

## BULK TERMINALS LISBON 2023: A RESOUNDING SUCCESS

Simon Gutteridge, chief executive of ABTO, enjoyed an informative and thought-provoking conference in the beautiful Port of Lisbon.

The Annual ABTO Bulk Terminals Conferences are designed for all those involved in the transportation, storage and handling of bulk commodities.

As well as terminals and ports, we welcome equipment and service suppliers, professional advisors and academics to the conference. Indeed, ABTO feels strongly it is only through the interaction with these others that bulk terminals will achieve increased operational efficiencies, together with safety and environmental compliance.

At the suggestion of ABTO member SILOPOR, we held the Bulk Terminals 2023 conference in its port city base, Lisbon – an exceptional choice as this year, the Port of Lisbon is celebrating its 135th anniversary. We were very grateful for the support of the Port of Lisbon Authority, local organisers for the conference, as well as of our sponsors: the TT Club; igus; BRUKS Siwertell; ProStack; RAM Spreaders and Bedeschi.

Our traditional analysis of bulk markets set the scene at the conference, continuing with a full programme focused on the concerns of operators, offering sound practical solutions to terminal operators for improving safety, ensuring environmental protection and streamlining operations – including digitalisation and countering cyber threats.

The conference theme of 'The Changing Patterns of International Trade' certainly ran through the opening markets session of the conference, given the likely impact on grain markets of developments in the naval war in the Black Sea. The autumn and previous summer editions of *Bulk Terminals International* have also covered this theme in some depth.

João Roda, Country Lead for BUNGE Iberica Portugal, covered 'Grain markets 20 months on from the conflict in Ukraine'. See [Roda's slides](#) and the past two editions of *Bulk Terminals International* for more details.

At the time of going to press for the summer edition of Bulk Terminals International, the Black Sea Grain Initiative deal brokered by the UN and the Turkish government had expired. Certainly, in the short term it was not going to be renewed. Putin halted the grain deal after Russia's bridge to Crimea was struck – although denying this was the reason for suspending it, instead citing a failure to meet demands for a parallel agreement on its food and fertiliser exports. The question was whether in the medium term it would be renewed. That has proved to be a false hope.

Most observers – including myself in that edition – predicted that a failure to strike a new deal would lead to global food shortages, causing catastrophic consequences for countries already on the edge of famine.

After all, within a day of Russia's invasion wheat prices shot up, all but doubling – similarly maize prices reached the highest point [Continued...](#)

## INVESTMENT BOOST FOR DIGITALISATION PROJECTS

The partnership between Teesside University and the Centre for Digital Trade and Innovation [C4DTI] has successfully won investment to fund two projects to accelerate the digitalisation of UK and world trade.

One is to establish a national facility to test the innovative use of data across ports, customs, finance and the private sector and the other to improve the transparency of trade in critical minerals.

The Electronic Trade Documents Act has changed the game for world trade and finance innovation. The new law came into force on 20 September, instigated by the team at C4DTI and ICC United Kingdom. It enables companies to benefit from cheaper borrowing and lending, lower interest rates, faster over the border times and a revolution in the way we trade. Transactions can now happen in hours not months with no paper and all the associated risk and bureaucracy.

Digitalising trade transactions will deliver £25bn in SME growth, £224bn in efficiency savings, £1bn in new working capital and an 80% reduction in trade transaction costs. It is a unique opportunity to drive growth and remove a critical pain point for small companies.

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in 10 years – due to Russia’s blockade of Ukraine’s Black Sea ports. Markets also expected that war and particularly the predicted Western sanctions on Russia would stop – or at least reduce – Russian grain exports. It is pleasant sometimes – and certainly in this case – to be proved wrong.

Wheat prices are actually less now than when the war began. In fact, they fell back to pre-invasion levels in the summer of 2022. In retrospect, the Turkish and UN-brokered grain deal had less to do with this than two other factors. The first of these was the bumper crops Russia, India and Brazil enjoyed. The second was that to protect food supplies for countries at risk of famine, Western sanctions against Russia did not apply to agricultural exports – and Russia harvested a record-breaking 100m tonnes of wheat in 2022.

The picture this year looks pretty much the same as it did last year. Ukraine may be harvesting less than before the war, but it cannot export as much as it could do on account of Russia’s refusal to renew the grain deal. However, the other grain exporting countries (including Russia) are enjoying good growing conditions and big harvests.

Of course, that is good news for everyone except Ukraine.

