the terminal's capacity is set to expand further, reaching 1.5 million tons per year.

Sarzha Grain Terminal will see a total investment of just over US$50m over the two phases, with AD Ports Group contributing around $30m.

With phase one scheduled for completion in the second half of 2026, Sarzha Grain Terminal is set to enhance global food trade, connecting Kazakhstan via the Transcaspian International Transport Route with Europe through a network of sea and dry ports in Central Asia.

Abdulaziz Zayed Al-Shamsi, Regional CEO of AD Ports Group, says: "Our partnership with Semurg marks another key milestone in AD Ports Group's Middle Corridor strategy and reinforces our commitment to global food security and the UAE's National Strategy for Food Security. This investment demonstrates our group's dedication to expanding our presence in Central Asia, and in Kazakhstan in particular."

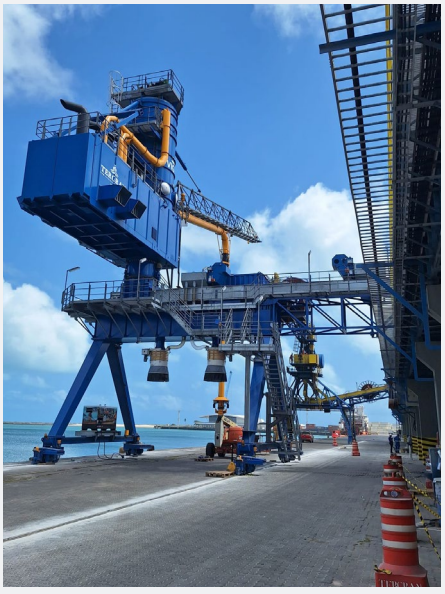
He adds: "Sarzha Grain Terminal will not only boost grain trade and handling at Kuryk Port but also, by leveraging modern technologies and sustainable practices, we aim to establish a resilient and reliable food supply chain to meet the growing demand of the global population. This project embodies our commitment to innovation, sustainability, and strategic growth."

Nurzhan Marabayev, General Director, Semurg Invest, says: "Our partnership with AD Ports Group marks a new impulse for the development of the Middle Corridor and confirms our commitment to continue further development and execute the transport and logistics potential development roadmap until 2030 approved by the government of the Republic of Kazakhstan. The project is aimed at diversifying export routes for Kazakhstan goods, increase export and transit potential of the Transcaspian route."

VIGAN: MEETING THE UNIQUE NEEDS OF GLOBAL PORTS

COMPANY NEWS

Bulk equipment plays a pivotal role in the efficient operation of ports worldwide, enabling the seamless loading and unloading of various goods, especially dry bulk products such as cereals. VIGAN Engineering SA, founded and headquartered in Nivelles, Belgium, has been at the forefront of this industry for more than 55 years, revolutionising bulk handling in ports. With a strong global presence and a commitment to innovation, VIGAN has become a leading provider of handling equipment for dry bulk products.



Over the years, the company has evolved into a global leader in the design, manufacture and on-site assembly of handling equipment for dry bulk products, primarily cereals. VIGAN's track record is impressive, with 1,500 machines operating all over the world.

STRONG PORTFOLIO

VIGAN offers a diverse range of equipment that is tailored to meet the unique needs of each port and its specific handling requirements:

- **Grain pumps:** Compact and mobile, these VIGAN pumps can reach up to 250 tonnes per hour, offering a cost-effective, efficient solution for quick deployment without heavy equipment investments.
- **Pneumatic and mechanichal ship unloaders:** VIGAN's pneumatic unloaders, available in stationary and mobile configurations (rails or tyres), are highly efficient, with capacities up to 800 tonnes per hour. Mechanical unloaders push throughput to 1,500 tonnes per hour. VIGAN's unloading systems utilise pneumatic suction technology to minimise dust emissions, meeting stringent environmental standards.

Loaders: VIGAN's loaders present a versatile solution suitable for a wide range of bulk products, whether handling large or small barges and vessels. VIGAN loaders are meticulously customised to accommodate diverse needs. The loading process is mechanised, with cargo efficiently conveyed into the loading boom through an integrated belt or chain conveyor. Subsequently, it is discharged into the ship's hold via a telescopic loading chute.

VIGAN prioritises the design of loaders with high-volume capabilities to minimise the necessity for equipment and component replacements caused by wear and tear. These shiploaders are engineered to achieve impressive capacities of up to 2,000 tons per hour for various types of products. VIGAN proposes multiple layout options, including fixed, tyre-mounted, and rail-mounted gantries, with flexible height and width configurations, customised boom lengths, a variety of loading spout types, dust control systems, control cabins and the option for static or rotating throwers.

Terminals: VIGAN's expertise extends to complete port terminal solutions. It provides turnkey projects, including the design and implementation of entire bulk handling systems within port

facilities. These terminals are designed for maximum efficiency, reliability and environmental compliance.

SET OF STRENGTHS

The exceptional achievements of VIGAN are grounded in a distinctive set of strengths that unequivocally distinguish the company:

Vertical integration: Unlike many competitors that rely on outsourcing, VIGAN controls every aspect of its equipment's design, manufacturing, assembly and testing. This ensures the highest quality and adherence to strict European standards.

Robust technology: VIGAN's use of proven and reliable technology guarantees uninterrupted operation, even in challenging conditions. The company prioritises high-quality, wear-resistant materials and simple, effective design choices.

Engineering and development: VIGAN continually innovates to provide top-performing equipment, often being ahead of the curve in the industry's developments. The company's focus on energy consumption and technology advancements demonstrates its commitment to efficiency.

A decade and a half ago, the company led the way in creating inline multi-stage turbo-blowers, powered by high-frequency drives with substantial suction power. Despite numerous efforts to replicate, there is still no other authentic multi-stage turboblower design available in the ship unloading market today.

One of the most recent of VIGAN's significant innovations is its expertise in noise protection systems for turbo sets, machine rooms and suction pipes. This development is particularly crucial when equipment is situated in urban or environmentally sensitive areas with stringent noise standards. Through calculations, studies and on-site measurements, VIGAN has established itself as a leader in designing noise-reducing solutions, further demonstrating its commitment to environmental and community considerations.

Customer services: Customer satisfaction lies at the core of VIGAN's philosophy, reflected in its integrated sales and service approach. From spare parts delivery – available even for machines that are more than 30 years old– to technical inspections and modernisation proposals, VIGAN ensures long-term operational excellence for its clients.

Leveraging decades of engineering expertise, VIGAN develops customised retrofit solutions that boost energy efficiency and extend the lifespan of existing port equipment. In response to rising energy costs, the company has introduced upgrade modules that reduce consumption by up to 25% through the integration of new VIGAN electric multi-stage turbo-blowers and frequency steering systems – achieving results with minimal structural impact and payback times of just two to four years.

A recent project in Portugal exemplifies this innovation-driven support. VIGAN replaced an outdated high-voltage Roots pump on a 500tph ship unloader with modern multi-stage turbines controlled by variable speed drives. The upgrade not only slashed energy usage but also simplified maintenance and significantly improved performance – restoring and surpassing the machine's original capacity.

DESIGNED FOR TODAY'S PORTS – AND TOMORROW'S

Customers prioritise several key features when selecting equipment for their port operations:

- **Performance**: VIGAN's equipment is known for its high performance, even under extreme conditions. It offers robust and reliable machines that consistently deliver outstanding results.
- **Energy efficiency**: With a focus on reducing energy consumption, VIGAN has been a pioneer in incorporating variable speed drive technology in its suction units, setting new standards for efficiency.
- **Low noise levels**: As more homes are built near industrial areas, noise reduction has become crucial. VIGAN addresses this concern by employing acoustic insulation solutions, ensuring that noise levels remain within acceptable limits, typically 60 to 65 decibels.
- **Ease of maintenance**: VIGAN designs its machines with longevity in mind. The company provides detailed maintenance instructions and offers preventive maintenance programmes to maximise machine uptime.
- **Dust emission reduction**: In response to evolving environmental regulations, VIGAN uses pneumatic suction technology that minimises dust emissions. The closed-circuit systems with overpressure filters keep dust contained, reducing emissions to around 3 mg/m^3.

STRONG FOCUS

What sets VIGAN apart is its commitment to vertical integration? From initial machine design and manufacturing to commissioning, the company controls every aspect of its equipment's development, ensuring both quality and timely delivery.

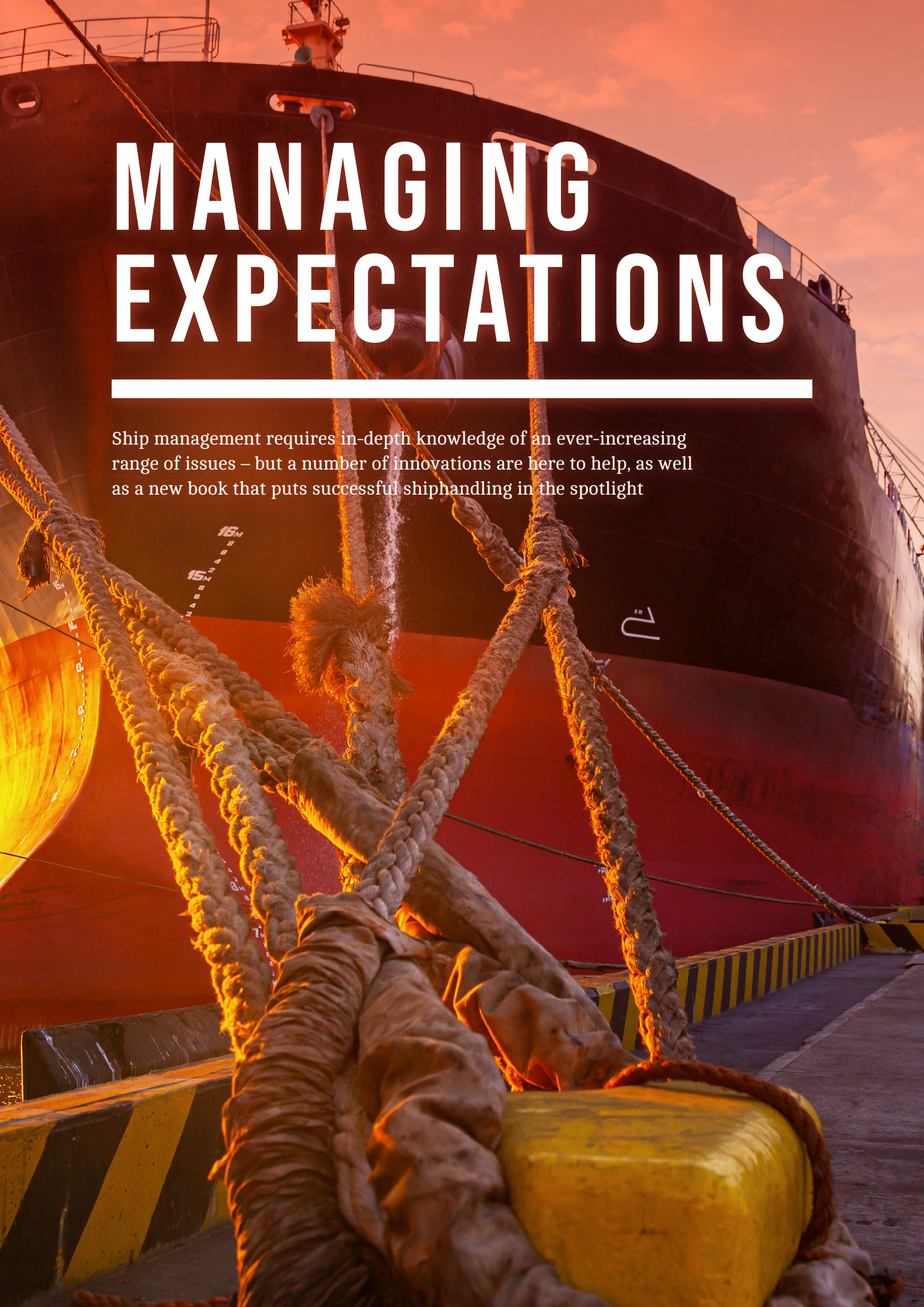
With a focus on precision, adaptability and sustainable solutions, VIGAN continues to provide its customers with modern tools to meet today's operational and environmental demands, while positioning itself as a global leader in bulk handling solutions.

