





BULK TERMINALS 2023 LISBON

THE CHANGING PATTERNS OF INTERNATIONAL TRADE

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

- the only event aimed at the entire bulk terminals industry

25-26 October 2023: Vila Galé Ópera Hotel, Lisbon, Portugal

With thanks to the Port of Lisbon Authority, our host port and local organiser

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CONFERENCE PROGRAMME

PRE-CONFERENCE NETWORKING: TUESDAY 24 OCTOBER 2023

18:00 Ice Breaker Drinks at the Vila Galé Ópera Hotel

CONFERENCE DAY ONE: WEDNESDAY 25 OCTOBER 2023

08:15 Registration and refreshments

OPENING WELCOME ADDRESSES

- 09:00 Simon Gutteridge BA Law (Hons), FIMarEST, Chief Executive, ABTO
- 09:05 Conference Chairman's opening remarks **Professor Mike Bradley** BSc Hons, PhD, Director, The Wolfson Centre for Bulk Solids Handling Technology, University of Greenwich; Chairman, Solids Handling and Processing Association (SHAPA) and the ABTO Members' Advisory Panel
- 09:10 Carlos Alberto do Maio Correia, Chairman, Port of Lisbon Authority
- 09:20 **João Galamba,** Minister of Infrastructure of the Portuguese Republic

BULK MARKETS

Session Chairman: Rahul Sharan, Lead Analyst Bulk Shipping Research, Drewry

09:30 Grain markets 20 months on from the conflict in Ukraine

In the aftermath of the Russian invasion, Ukrainian ingenuity and market participants were able to re-route the export flows inland though neighboring countries. Later they were able to establish a sea flow to the ports closer to Romania and the sea shipment of barges to Romania to be later transshipped. Not to forget the importance of "The Corridor".

- For couple of months after the invasion Ukraine started to export similar volumes to those before the war started.
- Effect of supplies from Ukraine reaching the market
- Resumption of normal price movements that come from supply & demand and the "weather market"

João Roda, Country Lead, BUNGE Ibérica Portugal

10:00 Market and policy trends for solid biomass fuels

The markets for solid biomass fuels have grown constantly over the last years, but have also experienced unprecedented turbulence in 2022 following the war in Ukraine. Moreover, they are subject to much closer regulatory scrutiny than many other energy carriers, especially as regards the sustainability requirements of the different iterations of the Renewable Energy Directive. On the positive note, new market segments are emerging with industries realising that biomass can be a mature and cost-effective solution for decarbonisation. The presentation intends to give a bird's eye view of the current trends in markets and regulations affecting bulk shipments of solid biomass fuels.

- Key markets & trade patterns for solid biomass fuels
- New sustainability requirements for solid biomass fuels
- Emerging market segments for solid biomass fuels

Manolis Karampinis, Business Development & Membership Director, Bioenergy Europe

10:30 Trends and challenges for the biofuels market

Biofuels consumption have been steadily rising since 2010. Nevertheless, to achieve a more significant GHG reduction in the following years, governments across the world have been setting more aggressive renewable goals, not only for road transport, but also for maritime and aviation. Despite the growing importance of electric vehicles and the renewable fuels of non-biological origin (RFNBO), in the short to medium term, the world has to rely mainly on biofuels (biodiesel, ethanol, HVO, SAF) to accomplish these objectives. But some questions remain, such as: (i) what will be the impact on final prices and are consumers willing to pay it, (ii) how can we balance industry competitiveness between countries with higher renewable penetration and those without it, and (iii) are we seeing an history repetition with huge investments and over production capacity?

- Industry capacity has been growing quickly in Europe, North America and Asia and many more HVO, SAF and second-generation biofuels plants are planned or under construction.
- Regulation has been always a key driver of biofuels demand but it is very uncertain.
- Market demand will be boosted but challenges will arise on the feedstocks side

Gonçalo Santos, CEO, Iberol & Biovegetal

11:00 Refreshments

11:30 Prospects for the minerals dry bulk market in 2023 and beyond

The minerals trade has been consistently rising over the past two decades, supporting the employment of all sizes of dry bulk vessels. What is particularly significant is that they are traded not only on short haul routes but also engage ships on long distances. While Indonesia-China, Australia-China and South America-US are important for small and mid-sized vessels, Africa-Asia also employ large vessels. Additionally, there has been substantial trade on longer routes, such as South America-Asia as well. The question is – will all these routes flourish amid the ever-emerging geo-political risks?

