

Newsletter

November 15th 2019

Link road, rail, sea!

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PORTS AND TERMINALS

NEW CONTAINER GANTRY CRANES ARRIVE IN HAMBURG

Hamburger Hafen und Logistik AG (HHLA) took delivery of three new container gantry cranes for its Container Terminal Burchardkai (CTB) in Hamburg on Tuesday afternoon, 5 November 2019.

This will provide HHLA with additional capacities for handling ultra large container vessels with a cargo volume of 23,000 standard containers (TEU) and more.

The three state-of-the-art container gantry cranes arrived at their temporary berth at Athabaskakai on board the special ship "Zhen Hua 27" after a journey of almost eight weeks.

Preparations for the complex unloading process will take place there before the "Zhen Hua 27" shifts to the final location at berth 6 in the Waltershofer Hafen.

The new gantry cranes manufactured by ZPMC will replace three smaller units at CTB, which have already been dismantled.

HHLA is expecting delivery of another two large container gantry cranes of the same type in the first quarter of 2020.

After the new handling equipment has gradually commenced operating, HHLA will have an additional mega-ship berth at Burchardkai.

"By investing in five new container gantry cranes and creating another megaship berth, we are providing our shipping company customers with additional capacities and greater flexibility in handling ultra large container vessels with a transport capacity of more than 23,000 standard containers," says HHLA Executive Board member Jens Hansen.

Last year, the number of calls at the Port of Hamburg by container mega-ships with a capacity of 18,000 TEU to 22,000 TEU increased by 47 percent to 150 calls.

And this trend is continuing: in the first half of 2019, the number grew once again by almost 40 percent.

This development is a challenge for terminals worldwide.

Up to 14,000 TEU per ship call must be loaded and unloaded within the shortest of time frames.

"The new container gantry cranes will ensure that our customers continue receiving the same high quality of handling in the future.

At the same time, the competitiveness and attractiveness of the Port of Hamburg will be strengthened in connection with the fairway adjustment of the river Elbe," emphasises Hansen.

The largest container gantry cranes currently at the Port of Hamburg can

accommodate ships with a width of 24 containers side by side.

The jibs of the new cranes are almost 80 metres long and can reach across 26 rows of containers.

These giants, each weighing 2,480 tonnes, can move two 40-foot containers or four 20-foot containers with a combined weight of 110 tonnes in one go.

That is the same as 70 mid-size cars.

Over 30 container gantry cranes are now in operation at HHLA Container Terminal Burchardkai.

18 of these are so-called mega-ship cranes.

Burchardkai is both the oldest and the largest container handling facility at the Port of Hamburg.

The first container ship in Hamburg was handled here in 1968.

It had a capacity of just 1,200 TEU.

Today, the biggest container ships in the world are handled at Burchardkai.

After the five new container gantry cranes have commenced operating, the number of mega-ship berths at CTB will increase from two to three.

HHLA also has another mega-ship berth in the Port of Hamburg at Container Terminal Tollerort.

The investment in new container gantry cranes is part of an expansion programme at CTB.

In addition to new container gantry cranes and other handling equipment, this includes the construction of new storage blocks and the expansion of the container railway station in 2019.

HHLA plans to invest € 1 billion throughout the Group by 2022, approximately € 450 million of which will be spent on container handling.

Facts and figures				
Total height, jib lowered	89 metres			
Total height, jib raised	138 metres			
Weight	2,480 tonnes per bridge			
Jib	Total length of 80 metres			
Span / vessel width	26 container rows side by side			
Tandem operation	2 x 40-foot containers or 4 x 20-foot containers			
Maximum payload	110 tonnes			
Total length of rope	3,160 metres per bridge			
Lifting height	49.5 metres			
Height of bridge cockpit / work station of bridge operator	52 metres			

(from: hhla.de, November 5th 2019)

MARITIME TRANSPORT

ABS & THE FUTURE OF CLASSIFICATION

The discussion of the 'future of class' seems more relevant today than ever, as the maritime industry navigates a transcendent period, with digitalization, decarbonization and a long list of related safety and risk concerns occupying the attention and budgets of shipowners globally.

"There are many things going on in the industry, and in fact the world, and looking ahead I think we're looking at a 'new norm'," said Christopher J. Wiernicki, ABS Chairman, President and CEO.

"It's a norm where everyone in the industry is going to have to make uncertainty our friend."

The course toward greenhouse gas emission reduction is set, but the path is anything but certain as shipping companies wrestle with the best means and methods to not only achieve new standards, but to achieve them while still maintaining a solid business model.

"There are many sign posts that are helping to guide us, but how we choose as an industry to connect these sign posts will really make a difference," said Wiernicki.

Along with increased market uncertainty and unpredictability, Wiernicki counts the impact of regulation on shipping cycles and the impact of technology – not just technology itself but the increasing speed of technological change – as the "three tectonic shifts" impacting the maritime industry for the coming generation.

From these shifts come five opportunities and challenges, including:

- The effect of digitalization & automation,
- Cyber security,
- The continued focus on performance optimization,
- The course toward low-carbon shipping, and,
- "The last one, which is nearest and dearest to my heart, is safety."

While the convergence of new technologies offers tremendous promise and business opportunities, it also comes with challenges, from selecting the best new tech for your fleets profile to recognizing and addressing unintended consequences brought on with the digitalization, automation, decarbonization.

"These will have impacts on how vessels are designed, built and operated going forward," said Wiernicki.

The business of technology

While it can be easy to get caught up in the glamor of new technologies, Wiernicki said that the future is not simply about adopting new technology in a vacuum, rather assessing how it impacts maritime operation wholistically, from emissions to performance to risk profile to the business of maritime.

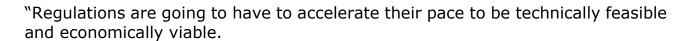
"You are beginning to see that (technology) creep up into things like The

Poseidon Principles, which essentially brings the shipping technology and finance worlds together as you look at the next generation of vessels and the banks start benchmarking the conditions of finance," said Wiernicki.

"You are going to see the technical side

become as important as the commercial side of decision making."

Hand-in-hand with the pace of technology will be the pace of regulation, arguably one of the taller hurdles in the equation as the technology and business/finance communities have a commercial impetus to proceed at pace.



In fact I'm about to send a personal letter now to Kitack Lim at IMO encouraging him to take a hard look at SOLAS," a regulation that was not only created before the internet and iPhone, "in fact it was created before the fax machine," said Wiernicki.

"It's a regulation that needs to be upgraded, and this is a challenge to regulation overall to be able to allow for the rapid rate of technological change."