For more information, visit: vigan.com

VIGAN

MANAGING EXPECTATIONS

Ship management requires in-depth knowledge of an ever-increasing range of issues – but a number of innovations are here to help, as well as a new book that puts successful shiphandling in the spotlight



Good shiphandlers can become great shiphandlers – and a new book from The Nautical Institute explains how.

The phrase 'the beautiful game' is synonymous with football, but for twin brothers Captain Grant H Livingstone and Captain George H Livingstone the words perfectly capture life at sea. Both authors have spent decades working as pilots, mastering the art of shiphandling, for which technical expertise meets instinct, experience and split-second decision-making.

As with elite sport stars and world-class musicians, who combine dedication to practice and honing skills with an instinct for their craft, the brothers have learned how professional mariners endorse the science of shiphandling but also talk about its 'feel'. Knowing the fundamentals is certainly a crucial element in successful shiphandling, but so, too, is the ability to manage emotions, rise above the panic and maintain focus, even with distractions all around.

To inspire other seafarers to view their profession as 'the beautiful game', the Livingstones have gathered insights from experienced mariners, asking them: "What were the most challenging elements to learn theoretically?" and "What were the most challenging elements to execute practically?".

The result is a book that draws together a range of real-life scenarios and how they were handled, examining both successes and failures so that today's mariners can learn from past events. It will propel them to the successes and help them to avoid the failures.

Shiphandling, the Beautiful Game has been written to explain what differentiates a good shiphandler from a great one. The authors consider common challenges and how best to deal with the emotions that can affect the outcomes, sharing examples of how to master those emotions and avert disaster. The book explores the many ways the human brain assimilates experience and develops motor skills and cognitive deduction, turning shiphandling into an art form that can be enjoyed rather than a challenge to be endured.

Whether you are a young cadet or a seasoned mariner, The Nautical Institute's newest release, *Shiphandling, the Beautiful Game*, offers valuable lessons on mastering the craft, managing high-pressure situations and achieving excellence in the wheelhouse.

Head of Information and Publications, Steven Gosling, comments: "Today more than ever, the mariner needs to be a competent and confident shiphandler, being in control at all times of the ship and themselves. What better than a lifetime of experience from two experts in the field to help you understand and master the art, the science and the mindset of successful shiphandling?"

***Shiphandling, the Beautiful Game* is available at nautinst.org, priced £87.50-125**

> "What better than a lifetime of experience from two experts in the field to help you understand and master the art, the science and the mindset of successful shiphandling?

ESG ENHANCEMENT

Achilles, a global leader in supply chain risk management solutions, and Procureship, the world's leading e-procurement platform have agreed a long-term partnership to enhance the environmental, social and governance (ESG) capabilities of the shipping industry's procurement processes.

The latest agreement will bring efficiencies to the supply chain assessment and purchasing process for Procureship members. Procureship provides streamlined purchasing for more than 100 fleet owners and operators, including BW LNG, Angelicoussis Group, Oldendorff Carriers, Starbulk Group, TB Marine and Technomar. By leveraging advanced analytics, machine learning tools, and a unique supplier recommendation engine, Procureship simplifies the procurement process between buyers and suppliers.

The Achilles Maritime Network provides a platform for shipowners and managers to collaborate, reduce risks, and enhance supply chain visibility while lowering costs and administrative burdens. Suppliers and contractors benefit from standardised processes and pre-qualification, fostering stronger relationships and business growth. The network supports transparency, sustainability, and responsible business practices in the maritime industry. Members of the Achilles Maritime Network include BW LNG and LPG, Odfjell, Seapeak and Seasourcing.

Through this agreement, users of the Procureship platform can access the Achilles service to improve visibility of their suppliers' sustainability performance. Procureship will also offer its supplier network the opportunity to demonstrate their Achilles score and standout through a rigorous, independent assessment.

The Achilles Sustainability Score will be reflected in Procureship's supplier profiles and displayed in supplier search engine results. Additionally, buyers will be able to check the suppliers' Achilles scores on the spot during the evaluation of quotations. This will allow maritime purchasers to easily source products from companies that align with their standards, providing greater transparency and confidence in their procurement decisions.

"Procureship identified the need for an ESG module to complement

our existing marketplace services and recognised the expertise we would gain through this partnership with Achilles," says Grigoris Lamprou, Co-Founder and CEO of Procureship. "For our clients, the ability to easily access information on supplier sustainability practices reinforces trust across the supply chain."

"The aim of Achilles is to ensure that procurement professionals within the shipping sector have a streamlined purchasing process that improves visibility, drives ESG metrics and increases process efficiency," says Paul Stanley, CEO, Achilles. "Including supplier sustainability data within an e-commerce platform like Procureship, cements this strategy with a simplified, yet robust process."

FUEL CONVERTER

Baltic Exchange has launched the maritime industry's first-ever free Fuel Equivalence Converter, a reliable, easy-to-use digital calculator that helps owners, traders, brokers and charterers to navigate the complexity of the physical properties of the wide variety of marine fuels that are currently available on the market.

The Fuel Equivalence Converter is the latest resource provided by Baltic Exchange to help shipping players understand the cost and commercial implications of greener fuel options following the launch of its FuelEU Maritime Calculator in December 2024, which was then expanded to include biofuels in March 2025.

The converter enables users to compare the mass, volume and energy content of various traditional bunker and green fuel options in order to better understand how their bunker supplies would be impacted to achieve an equivalent energy level. This type of data is critical for owners and operators looking to reduce their compliance costs or run their vessels on cleaner alternatives.

"With a number of standard and alternative fuels available on the market, finding the conversion rates and energy ratios of all of the options in one place is incredibly difficult. As the range of potential fuel alternatives increase, this converter enables owners, charterers, traders and more to understand the physical properties and energy content by volume of each fuel type," says Martin Crawford-Brunt, Emissions Lead at Baltic Exchange.

"Finding viable fuel options for our specific trades and ship types requires informed, data-led decisions that are grounded in reality. Just as we have done with our other emissions-related calculators and resources, Baltic Exchange is helping the industry to cut through this complexity." he adds.

The fuel consumption of the Baltic standard ship is expressed in terms of metric tonnes per day of marine fuel oil. The Fuel Equivalence Convertor can be used to quickly find the volume or mass of an alternative fuel to provide a similar amount of energy.

At present, the converter includes VLSFO, HFO, LFSO Crude, LFSO Blend, ULFSO, MDO & MGO, LNG, Ammonia and Methanol. It also includes various unit types, including metric tonnes (mt), cubic metres (cbm) and MMBtu, enabling shipping players to understand how different fuel options will impact their vessel's bunker fuel storage and management systems.

For example, the fuel consumption for a 300,000 dwt Very Large Crude Carrier (VLCC) at an eco-speed of 11 knots and in laden condition is 39.8 mt of VLSFO. Baltic Exchange's Fuel Equivalence Converter shows that this vessel would require 38.4 mt of MGO or 33.4 mt of LNG in order to achieve the same energy levels.

Similarly, the converter shows that the same vessel would require 82.4mt of methanol or 88.2mt of ammonia to achieve the same level of output.

"Understanding the potential impact on operations of the many alternative fuel options is crucial given the shipping industry must navigate the growing number of emissions regulations coming into force, successfully.

"By simplifying the process and providing this converter to the industry free of charge, alongside our other calculators, Baltic Exchange is doing its part to support decision makers with their decarbonisation journey," Crawford-Brunt notes.

"As always, we look forward to feedback from the industry to understand more about how we can improve our tools and resources to make them more effective for real-world users."

GAME-CHANGING BILL

The UK's new Cyber Security and Resilience Bill is a game-changer for Managed Service Providers (MSPs) and a necessary step in strengthening national cyber resilience. With the 2024 NHS cyber attacks exposing critical vulnerabilities, bringing MSPs into the scope of regulation is long overdue.

The Bill also has significant implications for insurers, as enhanced cyber security measures could reduce risk exposure, influencing cyber insurance uptake, underwriting standards, and premium stability.

Matthew Geyman, Managing Director of IT company Intersys comments: "This move aligns the UK with global efforts such as the EU's NIS2 Directive and the US's CIRCIA, ensuring that MSPs – who have unparalleled access to client systems – meet higher security standards. We've seen first-hand the gaps in cyber preparedness, and this Bill is a positive step towards a stronger UK cyber readiness baseline.

"However, with £100K-a-day fines at stake, organisations must act now. The biggest priority isn't just compliance – it's resilience. Businesses should be focusing on continuous risk assessment, security monitoring, and enhanced staff training. Cyber Security as a Service will become essential."

For the insurance sector, the Bill represents both a challenge and an opportunity. Rising cyber threats have driven premium increases and stricter underwriting standards, yet uptake of cyber cover remains low.

By compelling organisations to enhance cyber security controls and reporting, this legislation could reduce risk exposure, providing insurers with greater confidence in underwriting cyber and business interruption policies.

INTERACTIVE GUIDANCE

The Industry Associations of BIMCO, ICS, IMCA, INTERCARGO, INTERTANKO and OCIMF, supported by more than 40 maritime stakeholders, have released a consolidated and enhanced publication *Best Management Practices (BMP) for Maritime Security (MS)*.

As an interactive online publication, *BMP Maritime Security* consolidates previously published regional publications into a single, comprehensive publication with actionable insights and advice.

It focuses on providing a threat and risk management process and, recognising the dynamic nature of regional security situations, provides signposts to direct users to the most up-to-date security intelligence and risk assessment information.

Seafarers operating ships around the world encounter a range of maritime security threats, which often involve aggressive state and non-state actors. Although these threats vary across regions and in their severity, they can have a traumatic effect on seafarers who face unwarranted physical and mental harm. In some cases, being held as hostages and subjected to violence and ill-treatment for extended periods.

To counter the threat, existing BMP guidance has greatly improved the industry's ability to understand, detect, and deter maritime security threats in recent years, but the advice needs to keep pace with the rapidly evolving threat environment.

In *BMP Maritime Security*, users can navigate easily to different sections and link directly to external sources. Additionally, the publication includes various diagrams that provide valuable learning opportunities. The publication includes a significant section detailing global authorities and, importantly, appropriate contacts and tools for seafarer welfare support.

David Loosley, BIMCO Secretary General and CEO, says: "2024 saw an unprecedented spike in attacks against merchant ships. Ships were attacked with weapons of war in the Black Sea and in the Southern Red Sea more than one hundred times, and four innocent seafarers lost their lives. Globally, 126 seafarers were held hostage during pirate attacks and armed robberies, and 12 seafarers were kidnapped.

"*BMP MS* will reduce risks and save lives. While we cannot control how the threats will develop in 2025 and beyond, we can make sure that we have the best tools available to help protect our seafarers and world trade."

Guy Platten, Secretary General, ICS, adds: "Recent years have shown the stark security threats that seafarers and the industry can face in the service of world trade. From the conflict in Ukraine to the Red Sea Crisis, the dangers faced by shipping have increased to a severity not seen in two generations. This new global BMP continues the shipping industry's unswerving commitment to protecting seafarers and mitigating threats to the trade on which we all depend."

IMCA Chief Executive Iain Grainger, comments: "The maritime industry faces an ever-evolving landscape of security threats, making it essential for seafarers to have access to the most up-to-date and practical guidance. *BMP Maritime Security* provides a consolidated resource that helps vessels proactively manage risk, safeguard the welfare of crews, and enhance maritime security resilience worldwide.

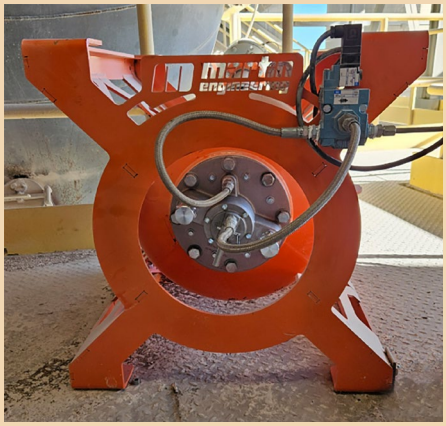
"People are our key asset, so IMCA is proud to support this initiative, ensuring that best practices continue to evolve alongside the challenges our industry faces."

