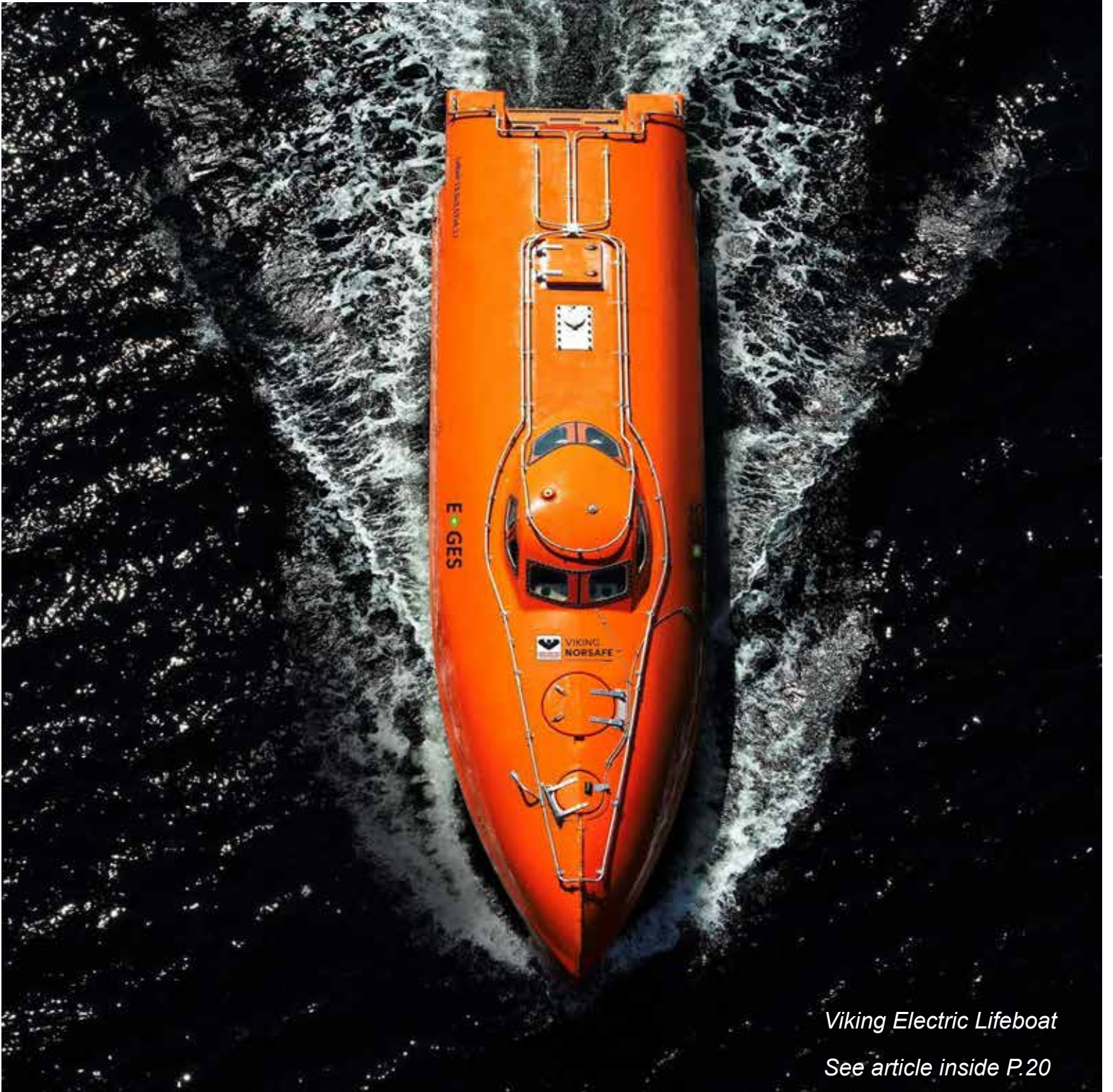


Number 29, January 2020

# IFSMA

## NEWSLETTER

The Shipmasters' International Voice



*Viking Electric Lifeboat*

*See article inside P.20*



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## Secretary General's Report

We have come to the end of another very busy year for the IFSMA Secretariat. Not only have we been raising a number of issues at IMO, as you will have read during the year, but for the many meetings to which Paul and I are invited to prepare papers and raise new issues to achieve broader support at the IMO and in other international arenas. One of our biggest successes last year has been that we and other NGOs managed to get Maritime Anti-Corruption onto the IMO Agenda for the first time in the IMO's history and I am hopeful that this will start to bring about some real change around the world.

2020 is going to be a busy year as we complete the Regulatory Scoping Exercise for Maritime Autonomous Surface Ships (MASS) and start the actual work of going through the various regulations in detail and deciding what and how needs to be changed to support or regulate autonomous ships. This will need a lot of help from our Shipmasters so I will be calling for volunteers throughout the year to support Paul and me. The same will be true when we start to look at the STCW Convention which I hope is going to be subject to a complete review and change.