Looking at the ISM the safety management code, Wiernicki sees this as potentially being a framework for the industry as we move into the digital 4.0 world.

"It is built from a systems perspective and built to be indifferent to the technology, it recognizes that future safety is synonymous with security and reliability," said Wiernicki.

"You are starting to see evidence of that as flag states start to put their cyber security requirements into ISM.

But I think ISM in general is going to move from a compliance check-off to an important management tool."

The future of fuel

With ever stricter emission mandates comes discussion and research on future maritime fuels.

"You can get to 2030 (and the 40% CO2 reductions for cargo transport) by focusing on LNG as a fuel, speed optimization and 'just-in-time shipping' which is improving the utilization of the voyage," said Wiernicki.

But hitting aggressive targets for 2050 is another matter.

"When we talk about the fuel choices of the future, it's not LNG, Methane, Ethane or Ammonia ... it is ideas.

It's being able to collectively take ideas and pull them together," said Wiernicki.

A collective challenge is moving forward it's not going to be a single, obvious fuel solution.

"It's going to be a hybrid solution, it's going to be a combination of things with a greater focus on operational performance, which is where digitalization comes in to help ship owners make better informed decisions."

ABS' future

As the industry changes, naturally class must change too.

"We at ABS are going through a digital transformation," said Wiernicki.

"We are progressively moving toward the future of class that is evolving from a calendar-based survey cycle to a condition-based cycle," citing its large pilot project in progress today with Military Sealift Command, taking that entire fleet and switching it from a calendar-based survey to a condition-based survey cycle.

Speaking of digital, he said ABS' leadership is particularly evident in the case of fast-emerging cyber security threats.

"ABS was the first classification society to really embrace the importance of cyber security.

Cyber is the safety system that you can't necessarily see," said Wiernicki.

"Historically we work well in the structures and the equipment areas, based traditionally on things that you can see.

In the digital world safety and security is based on things you can't necessarily see ... the software and the data."

With the cumulative issues, challenges and complex technological discussions for the industry today, in Wiernicki's mind it all boils down to safety.

"Technology is interesting, I'm a technologist.

But the purpose of technology is to unlock economic value.

Technology has no sense of humor, it has no common sense and it has no instincts.

It's people," he said.

"The challenge for this industry going forward is being able to marry traditional skill sets with non-traditional skill sets.

It's people.

As a class society we have engineers and surveyors sitting side-by-side with a whole new breed of people we've never recruited before: data scientists, systems engineers, computer scientists, risk engineers."

Shipping companies in general in this industry traditionally have been organized vertically; going forward they are going to have to be organized horizontally.

You are going to see connectivity between vendors, yards, class and others.

You are going to need people to do this."

(from: marinelink.com, November 8th 2019)

RAIL TRANSPORT

ARTIFICIAL INTELLIGENCE IMPROVES ESTIMATED TIME OF ARRIVAL

The ELETA project has resulted in more accurate ETA data.

This is the first careful conclusion drawn on the ELETA final conference marking the last months of the ambitious project.

The EU project aims to calculate more precise data on the arrival of freight trains, partly by using algorithms.

Especially when it comes to this particular calculating method, the results are promising.

But a lot remains to be done.

"Where data is complete and available in good quantity quality, machine learning is already improving ETA predictions", said Marian Pufahl of Synfioo, one of the IT-companies involved.

He showed an example of a train path between Ludwichshaven in Germany and Busto in Italy.

In the period from September till October this year, the machine learning method resulted in a 75 per cent accuracy of arrival data, while real-time information led to an 68 per cent level up till three hours before arrival, the graph shows.

But what does this mean?

Before, after

Figures to estimate the time of arrival of a freight train are not new in the industry.

However, the quality of the data has been poor.

Most forecast messages are based on time-shifting; for example, if a train is fifteen minutes delayed, the forecast for the continuing train run is a delay of fifteen minutes.

This method is quite rough, but until recently it was the best alternative available.

More exact data can be calculated by forecast calculators taking algorithms into account, and this is where the IT companies come in.

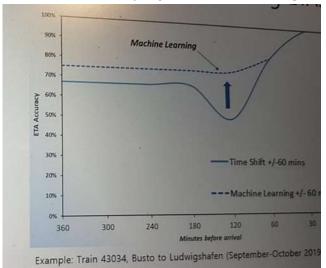
By using the experiences of previous train journeys and delays from the past, Artificial Intelligence or machine learning can achieve a higher level of accuracy.

Synfioo and HaCon are currently taking up this task for the ELETA project.

Final days

The final conference of ELETA, which took place in Brussels on Tuesday 6 November, marked the last few months of the project.

It is one of the projects that was agreed upon during the 2016 TEN-T Days in



Rotterdam, when the sector committed to boosting international rail freight by defining ten priority projects.

The ELETA project has mainly focused on letting stakeholders sign TIS user agreements.

TIS is the platform where data is inserted, combined and calculated.

The project has succeeded in the sense that most parties are now onboard.

Around 80 per cent of all stakeholders are now part of the data pool.

In the next few months the picture should be complete.

Available data

Although this sounds as a small chain in a large project, it was a major milestone to have everyone accept the terms of data sharing, explained Harald Reisinger, CIO of RailNetEurope.

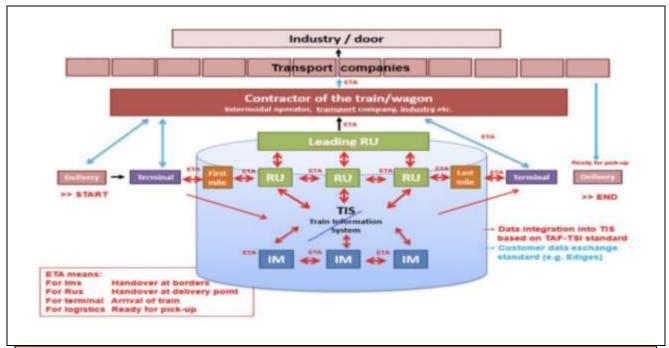
"The willingness was there, but there were legal implications to exposing data.

There was need of a legal framework, and that has been established through the TIS.

Within the project time frame, 30,000 TIS agreements have been signed between parties."

The next step is gathering enough data of these companies and that takes time, explains Pufahl.

"We have now examined 191 train journeys, and this has resulted in the numbers presented.



ELETA scheme of stakeholders

But in order to achieve a significant success, we need big data.

We need to examine more than a 1000 journeys.

Only then can machine learning contribute to a more accurate ETA."

Unique train number

Besides the numbers, there are some other challenges on the road.