Now Ukraine is banking on a new sea corridor in and out of Odessa, which it announced in August to provide a new lifeline for its beleaguered economy, including grain exports.

This new route hugs the Ukrainian coastline running to the west of Snake Island until it reaches Romanian waters. Once these reach the Romanian border it is assumed Russia would be reluctant to attack ships inside the territorial waters of a NATO member.

It hardly needs to be said that an escalation that brought civilian shipping from both sides into the firing line (Ukraine certainly retaliating against any Russian attack) would send grain prices soaring.

After the in-depth look at today’s grain trade, the markets session continued with biofuels, biomass and minerals projections under Drewry’s lead research analyst Rahul Sharan’s session chairmanship.

After lunch, chairman of the ABTO Technical Committee Garry O’Malley led the Operations session, divided into shoreside and digitalisations.

The Legal Panel led by Tim Springett from the UK Chamber of Shipping finished the business part of day one.

The evening reception was kindly hosted by the Port of Lisbon Authority at its HQ, the Gare Marítima de Alcântara. Built in 1943, it is one of the most important modern constructions in Lisbon and classified as a Monument of Public Interest, featuring magnificent fresco panels by the modernist Almada Negreiros.

Conference chairman Professor Mike Bradley led the Safety and Risk session. We had anticipated that by the time of the conference the findings of the UK Marine Accident Investigation Branch (MAIB) report into the fatalities of three stevedores on the Isle-of-Man-registered Berge Mawson bulk carrier while loading coal at Bunyu anchorage in Indonesia would have been published. It was due in June, but only an **interim report** was published in August. The interim report states under the heading of ‘Ongoing Action’ that “The MAIB investigation is complete and a draft of the report is being prepared and will be distributed to stakeholders for a 30-day consultation period in due course.” A 30-day consultation period appears inadequate, to say the least.

Be that as it may be, we kick started this process at Lisbon. Garry O’Malley moderated a panel including Richard Steele, head of ICHCA International; Professor Mike Bradley, director of the Wolfson Centre; Dorota Jilli, senior underwriter at the TT Club, Captain Kuba Szymanski, secretary general of InterManager and Yücel Yildiz, an assistant director at RightShip. Environmental Matters continue to be at the forefront of terminal operators concerns. This session rounded up the conference presentations.

The conference finished with a boat tour of Lisbon harbour across the Tagus River – courtesy of the Port of Lisbon Authority – and a very interesting visit to SILOPOR’s Trafaria terminal.

It was a pleasure to see many old friends and new in Lisbon. See you all next year.

**Visit our website** to see all the conference slides in full.

## CELEBRATION OF SHIPPING

**The British Ports Association (BPA) and the UK Chamber of Shipping (UKCOS) jointly held their annual Scottish Parliamentary reception in Holyrood, at which the vital role of the ports and maritime industry was celebrated.**

Nearly 200 guests from the Scottish maritime industry heard from the BPA’s Scottish Ports group chair Stuart Cresswell, Scottish transport minister Fiona Hyslop MSP, and the Chamber, all covering the essential role that ports and shipping plays to in Scotland.

The minister also welcomed the BPA’s new policy paper, *Scottish Ports: Gateways for Growth 2023*, designed in collaboration with Scotland’s enterprise agencies.



BPA CEO Richard Ballantyne, transport minister Fiona Hyslop MSP, and Scottish Port chair Stuart Cresswell

## ABP SETS SIGHTS ON NET ZERO WITH TIPC MOU

Associated British Ports (ABP) has signed a memorandum of understanding (MOU) on cooperation with Taiwan International Ports Corporation (TIPC), in a ceremony at the Kaohsiung Port Cruise Terminal Port of Kaohsiung Passenger Terminal. The MOU opens the door for information and experience sharing between the two signatories on floating offshore wind (FLOW) related port facilities and for the exploration of future business collaboration opportunities.

Henrik Pedersen, CEO of ABP, said: "This agreement with Taiwan International Ports Corporation represents an exciting new stage in our journey towards net zero, for which international collaboration is key. Floating offshore wind presents huge opportunities to the UK, from becoming a global leader in green energy generation to creating significant jobs, prosperity and energy security. We look forward to working with TIPC to exchange ideas and accelerate the advancement of this technology."

The MOU was signed by TIPC vice president of business, Shu-hui Cheng and ABP head of offshore wind, Andy Reay and witnessed by TIPC chairman, Hsien-yi Lee and British Office Taipei representative John Dennis.