***Best Management Practice (BMP) Maritime Security* replaces previously published issues or supported guidance. The publication is available for download at: ocimf.org/publications/information-papers/bmp-maritime-security**

MARTIN® X-STAND IMPROVES AIR CANNON EFFICIENCY AND SAFETY

Martin Engineering, the global leader in bulk material flow technology, has introduced a heavy-duty air cannon mounting system. The Martin X-Stand is an organisation system that safely keeps air cannons away from super-heated or potentially hazardous areas while offering easy service access. The result is clearer walkways, improved safety and greater maintenance efficiency for a lower cost of operation.

"Although secure when held in place by pipework, air cannons can be precariously placed around preheaters, hoppers and drop chutes, making them hard to get around or reach by maintenance crews," says Sid Dev, Product Manager of Air Cannons at Martin Engineering. "Some of these applications can also be in high-heat environments in loading zones, so we worked with customers to formulate a more practical and long-term solution. The X-Stand ended up having more benefits than we initially thought."



MARTIN X-STAND ORGANIZES AIR CANNONS AND PROTECTS MAINTENANCE STAFF (ALL PICS © 2025 MARTIN ENGINEERING)

IMPRESSIVE SPECIFICATIONS

The X-Stand is a rugged steel cube frame that comes in three sizes to fit the 35-litre, 70-litre and 150-litre air cannon tanks. These fit Martin Hurricane and Typhoon Air Cannons. The largest model measures 91.5 x 91.5 x 91.5cm and weighs 80kg.

Each cube has a sturdy cross-bar frame designed to distribute weight and absorb vibration from the cannon's firing. The central top hole allows easy access to the valve and attachments, while the bottom hole accommodates a standard 10 cm, 68kg, ight-bolt ANSI (American National Standards Institute) flange to hold the cannon securely in place.

The open sides allow easy access to the flange, hose connection, and tank removal. Solenoid boxes that enable manual firing and control the firing sequence can be conveniently mounted on the side of the rack.

The X-Stand is specially designed to fit different spaces and stack in several configurations for optimum space-saving, safer access and ease of maintenance.

The air cannons are still secured with a tether for added safety. X-Stands are delivered in assembled blocks with all the bolts and nuts required to secure them using standard tools. Air cannons are sold separately.

MARTIN X-STAND WITH A SOLENOID BOX MOUNTED ON THE SIDE FOR BETTER ACCESS

PREVENTING CLOGS

Air cannons are the most effective way to clear material that's adhered to preheater vessels or silo walls, as well as clogs in hoppers, bins and drop chutes. Instead of exposing workers to extreme heat, having them beat vessel walls with hammers, or entering dangerous confined spaces, air cannons do the job safely and remotely.

They comprise a 35, 70, or 150 litre tank connected to a compressed air system that delivers a powerful shot triggered from a solenoid box up to 61m away. Pointed in the direction the material flows, the high-velocity air passes through a nozzle across vessel surfaces in order to dislodge adhered material and clogs, promoting efficient throughput with minimal downtime.

Air cannons are commonly secured to a nozzle assembly next to the vessel. A wire tether ensures the tank doesn't fall should it suddenly detach from the assembly. This positioning can make access a challenge, particularly when the units are set close to a hot wall like a preheater or kiln.

The positioning also becomes an issue when air cannons jut into narrow

MARTIN X-STAND ORGANISES AIR CANNONS AND PROTECTS MAINTENANCE STAFF

walkways, or workers must step over 10cm tubing to access maintenance areas. Since trips and falls commonly top the list of workplace injuries, proper headspace and unobstructed walkways help staff move through the area easily – particularly important when carrying large or unwieldy equipment or replacement parts.

Installing an X-Stand system allows air cannons to be placed in the optimum position and provides the opportunity to rearrange tubing leading to nozzles. Moreover, equipment can be moved away from areas of extreme heat. This reconfiguration ensures safe passageways and maintenance access, improving workplace safety.

"Through testing, we've found that there is negligible air blast power loss by extending the distance a few feet, and only about 5% power is lost with each elbow in the pipe," Dev points out. "With strategic placement, the X-Stand will deliver safety results that justify any increase in the number of shots per sequence."

Some air cannon installations require mesh tubing to properly accommodate the tank's position and handle vibration from firing. Although commonly made with metal strands, the mesh tubing is considered a wear part that needs changing after long-term exposure to the punishing production environment, heated walls, and constant vibration. The X-Stand promotes the use of hard

THE POSITIONING OF THE CANNON CAN REDIRECT PIPES TO GO UNDERNEATH THE WALKWAY, IMPROVING ACCESS

pipes with a longer equipment life and less maintenance for added safety and a lower cost of operation.

CASE STUDIES

A cement plant operator sought to move cannons farther away from the super-heated kiln wall. The X-Stand construction moved the pipes overhead attached to Y-pipe assemblies with Thermo Safety Sheilds. The increased distance from the wall allowed for regular maintenance in a more comfortable environment.

Although nozzle replacement required workers to wear heat suits, the job could be done without downtime. The process was made faster and safer by merely closing the shield guard to prevent blowback, removing the flange in the Y-Pipe, and quickly replacing the nozzle – a five-to-15-minute operation, depending on positioning.

To mitigate molten ash buildup that limited production along a superheated wall in a steel mill, four air cannons were placed to dislodge material and avoid downtime.

To precisely place the air cannon shot, the tanks obstructed the inspection doors, preventing them from opening fully.

Moving the tanks to stacked X-Stands a few feet away from the hot wall reduced the heat exposure for maintenance crews and reduced the time and effectiveness of inspections.

MARTIN X-STAND SET AWAY FROM THE HOT WALL WITH PIPES RUNNING OVERHEAD

One bulk material operation had a hopper/silo raised off the ground to load transport vehicles passing beneath. Seasonal changes would raise moisture levels that cause clogging in the downspout. A grated walkway around the vessel was partially obstructed by jutting air cannons.

Rather than the standard configuration with the cannons on their sides and valves facing outward, installers set up the X-Stand with the valves facing upward. Holes were cut in the floor grating, and the pipes were run under the walkway toward the nozzle assemblies. This ensured the tanks were organised and the walkway was clear while optimising production.

IMPROVED SAFETY AND ACCESS

After testing, participating operators said they liked the more organised approach in helping to keep congested operational areas as clear as possible. They were impressed with the cleaner look and the innovative solutions to pipe placement.

Participants in the field tests recognised no substantial change in performance from the original configuration.

"Martin is always listening to customers for ideas to improve safety and efficiency," Dev explains. "The X-Stand is a result of that and is the next step to a clean, safe, and efficient bulk handling operation."

Martin Engineering just celebrated the 50th anniversary of inventing Air Cannon technology. It holds the intellectual property for low-pressure cannons and continues to work on incrementally improving the technology for greater efficiency.

GLOBAL INNOVATION

Martin Engineering has been a global innovator in the bulk material handling industry for more than 80 years, developing new solutions to common problems and participating in industry organisations to improve safety and productivity.

SAFETY RESOURCE

The company's series of *Foundations* books is an internationally-recognised resource for safety, maintenance and operations training,with more than 22,000 print copies in circulation around the world. The 500+ page reference books are available in several languages and have been downloaded thousands of times as free PDFs from the Martin website.

WORLDWIDE FACILITIES

Martin Engineering products, sales, service and training are available from 18 factory-owned facilities worldwide, with wholly-owned business units in the following countries:
Australia, Brazil, China, Colombia, France, Germany, India, Indonesia, Italy, Malaysia, Mexico, Peru, Spain, South Africa, Turkey, Kazakhstan, the USA and UK.

The firm employs more than 1,000 people, approximately 400 of whom hold advanced degrees.

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SAFE GUARDS

Safety and security continue to be key elements of the maritime way of life. A number of new regulations and innovations have been introduced with the singular aim of keeping seafarers safer

The Mission to Seafarers has published the results of the latest Seafarers Happiness Index, which reveal a fall in happiness in several areas of seafaring life to 6.91 in Q4 2024, from 7.16 in Q3 of last year. This marks the first downturn for four quarters, with restrictive port policies highlighted as a significant impediment to seafarer welfare.

The Seafarers Happiness Index (SHI) is a quarterly survey conducted by the Mission to Seafarers, in partnership with Idwal and NorthStandard, and supported by Inmarsat. It provides vital insights into the experiences of the men and women who serve at sea, highlighting the areas most in need of attention and action. These findings underscore the critical importance of prioritising seafarer welfare to ensure a sustainable and thriving maritime workforce.

The results of the latest survey show that dissatisfaction is partly due to some ports not actively facilitating shore access. There is a growing perception that if a port is not proactive in supporting shore leave then it is acting as a barrier to it.

Many seafarers report feeling isolated and frustrated due to limited shore access, poorly maintained facilities, and inconvenient transport options. These challenges make it difficult for crew members to leave their vessels to rest and recharge, contributing to heightened mental strain.

These findings also highlight that while some improvements have been made in terms of interpersonal relationships and professional development, critical areas continue to undermine overall satisfaction and well-being.

Connectivity issues remain a major source of discontent. Although free wi-fi is often promised onboard, inadequate infrastructure means that connectivity is frequently unreliable or unusable. This paradox leaves seafarers struggling to stay connected with family and friends, further intensifying feelings of isolation and negatively affecting morale.

Seafarers shared their concerns over stagnant wages amid rising living costs. With many seafarers feeling that their wages have not kept pace with inflation, or the increasing demands of the job, leading to growing dissatisfaction.

The results have also shown that training can present seafarers with both a positive and negative experience. On the positive side, many seafarers have reported access to quality mentorship opportunities, and professional development programmes, helping seafarers enhance their skills and stay up to date with industry standards.

However, the negative aspects of training are equally prominent, with many crew members expressing frustration with redundant training requirements, feeling that they are asked to complete the same courses repeatedly without gaining new insights.

Workload and fatigue remain significant issues, driven by long hours, inadequate staffing and a rise in administrative burdens. Despite efforts to streamline processes through digitalisation, persistent paperwork continues to drain time and energy. This combination of factors is increasing fatigue levels, jeopardising both safety and well-being.

Social interaction on board is another area in need of attention, with high workloads often restricting opportunities for social interaction. This isolation is often compounded by departmental segregation, where crew members from different departments interact less frequently, further adding to the sense of disconnection. Addressing these issues could significantly enhance morale, foster teamwork, and contribute to safer, more efficient operations.

Ben Bailey, Director of Programme, The Mission to Seafarers, says: "Shore leave is not a luxury, but as a vital opportunity for rest and mental recovery for seafarers. The decline this quarter highlights the critical need to sustain efforts to improve seafarer welfare and avoid complacency in addressing the challenges they face.

"We are committed to working closely with the shipping industry, including the ports sector, to overcome these challenges and enhance the well-being of seafarers. The Seafarers Happiness Index is a vital tool in this mission and we extend our gratitude to all the seafarers who contributed to the survey."

Thom Herbert, Idwal Crew Welfare Advocate, comments: "The Q4 2024 report is again a stark reminder of the persistent challenges facing seafarers today. Despite pockets of progress, the decline in overall happiness, especially related to shore leave and connectivity, underscores the urgent need for industry-wide reforms. We must listen to the voices of those at sea and address their concerns, from stagnant wages to isolation caused by inadequate port access.

"At Idwal, we believe improving these conditions should be the cornerstone for sustaining a thriving maritime industry."

Yves Vandenborn, Head of Loss Prevention Asia-Pacific, NorthStandard, adds: "Once again, the Seafarers Happiness Index has offered powerful insights into the way shipping's key workers think and feel about their lives at sea, and areas of potential improvement. With a change from 7.16/10 in Q3 to 6.91 in Q4 of 2024, this reflects the first decline in happiness levels since Q1 of 2024.

"The report reflects positively on onboard relationships, mentorship and professional growth opportunities. It is critical that we pay full attention to the views of those at the sharp end of shipping to recognise the positives and respond decisively to their areas of concern."

SONAR TECHNOLOGY

Marine safety and navigation technology company Daniamant has launched its latest Forward-Looking Sonar (FLS) development: the FLS 3D – 30 Degrees, a world-first in sonar technology offering enhanced visibility and safety at sea.