A unique reference number connecting different train numbers to one train run is necessary in order to share train running information, explained At Toet, project coordinator.

However, these reference numbers are currently not widely applied.

"This causes a lot of concern", explained Reisinger.

"It means that we cannot properly track the cargo.

A wagon has a number, and so does a locomotive.

But it is not known in advance in which order these will be linked."

For the duration of the ELETA project, train numbers were linked manually or automatically.

However, the solution is eventually in regulation, which comes in the form of the TSI TAF.

Regulation

TSI TAF is the technical specification for interoperability relating to the telematics applications for rail freight in the European Union.

It is EU regulation, aimed at standardising the data exchange in the industry.

The next revision of the TAF TSI will be discussed in 2020, in order to be published in 2021.

The introduction of unique train numbers is on the agenda.

Another question raised is whether data sharing should be made mandatory.

If this opinion was shared by a majority was tested on the spot with a vote by the audience at the final conference.

And in fact, 61 per cent voted in favour.

"The only way forward is to make this mandatory by regulation, or it will take a lot of time to generate qualitative algorithms.

And in competition with the fast-developing competing modalities, time is something we do not have", concluded Josef Doppelbauer, Executive Director European Agency for Railways (ERA).

The counter argument however, is that not every company is willing to share insight in its accuracy data.

It makes the RU vulnerable, as the customer could depend its choice based on these figures, some stated.

Standardising algorithms

When it comes to the algorithms, the yield of the field research is yet to come, Doppelbauer thinks.

He noted that the machine learning data could not yet become part of the handbook, as it requires "a longer validation".

"As soon as we have a better idea about the quality of the data, we can standardise it."

This could only be confirmed by Symfoo.

"We have a customer where we examined more than 1000 trips and in this case, we achieved an accuracy rate of 92.5 per cent", said Pufahl.

Punctuality

According to the definition of an on-time arrival, the train may have a delay of no more than 60 minutes.

When it arrives within this timeframe, it is considered 'on time'.

In reality, not even half of all freight trains accomplish these rates.

The reliability of the rail freight sector has therefore been scrutinised, especially when compared to other modalities where delays are far less excessive.

A critical note to the ELETA project has therefore been that the focus should not only be on predicting the delay, but also on preventing it.

"Why not be punctual?" asked Irmtraut Tonndorf of Hupac, acknowledging that the operator witnesses these delays on a daily basis.

This was an argument echoed by most in the room.

However, even when trains run punctually, there are always unexpected circumstances such as storms, suicides or construction works, noted Dirk Stahl, CEO of BLS Cargo.

"These make accurate ETA data even more important."

Customer demand

"Our main demand from the industry is to know when we can pick up our stuff", said Frank Andreesen, Director of shipper Covestro.

"We need a proactive reception alert, which tells us when the shipment has arrived in the terminal."

According to logistics provider Kube & Kubenz, the pickup time is what matters.

"Not the time of arrival of a train, not the departure.

We need to know when it is ready for pick up", explained Michael Kubenz.

His company is launching a notification system to this end, in which it has selected three ETA data points to share with its customer, among which the Estimated Time of Pickup (ETP).

The system will be launched in Q1 of next year.

Follow up

In any case, the ELETA project has delivered, is the overall conclusion.

In order to complete the list of stakeholders involved it has gotten an extension till the end of 2019 to conclude the project.

After that, a follow-up of the ELETA project is expected.

"Apart from knowing when the train will arrive, people want to know when the train has arrived.

This is a different set of data which will help measuring quality.

Both these data streams will continue to be collected after the project is completed", revealed Ralph-Charley, Chairman of the UIRR.

(from: railfreight.com, November 6th 2019)

ROAD TRANSPORT

FUNDING AVAILABLE TO IMPROVE SAFE AND SECURE PARKING AREAS ACROSS EUROPE

IRU welcomes the recently published call for proposals released by the European Commission, committing €60 million to improve the safe and secure truck parking areas (SSTPAs) network across Europe.

The priorities for the investment will include development of new SSTPAs approximately every 100km along the TEN-T core road network and upgrades to the safety, security and services of existing rest areas.

Currently, there are only 300,000 available truck parking spaces in the European Union, a significant 100,000 shortfall of the total demand for overnight parking and regular rests.

Only 7,000, or less than 3%, of the existing parking capacity, are certified and

safe labelled and secure across the continent, where an independent check and audit has been undertaken to validate that the parking has area achieved a certain quality level.



IRU participated in an

EU-funded study (https://sstpa.eu-study.eu/) which revealed that the lack of SSTPAs is a major concern in the EU, with almost 90% of drivers and transport operators stating that the current parking supply is insufficient.

The study defined the security, safety and service offer requirements needing to be met in order for a parking area to be certified as safe and secure.

The standards, strongly supported by IRU, were adopted by the European Commission expert group on this topic in June this year and will be the basis for the new funding scheme.

The news from the European Commission represents a major first step in tackling this problem and improving conditions for long distance drivers across Europe.

Of the total funding, €20 million will form part of proposals for the Connecting Europe Facility and €40 million will be under the Cohesion envelope.

The announcement comes with the news that the Commission will be making a total of $\in 1.4$ billion funding available to support European Transport Infrastructure.

Matthias Maedge, General Delegate at IRU, commented: "We welcome the news from the Commission.

Last year, in order to raise awareness on this issue, I invited members of the European Parliament to spend the night in a truck cabin to demonstrate first-hand that the truck is not the problem, rather it is the quality of parking infrastructure that needs improvement.

In May, the social partners ETF and IRU met EU Transport Commissioner Bulc to call for making investments in SSTPAs a political and funding priority."

The consequences of the lack of secure parking areas for truck drivers are extremely serious.

The road transport industry is facing an acute driver shortage, with implications not only for transport operators and international organisations, but for economies and societies as a whole.

"If we are to tackle this issue and attract new talent into the industry, then improving working conditions - including safe and secure truck parking areas is critical.

The funding made available by the European Commission is a direct result of the hard work of IRU and its partners over the past two years and an important first step in the journey to improving working conditions in the road transport sector", Matthias Maedge concluded.

(from: iru.org/sstpa.eu, October 28th 2019)

INTERMODAL TRANSPORT

DUISPORT EXPANDING ITS LEADING POSITION IN CHINA TRAINS – DUISBURGER HAFEN AG TO RECEIVE THE LARGEST HINTERLAND TERMINAL IN EUROPE

Logistics follows coal.

The largest container terminal in the European hinterland is being developed in the Port of Duisburg.