Cheng, said: "The third phase of offshore wind power development is about to unfold in Taiwan. With larger

scale wind turbines, localisation policies, and so on, there will be more demand for land and space in ports of Taiwan, and the demonstration plan of floating wind will also bring up more requirements and challenges. Through the signing of the MOU with ABP and information sharing between the two parties, I believe that TIPC will be fully prepared on port planning and construction in coordination with offshore wind power policies.

TIPC's Lee stressed that ports have a crucial role to play in the current and future development of offshore wind power. TIPC is particularly interested in learning how to best develop the port infrastructures necessary to support the future development and installation of FLOW in Taiwan, he said. This was a key incentive for TIPC to seek this new MOU with ABP.

Enabling the clean energy transition is also a key focus for ABP, as it launched its 'Ready for Tomorrow' sustainability strategy in February 2023, which sets out the port operator's plans to achieve net zero from its own operations by 2040. The strategy is backed by a £2bn investment in decarbonising ABP's own operations and enabling large scale green energy infrastructure projects such as FLOW in Port Talbot.

ABP is planning to invest around £500m to upgrade the Port Talbot site to support the wind farms and provide investors, developers and manufacturers the confidence to run large, long-term projects that will generate thousands of high-quality jobs.

### ETS EFFECTS UNDER THE SPOTLIGHT

**In a viewpoint piece, Jacob Clausen, performance director at NAVTOR, simplifies the complexities of the EU Emissions Trading Scheme (ETS) with a high-level look at the regulatory horizon, allied to a clear lowdown on how shipowners and operators can mitigate risks, manage costs and comply, comply, comply.**

According to Clausen: "The EU ETS for shipping landed with a colossal splash on 16 May this year, when it was officially adopted and finalised. But it won't be until 1 January 2024 that the industry feels the true ripple effects. So, is it time for owners and operators to batten down the hatches, or will adequate foresight and planning ensure these ripples don't turn into tsunamis?"

"Although the introduction of regulations that potentially incur significant costs may not be universally applauded by the industry, it really does pay to see the bigger picture here.

"The most important factor, naturally, is that we need to take action to reduce emissions and mitigate climate change. In this respect, any tool that incentivises businesses to do so is a step in the right direction," Clausen says.

"However, we shouldn't lose sight of the commercial opportunity here, too. With careful monitoring, management and informed decision-making compliance can come with a benefit rather than at a cost – paving the way for reduced fuel expenditure, more efficient energy use, and a strong business, rather than purely environmental, case to transition to more sustainable practices.

"Time will tell how effective the EU ETS proves to be. But with the right, informed strategy in place, it needn't be something to be feared, but rather welcomed by shipping industry stakeholders, as well as the rest of society."

For the full story see: [navtor.com](https://navtor.com)



# PORT AND TERMINAL OPERATIONS FOR BULK CARGOES – Short Course

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- » Dust control and environmental protection
- » Controlling cargo damage
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- » Cargo characterisation for handleability and other issues

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

**Course Leader:** Mike Bradley,  
Professor of Bulk and Particulate  
Technologies and  
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## UPDATED EDITION

The Nautical Institute has published a fully revised edition of its reference work, **Bulk Carrier Practice**.

The publication provides comprehensive, practical guidance on every aspect of bulk carrier operations. It takes the reader through a typical voyage – from paperwork, hold preparation and loading to cargo care on the voyage and discharging – illustrated with more than 300 photographs. There is extensive coverage of the carriage and monitoring of both standard and unusual cargoes.

The book describes the various vessel types, detailing their construction, maintenance, equipment and safety considerations, paying particular attention to hatch covers, stability and trim. Chapters incorporate useful checklists and sources of further information. Examples of cargo documents and ships' certificates are reproduced in the book's extensive appendices.

The new publication is organised in the same logical way

as the second edition, but the text has been significantly updated to take into account the many changes in the sector since 2010. New material includes important guidance on the dangers of liquefaction and dynamic separation. The sections on bulker casualties and charterparties have been completely updated and new case studies have been added. The layout has been improved and many of the diagrams have been redrawn.

*Bulk Carrier Practice* is a reference book for masters, shipowners, ship operators, charterers, marine consultants and surveyors, and a companion for mariners preparing for their exams.

The revising author for the third edition, Captain Hemant Gupta, says: "Well-maintained vessels with competent crew help in reducing the number of accidents and claims and therefore, contribute to increasing the reputation of the shipowner and ship managers."