Building on the success of its flagship FLS 3D model, Daniamant's new innovation features a streamlined, single-transducer design, delivering a precise view of the seabed to provide captains with unparalleled depth visibility, real-time navigation and enhanced

situational awareness in uncharted or poorly charted waters.

With a 30° horizontal and 90° vertical scan, the new model allows users to see a forward range of up to 200m ahead and 100m in depth, alongside an industry-leading 20x depth-to-range ratio. This extensive scanning range ensures comprehensive underwater awareness, providing critical real-time data to improve navigation and visualisation of seabed conditions or hazards ahead, particularly in shallow waters.

One of the most significant advancements in the FLS 3D – 30 Degrees is the introduction of Average Forward Depth (AFD), a first-of-its-kind feature that calculates the average depth of the seabed ahead, giving sailors a more accurate understanding of underwater terrain. This breakthrough improves navigation safety, particularly in poorly mapped or unfamiliar waters, to reduce the risk of grounding.

Taking underwater visualisation to the next level, the FLS 3D – 30 Degrees offers an interactive 3D view with Raymarine Axiom Displays. With effortless compatibility, the FLS 3D – 30 Degrees integrates seamlessly with the Raymarine Axiom Displays via Raynet, allowing boaters to use split-screen functionality for simultaneous nautical chart and sonar viewing on the EchoPilot app.

Captains can also fully rotate the sonar image on 360° via touch, with a zoom function for detailed seabed analysis, as well as the ability to seamlessly switch between 3D and side-view modes. This real-time imaging offers a highly intuitive view of underwater conditions, ensuring obstacles and seabed changes are detected before they become a threat.

Kevin Rough, Daniamant CEO, comments: "We designed the FLS 3D – 30 Degrees in response to customer feedback and evolving market needs, demanding a high-quality FLS system for a broader audience of boat owners and captains, at an accessible price point. This latest development represents a major leap forward in high-performance sonar technology for navigation safety at sea, designed with world-leading FLS coverage to provide captains, crew and boat owners alike with the tools they need to navigate confidently, even in the most challenging waters."

The FLS 3D – 30 Degrees is also compatible with any third-party display through HDMI and VGA video output, making it a versatile option for a wide range of vessels and navigational setups. This plug-and-play connectivity ensures users benefit from a fully integrated, high-performance navigation system that enhances both safety and convenience.

Tailored for vessels between nine and 18m, the sonar technology provides an advanced, yet cost-effective, navigational tool that enhances safety and peace of mind.

INTELLIGENT MOB DETECTION

Zelim's intelligent detection system, ZOE was recently installed on a cruise ship, marking the first operational reference for the revolutionary technology in the global cruiseship sector.

The Edinburgh-based maritime safety and security technology pioneer is fitting out the 1,200-passenger capacity cruiseship with a full ZOE installation to deliver instantaneous detection and tracking of persons in the water following man overboard (MOB) incidents.

The installation – comprising multiple infrared and daylight cameras, sensors and software to provide crews with 360° visibility – dramatically increases the likelihood of both spotting and recovering an MOB.

Ambassador Cruise Lines' COO Nick Hughes says: "With the safety of our passengers and crews our foremost concern we were keen to put ZOE onboard. ZOE gives our passengers and crew piece of mind that in the rare event of a MOB incident bridge teams are immediately alerted to a person falling overboard, with the person tracked until rescued. It allows us to direct an immediate and rapid rescue response.

"What we also like about the system is that it can be used to alert our watchkeepers to hard-to-see navigational hazards."

Stewart Gregory, Zelim's Chief Operating Officer, says: "The decision by Ambassador Cruise Lines to install ZOE is an important milestone in maritime safety. *Ambition* shows the passenger ship sector there is now proven technology available that mitigates the risk of losing lives to MOB incidents, especially in rough seas and in hours of darkness."

This is particularly important for the cruise sector since the US Vessel Security and Safety Act (2010) requires passenger vessels "to integrate technology that can be used for detecting passengers who have fallen overboard". With advances in AI technology, this is now possible.

"MOB detection is an emergent technology, but most existing solutions focus solely on detecting the fall, not on tracking the person in the water. Without continuous tracking, a drifting casualty can be quickly lost from view as the vessel moves, making a successful rescue far more challenging," says Doug Lothian, Zelim's CTO.

"One of the biggest challenges following an incident is determining exactly when and where a person entered the water. ZOE's AI-powered detection models not only identify and classify a person as they fall, automatically alerting the bridge, but continuously tracks them as they drift. It provides precise geo-location data, enabling bridge teams to coordinate and accelerate the rescue effort with greater accuracy."

ZOE has been undergoing independent testing aboard the *Ambition* to meet the ISO 21195 standard for the detection of persons falling overboard. The technology also recently passed Lloyd's Register Phase I & II type approval tests with a 98% MOB detection rate.

"First and second phase trials have been a huge success and LR will now move ahead with Phase III of the certification process," says Gregory. "This delivers further confidence to cruise lines that ZOE reduces the risk of persons falling overboard going undetected and

lost at sea. ZOE represents the single greatest technological advancement to reducing lives lost to man overboard incidents."

While MOB detection and tracking are ZOE's primary focus, Ambassador Cruise Lines' decision to install additional forward-facing cameras points to the technology's wider multi-functional capabilities.

"ZOE's advanced cameras and sensors also identify navigational hazards such as semi-submerged objects, vessels of all sizes, and low radar cross-section threats that pose risks to safety and ship security. This enhances overall situational awareness for watchkeepers and bridge teams," says Lothian.

IMO'S RECOMMENDATIONS

The International Maritime Organization (IMO)'s 10th session of the Sub-Committee on Carriage of Cargoes and Containers (CCC),made significant progress in revising resolution A.1050(27) to ensure the safety of personnel entering enclosed spaces on board ships.

During the session, a working group reviewed the draft revised recommendations for entering enclosed spaces aboard ships. They incorporated various comments and proposals, resulting in a comprehensive and updated set of guidelines.

As BIMCO announced in a news release, the revised recommendations emphasised several vital areas to enhance safety during enclosed space entry:

Organisational leadership: The importance of safety leadership was emphasised and the need for strong leadership from ashore, which empowers shipboard staff to make informed decisions regarding safety procedures.

Safety management system: Although the previous version required ships to produce a list of enclosed spaces on a ship-by-ship basis, this was not seen implemented widely on all ships as there was a lack of clarity of this recommendation. This meant that not all ships had a ship-specific list of enclosed space, and there was confusion on which is an enclosed space and which is not. The new revised recommendations make a clear encouragement on companies and ships to adopt a robust safety management system, including maintaining an Enclosed Space Register tailored to each vessel. This is one of the most important additions to the previous version of the recommendations.

Risk assessment: Enclosed spaces present unique challenges due to their complex structures, ventilation, illumination, and potential for oxygen depletion or toxic gas accumulation. This also means that there are pockets of gas that can be trapped within a seemingly safe space. The revised recommendations clearly define and differentiate between an adjacent space and connected space and gives guidance on how to treat each space in connection with enclosed space entries.

Cargo safety: Specific safety information about the cargo being carried should be readily available, as hazards can extend beyond the immediate enclosed space. While the earlier version mentioned specific cargo related hazards are present in IMDG and related codes, the revised recommendations put a clear emphasis on obtaining the specific cargo related hazards from the shipper and that the ship master or his representative have all the hazard related information of the particular cargo in question.

Oxygen depletion and toxic atmospheres: In contrast to popular belief, Oxygen depletion occurs more rapidly than previously thought and the risk of toxic atmospheres developing within enclosed spaces is significant. Carbon dioxide plays a significant role in oxygen depletion and more information on this is included. Emphasis is put on measuring carbon di oxide along with other toxic and relevant gases.

Space security and signage: It was noted that workers, especially port workers, were oblivious to the dangers present in cargo holds and entered it without any precaution leading to casualties. In these revised recommendations, more emphasis is put on proper identification of safe and unsafe spaces and the use of proper signs to guide port workers is further recommended.

Crew training: Comprehensive training for crew members is essential, especially considering the ongoing revision of the STCW Convention and Code. The revised recommendations mention what kind of training is needed for the relevant crew members. Training should address specific hazards, such as carbon dioxide and other toxic gases, as well as cargo-related risks and oxygen-depleting cargoes.

Rescue planning: A number of investigation reports pointed out the fact that rescue was carried out in haste and in an unplanned manner leading to further casualties. A well-planned rescue operation, including training of appropriate staff, is crucial for effective emergency response, this is further emphasized in the revised recommendations and is also mentioned in the training recommendations. Clear and well-practiced emergency response plans are essential for mitigating incidents.

By addressing these key areas, organisations can significantly enhance safety measures and reduce the risks associated with entering enclosed spaces on board ships.

The draft revised recommendations have been approved at sub-committee level and will be submitted to MSC 110 in June for adoption. Additionally, necessary consequential amendments to relevant IMO instruments will be made to ensure comprehensive compliance and implementation.

The revised recommendations for entering enclosed spaces aboard ships represent a significant improvement in maritime safety. By following these guidelines, lives of personnel can be safeguarded and safer working environment fostered in the maritime industry.

All stakeholders– shipowners, operators, and port authorities– need to collaborate to enforce these recommendations effectively.

REVIEW HIGHLIGHTS SAFETY

The International Association of Classification Societies (IACS), the membership organisation for the world's leading classification societies, has published its 2024 *Annual Review*, which highlights the central role played by IACS in supporting safety standards in global shipping.

In a year that marked the 50th anniversary of the adoption of the SOLAS Convention, safety was at the forefront of IACS's work programme for 2024. This was exemplified by the new Safe Digital Transformation Panel, which began its important work to identify and mitigate any safety risks posed by shipping's ongoing digital transformation.

Technical and digital advances featured heavily in IACS's programme for 2024, including the significant challenge posed by new technologies and alternative fuels when it comes to the safety and reliability of engines and other onboard systems.

IACS's work in emerging fields was further highlighted by its work on remote surveys, which included the development of a new Unified Requirement to ensure uniform standards in the conduct of surveys undertaken without the presence of a surveyor.

The report also highlights other areas of important work, including safety standards for gas carriers, improvements to the implementation of the Safe Return to Port (SRtP) scheme for passenger ships, and further guidance to support compliance with ballast water management system standards. 2024 also saw extensive consultation with industry and Flag States on the ongoing comprehensive review of the IACS Common Structural Rules, which will continue into 2025 and until their expected adoption in four years' time.

Although digital and technological innovation has been a core focus of IACS's work, the human element has remained at the heart of IACS safety agenda. As the report explores, IACS has continued to invest heavily in training and guidelines that support the role of people, including the risks posed to and by people in a ship's lifecycle.

Robert Ashdown, IACS Secretary General, comments: "2024 was an extremely busy year for IACS, which saw us deliver a diverse work programme, with safety at the heart of all we do, whether that was through our strong presence at IMO, our close collaboration and engagement with industry partners, or our new and revised rules, recommendations and guidance. Through the collective efforts of our team and our members, IACS is playing a significant role upholding our purpose of safer, cleaner shipping."

Roberto Cazzulo, Chair of the IACS Council, says: "At a time of transformation for our industry, IACS has been at the forefront of setting the standards needed to keep vessels safe and to protect the environment, particularly when the world around us is being reshaped by digitalisation and decarbonisation. This pace of change also requires an agile, rapid response in order to address the technical and safety implications for shipping.

"Throughout 2024, IACS and our members proved their ability to deliver the expert guidance needed by our industry to help safeguard safety at sea."

The report recognises IACS's extensive programme of engagement and support for industry at a technical and strategic level with a wide range of regulatory authorities, representative bodies and other stakeholder groups, most notably at the International Maritime Organization, where IACS works closely with the secretariat and member states to deliver on the shared safety vision of both organisations. In 2024, the collective contribution from IACS and its members resulted in 77 submissions to IMO, along with the co-sponsorship of a further 12 papers.

IACS also plays an important role as a convenor and partner with industry stakeholders through other initiatives, such as the Joint Industry Working Group on Safe Decarbonisation, which was established last year. Through regular technical meetings and workshops, the feedback and insight from these discussions has fed directly into IACS's rules and recommendations.