Duisburger Hafen AG (duisport) will withdraw its coal island from the market, starting in 2020, and build a trimodal container terminal on the site together with its international partners COSCO SHIPPING Logistics, Hupac SA, and HTS Group.

This is duisport's response to the sharp decline in coal handling resulting from the energy transformation.

In the future, duisport will instead use the coal island in particular to handle the

booming trade with China.

The new terminal will be developed into the key

European gateway hub, in particular to handle train traffic along the corridors of the New Silk Road, and will therefore operate under the name

"Duisburg Gateway

Terminal".

Even now, around 30 percent of all rail-based trade between China and Europe runs through the Port of Duisburg, which is the start and end point of the China trains.

Currently, between 35-40 trains per week run between duisport and a dozen different destinations in China.

The terminal will significantly increase the Port's capacities for trade with China.

In the future, up to 100 China-bound trains per week, rail traffic on the European rail corridors, in particular to Eastern and Southeastern Europe, and inland waterway services to seaports will be able to operate from the "Duisburg Gateway Terminal", which will thereby generate an annual throughput of around 850,000 standard containers (TEU) upon completion of the terminal.

"We are reacting to the changing market and are building Europe's largest container terminal in the hinterland on the coal island.

In this way, we are consolidating our leading position in Chinese trade, creating jobs, and strengthening NRW as the most important logistics location in Europe," explains duisport's Chief Executive Officer Erich Staake.

On the 240,000 square meter area in the Port of Duisburg, 220,000 square meters are planned for the terminal and 20,000 square meters for warehouses.

Six gantry crane systems, 12 block train platforms with a track length of 730 meters each, 5 loading areas and 3 berths for inland vessels, as well as a container storage area of 60,000 square meters will ensure rapid container handling in two construction stages.

Pre-carriage and onward carriage of goods at the trimodal terminal are to be handled primarily by water and rail.

The investment volume amounts to around EUR 100 million.

The terminal is set for commissioning in 2022.

Since the China trains increasingly represent a cost-effective alternative to air transport, the "Duisburg Gateway Terminal" will also contribute to improving the CO2 balance in NRW and Germany.

The savings potential is estimated at over 60 million tonnes per year.

"We are proud that, thanks to our network management, we have been able to acquire internationally operating partners for the realization of this outstanding project with international appeal," says Staake.

duisport and COSCO SHIPPING Logistics each hold 30 percent of the investment and operating company.

With a fleet of 1,300 ships, the Shanghai-based COSCO SHIPPING Group is the world's largest shipping company.

COSCO SHIPPING also holds stakes in 55 terminals worldwide.

With its business division, COSCO SHIPPING Logistics, COSCO SHIPPING is a leading market player in the organization and handling of the China trains.

Hupac SA and HTS Group each hold 20 percent of the shares in the investment and operating company.

The Swiss-based Hupac Group is the leading network operator in European intermodal transport.

The Hupac network comprises 130 trains daily with connections between the largest European economic areas, as well as to Russia and Asia.

Today, the Duisburg area is already a central hub in Hupac's network, with around 60 weekly trains at various local terminal locations.

The capacity expansion with the "Duisburg Gateway Terminal" enables the bundling of traffic in the China transit, as well as improved network supply logistics, with Duisburg as the gateway in the heart of Europe.

HTS Group is a Dutch inland waterway transport company which, in addition to its own fleet of vessels, operates terminals in the Netherlands, Belgium, and Romania.

(from: duisport.de, October 23rd 2019)

TRANSPORT & ENVIRONMENT

GLOBAL MARITIME ISSUES MONITOR 2019: ENVIRONMENTAL AND CLIMATE RELATED ISSUES JUMP TO THE TOP OF DECISION-MAKERS' AGENDA

'Global economic crisis' ranked to have potentially the greatest impact on the maritime industry over a ten-year time horizon.

'New environmental regulation', 'geopolitical tension' and 'cyber-attacks and data theft' perceived as most likely.

Industry deemed least prepared for global issues considered to have the biggest impact – although more confident in some financial areas.

Senior leaders foresee environmental and climate related issues to have a major impact on the maritime industry in the coming decade.

This is a key finding of the *Global Maritime Issues Monitor 2019*, published today by the Global Maritime Forum; Marsh JLT Specialty, a division of global insurance broker and risk adviser Marsh; and the International Union of Marine Insurance.

Survey respondents from 46 different countries around the world highlight 'decarbonization of shipping', 'new environmental regulation', 'societal demands for sustainability', and 'failure of climate-change mitigation and adoption' as four of the top 10 issues in terms of potential impact on the maritime industry.

"Important environmental initiatives are underway within the maritime sector and the pending 2020 sulphur regulation appears to be on senior leaders' radar.

They see new environmental regulation as most likely to occur in the next ten years and deem the issue to have the third highest impact.

Worryingly, they perceive the maritime industry as relatively unprepared for the issue close to the deadline for the new fuel requirements.

When it comes to decarbonization, the maritime sector must play an even larger role in addressing climate change and the sector is a key stakeholder when it comes to both the causes and solutions related to the issue," says Peter Stokes, Chair of the Global Maritime Forum.

Top issues: the maritime industry is grappling with a vast range of challenges

Environmental, economic, geopolitical, and digital areas attract attention when top issues regarding likelihood, impact and preparedness are compared.

For the second consecutive year, a potential 'global economic crisis' is tapped as the issue to have the greatest impact over the next ten years.

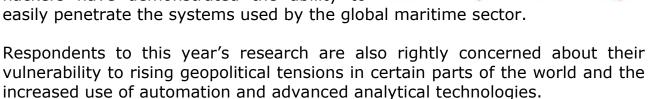
It is also the one issue the industry is least prepared for, although it considers

the event relatively unlikely.

Likewise, 'cyber-attacks and data theft' remain a top concern for the industry.

"Increasingly complex cyber-attacks on critical infrastructure – which are designed to inflict damage or disrupt operations – are at an all-time high.

As recent attacks show, highly-skilled hackers have demonstrated the ability to



Issues Monitor

As an industry, greater collaboration is needed to assess and model the risks surrounding new technologies and evolving risks.

We need to learn from best practice in other sectors, if we are to successfully adapt and thrive in the face of these new threats," says Marcus Baker, Global Head Marine and Cargo at Marsh JLT Specialty.

Conversely, respondents show more confidence in 2019 in some financial areas.

This year's respondents are less likely to view 'insufficient access to finance' as a significant issue, and its likelihood score dropped to 2.65, down from 3.01 in 2018.