## MANAGEMENT MISTAKES

**The warning came as part of ITIC's October 2023 Claims Review that cited a case of a ship manager managing two vessels for the same owner and allegedly failing to meet the required standards expected according to the signed BIMCO Shipman contracts.**

For the first vessel, the owners alleged that the managers mismanaged their ships by failing to identify deficiencies, arrange and supervise maintenance and repairs, implement the onboard ISM and PMC systems, and communicate appropriately with the crew.

The owners further alleged that the managers failed to provide them with sufficient information in respect of 'extraordinary' expenditure to allow owners to make an informed decision on whether to approve incurring the cost.

For the second vessel, the owners made various allegations, including failure to plan a crew change and dismiss the crew for misconduct, which allegedly meant the crew were not suitably qualified, and failure to maintain the ship adequately.

Owners presented their claims under various heads of damages, including cost of repairs, loss of hire, cost of bunkers, and port and agency costs. The total claim was for US\$9.5m. BIMCO Shipman contracts limited liability to \$1.5m for each ship.

The ship managers accepted that there had been some mismanagement on their part. Therefore, there was a significant litigation risk. Furthermore, costs incurred in fighting the claims would be substantial – in the hundreds of thousands, if not more. This also meant a lot of management time would be used to defend the claims. As a result, with ITIC's assistance, the managers met with the owner for settlement talks.

Following several rounds of settlement talks, both ships were eventually settled at \$700,000 each (\$1.4m total), with ITIC paying this claim less the deductibles.

"It is of utmost importance that ship managers ensure they adhere to contractual obligations at all times and that maintenance works are kept up to date. Professional Indemnity insurance is part of our member's risk management strategy, and it gives the ship manager peace of mind and protects them against claims such as this one. The benefit of having cover from a company such as ITIC is that you have an insurer who understands the business and risks ship managers face and speaks the ship manager's language," says Mark Brattman, Claims Director at ITIC.

ITIC's October 2023 Claims Review can be accessed [here](#).

## MARITIME LAW FOR MASTERS

**When something goes wrong on board, legal issues often arise, and it is the master's responsibility to react appropriately. A Master is not a lawyer, but needs to understand how to respond within the confines of the law to protect the interests of themselves, the shipowner and other crew members.**

The International Chamber of Shipping and the International Federation of Shipmasters' Associations have put together a guide that bridges the gap between theory and practice by exploring practical real-world scenarios commonly encountered by masters, whether in port or at sea. It offers guidance on how to approach legal issues effectively, highlighting best practices, and providing expert advice on managing legal risks with particular emphasis on the commercial aspects that form a significant part of every Master's responsibilities on board.

*The Master's Practical Guide to Maritime Law* aims to be:

A detailed, practical guide relevant to real-life situations.

- Designed to help masters protect themselves within the legal framework.
- Equally suited to seasoned masters seeking to refresh their knowledge and masters embarking on their first voyage.
- An easily accessible resource helping masters navigate common legal issues and pitfalls and assist in protecting the shipowner's interest.
- A guide covering both criminal and commercial law.

This first edition is priced at £250 and is available in print and e-book formats. [Find out more](#) and order from ICS Publications.

## CONVINCING ARGUMENTS FOR CTU CODE

The seven industry bodies dedicated to container safety, collaborating as the Cargo Integrity Group, highlight an **independent study** carried out by researchers at Italian University Politecnico di Torino into shipper and forwarder application of the CTU Code. The 2023 survey yielded encouraging signs of adoption and highlighted several convincing arguments – including financial benefits for its use

The survey highlights multiple benefits to CTU Code users including:

- Improved safety, reputation and supply chain coordination
- Decreased cargo damage, environmental impact and operational inefficiencies
- Those using the CTU Code incurred no extra costs in employees, contractors, or vehicles
- Any increase in loading and waiting times were typically offset by CTU Code related efficiencies overall
- Annual costs and penalties reduced from €670,000 pre-implementation of the Code to €13,000 post-implementation
- Extra costs as a percentage of revenue reduced from 37% to 10%

In the words of the report's authors: "The application of the CTU Code to cargo loading and transportation processes can increase the safety level of transport activities, and also improve business processes and competitiveness. The results show that the use of the CTU Code provides an increase in safety with a drastic reduction of loading accidents and

damage to goods, as well as important benefits in terms of costs, improved efficiency, corporate image and reduced environmental impact."