- More than 750 million tonnes of minerals were traded in 2021 which contracted in 2022 to below 700 million tonnes.
- The minerals trade increased by close to 4.5% each year between 2000-2022
- Will it further increase over the next few years?

Rahul Sharan

12:00 Coal – still in demand despite alternative energy sources

The news of coal's death has been exaggerated. A post Covid19 recovery combined with an energy shock as a result of Russia's invasion of Ukraine, it made the world fall in love with coal once again. Both developed and developing economies had to look into coal as a stopgap to meet their immediate energy needs. Coal demand remains strong especially by countries such as India and China that cannot meet otherwise their quickly accelerating energy demands. Trillions of dollars in investment are required to substitute coal with clean energy. And, as cost for clean energy infrastructure have skyrocketed post covid 19 (another result of supply chain disruptions), dependency on coal likely to be "higher for longer". Some believe that only restricting financing to coal projects may be the only way to affect coal supply. What are the factors which will be driving demand for coal until the end of this decade?

- Strong energy demand from developing countries, especially India & China
- ESG targets seem to have taken a back seat to economic growth
- Infrastructure for alternate sources of energy has yet to flourish

Basil M Karatzas, CEO, Karatzas Marine Advisors & Co

12:30 Panel discussion and questions

Previous speakers and Chairman

13:00 Lunch

OPERATIONS AND OPPORTUNITIES

Session Chairman: Garry O'Malley, Operations Director, Teesworks and Chairman, ABTO Technical Committee

PART ONE: SHORESIDE SYSTEMS

14:00 Unloading bulk cargoes - choosing the right system

For unloading bulk cargoes from ship holds, there is a bewildering variety of different technologies available. Experience shows that these different technologies do not suit all cargoes equally, in terms of throughput, spillage, dust emission, energy usage, product breakage etc. This presentation will provide a brief overview of the factors that should be considered when choosing a ship unloader:

- The five main technologies used
- Suitability and adaptability in relation to different cargoes
- Cargo quality and environmental considerations particle breakage, dust emission and spillage
- Available throughput in relation to machine size
- Cost, quayside weight and programme considerations
- "Clean up" efficiency and "through the ship" performance
- Mobile versus fixed / rail mounted machines

Professor Mike Bradley

14:30 CASE STUDY: Handling cargoes with a high moisture content

The dangers presented by high moisture content to the safety of bulk carriers is well known. This presentation will examine the issues relating to the handling of bulk ore cargoes with a high moisture content and the challenges faced by bulk terminal operators in the handling and storage of such cargoes. The presentation will include the case study of a vessel with a Brazilian ore cargo offloaded at a UK bulk terminal.

- Problems associated with offloading cargoes with a high moisture content
- Storage issues associated with problem cargoes
- Case study of the problems encountered offloading a cargo of Brazilian ore and how they were dealt with by the terminal

Garry O'Malley

15:00 Shoreside transport and storage systems

Getting material into and out of ships' holds is a challenge, but how much thought is given to the handling of the materials before or after this operation, and the factors involved? There are so many different options, ranging from sheds and mobile plant right up to fully automated belt and silo systems, all of which have different consequences for safety, efficiency, flexibility, cargo quality and cost of ownership. This paper will give a brief tour of the options and provide some rational bases for decisions when developing new cargo facilities or assessing existing ones for investment.