Preparedness remains a key concern

Senior leaders perceive the maritime industry relatively unprepared to deal with all 18 issues surveyed.

More worryingly, seven of 10 issues considered to have the biggest impact are among those for which respondents consider the industry to be least prepared.

"The maritime industry is not alone in questioning its preparedness for many of the issues in the survey.

Most sectors are struggling with issues related to climate change, cyber-attacks, the ongoing technology revolution, and geopolitical concerns.

We hope this view of preparedness is taken as a challenge.

Our qualitative research indicates that the industry has the power to influence many of the top long-term issues identified, and the expertise and resources to focus on them," says Richard Turner, President of the International Union of Marine Insurance.

Deep dive on getting to zero: availability of zero carbon vessels and fuels is seen as a major barrier to shipping's decarbonization

The Issues Monitor's deep dive on 'getting to zero' – which looks at six barriers to shipping's decarbonization – strongly indicates that the availability of zero carbon vessels and fuels is seen as a major barrier to shipping's decarbonization.

While both issues rank relatively high in perceived impact and likelihood of occurring within the next 10 years, they received the lowest preparedness scores of the entire survey.

"Commercially viable zero emission vessels powered by zero emission fuels must start entering the global fleet by 2030 and their numbers need to be radically scaled through the 2030s and 2040s if international shipping is to meet the target of reducing greenhouse gas emissions by at least 50% by 2050.

This represents an unparalleled challenge, but it can be done through close collaboration and deliberate collective action between the maritime industry, the energy sector, the financial sector, governments and IGOs," says Johannah Christensen, Managing Director, Head of Projects & Programmes at the Global Maritime Forum.

The Issues Monitor also undertakes a deep dive into the theme of 'workforce of the future'.

Overall, survey respondents do not rank workforce-related issues as high for impact, likelihood, or preparedness as they do for other areas.

Respondents say increased automation of jobs and tasks is the most likely to considerably affect the industry in the next 10 years.

They also considered it to be the most likely to occur — and the one for which the industry is least prepared.

The Global Maritime Issues Monitor 2019 is available for downloade here: https://www.globalmaritimeforum.org/content/2019/10/Global-Maritime-Issues-Monitor-2019.pdf

(from: globalmaritimeforum.org, October 30th 2019)

LEASING

THE HIDDEN COSTS OF A CONTAINER LEASE

In times gone by container leasing companies boosted their profits with 'sweep outs' and DG sticker removals that customers rarely bothered to contest. But now margins are much tighter and stakeholders in the supply chain can illafford to receive a bill for non-budgeted extra container hire costs.

This informative article and insurance pitch from Xchange flags up the risk that "container damage can leave shippers in a financially tough spot".

* * *

Container insurance: can a dent in your container leave a dent in your pocket?

The container has been a revolutionary invention of the 21st century.

"Containerisation" has been growing steadily in the last few decades.

Containers reach every corner of the world with the help of vessels, trucks and trailers.



With all these movements, the container is prone to a lot of risks.

Ocean transportation can be unpredictable.

Bad stowage, bad weather, improper supervision, and many other causes can lead to

container damage.

Container damage can leave shippers in a financially tough spot.

Container damage could be broken doors, dents, heat damage, dropped in the ocean and so on.

There could be times when it is hard to find the origin of the damage to see who is responsible to compensate for the damage.

Many shippers overlook container insurance as they want to save costs or don't bother themselves about it.

A freight forwarder without insurance might have to pay the entire value of the container and the cargo in case of a total loss.

This is a huge financial disadvantage and inconvenience.

This is where Container Insurance provides security to equipment owners and users by covering a wide variety of risks.

Oftentimes, Container Insurance can be easily confused with Cargo Insurance.

While Cargo Insurance protects the cargo inside, Container Insurance protects the equipment.

Different types of container insurance

There are many Container Insurance brokers in the market offering insurance to container owners, lessors and operators.

Sometimes, Insurance brokers offer Container Insurance together with Cargo Insurance.

Container Insurance types can vary from insurance broker to insurance broker and the types of damages you would like to prevent.

In general, most insurances cover the following aspects:

- Physical Loss and Total loss
- Recovery and Maintenance costs Full Equipment Cover (FEC)
- Damage Repair and Lost units
- Third-Party Liability (ex. Chassis)
- Coverage on Residual Value on Equipment

Container Insurance might not cover certain conditions (and this can vary):

- Mysterious disappearances
- Insolvency
- Mechanical/electrical breakdown

- Errors in design/manufacture
- Depreciation, inconsistent maintenance routine

When the containers are returned to the owner, it is inspected for damages.

If damages are found, the owner makes a cost estimate for fixing the damages and sends it to the container user.

The user arranges another inspection to recheck the charges and negotiates in case of disagreements.

The charges are then settled using the Insurance brokers.

When the insurance is not a part of the deal, the user faces the inconvenience of paying from his/her own pocket.

Container Insurance at xChange

Container xChange with the help of ATS Insurance offers Container insurance to customers.

The container suppliers can choose to include insurance as part of container usage on every transaction they make or on a case-by-case basis.

The container insurance is always paid by the user of the container.

At Container xChange, customers benefit from 2 types of container insurance.

The Basic Insurance covers the container from a total loss such as lost at sea, mysterious disappearances or damaged extensively that it cannot be fixed.

The insurance is valid for one-way moves up to 60 days from the day of pickup.

The insurance automatically renews after the 60 days unless the container is reported as returned empty.

The Premium Insurance covers all kinds of physical damage a container can go through including a total loss and has a slightly higher price point.

Physical damage could happen due to swaying of the vessel, mishandling by the crane lifters, heat damage, a train derailment and so on.

The premium insurance covers any costs that go above the DPP.

The insurance is valid for one-way moves up to 60 days from the day of pickup. It gets renewed on a day-to-day basis unless the containers are reported as returned empty.

Apart from the insurances, there is also the Damage Protection Plan (DPP) that helps to compensate for the regular maintenance and repair after the container use.

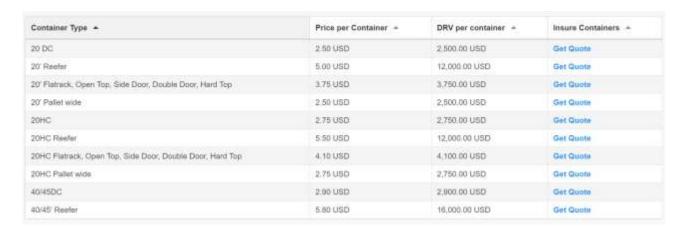
The DPP is paid by the container supplier.