The Cargo Integrity Group continues its efforts to underline the positive effects of the widespread use of guidance in the CTU Code, which is the Code of Practice for Packing of Cargo Transport Units jointly published by the International Maritime Organisation, the International Labour Organization and the United Nations Economic Commission for Europe (UNECE)<sup>1</sup>.

The group is dedicated to improving the safety, security and environmental performance throughout the logistics supply chain. In particular, it is concerned to promote safe methods to those responsible for the packing of cargoes in containers, securing them and accurately declaring them.

Welcoming the Politecnico survey, the CEO of ICHCA, one of the group's founding associations, Richard Steele says, "As far as we are aware, this is the first example of publicly available empirical evidence about the use of the CTU Code made by forwarders, shippers and others responsible for safe packing. Notwithstanding the regional focus of this particular survey, we believe the results to be genuinely encouraging. They show that good operational management, efficiency and safety are partners, not opposites."

To facilitate a greater degree of understanding and wider use of what is a lengthy and complex document, the Group has published a 'Quick Guide' to the CTU Code, together with an editable and saveable checklist of actions and responsibilities for the guidance of those undertaking the packing of cargoes in containers. These materials are now available in all six of the United Nations' official languages, as well as Italian.



# THE WOLFSON CENTRE FOR BULK SOLIDS HANDLING TECHNOLOGY AT THE UNIVERSITY OF GREENWICH, MEDWAY.

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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
- » Powder Handling and Flow for Additive Manufacturing

## SEAFARERS' HAPPINESS SPARKS CONCERNS

Further concern over seafarer welfare has been raised by the results of the latest *Seafarers Happiness Index*, published recently, which reveals a further drop in seafarer happiness. This report covers Q3 2023 and is the third successive report to show such decline, sparking fears over the impact on all those working at sea.

The Seafarers Happiness Index is a quarterly survey conducted by The Mission to Seafarers and made possible by the sponsorship of NorthStandard and Idwal, as well as the support of Inmarsat. It measures the wellbeing of seafarers through 10 key questions about their work and life, designed to gauge sentiment about their experiences on board.

The Q3 report shows an overall fall in seafarer happiness to just 6.6 out of 10. This compares to 6.77 in Q2 2023 and 7.1 in Q1 2023.

The results showed a decline in most areas covered by the survey, including wages, workload and onboard connectivity, which saw the most significant fall in happiness levels. The only areas to buck the trend of a decline in happiness for this quarter were shore leave, training and food, where the report showed marginal improvements.

This latest Seafarers Happiness Index report brings together seafarer perspectives to highlight the major factors impacting happiness. Key recommendations centre on facilitating shore leave and engaging with ports globally, addressing remuneration concerns, promoting diversity and inclusion, managing workloads, and leveraging technology to enhance work-life balance.

Concerns emerged around salary inadequacy in this quarter's feedback, especially for senior roles. The survey also heard reports of how catering budget constraints can force nutritional compromises, underscoring the need for well-provisioned ships and skilled catering crews. Maintaining onboard gyms and exercise equipment was also seen as an issue.

Connectivity and communications represented a double-edged sword in this quarter's feedback, enabling contact with loved ones, but potentially facilitating micromanagement from ashore. To address this, there were calls for guidelines to promote a healthy work-life balance through technology.

The issue of overwhelming workloads again came to the fore. This was felt to be driven by expanding regulations and administrative tasks. There appears to be a growing sense of unmanageable responsibilities among seafarers, which is causing a huge amount of stress.

The report highlighted how prejudices and misunderstandings can impede social cohesion on board. There are cultural issues at play and pressures from home that are not always fully explored, including some troubling insights into gender disparities and barriers to diversity and inclusion. This included reports of a lack of acceptance, discomfort and exclusion for female seafarers. To address these issues, the report says it is essential that more is done to foster open

communication and overcome biases.

The report is not without some positive feedback on life at sea. From a more encouraging perspective, respondents spoke of the benefits that a seafaring life can offer, including a steady income and adventure, whilst recognising that it also demands substantial sacrifice.

Andrew Wright, secretary general of The Mission to Seafarers, says: "It is deeply concerning to see seafarer happiness fall again during the third quarter of 2023. This extended downturn across all three quarters of 2023 so far paints a worrying picture. It seems clear that happiness levels will not recover to acceptable levels unless we can address the systemic challenges that continue to undermine the welfare of our seafarers, such as limited shore leave, unsustainable workloads, insufficient connectivity, and stagnant wages.