Over 2024, IACS adopted 85 new or revised Resolutions and Recommendations for implementation by its members, and the Annual Review provides a full list of all these, as well as those withdrawn. It also includes the 'Class Report 2024', which contains data on the global IACS fleet, broken down by the 12 IACS members.

The 2024 Annual Review is available for download at: iacs.org.uk/about-us/annual-review. Hard copies are also available on request from the IACS Permanent Secretariat at permsec@iacs.org.uk

MINIMUM MANNING

Safe manning refers to the minimum number of qualified and capable crew members required to operate a vessel safely and efficiently. Effective manning strategies consider the vessel's size, type, and operational requirements to maintain high safety standards and minimize risks to both crew and ship.

IMO Resolution A. 1047(29) sets out the principles of minimum safe manning with the aim of ensuring that ships are adequately staffed for safety, security, safe navigation, port operations, and environmental protection. It also aims to prevent injuries, fatalities, and fatigue among seafarers.

But even though these rules exist and are followed, seafarers report high job demands and fatigue.

For more information, visit: gard.no

TOOLS TO AID WELLBEING

Singapore-based maritime learning provider WiseStella has unveiled a pioneering crew wellbeing assessment tool that aims to change the way in which shipping companies address the increasing mental and physical health issues faced by seafarers.

Amid growing concern about workplace harassment, bullying, stress and fatigue, the Wise Well-Being module has been developed in collaboration with HR experts and psychologists to identify and address a number of important issues, ultimately

enhancing seafarer safety, contentment and retention.

"Seafarers often operate in isolated environments with limited access to mental health support," says WiseStella's Chief Executive Officer Ferhat Abul.

"Many seafarers are reluctant to speak out about their struggles, particularly in cases of bullying and harassment. They need a voice under a cloak of anonymity that helps them, and their employers, take appropriate action. It's about creating a proactive approach to seafarer wellbeing."

The new Wise Well-Being module is unlike existing seafarer happiness or wellbeing indices in that it has been designed for direct use by shipping companies, rather than third parties, delivering more precise data that reflects their specific workplace conditions.

Through an interactive digital survey, with questions based on input from leading psychologists and health specialists, Wise Well-Being measures the physical, mental, social, and intellectual health of a company's workforce.

"Responses enable HR teams to better identify problem areas and implement more targeted training and resources to foster a safer and more supportive, inclusive working environment. It provides shipping companies with an easy-to-use and anonymous platform to better understand the physical and mental wellbeing of their crews," says Abul.

WiseStella Board Advisor Dr Rafet Emek Kurt, an expert in maritime safety and risk, particularly human factors in shipping, adds: "Bullying and harassment at sea are more common than many realise, but the hierarchical nature of the maritime sector makes it difficult for victims to report misconduct," he says, referring to a case where a qualified and competent female crew member was refused permission to board her ship simply because of her gender.

A 2022 WISTA Survey found that 60% of female respondents experienced gender-based discrimination onboard ship, two thirds said that they had experienced harassment and intimidation from male co-workers, and one-in-four reported that physical and sexual harassment was common, involving intrusions on their privacy.

"There are many cases where seafarers, male and female, experience verbal, psychological, sexual and physical abuse," says Kurt. "This leads directly to poor mental health, potential lawsuits and reputational damage, and significantly increases the risk of accidents at sea.

"We need a safer, more inclusive industry, and have to address these problems head-on by integrating anonymous well-being assessments and anonymous reporting procedures into the overall safety management system. Shipowners have a duty of care to improve the wellbeing of their seafarers."

Yaren Cemre Gulcek, Clinical Psychologist at Parla Consultancy, emphasises the importance of addressing psychological distress at sea: "Through my work with seafarers, I have witnessed firsthand how prolonged stress, isolation, and workplace harassment take a toll on mental health and overall performance. Psychological distress at sea doesn't just affect individuals, it weakens team dynamics, increases the likelihood of human error, and compromises safety."

Gulcek said the Wise Well-Being module is a "crucial step towards addressing these challenges" empowering shipping companies with the tools they need to create a "culture of trust and psychological safety".

Tineke Zoet, a certified transformational coach specialising in maritime workplaces, adds that effective leadership is paramount if the industry is to foster a safer, productive working environment.

"In my experience as a seafarer and now working closely with ships' crews, I have seen how unmanaged conflict, cultural differences,and lack of psychological safety lead to frustration, stress and even dangerous working conditions. It takes intentional human-centred leadership, clear communication, proactive listening and support to create a more positive, inclusive environment where people can thrive. This will ultimately make shipping safer and more attractive to new entrants."

Future developments will include direct access to mental health professionals, awareness training programmes and personalised wellbeing recommendations based on survey responses. The company is also working with academic institutions to ensure that the platform is continuously updated and improved to meet seafarer and industry needs.

PLAYING BY THE RULES

A number of new recommendations and guidelines aim to improve seafarer safety and bring the industry up to date with the latest innovations

The International Association of Classification Societies (IACS) has published a new recommendation, Rec.186, that meets the need for a standardised approach to integrating Additive Manufacturing (AM), commonly referred to as 3D printing, into marine and offshore applications.

The maritime industry continues to embrace developments in manufacturing technologies to enhance efficiency and sustainability in shipbuilding and offshore operations.

Additive manufacturing (AM) has emerged as an alternative to traditional manufacturing processes by fusing materials to produce objects from a digital 3D model into a series of 2D cross sections for layer-by-layer physical prints, ultimately producing a 3D object.

Unlike conventional methods such as casting, forging and welding, AM offers greater design freedom, reduced material waste, and the potential for on-demand production. Its flexibility allows for localised production and customisation, providing tailored solutions for specialised marine and offshore applications.

'Rec. 186: Additively Manufactured Metallic Parts for Marine and Offshore Applications' establishes a framework for the qualification, approval and certification of additively manufactured metallic parts. This recommendation provides detailed guidance for key aspects of the AM process, including part design, feedstock selection, AM processes, post-processing, and inspection/testing.

By incorporating recognised international standards such as ISO/ASTM 52900 and AWS D20.1, it aligns AM technology with existing Unified Requirements, particularly UR W for materials and welding, ensuring equivalent reliability and safety.

To facilitate the safe and effective adoption of AM in the marine sector, the recommendation outlines the following key areas:

» **Scope of AM Process:** The recommendation covers Powder Bed Fusion (PBF), Directed Energy Deposition (DED), and Binder Jetting (BJT), with detailed process-specific parameters.
» **Criticality Levels and Testing:** Introduces tiered testing levels (AM Levels 1-3) for class and certified items, enabling customised testing based on application criticality.
» **Feedstock and Material Standards:** Specifies rigorous qualification processes for AM feedstocks, including powder, wire, and binder feedstocks, including recycling protocols for sustainability.
» **Part Design and Qualification:** Includes innovative provisions for design optimisation, topology adjustment, and pre-build simulation to ensure robust performance under marine conditions.
» **Inspection and Non-Destructive Testing (NDT):** Addresses anisotropic properties and potential imperfections (e.g., porosity, lack of fusion) through advanced NDT methods like CT scans.

Rec. 186 establishes a robust verification and certification framework, ensuring the safe and effective use of AM technology in critical marine contexts.

Moving forward, IACS will continue to collaborate with stakeholders to expand the application of AM in safety-critical marine components. By encouraging shipyards, original equipment manufacturers (OEMs), and vessel operators to adopt AM, it paves the way for innovation in shipbuilding and offshore engineering, marking a pivotal step in the safe and standardised adoption of additive manufacturing.

Commenting on the publication of Rec. 186, Alexandre Astruc, Chair of IACS' Expert Group on Materials & Welding, said: "Additive manufacturing, or 3D printing, is increasingly becoming a valuable tool for the marine sector, offering a flexible, speedy and customisable solution for environments where the consequences for safety, sustainability or operational uptime can otherwise be significant.

"While its potential for rapid production is notable, its true strength lies in its ability to provide innovative, on-demand solutions tailored to complex maritime challenges. In developing Rec 186, IACS is seeking to safeguard the benefits offered by additive manufacturing by ensuring it is underpinned by a standardised framework for verification and certification that gives confidence to all parties."

For full details on Rec. 186, visit: iacs.org.uk

SEAFARER PROTECTION

The International Maritime Organization (IMO) has adopted crucial new guidelines to protect seafarers from unfair treatment when detained in foreign jurisdictions in connection with alleged crimes committed at sea.

The guidelines, adopted by the Legal Committee during its meeting in London in March, aim to protect seafarers' rights and ensure they are treated with fairness and dignity, no matter where they are in the world.

IMO Secretary-General Arsenio Dominguez stated: "Unfortunately, incidents of unjust treatment of seafarers are on the rise, posing a significant challenge to the sustainability of shipping. These cases not only undermine seafarers' morale but also discourage young talent from pursuing a career at sea."

He said the guidelines "will add a significant value in resolving the challenges faced by seafarers and ensure that seafarers are treated fairly".

Key aspects of the guidelines relate to due process, protection from arbitrary detention, coercion or intimidation, and ensuring that wages, medical care and repatriation rights should remain intact during any legal proceedings.

The guidelines aim to improve coordination among countries, including port states, flag states, coastal states, states of which the seafarer is a national, shipowners, as well as seafarers.

The text was developed and first adopted in December 2024 by a Joint Tripartite Working Group with the International Labour Organization (ILO),

which includes representation from governments, shipowners and seafarers.

The Legal Committee called for urgent action to tackle the sharp rise in seafarer abandonment cases, where shipowners fail to repatriate crew, pay wages, or provide basic necessities.

According to the IMO/ILO joint database on abandonment of seafarers, 310 new cases were reported in 2024 – more than double the 142 cases recorded in 2023.

The trend continues in 2025, with 63 cases already reported in the first two months.

The Committee urged Member States to report abandonment cases occurring in their ports or involving their flagged vessels and nationals; and improve the accuracy of these reports.

Member States were urged to update national contact points for handling cases, implement existing Guidelines on how to deal with seafarer abandonment cases, and raise awareness among seafarers about financial security protections.

The Committee welcomed the ongoing work by the Task Force coordinated by the International Chamber of Shipping (ICS) to review and update the ILO/IMO Joint abandonment database. Member States are encouraged to work with the Task Force to improve the database further.

The Committee discussed the need to address substandard shipping, given the rise of unlawful operations which distort the global playing field, increase risks to safety, security and the environment.

The Legal Committee will also be working on three other outputs over the coming year, including:

- Development of guidelines or best practices for the registration of ships for the benefit of safety, protection of the marine environment and the well-being of seafarers;
- Suitability of IMO liability and compensation regimes with respect to alternative fuels; and
- Measures to address maritime security threats.

NEW ARBITRATION ACT

The Arbitration Act 2025 will shortly come into force, which will govern all arbitrations taking place in England and Wales. The Act is the culmination of the Law Commission's review of the former Arbitration Act 1996, a process that commenced in 2021 and was designated to ensure that arbitration in England and Wales remains best-in-class and the leading destination for commercial arbitration.

BIOFOULING CONVENTION

With most attendtion on the development of a mid-term measure on GHG emissions, the 83rd meeting of the IMO's Marine Environment Protection Committee (MEPC 83) also made significant progress on other matters with the go-ahead given for the development of a new convention on biofouling, the introduction of an experience building phase on ship recycling and agreement on CII reduction factors for 2027 to 2030, according to analysis by BIMCO.

MEPC 83 adopted amendments to the NOx Technical Code 2008 concerning the use of multiple engine operational profiles for a marine diesel engine, including clarifying engine test cycles. The amendments will enter into force on 1 March 2027. The Committee also adopted amendments to the NOx Technical Code 2008 concerning the certification of an engine subject to substantial modification or being certified to a tier to which the engine was not certified at the time of its installation. These amendments will enter into force on 1 September 2026.

MEPC 83 agreed to new output on the "development of a legally binding framework for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species- a biofouling Convention".

According to BIMCO: "The work on such a convention will commence in 2026 and we expect the process to be a lengthy one- with the Committee allocating two two-year periods to complete the work- meaning that a draft legal document and process for adoption would not likely be finalised until 2029 with ratification to the agreed level then required for the entry-into-force.