Any costs, that rise above the DPP is covered by the insurance.

DPP is useful when you don't want to make damage assessments every time the container is leased out.

It takes care of all the repair costs if it falls under the negotiated DPP amount.

The Basic Insurance for a 20DC costs \$2.5 and the Premium Insurance costs \$12, and the price varies according to size and type of the container as shown below.



(from: theloadstar.com/container-xchange.com, October 28th 2019)

LOGISTICS

DSV-PANALPINA INTEGRATION 'ON TRACK'

DSV's integration of the Panalpina business it acquired in August is "on track, and all the lights are green", group chief executive Jens Bjørn Andersen said today, as the newly merged forwarding giant navigates "volatile" freight markets buffeted by "trade wars and micro-economic uncertainties".

The DSV air and sea division saw 2019 third quarter growth of 41% in sea freight volumes to 520,000 teu and organic growth of 7% when excluding Panalpina volumes.

For air freight, the division reported total volume growth of 63% to 289,000 tonnes for the third quarter to 2019.

Excluding Panalpina volumes, there was a decline of 6% in air freight tonnages.

Andersen confirmed that Panalpina's air cargo perishables product, with its inhouse expertise, and the freighter aircraft charter network will continue as separate profit and loss business areas within the division.

Fallout from Brexit and a weaker German automotive market had affected group

volumes, although the US sector was performing well.

The overall group exposure to the automotive sector is around 15%, said Andersen, split roughly 50-50 between the US and Europe.

The group, now known as DSV Panalpina after the



merger deal completed on 19 August, achieved a gross profit of DKr16.67 billion (US\$2.48 billion) for the first nine months of 2019, compared to DKr13.042 billion for the same period last year, with organic growth of 6.2%.

DSV, which is relocating the former Panalpina headquarters from Basel in Switzerland to its headquarters in Denmark, has already warned of up to 165 job losses from the move.

It still expects to retain approximately 50% of Panalpina's current head office workforce following completion of the restructuring by the end of the second quarter 2020.

In a conference call today, Andersen said: "We have struck a good balance in the integration of Panalpina and DSV," adding that the process is "on track" and "all the lights are green; and we are very happy with what we seen so far".

When Panalpina is fully integrated, the new group expects to achieve annual "cost synergies" or savings of around DKr2.3 billion a slight increase on the DKr2.2 billion previously announced.

Total transaction and integration costs are expected in the level of DKr2.3 billion.

Andersen continued: "These costs will be charged to the income statement under special items.

We expect that approximately 30% of the transaction and integration costs will materialise in 2019, 55% in 2020, and 15% in 2021."

Andersen told analysts that management teams have been appointed and integration "kick-off" meetings started in all countries.

There has been "no material customer loss so far and we continue to have successful meetings with customers."

In terms of IT, DSV's existing CargoWise One (CW) has been chosen as future transport management system for the air and sea division, with the "migration of customers and volumes to CW ongoing and successful so far".

Andersen said that the IT migration of volumes from Panalpina to CargoWise One would take slightly more than 12 months, compared with DSV's earlier acquisition of UTI, a smaller business than Panalpina, which took 11 months.

He noted that the IT transition was on "a good journey" and that there would be a number of temporary solutions to help customers in the transition phases from one IT platform to another, adding that shippers would benefit from better data quality.

DSV's Global Commercial Organisation has been reorganised with "a strong focus on global accounts and verticals: automotive, industrial, consumer retail, healthcare, chemicals and energy".

Andersen also dismissed a market perception that Panalpina had more blue-chip customers with a greater level of supply chain complexity than DSV, saying that the customer profile was, in fact, very similar.

He added that some large Panalpina customers had already expressed an interest in DSV's larger European road network and contract logistics businesses, with the potential for future gains in volumes.

The new group, said Andersen, has 500,000 "active customers, and although there had been "downtrading" by some air cargo customers due to the current volatile air freight market, there has been "very strong growth" in the Asian high-end retail sector.

(from: lloydsloadinglist.com, November 1st 2019)

LAW & REGULATION

DOES IMO 2020 EXPOSE SHIPBUILDERS TO CLAIMS FOR BREACH OF CONTRACT?

Since the adoption of the 0.50% m/m maximum global limit on sulphur content by the IMO in October 2016 much consideration has been given to the practical and legal challenges facing shipowners in meeting the global limit effective from 1 January 2020.

However, there has been little focus on the potential impact on shipbuilders, specifically their potential exposure for breach of contract.

Regulation 14.1.3 Annex VI of the Marpol Convention applies directly to shipowners, reducing the permissible sulphur content of fuel on board intended for use as bunkers from 3.5% to 0.50% m/m (the 'sulphur cap'), in addition to Regulation 14.4.3 which remains in effect and applies in emission control areas where the permissible sulphur content is 0.10% m/m.

Guidance on the implementation of Regulation 14.1.3 names shipbuilders as



interested parties to which the Regulation applies.

Consequently, shipbuilders may be liable for fines in circumstances where, for example, sea trials are taking place

should the fuel being consumed violate the sulphur cap.

However, shipbuilders may also be exposed to claims for breach of contract as a consequence of the implementation of Regulation 14.1.3.

One area of potential concern relates to the shipbuilders obligations in relation to class and 'other regulatory bodies' after 1 January 2020.

There is, as yet, no published guidance or commentary in this regard, consequently, while it is not known whether it will be more difficult to obtain class approval from 1 January 2020 for vessels which are built without emission

abatement technology on board (and it can probably be safely assumed that at least to begin with it probably will not be) there are risks.

Will class, for example, make recommendations, restrictions or qualifications in relation to newbuildings delivered in an area where there is an issue concerning the availability of compliant fuel?

Will there be seaworthiness issues if there are doubts about the availability of compliant fuel?

Will some classification societies decide to approve only vessels with scrubbers on board?

Or, as more ports ban the use of open loop scrubbers, will a newbuild with open loop scrubbers struggle to obtain class approval?

May there be conditions or recommendations on the class certificate?

These could lead to knock-on claims.

The approach of class and other regulatory bodies in this regard is important (and may become increasingly so) since the shipbuilder usually commits to delivering a vessel which is compliant with rules, regulations and requirements.

Under Article I of the Shipbuilders' Association of Japan form of shipbuilding contract ('SAJ Form') the builder commits to deliver a vessel which complies with rules, regulations and requirements of Class and other regulatory bodies in force as at the date of the contract (by contrast the Newbuildcon places this obligation at the date of delivery.)

Arguably therefore the approach of class in this regard will only bite on those contracts on the SAJ Form entered into after 1 January 2020.