"This latest report also offers a number of important recommendations to address these issues. If we can work together in common cause as an industry, we can reverse these recent declines in seafarer wellbeing and turn the tide towards not just improved welfare at sea, but ensuring that seafaring is a decent and fulfilling profession for all."

Idwal senior marine surveyor and crew welfare advocate Thom Herbert says: "The concerning continued downward trend in seafarer happiness revealed in this report mirrors issues we see during our vessel inspections. While connectivity enables constant family contact, it also risks facilitating micromanagement from ashore, persistent barriers to shore leave undermine its importance as a respite, and nutritional compromises on board highlight the basic need for well-provisioned ships and skilled catering crews.

"It is also deeply troubling to hear about the issues around gender issues and disparities. As ever, we believe targeted efforts to improve policies and practices in all these areas would go a long way to restoring optimism amongst crew and enhancing retention."

Yves Vandeborn, head of loss prevention Asia-Pacific at NorthStandard adds: "At 6.6/10, Quarter 3 of 2023 marks yet another dip in the overall happiness levels of seafarers at sea. This represents the longest sustained decline since the Seafarers Happiness Index was founded. Some areas reflect marginal improvements while others show persistent declines. It is worrying that overall happiness remains hampered by persistent challenges in workloads, connectivity, and ability to keep fit and healthy on board.

"NorthStandard will continue to raise awareness on the seafarer condition and will work on collaborating with industry leaders in charting a course towards an improved working environment for seafarers worldwide."

The Mission to Seafarers is working with industry partners to address the many issues that continue to affect the wellbeing of seafarers, as well as providing direct support for seafarers through its global network of seafarers' centres and ship visits, chaplains, staff and volunteers, and its digital solutions, such as its 'Happy at Sea' app for seafarers.

To read the full Seafarers Happiness Index report for Q3 2023, [click here](#).



## JIT KEY TO EMISSIONS GOALS

In a time of unprecedented environmental and economic challenges, a **white paper** has been unveiled by PortXchange. The white paper serves as a roadmap for immediate maritime action and presents hard evidence that just-in-time (JIT) port arrivals is an environmental and economical solution that must not be ignored if net-zero emissions goals in the maritime industry are to be reached by 2050.

The field trials conducted by PortXchange prove that JIT port arrivals could reduce global container shipping emissions by at least 5%, translating to approximately 17m tonnes of CO2 emissions annually. The empirical data shows that this is an achievable and affordable operational reality through PortXchange's Synchronizer technology, which helps carriers optimise their speed during the voyage based on real-time berth availability. This is not just a theoretical proposal; it's a factual, empirical contribution to the industry's decarbonisation efforts.

The paper identifies ports where JIT Port Arrivals could stand to have the biggest gains. These include Buenos Aires, Moin, Valencia and Tanger Med. Here it was shown that vessels operated by major carriers such as Maersk and MSC had

significant untapped potential for JIT port arrival benefits.

Case studies, such as the example of a vessel travelling from Genoa to Valencia, are highlighted in the white paper and underscore the immediacy of these benefits. Had the JIT port arrival recommendations been heeded, the ship owners could have saved approximately 15.85 tonnes of fuel, avoiding unnecessary emissions equivalent to 50.11 tonnes of CO2.

Abhishek Nair, business development director of PortXchange, states: "Our white paper is a call for collective action, extending an invitation to governments and regulatory bodies to recognise and leverage JIT technologies to fast-track global environmental goals.

"There is no excuse. The technology to achieve dramatic CO2 reductions in the maritime industry is at our fingertips and with PortXchange Synchronizer, ports can be set up and ready to go within weeks."

Ports that serve ships on a first-come-first-served basis are causing an adverse carbon footprint through planning disruptions. JIT port arrivals, facilitated by PortXchange, are a quick-to-implement and low-cost solution for predictable, efficient and sustainable shipping. This is not the future – this is the here and now, the company says.

## SIMULTANEOUS FIRST IN LNG BUNKERING

**For the first time in Korea, on 28 October, simultaneous operations (SIMOPs) of ship-to-ship liquefied natural gas (LNG) bunkering were successfully conducted for a coal-carrying bulk carrier at the POSCO raw material dock, one of the loading docks at Gwangyang port.**

South Korea boasts world-class shipbuilding capabilities for LNG carriers and bunkering vessels. However, due to safety concerns, ship-to-ship LNG bunkering has never been carried out at the loading docks of its trading ports.