"The current absence of internationally-agreed legislation has meant that some states have taken the initiative to implement domestic legislation to address biofouling. We believe that an international convention should provide a unified framework for addressing biofouling management globally. It should help avoid the patchwork of national regulations that can be discriminatory and impractical for the industry and help ships to gain access to in-water cleaning in more places than we see today. "

MEPC also adopted in-water cleaning guidance designed to help shipowners, charterers, and so on to safely plan and conduct in-water cleaning operations while addressing risks to the environment and ship coatings.

According to BIMCO: "The entry into force in June 2025 of the Hong Kong Convention (HKC) will herald a new era in ship recycling by introducing safety, human health and environmental requirements at the end of life of ships."

However, it has been 15 years since the HKC was adopted, and based on experiences with other IMO conventions, various issues will arise at the early phase of implementation of a convention. As such, MEPC agreed to a new output on ship recycling to take place over two two-year periods where the first two years will focus on gaining experience on the application of the HKC followed by two years considering amendments.

BIMCO indicates that the number of ships destined for recycling is expected to more than double in the next decade. This surge underscores the urgent need for a unified global standard to ensure that the recycling process is conducted safely and sustainably. By facilitating a smooth implementation of the HKC during the experience-building phase, stakeholders can work towards a cohesive approach that not only adheres to international norms but also supports continuous improvement and transparency."

PIN POINTS

Coming up with innovative solutions for port handling has been exercising the minds of operators in German ports, including a successful project to develop a mobile robot to position pins on container wagons

Hamburger Hafen und Logistik AG (HHLA) and the Fraunhofer Center for Maritime Logistics and Services (CML) have successfully concluded the Pin Handling mR project.

The aim of the project was to develop a mobile robot to automate the manual repositioning of pins on container wagons. The innovative solution for rail handling was tested under real-life conditions at HHLA Container Terminal Tollerort (CTT).

At the final project meeting in April, HHLA and Fraunhofer CML jointly presented the project results at CTT, demonstrating how a specially designed robot is able to handle the repositioning of pins on container wagons at the terminal – something that, until now, has had to be done manually.

The autonomous system, which is managed via the HHLA Sky control centre, independently navigates its way along the container train and positions the necessary pins precisely and efficiently with the aid of its robotic arm.

Currently, these pins must still be handled manually before trains are loaded. They are installed at various positions on the container wagons and are opened or closed according to the size of the container. Even if the system is not yet ready to go into production, the research project has laid the foundations for its further development. In a potential follow-up project, the technology may be further optimised and brought to market-readiness in order to enable its cost-effective, operational use in practice.

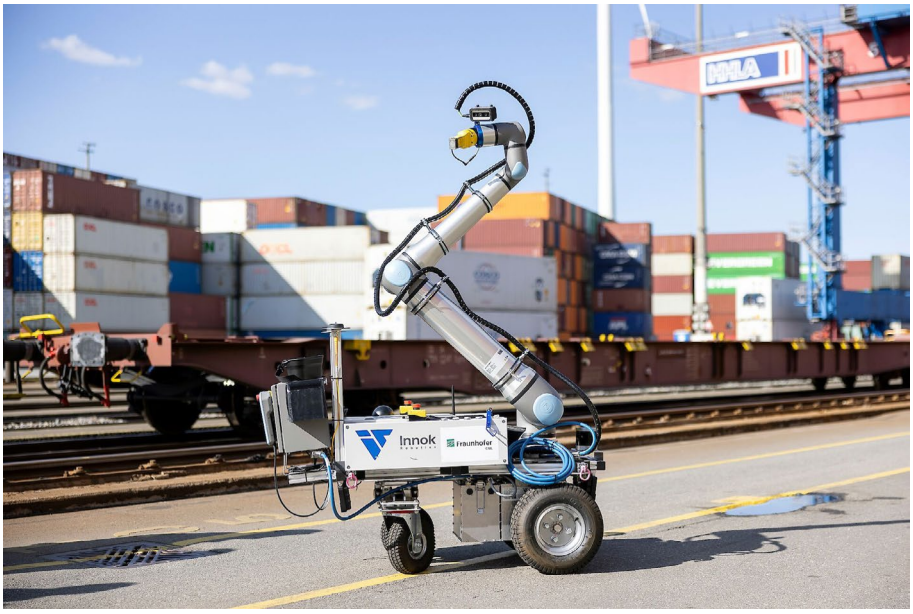
Pablo Rossio, HHLA Project Manager, says: "This research project has shown that the automation of pin handling in rail processing is technically feasible. The insights gained from this research now form the basis for further evaluation of its operational use. Thanks to the group-wide network established for the project – spanning our container terminals, HHLA Sky, and our rail subsidiary Metrans – we have combined our expertise to make terminal processes safer and more efficient.

"In the next phase, we aim to further develop this technology to enable its application in productive operations," he explains.

Johann Bergmann, Team Lead Port Technologies at CML, says: "We're delighted with the successful conclusion of this joint project. The robot receives data from the control centre, navigates autonomously along the train and moves the pins it has identified with the aid of a magnetic picker arm. Initially, the system components were simulated and later tested on a demonstrator in the lab. Of particular note is the seamless integration of standardised hardware with a robot operating system-based software architecture, specifically designed to meet the unique requirements of this process."

HHLA was the coordinator for the project and supported it with its subsidiaries HHLA Container Terminal Tollerort, HHLA Sky, Hamburg Port Consulting and Metrans. The use of the robot was tested under real-life conditions at CTT. The Fraunhofer CML took on responsibility for the design and development of mobile robotics systems. This also includes the selection and procurement of suitable hardware components, their integration in the overall solution and the testing of the system.

The project was supported by the German Federal Ministry for Digital and Transport as part of the initiative for innovative port technologies. The goal of this initiative is to drive port technology innovations in the area of autonomous systems and automated technologies.



CORROSION CONCERNS

Corrosion is just one of the issues that vessels have to handle when in port or at sea and failure to address this issue could have fatal consequences.Germany-based protective coatings innovator Steelpaint is encouraging shipyards and port authorities with steel assets to prioritise surface preparation, advising that skimping on this critical step in the application process is leading to premature coating failures, costly repairs, and increased safety risks.

The advisory follows a recent request to apply its single-component, moisture-cure Stelcatec to a steel structure that had not been properly prepared, with high levels of rust and contamination still present.

"We made it clear that without proper surface preparation tools to remove rust and corrosion, and subsequent freshwater washing to disperse salts and other contaminants, there was no point in applying the paint," says Dmitry Gromilin, Steelpaint's Chief Technical Supervisor.

"We have seen too many cases where companies have invested in advanced coating systems, only to have them fail

prematurely due to inadequate surface preparation. Not only does this lead to accelerated corrosion, and the need for costly reapplication, but any investment in advanced corrosion protection is wasted."

Gromilin says: "One of the most common misconceptions is that a quick wipe-down or solvent wash is sufficient. In reality, contaminants such as rust, grease, salt and moisture create an invisible barrier between the steel and the coating. Without thorough surface preparation, adhesion is compromised, and the coating will inevitably fail. When this happens, it is not just the paint that deteriorates – steel structures will suffer rapid corrosion, leading to structural weaknesses, safety risks, and costs."

Steelpaint also reports incidents where asset owners have used low-pressure water jet washing to prepare areas prior to coating applications.

"We have seen operators using 300-400bar low pressure water jets to prepare larger, heavily corroded areas, such as tank tops. At the very minimum, 2000bar ultra high-pressure water blasting should be carried out. Anything less means any corrosion protection will be ineffective. Surfaces must be properly prepared," Gromilin says.

He adds that preparation challenges are compounded by environmental conditions, such as saltwater environments, high humidity, fluctuating temperatures and condensation, which can impact application.

This is especially the case when traditional two-component systems are used, which require precise application windows. In tropical climates, for example, dew point restrictions often mean that conventional coatings can only be applied during specific hours of the day.

Steelpaint Director Frank Mueller says that by highlighting the importance of this critical preparatory step, "steel asset owners can get the most out of their corrosion protection spend".

"The best coating system in the world will not perform if applied to contaminated, rusty or inadequately prepared steel surfaces," he says. "Cutting corners in preparation only leads to greater costs down the line. By adopting best practice in steel preparation and selecting coatings that offer greater flexibility in real-world conditions, steel assets can remain protected for longer, reducing operational and maintenance costs in the long term."

While acknowledging that the perfect surface preparation is seldom achieved, Steelpaint's Stelcatec system has been developed to be applied to the minimum SSPC SP2 standard using non-powered hand tools such as wire brushes, scrapers, and sandpaper. This is the minimal standard.

The one-component Stelcatec coating can also tolerate light flash rust and can be applied on damp surfaces, significantly reducing downtime for critical infrastructure such as cargo tanks, ship-to-shore cranes, and other steel assets operating where extended maintenance shutdowns are not an option.

It also provides longer corrosion protection at a lower film thickness, and can be applied at 98% relative humidity (RH) at temperatures ranging -5°C to 50°C.

> By adopting best practice in steel preparation and selecting coatings that offer flexibility in real-world conditions, steel assets can remain protected for longer

STRADDLE CARRIERS ORDER

Eurogate Container Terminal Hamburg has ordered 15 Hybrid Konecranes Noell straddle carriers. Booked at the end of 2024, the order will be a delivery of the new modular straddle carrier design, which enables easy drive retrofits for reduced fossil fuel dependence. The straddle carriers will be delivered by July 2026.

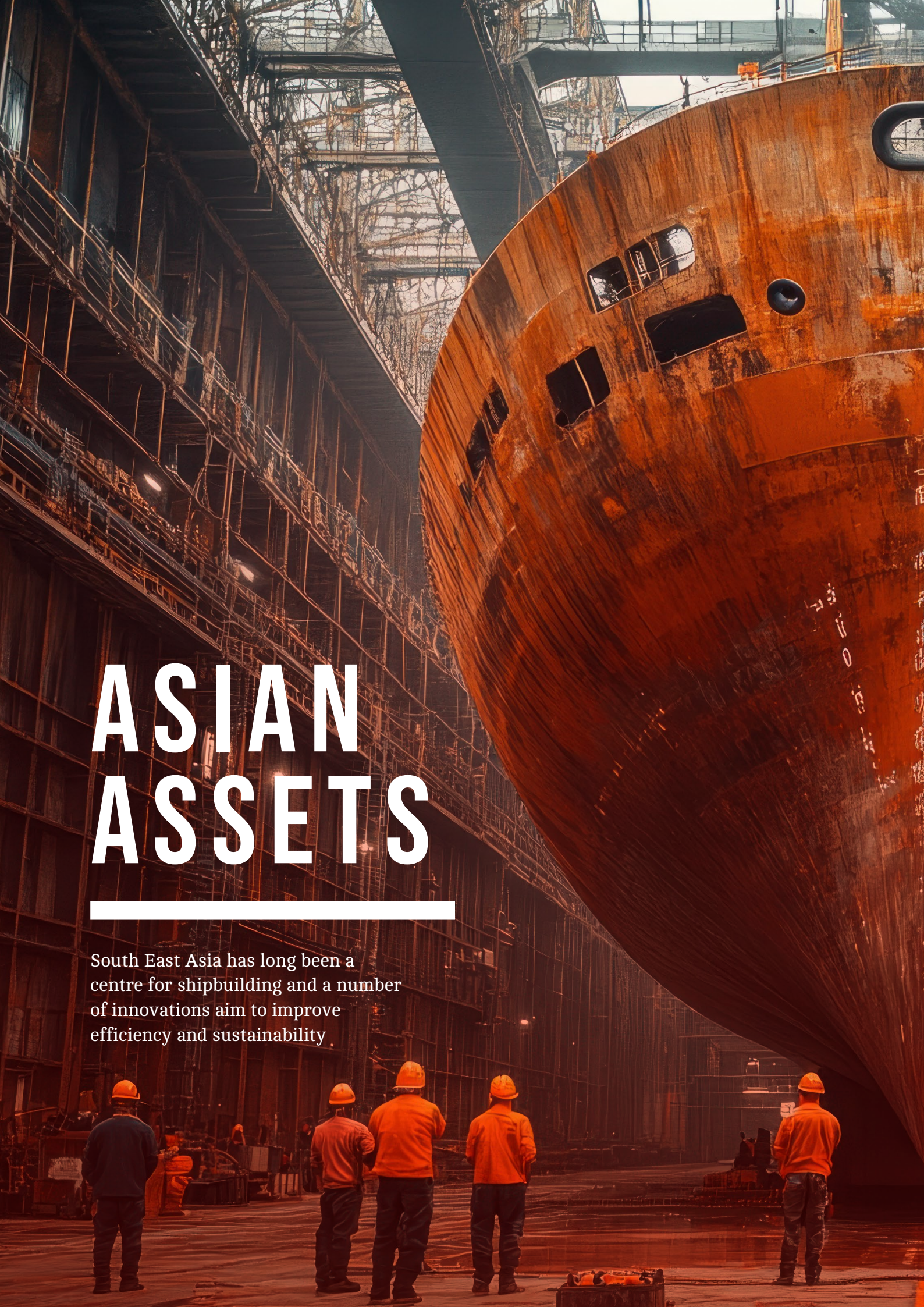
The Eurogate Group handles more than 12 million TEUs annually at nine locations across Europe and Africa. Over the past 25 years, the operator has deployed several hundred Konecranes Noell Straddle Carriers across its German network. Eurogate's latest investment reaffirms its confidence in Konecranes' reliability, innovation and ability to help customers reduce their dependence on fossil fuels.