But, Article V SAJ Form provides a mechanism to change the vessels' specifications in response to compulsory and non-compulsory changes in class requirements or regulations during the build (Articles V.2(a) and V.2(b) respectively) accordingly it is potentially relevant to all contracts on the SAJ Form where delivery is due after 1 January 2020.

Until it becomes clear whether there will be additional issues in relation to obtaining class and other regulatory bodies' approval, there is a risk of increased exposure to costs and delays for the builder arising out of requests for alterations in the specification, particularly those which are non-compulsory.

A further, perhaps more pressing issue, arises from the characteristics of low sulphur fuel.

The experience in the emission control areas suggests that low sulphur fuel has different performance criteria to high sulphur (higher consumption and lower speeds) and that there can be ignition issues and compatibility issues.

In Article III of the SAJ Form the builder warrants (among other things) the fuel consumption and speed by reference to the engine's rating and power output, the agreed minimum specification of bunkers and draft.

It further provides for the price to be adjusted and the buyer to claim liquidated damages or, in the worst case, cancel the contract for breach.

In circumstances where performance is being warranted without reference to the properties of low sulphur fuel (particularly with the added challenge that not all low sulphur fuels behave in a uniform way), the builder may be exposed unless there has been a careful adjustment to the contractual performance parameters to bring them in line with the likely characteristics of low sulphur fuel, or an amendment to the warranty to account for different performance on the basis of low sulphur fuel.

Since it is also known that low sulphur fuel can cause ignition issues and may have compatibility issues, both of which may affect the smooth running of sea trials, the shipbuilding contract should be amended to deal with the technical challenges which may arise, such as ignition failure, in order to keep the parties' obligations intact.

The IMO 2020 and the sulphur cap is certainly going to impact on the shipping market as a whole.

The challenges that builders will face are largely practical in nature, but also commercial and legal.

This is an area which will no doubt develop once the new Regulation takes effect.

(from: hellenicshippingnews.com, October 30th 2019)

STUDIES & RESEARCH

WHY THIS SCRUBBER DISCUSSION IS SO IMPORTANT

The image of shipping is somewhat hard to define.

In the mainstream media there tends to be a focus on it when there is an accident or in relation to its environmental image.

More often than not the point that gets ignored is that over the years the industry has been rapidly improving, with nearly all its emissions to air and discharges to sea now being regulated, and owners, operators and technology firms working on an array of solutions to take shipping to a new level of sustainability.

All the technical efforts, both in the past and into the future, to improve shipping should be applauded.

These efforts show how the industry is being progressive.

But it gets confusing perhaps when we hear different solutions compared to each

other.

At Yara Marine we believe that shipping is not homogenous, there is not, and nor will there be, one solution for all vessel types.

This is why so many solutions,

and potential solutions are needed when we focus on a sustainable future for a global industry.

About a decade ago, as bunker fuel prices began to climb and regulators began to urge ship operators to look at ways to curb greenhouse gas emissions and other emissions and discharges, operators were using a range of tools to find a balance between operational efficiency and regulatory compliance. (Onboard efficiencies are also one of the most widely accepted ways of reducing fuel consumption and therefore CO2 emissions).

Just now we are approaching the big issue of the global sulphur cap, where all ships have to have a fuel of less than 0.5% sulphur content from January 1 2020 – not as low as the ECA limit but serious due to it impacting up to 70,000 ships

 or use approved systems (such as exhaust scrubbing technology or LNG) to demonstrate equivalence – a principle enshrined into the regulations of the International Maritime Organisation.

Simultaneous to the global sulphur cap impacting shipping, two other trends are developing.

On the one hand is the drive to even further address shipping's greenhouse gas emissions through additional regulation, and to find a suitable way for the industry to reduce its impact on the environment.

This latter issue is more market and societally driven and is pushing for the demands for total supply chain transparency.

This latter point is going to become more important in the future.

Trade flows are no longer seen simply from port-to-port, but door-to-door, and industrial processes are now viewed from start to finish.

Society no longer looks at individual parts of a chain in isolation, but at how these parts impact or are influenced by each other.

In the discussion about future fuels, this means the debate is as much about the environmental footprint of the fuel from its source (the well) to its final use.

Experts no longer just look at the greenhouse gas emissions when a hydrocarbon is burnt, but at the emissions from its extraction from the oil or gas reservoir until it is burnt in an engine or power station.

A significant part of this GHG footprint is at the refining and distilling processes that various fuels undergo.

In looking at the difference between well-to-wake (from oil well to the power given to the propeller) compared from bunker tank-to-propeller, two different stories emerge, and this is part of a recent scientific report from the Norwegian research institute, SINTEF.

Detailed research from SINTEF showed that using a residual fuel that has not been highly refined by an oil major will, when it reaches the ship's bunker tanks, have a lower CO2 footprint than a refined, distilled or blended product.

In a recent paper, where marine diesel, fuel oils and LNG well-to-wake emissions are compared, SINTEF noted that since the IMO agreed on the 2020 sulphur cap in 2008, industry has been aware that desulfurising residual fuels loses between 10% to 15% of the energy content in the heavy fuel oil.

The conclusion of the work shows, when viewed from a well-to-wake perspective, that a two-stroke engine burning heavy fuel oil in conjunction with

a scrubber has 3% less the CO2 emissions than when the same engine is fuelled with a low-sulphur marine diesel oil.

Clearly as we see the maritime sector move towards its 2030 goal and then the 2050 goal of a net carbon neutral transport chain it needs to equate the role it plays on other industries and where it creates additional carbon pressure on those sectors.

Exhaust cleaning has pedigree

The idea of using water droplets to scrub exhaust gases clean was first explored in the 1950's, rapidly becoming an approved and accepted common technology in shore-based industries across the world.

Many of these systems use seawater as the wash-water due to the salinity negating the need to add further chemicals.

With over 60 years continuous development and growth in shore-based electricity generation and other industrial plants, wet scrubbers and other similar technologies have been a crucial help in the continued development of society.

With such success ashore, it was a natural consideration to adjust this effective environmental technology for marine use.

This happened over 12 years ago on a UK ferry, that demonstrated the ability to clean a ship's emissions of sulphur oxides and particulate matter, as well as to make a dent in a ship's nitrous oxide emissions.

The first commercial scrubbers on vessels began to appear in the following years, notably on a few hundred vessels¹ that were likely to be sailing, permanently or occasionally, in the emission control areas.

Vessel operators realised the benefits of installing scrubbers to ensure they could use existing fuel oils rather than to switch to more expensive ultra-low sulphur fuels, namely refined distillate products with a sulphur content of less than 0.1%.