To address these concerns, the Ministry of Oceans and Fisheries of Korea (MOF) initiated a plan this year to promote LNG bunkering operations. They are supporting R&D projects and LNG bunkering operators by providing port facility fee discounts, with the aim of ensuring the successful implementation of simultaneous LNG bunkering operations.

KR, together with the Korea Research Institute of Ships & Ocean Engineering (KRISO), has been actively conducting R&D aimed at improving LNG bunkering safety technology, including the development of standard LNG bunkering operating procedures.

KR also plays a vital role as a member of an advisory group established by the MOF, along with other specialized organisations. This group assists the ministry in promptly reviewing and approving administrative procedures related to safety regulations, with the goal of reducing unnecessary obstacles and enhancing efficiency.

A KR official comments: "While LNG has been widely chosen as an alternative fuel, this is a significant step forward in the operation of LNG bunkering. We will continue to do our best to support the safe and successful implementation of simultaneous LNG bunkering operations."

MOF's spokesperson says: "We plan to expand the demonstration of bunkering with alternative marine fuels such as LNG and methanol at major Korean ports, including the Port of Busan. Our goal is to develop Korea as a primary bunkering hub for alternative marine fuels by significantly easing bunkering safety regulations and taking measures to establish a sustainable alternative marine fuel supply chain under the guidance of specialized organizations such as KR."



LNG Bunkering Simultaneous Operations (SIMOPS) for the first time in Korea on October 28 [Photo provided by Korea Gas Corporation]

## TT CLUB WARNS ON DANGEROUS GOODS

In an online comment, TT Club considers new dangerous goods regulations, which apply from the beginning of next year.

The biennial cycle of maritime Dangerous Goods regulations, the next Amendment of which enters mandatory application on 1 January 2024, provides a valuable opportunity to consider the trajectory of changes or improvements in safety for the freight supply chain, the TT Club warns in an opinion piece on its website.

The provisions relating to the transport of Dangerous Goods are revised regularly. While the overall governance of the regulations and the Dangerous Goods List is centred in Geneva and housed in the United Nations Recommendations on the Transport of Dangerous Goods, commonly known as the [UN Model Regulations](#), the [IMO](#), domiciled in London, has responsibility for the implementation of these regulations in the maritime mode.

The next version of the International Maritime Dangerous Goods Code ([IMDG code](#)), being Amendment 41-22, will shortly enter mandatory application. Consequently, TT has, in conjunction with UKP&I, updated the well-established '[Book it right, pack it tight](#)' publication to provide general assistance and route map to the industry in these important matters.

While there have inevitably been numerous [changes](#) embedded in this IMDG Amendment, a number of consequential debates remain underway at this inter-governmental level. IMO committees are, for example, currently seeking to reach finalisation on how to fashion a revised safety framework regarding the transport by sea of Charcoal / Carbon (UN 1361). This [vexed issue](#), frequently resulting in fires while in the supply chain, has encountered protracted debate. As previously reported, the concerns relate essentially to lump charcoal that is intended for burning on barbecues and the like – sometimes having been treated with accelerants to boot.

While tests and research are ongoing to determine certain particular hazards, it appears that there is agreement over key safety measures that may be adopted. These will, however, only become mandatorily applicable from 1 January 2026 in Amendment 42-24. There remain some concerns relating to the differentiation between this cargo and Activated Carbon (UN 1362), which is produced from the raw material. Further, there are non-lump forms of charcoal, such as produced for artists materials, that have quite distinct burning, cooling and packaging processes; deft handling of such issues will be required by regulators, carriers and enforcement agencies.

The topic arguably giving rise to most debate in the transport and logistics industry – lithium ion batteries, in their various forms – has yet to reach centre-stage at regulatory level. It is, however, almost a year ago that TT published the [joint white-paper](#) on this, raising a number of calls to action. Subsequent papers, such as the guidance produced by [CINS](#) or the best practices from [IUMI](#), have demonstrated both developing safety thinking and the need for further robust research.

The global need for decarbonisation and related demand for

effective battery storage drive research towards power output and speed of recharge, but not necessarily enough towards safety through the supply chain and end-to-end life cycle. TT continues to lobby for engagement between manufacturers and the transport industry to reach a common understanding of the hazards presented and how these can best be controlled. In part, this requires thorough independent scientific research – as much for the existing and legacy chemistries as for what is emerging, since the former will continue in circulation for many years, including in increasing states of degradation.