- Considerations of the bulk solid handling properties
- Customer expectations in relation to effect of handling on the cargo quality
- Environmental and safety considerations
- Personnel needs
- Costs, of both up-front investment and operation

Professor Mike Bradley

15:30 Refreshments

PART TWO: DIGITALISATION AND THE CYBER THREAT

16:00 Harnessing the power of IIoT for efficiency and sustainability

For quite some time now, digitalisation has been on people's lips, now latest with AI. But what can digitalisation do for our industry? IIoT offers numerous benefits to the dry bulk handling industry, including improved efficiency, reduced downtime, enhanced safety, and better decision-making capabilities. As technology continues to advance, the adoption of IIoT is likely to become increasingly important in optimising operations and staying competitive in the industry.

- Improved efficiency
- · Data-driven decision making
- Remote monitoring

Kristoffer Alm, Business Solution Developer, BRUKS Siwertell

16:30 Update of the latest cyber risks and lessons learned

In an era where maritime operations are increasingly reliant on digital technology, cybersecurity remains a paramount concern. Today, we present the latest developments in maritime cybersecurity research, offering insights into a significant update to a major study in this field. We'll explore the forefront of safeguarding our maritime assets against cyber threats and discuss the implications of this groundbreaking research.

- What are the key findings and updates in the latest maritime cybersecurity research, and how do they impact the industry's security posture?
- How can the maritime sector effectively adapt to evolving cyber threats and vulnerabilities highlighted in the updated research?
- What measures and strategies can maritime stakeholders implement to enhance cybersecurity resilience in an increasingly digital maritime landscape?
 Nick Chubb, Managing Director, Thetius

17:00 Panel discussion and questions

Previous speakers and Chairman

LEGAL PANEL

17:30 Updates and over the horizon

Panel Chairman: Tim Springett, Policy Director - Employment and Legal, UK Chamber of Shipping

Ricardo Gebauer, Abogado, Schenke+Brancoli (SLBZ Abogados) **Dr Mark Hoyle** PhD, Barrister, International Dispute Resolution Centre, ArbDB Chambers

Raphael Picard MSc Engineering, MBA, VP Sales EMEA, Ellona **Rahul Sharan**

18:00 Chairman's conclusions and close of day one

EVENING SESSION

18:15 Conference Reception kindly hosted by the Port of Lisbon Authority at the Gare Marítima de Alcântara



CONFERENCE DAY TWO: THURSDAY 26 OCTOBER 2023

08:30 Refreshments

09:00 Conference Chairman's opening remarks

Professor Mike Bradley

SAFETY AND RISK

Session Chairman: Professor Mike Bradley

09:05 Managing risk and reducing incidents through information sharing

There are not adequate mechanisms and risk evaluation models within the port and terminal space for ports and terminals to have the visibility or foresight of the operational risks of vessels they expect to call. There is no common and useful platform to record and share information on operational events, unfavourable conditions, or items that require greater awareness for other stakeholders. Ports and terminals need to gather information effectively to plan and manage operational risks, to enable them to implement strategies to better monitor or

operational risks, to enable them to implement strategies to better monitor or manage vessels with the confidence to take data driven decisions to safeguard against risk.

- 50% of incidents in 2022 occurred within the port and terminal boundaries
- 1,955 vessels were detained by Port State Control Authorities
- 10,445 days of PSC detention impacted port operations
- · PSC detention ratio over time is increasing
- Incident and PSC detention statistics clearly indicate that ports and terminals are facing increased risks due to vessels calling

Yücel Yildiz, Assistant Director Commercial, Ports & Terminals EMEA, RightShip

09:30 The importance of an embedded safety culture in managing risk, reducing accidents and ensuring resilient operations

Compliance with regulations and related requirements is a given for all businesses. Failure to comply will place your business in an extremely difficult position, should a serious incident occur. However, adherence with the law should be seen as the baseline in the context of developing a mature safety culture. There are a range of factors that need to be taken into account in developing an appropriate safety culture for any business.

- What we mean by safety culture
- Steps for embedding a safety culture
- Benefits to your business and the global supply chain

Dorota Jilli, Senior Underwriter, TT Club

09:55 Focus on enclosed spaces

The presentation will cover the dangers of entering enclosed cargo holds and the necessity to control access to ship and shore personnel from entering cargo compartments until such time they have been adequately ventilated, tested and passed safe to enter by a competent person.