The other main issue that we will be raising at IMO is that of Criminalisation of Shipmasters. Here there are a number of ongoing cases around the world. Following significant lobbying by our newest member, the Maritime Transport Workers' Trade Union of Ukraine (MTWTU), to their National Administration, the Ukraine has proposed a paper raising this issue at the IMO and will be co-sponsored by IFSMA and the ITF. We are determined to highlight criminalisation very robustly at the highest level and embarrass those nations involved if necessary.

Finally, I hope many of you have had the opportunity to spend time at home with your families and loved ones over the recent festive period and for those of you at sea, keep safe. All of us at IFSMA wish you a very Happy New Year and a prosperous and safe year ahead.

## From the Office

A quick reminder that your annual subscription invoice will be sent out soon.

If you do not receive your invoice in the next two weeks please contact the office to let us know.

## Editor's note

Looking back over 2019 we noted in mid-November that The Suez Canal Authority (SCA) celebrated with much ceremony the 150<sup>th</sup> anniversary of the Suez Canal's inauguration in 1869.

Admiral Osama Rabie, Chairman of the Suez Canal Authority congratulating HE Abdelfatah El-Sisi, the President of Egypt, and the Egyptian people on this precious anniversary. He also expressed immense pride of the Suez Canal's vital role since it was opened to serve world trade and to develop shipping.

In recent years the New Suez Canal project improved the navigational services for transiting vessels. Statistics of the financial year 2018/2019 showed the transit of approximately 19,000 vessels carrying 1.2 billion tons of cargo generating revenues of \$6 billion. A development scheme will upgrade the SCA fleet, with two new dredgers being commissioned by the end of 2020.

In August last the Canal saw a record breaking number of 81 transiting vessels in one day at 6.1 million tons with preparations in hand at that time for Megamax 24 class vessel, *MSC Gulsun*, carrying 23,000 TEU on her first transit of the Canal.

Long may the Suez Canal flourish.

## Investigation the effects of bridge alarms

This item appears on The Shipowners' Club website and the original article is to be found here:

<http://tinyurl.com/yyawljku>

We are most grateful for the kind permission of The Shipowners' Club in enabling us to reproduce the article

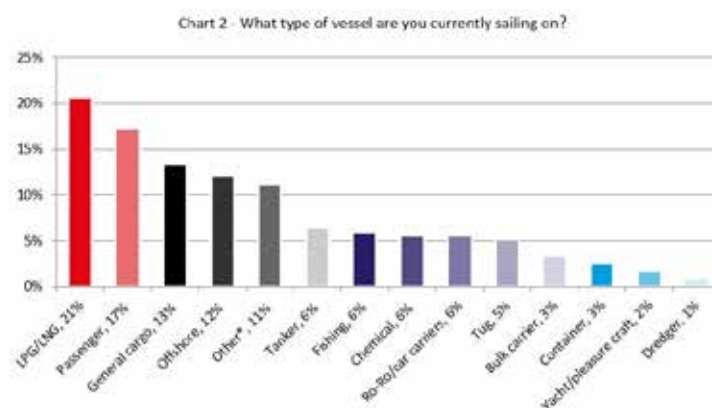
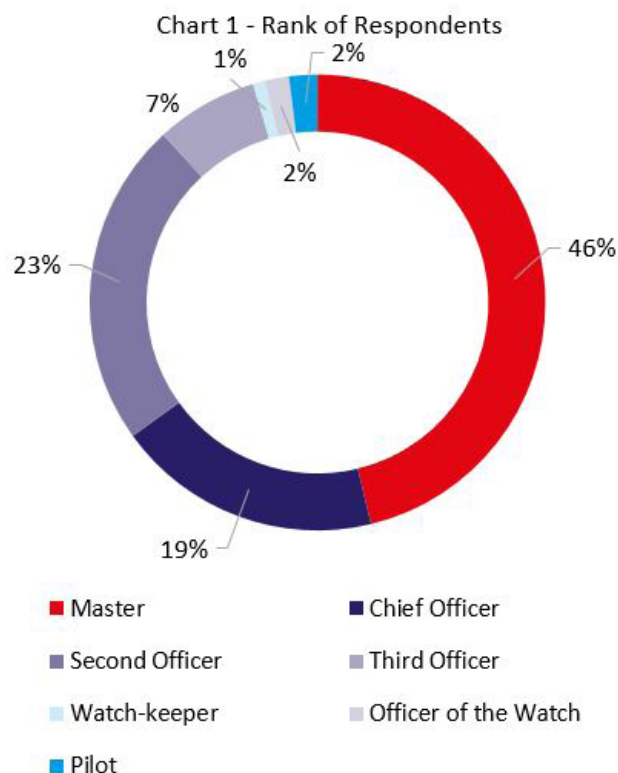
As vessels and equipment on board become increasingly smarter, seafarers are required to learn additional skills for the ongoing operation and maintenance of this technology. The installation of additional and new technology on board should always be done with the intention of enhancing the seafarer's ability to safely and efficiently navigate and operate the vessel. However, with more equipment comes the potential for more alarms.