Very few people seemed to mind the very small increase in CO2 emissions as power was directed to the cleaning system, as it was easily countered as shipowners began to look at ways to increase ship efficiency generally.

But when one looks at the well-to-wake picture the CO2 picture, as explained by SINTEF, was even clearer.

Working together

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¹ According to DNV GL data there were 243 vessels operating with scrubbers in 2015 when the 0.1% sulphur limit for emission control areas (ECAs) came into force.

Research work into the total benefits of exhaust cleaning systems needs to continue and the discussion needs to evolve in a sensible manner.

Shipping, and any other industry that uses environmentally sound technologies that are focused on long term sustainability, need to be allowed to continue their research and growth, especially when such solutions make environmental and economic sense.

Shipping remains complex, but by arguing against one environmental technology in favour of another only helps reinforce the misconception that the industry does not want to do the right thing.

As an industry we are in a significant period of transformation and we need to be unreservedly optimistic about our goals and efforts.

There is no denying that owners need the solutions which technology companies invest heavily in finding and developing on their behalf.

Therefore we need to work together.

(from: hellenicshippingnews.com/yaramarine.com, November 5th 2019)

SAFETY & SECURITY

SHIP BERTHING INCIDENTS

It is perhaps surprisingly common for things to go wrong in the processes around berthing ships, particularly in terms of manoeuvring in the port area and mooring.

Aimed at the ship/port interface, read on to understand TT Club's experience and ways to mitigate the risks.

The operations involved in berthing ships are highly dependent on human interaction and many incidents have their root cause in this fact.

When things go wrong, damage may result to the ship itself, the berth and quay

cranes, and there is potential for pollution to occur and, perhaps of greater concern, injuries to crew and shoreside personnel can also result.

The two key areas of heightened risk are ship manoeuvring in the port and the process of mooring; the former exposes the ship to collisions and allisions while the latter primarily results in injuries or



fatalities to crew or mooring line personnel.

In most locations, berthing involves the combined efforts of the pilot and the master to achieve safe berthing of a ship.

Inevitably, good communications and mutual understanding of each other's roles are critical for the safe conduct of the ship in pilotage waters, essentially integrating the pilot into the bridge management team.

The pilot's primary duty is to provide accurate information to ensure safe navigation, while the master retains ultimate responsibility for the safety of the ship.

Issues have proven most likely to arise where the master is new to the port and/or the pilot has not previously experienced the size or type of ship call at the port.

It follows that port authorities and pilots must ensure that appropriate training, systems and procedures are in place to service the ships that they will be handling.

Engine and/or propulsion equipment failure is a common cause of ship collisions and allisions.

On the ship side, proper maintenance systems and procedures should be in place and followed, including strict adherence to the ship's Safety Management System.

Equally, port authorities need to have a sufficient number of tugs with enough power, particularly taking account of changing customer requirements, such as larger ships.

Tying up

Ensuring that a ship is made fast requires that winches are in good working order and ropes are in sound condition.

Where in poor or damaged condition, ropes should be replaced with spares.

All ropes, wires and links used for mooring should be certified (and documentation available for inspection).

It is also important that all greasing points for winches are free, working correctly and have not been painted over.

In many ports bollards may have been in place and potentially unchecked for decades.

There is currently no international standard to ensure that bollards are sufficient in number, quality and capacity, as well as suitably located for the tonnage likely to call at each berth.

It may be appropriate to source non-destructive testing to verify the strength of bollards.

Emerging technologies offering vacuum and magnetic mooring systems may improve safety and the securing of ships.

Such technologies dispense with mooring lines and therefore remove ship and port personnel from the risks inherent in the use of lines and winches.

The safety advantages may be significant, while operational and infrastructure considerations may also justify their installation.

Traditional mooring operations aboard ships expose crew to danger; they need to be thoroughly trained and familiar with the physical environment.

A recurrent issue in mooring incidents is that seafarers stand in areas exposed to injury should ropes part, often due to insufficient training.

On the shoreside, it is necessary to have sufficient personnel to be able to moor the ship safely and effectively.

All mooring personnel need to be trained and familiar with bights, snap-back zones and the hazards associated with mooring operations.

Factor weather

Adverse weather can add significant risks for a ship in a port environment.

Wind may cause unexpected heading changes and leeway; failure to compensate correctly for wind during berthing is a frequent cause of berthing incidents.

The impact of wind conditions needs to be taken into account by the master and the pilot in their calculations, alongside tides, currents and the swell that may also affect a ship preparing to moor or sail.

Most ports only allow berthing and unberthing when the wind speed is below a certain level, generally between 20 and 30 knots – and also consider the wind direction, tides, currents and swell.

It is common for locations particularly susceptible to tropical or seasonal storms to implement additional procedures to send ships out to sea when severe weather is forecast.

Experience shows that unfamiliar and erratic weather conditions are becoming more prevalent; as a result, it is good practice for all ports to establish appropriate emergency plans.

The risk of ships' mooring lines breaking during severe weather conditions is substantial; the availability of additional mooring lines or tugs on standby, though necessary, may be difficult to deploy in adverse conditions.

Overcome constraints

Operationally, it makes sense for both ports/terminals and ships for quay cranes to be positioned so that they can be set to work without delay.

Nevertheless, whilst a ship is berthing, the safest location to park quay cranes is away from the allocated berth.

This is generally impossible due to the length of the berth and location of other operations.

For most purposes, the least risky location to park quay cranes during a ship's berthing is at the centre of the intended berth; this mitigates exposure to the bow and stern which are most likely to impact the berth in the event that control of the ship is lost.

In summary, the stakeholders on both sides of the ship/port interface need to focus on their own issues, while ensuring that there is effective advance and ongoing communications and plans that enable them to work together to manage the safety of people, assets and the environment.

(from: hellenicshippingnews.com, November 13th 2019)

ON THE CALENDAR

•	20-21/11/19	Rotterdam	24th Ballast Water Management Conference
•	27-28/11/19	Madrid	International Cruise Summit 2019
•	03-05/12/19	Pordenone	Navaltech 2019 - Marine Technologies Expo
•	04-05/12/19	Amburgo	15th Arctic Shipping Summit
•	04-05/12/19	Barcellona	Cruise Ship Interiors Expo
•	05-05/12/19	Mosca	Russian Union of Marine Insurance Conference
	15-17/12/19	Teheran	4th Asia Logitrans Expo

The Secretariat of C.I.S.Co. is able to communicate detailed information on the programs of all the events and how to participate.