- What are the dangers
- Practical measures to control access
- Safety culture and education
- Who is responsible?

Garry O'Malley

10:20 PANEL: Industry measures to combat enclosed spaces fatalities

Discussion of the findings of the MAIB report into the fatalities of three stevedores on the Isle of Man registered Berge Mawson bulk carrier and where we go from here preventing in future enclosed spaces fatalities.

Panel Chairman: Garry O'Malley
Mike Bradley
Dorota Jilli
Richard Steele, Head of ICHCA International
Captain Kuba Szymanski, Secretary General, InterManager

Yücel Yildiz

10:45 Refreshments

ENVIRONMENT MATTERS

Session Chairman: Professor Mike Bradley

11:10 Developments in maritime decarbonisation technology

In today's rapidly changing world, addressing climate change and reducing carbon emissions have become imperative. The maritime industry, a vital player in global trade, faces the dual challenge of meeting growing demand while significantly reducing its environmental footprint. In this talk, we will answer three key questions that are central to our industry's sustainability journey.

- How are investment trends shaping the maritime industry's path towards decarbonization?
- What are the promising alternative fuels that can replace traditional marine fuels, and how do they impact emissions reduction?
- Why is port call optimization crucial for achieving both efficiency and environmental sustainability in maritime operations?

Nick Chubb

11:35 Environmental benefits of containerised bulk handling (CBH)

There are many problems with current bulk handling logistics, such as dust generation from the various transfer points at a mine or handling facility to the final destination and extended exposure to harmful airborne pollutants. In some situations, containerised bulk handling (CBM) offers solutions to these environmental problems and for some for some commodities definite operational advantages.

- Problems with current bulk handling logistics
- Other methods to help reduce pollution and environmental impact
- Situations where CBH is the way forward in bulk handling

Frank van Laarhoven, Senior Sales Manager Europe, RAM Spreaders

12:00 Decarbonisation and asset optimisation using real-time Digital Twin

Digital-twins can be used to monitor, analyse and optimise the performance of site and its assets. The application of dedicated software processing, cleaning and analysing a variety of site and environmental data provides actionable insights into how to achieve decarbonisation at the same site as achieving asset optimisation and a more efficient operation.

- Reduce emissions exposure to neighbouring communities and staff
- Identify the main sources of pollutants to help target low-hanging fruit
- Real-time notifications of environmental thresholds
- Rank assets by utilisation
- Monitor energy and fuel usage OpX saving
- Compare real-world emissions before CapX investment
- Generate a Return on Investment

Guy Barkley, CEO, Atmo Technology

12:25 The role of electrification in reducing port emissions incorporating industry 4.0 condition monitoring and predictive maintenance

With more and more port operators and shipping lines committing to reducing emissions of vessels while in port, connecting to electricity helps to achieve this goal. Traditionally this would have involved installing multiple power outlets along the quayside to allow vessels of various sizes and configurations to connect. A moveable shore power system enables any size or configuration to be connected to shore power and needs only a singular power outlet.

- Reduces the cost associated with installing fixed power outlets
- A totally flexible system can connect to any size of vessel at any point along the quayside.
- Represents a one-time future proof investment
- Incorporating with condition monitoring and predictive maintenance technology eliminates unplanned downtime

Dan Seeney, Ports & Cranes and Shore Power Industry Manager, igus UK

- 12:50 Panel discussion and questions
- 13:00 Chairman's summary of conference deliberations

HARBOUR BOAT TOUR AND TERMINAL VISIT

- 13:05 Depart for boat tour of Lisbon Harbour kindly hosted by the Port of Lisbon Authority
- 15:00 Visit to SILOPOR's Trafaria terminal



16:00 Close of conference and return by coach to central Lisbon

REGISTRATION

REGISTER HERE for Bulk Terminals Lisbon and for details of how to take advantage of our special delegate rate at the Vila Galé Ópera conference hotel.

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