The 15 straddle carriers offer groundbreaking modularity that allows customers to retrofit power options, with much reduced effort, that lead to zero dependence on fossil fuels. The upgrading of drives previously required extensive rebuilds, but the new design simplifies the transition to battery-electric operation or hydrogen power.

"The flexibility to make powertrain upgrades makes this a future-proof investment. Konecranes is helping us to move towards CO_2-neutral operations while continuing to deliver the high operational efficiency we are known for," says Johannes Stelten, Managing Director of Eurogate Container Terminal Hamburg.

"The new, modular design of Konecranes Noell straddle carriers opens a new era in container handling by combining modular flexibility with sustainable performance. It's appropriate that Eurogate has taken this step towards the future of eco-efficient container handling," says Peter Kania, Sales Director, Straddle Carrier Business Unit, Konecranes.

The straddle carriers will be equipped for TIC 4.0, the industry-standard framework enabling advanced data transmission for operational insights and performance tracking.



ASIAN ASSETS

South East Asia has long been a centre for shipbuilding and a number of innovations aim to improve efficiency and sustainability

Only weeks into Donald Trump's second term as president, the Office of the US Trade Representative (USTR) unveiled its potential trade action against China and Chinese-built ships. "However, the wheels were set in motion even before that, when five US labour unions filed petitions on China's alleged targeting of the maritime, logistics and shipbuilding sectors for dominance," P&I Club Gard commented in a recent insight.

"An investigation into China's practices was launched in April 2024, which concluded that Chinese shipyards have allegedly been engaging in unfair trade practices that warranted action under Section 301 of the US Trade Act."

According to Gard, proposals outlined by the USTR include:

a) Service fees on Chinese vessel operators;
b) Service fees on vessel operators with fleets comprising of Chinese-built vessels;
c) Service fees on vessel operators with prospective orders for Chinese vessels;
d) Service fee remission for vessel operator via US-built vessels.

A vessel operator may reduce its service fee liability is if the trades its US-built Vessel to call a US port; in the circumstances, the operator will become entitled to a refund of up to US$1m per US entry.

However, this is unlikely to relieve many vessel operators given US-built vessels form a small proportion of global tonnage.

AIP FOR ETHANE CARRIER

Bureau Veritas Marine & Offshore (BV) has awarded Approval in Principle (AiP) to the Marine Design and Research Institute of China (MARIC) for its new 155,000m^3 Ultra Large Ethane Carrier (ULEC) design.

The vessel, measuring approximately 274m in length and 42m in breadth, is designed as a single-propeller liquefied ethane carrier powered by a MAN ME-GIE ethane dual-fuel main engine, supporting worldwide ethane transportation. The design is compatible with both Type B cargo tanks and GTT Mark III membrane tanks, offering a lower boil-off rate, reduced unloading residue and higher cargo capacity utilisation. It is also capable of transporting ethylene, propylene, and liquefied petroleum gas.

Optimised for fuel efficiency, the vessel features advanced hull lines, propellers, and rudders, along with energy-saving devices such as propeller cap fins, a pre-swirl duct, and a shaft generator.

Additionally, MARIC's Smart Ship Solution is integrated, including a Smart Navigation System, an Energy Efficiency Management System and a Machinery Health Management System, enhancing safety, operational efficiency and sustainability.

The vessel has been reviewed in accordance with BV's classification rules and key notations. Leveraging its extensive experience in gas carrier classification, including Very Large Ethane Carriers, BV will be able to conduct critical assessments such as structural strength evaluation, non-linear fatigue analysis, crack propagation studies, and leakage risk assessments.

Matthieu de Tugny, President of Bureau Veritas Marine & Offshore, says: "This AiP reflects our commitment to advancing innovative ship designs that enhance safety, efficiency, and sustainability in gas transportation. We are pleased to support MARIC in this project, which demonstrates ongoing progress in the development of ultra-large ethane carriers."

Zhu Jianzhang, Vice President of MARIC, says: "This AiP underscores MARIC's commitment to developing next-generation gas carriers that combine efficiency, sustainability, and advanced technology."

CMA CGM delivery

Bureau Veritas Marine & Offshore (BV) has also successfully delivered the CMA CGM TIGA, the last of 10 5500TEU container ships built for CMA CGM at CSSC Qingdao Beihai Shipbuilding.

This marks the completion of a major project for which BV provided classification services and Bureau Veritas Solutions M&O provided advisory services, helping to ensure compliance with international safety, structural integrity and environmental protection requirements, as well as maximising performance.

The CMA CGM TIGA, a new-generation, medium-sized container vessel, was designed by CSSC Qingdao Beihai Shipbuilding in collaboration with the Shanghai Ship Research and Design Institute.

With a length of 255.5m, a width of 40m and a deadweight tonnage of 73,025.91 tons, the vessel incorporates advanced technologies such as the world's first WinGD7X82-2.0 main engine, along with Selective Catalytic Reduction and Alternate Maritime Power systems, significantly reducing sulphur oxide and nitrogen oxide emissions. This contributes to the broader industry goal of enhancing sustainability.

DIRECT CONNECTIONS

Evergreen Marine has launched its 'CIX7' service, which will expand the company's network by offering direct connections from Vietnam and Thailand to East India.

The service will complement Evergreen Line's existing East India services by enhancing port coverage and frequency. The service will be jointly operated with Wan Hai Lines, RCL Feeder PTE and Bengal Tiger Line, using four vessels with a nominal capacity of 2,200TEUs. Evergreen will deploy one of these four vessels.

The maiden voyage of CIX7 began from Cat Lai Port in Ho Chi Minh on 20 April, and is expected to arrive in Chennai on 4 May. The service will follow a fixed 28-day round-trip schedule.

According to Evergreen, the port rotation will be: Cat Lai port Ho Chi Minh– Laem Chabang – Singapore – Port Kelang (North port) – Chennai – Vizag – Singapore – Port Kelang (North port) – Singapore – Cat Lai port Ho Chi Minh.

PURPOSE BUILT

The softening of proposed port fees on China-built and operated ships importing goods into the US has reduced the risk of severe congestion and upward pressure on freight rates, according to market analyst Xeneta.

The announcement by the Trump Administration on 17 April, saw changes to the original proposal. Significantly, the fees will now be levied on a net tonnage basis per US voyage, rather than cumulative fees for every port the ship calls at.

The new proposals will not come into effect for 180 days and the full notice can be read here.

Emily Stausbøll, Xeneta Senior Shipping Analyst, said: "We must look carefully at the potential impact of the revised port fees, but changes will be welcomed by the ocean container shipping industry given the significant criticism levelled at the initial proposal during the public hearing.

"The fact fees will not be imposed on every port call is particularly important because it lowers the risk of congestion had carriers decided to cut the number of calls on each service into the US. This port congestion had the potential to cause severe disruption and upward pressure on freight rates.

"Despite the softer approach in the revised proposal, costs could still be very high for Chinese carriers and carriers operating Chinese-built vessels - particularly for ships with the largest capacity.

"The 180 days before fees become effective is an opportunity for these carriers to revise how fleet is used across alliance partners. If they can avoid using the largest China-built ships on US services, they could minimize the impact greatly.

"The latest announcement should still be viewed in the context of the original proposal, which offered dire consequences. The situation has changed for the better, but it isn't a great victory for the ocean container shipping industry because these fees still add further pressure at a time when businesses are already trying to navigate the spiralling tariffs announced by the Trump Administration."

Peter Sand, Xeneta Chief Analyst commented at the same time:

"We are looking at record-breaking container shipping capacity leaving the Far East for North Europe this week, which means carriers know something is boiling.

"At the same time as record capacity, we are seeing an uptick in spot rates from the Far East to North Europe. This suggests a nervous market, but the demand must also be there to put upward pressure on rates.

"The question is whether this record capacity and rate increase is a consequence of the tariff threat if shippers are redirecting goods from the Far East to Europe instead of the US. What we can say is that this is usually a slack time of year for container shipping, so an uptick in pressure is likely related to the tariffs in some way.

"We are seeing heavy port congestion in North Europe including Antwerp, Le Havre, London Gateway and Hamburg, but the main cause is likely weather, crane maintenance, labor unrest and strikes, rather than tariffs.

"However, if we are seeing record levels of capacity leaving the Far East this week, there could be carnage by the time these ships arrive in North Europe, if congestion is still high.

"Average transit time from the Far East to North Europe is 55 days, so there could be serious issues on the horizon in June. As we saw in 2024, congestion is toxic for ocean container shipping and can quickly spread across global supply chains."

PORTS OF PLENTY

UK and Irish ports have been scoring some strong returns during the course of the past year

Peel Ports Group has announced plans to turn the Port of Liverpool into a global hub for steel after the port operator marked a record-breaking year for bulk imports at the site throughout 2024.

Some 702,000 tonnes of bulk steel were processed at the port in 2024, coming from across the world including from South Korea, Vietnam, Taiwan, Turkey, and Europe.

The record-breaking figure, which surpasses the port's previous record by more than 50,000 tonnes, follows significant investment by Peel Ports Group into infrastructure at the port as the company looks to bolster its support for the steel industry.

Peel Ports Group recently invested £2m into the development of a new deepwater bulk berth at the port's Alexandra Complex – the first to be opened at the port in 40 years. Expanding its cargo handling operations, the Port of Liverpool is now able to accommodate a range of vessels, including Handymax bulk carriers.

Meanwhile, a further investment in 200,000 sq ft of additional, inside storage space has been made in 2025 to expand Peel Ports Group's coil and precious metals handling capabilities at the port.

Some 85% of the steel imported into the Port of Liverpool in 2024 was steel coil, set to be used across a range of industries including construction, automotive, agricultural, renewable energy projects, medical healthcare, and manufacturing.

Phil Hall, Mersey Port Director, Peel Ports Group, says: "The Port of Liverpool is a deep water gateway to global markets and we're thrilled to achieve a record-breaking year for steel imports.

"The figures speak for themselves, showing the work we're doing to meet our ambition of cementing Liverpool as the leading UK hub providing vital commodities to a range of industries. That's further supported by our dedication to investing in the port's infrastructure, market reach, our port-centric services, and our expert teams.

"We look forward to developing this market-leading proposition further."

Warehousing construction

Peel Ports Group has also awarded the construction contract for a new warehouse at Birkenhead Docks as part of an ongoing collaboration with the wood-based panels specialist Finsa UK.

Construction of the 156,000 sq ft quayside facility at the UK's second largest port operator's new terminal Grandidges Quay at the port will begin later this year.

The port operator has awarded the contract for the design and build of the contemporary logistics space and two-story office to construction firm Glencar, and it will become the specialist wood manufacturer's new UK HQ.

The project will facilitate the next stage of business growth for Finsa UK – Finsa Group's subsidiary in the UK - keeping all the existing jobs in the area as well as generating many indirect jobs and apprenticeship opportunities for local young people. The project also incorporates an extensive service yard and parking facilities to support its operational needs.