Incident investigations – such as following the serious fire aboard *Freemantle Highway* – will doubtless shape diverse regulatory change, but there must surely be opportunity to get ahead and in the meantime implement safety innovations to protect seafarers, broader workforce, assets and the environment.

The UN agencies are necessarily constrained by the submissions that are raised, either by member states or affiliated organisations. Relevant here are the container inspection findings that are reported to IMO annually. Those lodged for 2022 continue to be too sparse to guide decision-making (and well below the annual average count over the last decade), while demonstrating continuing concerns in key safety issues such as placarding (the external alert) and effective packing.

It is heartening that the National Cargo Bureau are repeating a broad-based inspection initiative to shed more light on general container packing safety. Indeed, the work of the Cargo Integrity Group, where TT was a founding partner, continues to be highly important in promoting safe packing practices, linking to the IMO/ILO/UNECE CTU Code.

Perhaps a ground-breaking initiative is the Cargo Safety Program recently announced by the World Shipping Council, which seeks to standardise cargo screening across the liner shipping industry, combining this with container inspections and creating a machine learning powered feedback loop, linking also to a 'Verified Shipper Database'. There are a number of technology providers who deliver parts of such a matrix, but combining all elements has the potential not just to tackle non- or mis-declaration, but also beneficially segregate and reward those actors who habitually adopt good practice.

It is in everybody's interest to improve certainty of outcome; innovations and initiatives such as these have the potential to deliver far beyond regulatory change.

TT regularly focuses on regulatory compliance and the adoption of sound safety practices. In this regard, the club reminds readers of the judgment statement in *MSC Flaminia* that regulations set the baseline for safety. In other words, it is insufficient merely to comply where there is reason to believe that other factors need to be taken into account.

Using a simple universal analogy, traffic speed restrictions are not intended to urge the driver to adopt a given speed, the club says. Good driving practice requires that all hazards are continually and fully assessed, and appropriate actions taken accordingly.

## ADAPTING TO EVER-CHANGING CIRCUMSTANCES

Dry bulk ports and terminals are in a state of constant change. Operators need more space for future expansions, and they are constantly facing the challenge of adapting their facilities to the increasing throughput, while at the same time paying ever more attention to avoiding dust emissions and improving their CO2 footprint. In projects such as these, BEUMER Group works together closely with its customers to develop efficient and new solutions.

The ability to load ships quickly is a decisive productivity factor. It is important to adapt the technology implemented in ports to the local space constraints and the size of the vessels – as well as to take account of the characteristics of the transported material. “Ports are faced with the challenge of increasing their performance,” explains Lukas Paul, Head of Ports & Terminals at BEUMER Group. To remain competitive, operators must constantly expand their terminals. “That is just one of the challenges. It is necessary to ensure economically viable and environmentally responsible operation and, first and foremost, cost efficiency.” When it comes to dry bulk handling equipment, BEUMER Group is there to help. The system provider supports operators – starting with every aspect of conveyor technology and through to the loading of the ships.

“When customers come to us, we sit down with them and talk,” explains BEUMER expert Paul. “In most cases, they know their everyday workflows extremely well and are aware of where the weak points and bottlenecks are.” To ensure the efficient handling of dry bulk, they must constantly adapt or expand their terminals. However, the restricted space available in ports often presents a difficulty. This means that operators face the challenge of integrating new storage areas – and these are not always in the immediate vicinity of the port. To use these areas, environmentally friendly conveyor systems represent an alternative to trucks.

### Belt conveyors as a cost-efficient alternative

Belt conveyors can be used to transport various bulk materials from and to the port. BEUMER Group supplies a variety of solutions depending on the intended use. Troughed belt conveyors, for example, permit high mass flows. They have an open design and are therefore suitable for coarse materials and very large volumes. Pipe conveyors, by contrast, have other specific advantages. The idlers shape the belt into a closed tube. This protects the transported material against external influences and also protects the environment against emissions such as dust or material loss. Panels with hexagonal cutouts and idler rollers in an offset arrangement keep the tube closed. Pipe conveyors are able to cope with tighter curves and larger angles of inclination than are possible with an open troughed belt conveyor. Their enclosed design also enables them to handle various bulk materials securely without any danger of cross-contamination. They also protect the health of the people who work at the facility or live nearby – for example, when bulk metal concentrates are being transported.



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