Andrew Martin, Group Property Development Director at Peel Ports, says: "Finsa UK has been a valued customer of Peel Ports for more than three decades and we are delighted to see the next phase of their growth come to life with this transformative project at Grandidges Quay. We are pleased to be collaborating once again with Glencar, whose expertise and commitment to excellence make them the ideal partner to deliver this high-specification logistics facility."

Tom Kearsley, Operations Director at Glencar, comments: "This project represents an exciting opportunity to contribute to the transformative Wirral Waters regeneration scheme while showcasing our commitment to sustainability, innovation, and community investment. We are thrilled to be working with Peel Ports again and look forward to delivering a facility that supports Finsa UK's growth while leaving a lasting legacy in Birkenhead that extends far beyond construction."

Raquel Carrillo, Managing Director at Finsa UK, adds: "For more than 30 years, Birkenhead Port has been a key part of Finsa UK's story. Our new headquarters represent an exciting new chapter in our future. We look forward to working closely with both teams to achieve this vision and to continue supporting and contributing to the growth of Birkenhead and its community."

Contractors join the fold

Peel Ports has appointed a host of contractors into its new construction framework, covering a major programme of construction works across its UK and Ireland sites, worth up to £750m.

The port operator has appointed 18 contractors across the multi-lot framework for a period of up to eight years. The regional and national suppliers will support projects across the Group's entire portfolio of UK and Ireland ports, including the Port of Liverpool, Heysham Port, Manchester Ship Canal, London Medway, its Clydeport sites, Great Yarmouth, and Dublin Port.

The move underpins the delivery of Peel Ports' long-term construction pipeline, with the scope of the framework covering both existing infrastructure improvements and new developments.

Lewis McIntyre, Managing Director - Port Services at Peel Ports Group says: "We're pleased to announce the 18 contractors who have been selected to carry out this important work across our ports in the UK and Ireland."

"This rigorous procurement process has allowed us to select the very best regional and national partners, who will support the ongoing development of our network of logistics hubs."

"We look forward to working closely with them on the design and build of various exciting projects in the months and years ahead, all of which are the result of substantial investment in the future of our operations."

BELFAST INVESTMENT

Belfast Harbour has unveiled a bold new strategy setting out an ambitious programme to invest more than £300m in capital projects across the port and Harbour Estate over the next five years.

The strategy – Advance Regional Prosperity 2025-2029 – outlines Belfast Harbour's plans to invest £208m in significant port improvements and £105m in the ongoing regeneration and development of the Harbour Estate and waterfront. As a Trust Port, Belfast Harbour is self-financing and invests all post-tax profits in developing the port and estate to benefit the city and region.

The strategy includes the largest single capital project ever undertaken by Belfast Harbour, a proposed £90m investment in a new deepwater quay that will be able to accommodate some of the world's largest cruise vessels and also expand the port's capacity and capabilities for offshore wind turbine assembly and installation.

Stage one of the deepwater quay build, which will initially support cruise tourism, is expected to be delivered by 2027-28. Through the project, Belfast Harbour aims to boost cruise tourism to the region, currently worth an estimated £20-25m to the local economy annually.

Stage two of the deepwater quay build, due by 2030, will further strengthen the infrastructure, so that the port can play a leading role in the assembly and installation of the next generation of floating offshore wind turbines. While this part of the project is dependent on additional investment or third-party funding, Belfast Harbour is confident that when complete, it will position the port and local supply chain as central to the deployment of high-capacity wind farms, helping meet demand for clean energy as Northern Ireland, Great Britain and Ireland strive to reach net-zero targets.

Steady trading

Trade through Belfast Harbour increased slightly in 2024 as the shipping of key goods and commodities in and out of Northern Ireland remained resilient to global economic headwinds and persistently high energy costs.

Releasing its annual trade figures, Belfast Harbour recently reported that 24.1m tonnes of goods were handled by the port in 2024, up from 23.9m tonnes the year before and in line with projections for the period.

Belfast Harbour is the region's leading gateway and key economic hub for trade and tourism, handling more than 70% of the region's seaborne imports and exports and 25% of sea trade for the island of Ireland.

2024 was another record year for Roll-On Roll-Off (RoRo) freight traffic delivered by Belfast Harbour's partner and customer Stena Line, with 617,000 freight equivalent units comprising of HGVs, smaller commercial vehicles and cars for the motor trade, passing through the port. This is up from the previous record performance of 610,000 delivered in 2023. The number of tourist coaches also increased by 5% to 12,700

The overall volume of ferry passengers travelling through the Port remained steady at 1.7m and 500,000 cars passed through Belfast in 2024. The figures demonstrate the importance of Stena Line's freight traffic routes to Scotland and England to the local economy and reflect continued collective investment in terminals, facilities and ships.

Grains and feedstuffs had a record year, rising to 2.46m tonnes, slightly ahead of the previous record volumes of 2.43m tonnes seen in 2021.

Container traffic also saw a positive performance, ending the year up 3% on the previous year with 124,000 units handled – a positive outcome after two years of lower volumes following a post-pandemic high of 131,000 in 2021.

Belfast Harbour also welcomed 145 cruise ship calls in 2024 during a successful cruise season, with 60 ships from 35 different cruise lines bringing an estimated 260,000 passengers and crew to the city. Belfast Harbour estimates the value of cruise tourism to the economy of between £20-25m each year.

Michael Robinson, Belfast Harbour's Port Director, says: "The results for 2024 show that trade through Belfast Harbour remains resilient and that the Port community has continued to transport people and deliver the goods and services relied on by communities and businesses in the region.

"Like every business, we are mindful of the challenges in the economy, which have affected both our customers and our own operations. It is very pleasing to note that despite these challenges, RoRo traffic volumes and the number of passengers travelling to and from Northern Ireland reached new record levels and other categories continued to perform strongly, demonstrating the important role that Belfast Harbour plays in keeping daily life moving.

"In our new strategy, Advance Regional Prosperity, Belfast Harbour outlined our plans to make £313m of investments in key port and estate infrastructure over the next five years."

Paul Grant, Stena Line's Trade Director, says: "2024 represented a record year for Stena Line freight volumes on our Belfast routes to Cairnryan, Liverpool and Heysham. Belfast Harbour is now one of Stena Line's largest business hubs and we are confident that we can deliver even more success in the future. That's why have committed further significant investment in our fleet in the form of two

purpose built NewMax vessels to operate on the Belfast-Heysham service which will an additional 40% freight capacity. The first ship, *Stena Futura*, will come into service on the route in autumn 2025."

Claudine Heron, Chief Executive, Agri Division, W&R Barnett says: "The agri feed market enjoyed exceptional demand in 2024 and we were delighted this aligned with operation of a new crane commissioned by Belfast Harbour mid-2023, delivering efficiencies and supporting record import volumes for grains and animal feedstuffs.

"Port infrastructure investments, such as those announced within the recent Belfast Harbour Strategy document, continue to be an essential foundation for delivering productivity and growth for all businesses operating through the port. This is essential to underpin economic growth and prosperity."

> Belfast Harbour outlined our plans to make £313m of investments in key port and estate infrastructure over the next five years

CAMERA INSIGHTS

Dublin Port has officially launched two new live stream cameras, offering near real-time views of Dublin Bay and Dublin City.

The cameras provide the public with a unique insight into the daily operations of Ireland's busiest port – with some 1.6m ferry passengers and trade worth €165bn (last year.

On average, the port sees some 15,000 ship movements per year in the Dublin Port shipping channel, which is now visible on the live streams.

Since going live in beta mode in July, the live streams have been watched over 1.29m times on YouTube, with viewers from 50 countries worldwide enjoying fascinating Port views set against the backdrop of Ringsend's iconic Poolbeg Chimneys, along with glimpses of the Great South Wall and Poolbeg Lighthouse.

Meanwhile, the city-side stream overlooks the River Liffey with views of the Aviva Stadium and Dublin mountains with some of the local yacht and boat clubs in view alongside commercial shipping.

The stream has already captured stunning sunrises over the Port, located within the UNESCO-designated Dublin Bay biosphere, as well as the movement of ships entering and leaving the harbour – showcasing the work of Dublin Port's marine teams and shipping lines – and even a meteor sighting in November 2024.

During major weather events, avid weather watchers turned to the cameras, with spikes seen during both Storm Darragh in December and Storm Eowyn, in January.

Dublin Port is also exploring the possibility of providing live marine data and weather updates for viewers, along with introducing a third viewpoint from Poolbeg Lighthouse later this year.

The port continues to open up to the public, offering new ways for people to engage with its operations – even from a distance.

Claire Percy, Head of External Affairs at Dublin Port, comments: "These live streams provide a real insight into our busy port – the hardworking heart of Dublin.

"No matter when you tune in, the port is busy with activity on land and on the water, operating 24/7, 365 days a year.

"Ships continuously move, delivering everyday essentials to Ireland and supporting Irish exporters. You might spot ferries, container vessels, bulk ships, and car carriers – all vital activity that often goes unnoticed by the public.

"We have had great feedback from viewers so far, who have found the live stream cameras fascinating and even relaxing. Between the movements of the ships, cranes, water, weather and birds, there is always something to see.

"Later in the year, the live stream cameras will also provide great views of the sailing regattas of our local yacht and boat clubs."

SEADRAGON SAILS

UK Dredging (UKD), a division of Associated British Ports (ABP), which operates the largest British-owned dredging fleet, has welcomed the arrival of its newest vessel, the *UKD Seadragon*, to Cardiff.

The state-of-the-art Shoalbuster 2711 Water Injection Dredger (WID), was built by Damen Shipyards in the Netherlands. Equipped with a cutting-edge diesel-electric propulsion and power management system, the *UKD Seadragon* optimises engine efficiency, significantly reducing emissions.

This multi-purpose vessel features an electric dredge pump capable of delivering 4,000m^3/hr of water at 2.5 bar, enhancing operational efficiency by extending intervals between hopper dredging operations.

The *UKD Seadragon*'s arrival into Cardiff Bay saw the ship escorted by two Boluda tugs, which ceremonially sprayed their water cannons, and the vessel made a grand entrance as the first commercial vessel to be registered in Cardiff for six years.

Mark Pearson, General Manager of UKD, comments: "We are thrilled to welcome the *UKD Seadragon* to our fleet. Her advanced technology and capabilities will significantly enhance our operational efficiency and environmental performance, allowing us to better serve ABP and third-party ports around the UK. We are looking forward to her official naming ceremony and blessing next month."

The *UKD Seadragon* will be stationed at Queen Alexandra Dock. As the newest addition to the fleet, she underscores UKD's commitment to maintaining its position as the leading provider of dredging services in the UK.

EVENTS 2025

OMAN MARITIME PORTS AND ENERGY FORUM
28-30 APRIL 2025
Muscat, Oman
petrospot.com

BREAKBULK EUROPE
13-15 MAY 2025
Rotterdam Ahoy
europe.breakbulk.com

MARITIME WEEK AMERICAS
20-22 MAY 2025
Tampa
www.petrospot.com

NOR SHIPPING 2025
2-6 JUNE 2025
Oslo
nor-shipping.com

TOC EUROPE
17-19 JUNE 2025

Rotterdam Ahoy
tocevents-europe.com

GLOBAL MARITIME INDUSTRY EXPO
25-26 JUNE 2025
Hamburg
decarbonizingforum.com

INMEX SMM INDIA 2025
10-12 SEPTEMBER 2025
Mumbai
shipuniverse.com

BREAKBULK AMERICAS
15-17 OCTOBER 2025
Houston
americas.breakbulk.com

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INCLUDING TERMINAL VISIT

The 2025 conference will set the scene with the traditional analysis of bulk markets, continuing with a full programme focused on the concerns of operators – offering sound practical solutions to terminal operators for improving profitability, streamlining operations, improving safety, online security and ensuring environmental compliance & protection.

The fluid situation surrounding the imposition of the tariffs imposed by President Trump will have a serious impact on bulk trade flows at whatever level they settle at: both in terms of total volumes and trade routes. In addition to the obvious economic repercussions, bulk terminals will be presented with operational challenges and the need to make strategic adaptations.

Marseille will examine the impact these latest challenges place on bulk terminal operations – both in the short and long term.

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