In 2017/2018 the Club ran a survey in conjunction with the Department of Psychology at Royal Holloway, University of London, to investigate whether alarms on the bridge affected the attention and focus of bridge watchkeepers.

The survey was conducted by a questionnaire, which was circulated widely throughout many industry media such as the nautical institute's publications, UK Chamber of Shipping, Intermanager, ISWAN and the Club's media channels. After careful collation, we are now pleased to present our findings to our Members and the wider industry.

Firstly, it is important to show the background information

of the respondents. As you can see (Charts 1 and 2) submissions were mainly from Masters and were from a wide variety of vessel types.



The next question asked participants about the alarms themselves: Are false alarms a problem and are alarms graded to alert the watchkeeping of more urgent situations?

As can be seen in Chart 3, 89% of participants thought false alarms were a problem and in a further question (not shown graphically) 66% said the alarms were not easily detectable. The answers collated in the chart 4 illustrate that 57% of responses disagreed that alarms are graded by sound. This result was further supported by a high number of free text comments which corroborated this view.

The survey participants were then asked to comment on their knowledge of alarms and the systems they represent (Chart 5). It was positive to note that 85% of participants agreed that they were aware of the alarms and the systems. However, when reviewing the free text comments, 50% of participants reported some frustration with the format of the alarms themselves. The issues disclosed mainly concerned the sounds being the same tone for all alarms

and there being no distinguishing factors between alarm systems

Chart 3 - Frequent false alarms are a problem.

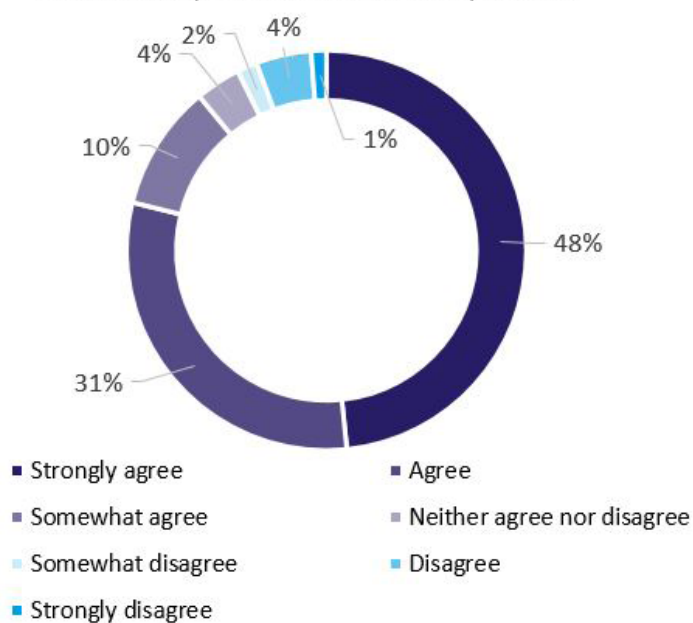
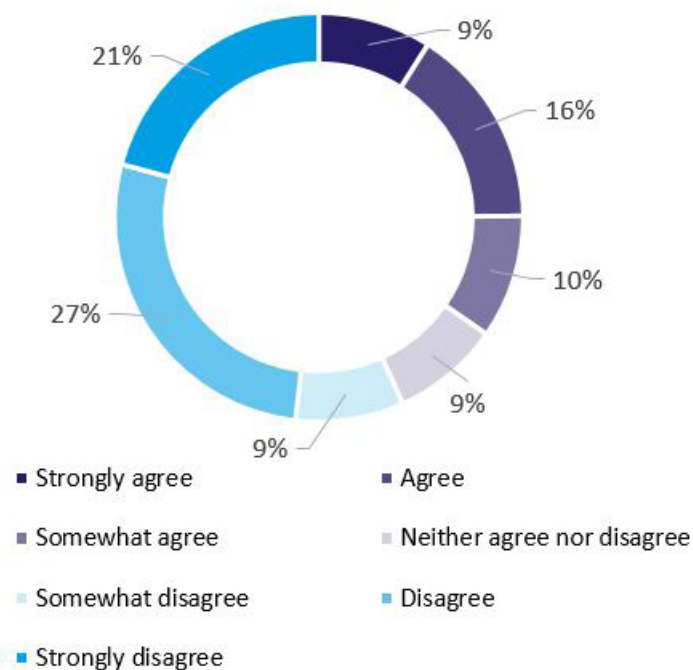


Chart 4 - Alarm sounds are graded, such that alarms indicating more urgent situations sound more urgent than other alarms.



When asked for comments on the statement 'Alarms that reoccur frequently are sometimes ignored/silenced and not actioned, as they are not considered a priority when carrying out other navigation/watch-keeping duties' (Chart 6), some responses confirmed the statement which may relate to the issue highlighted in the previous responses regarding the difficulty of distinguishing between alarms.

The results from this statement could be taken as indicating that 77% of crew do not want to be disturbed from their watch keeping duties. This could be interpreted as a positive result, however, this result also presents a danger that the crew will not recognise the importance of the alarms sounding and could be unaware of an emergency

developing. The results from these questions present a reoccurring theme regarding the grading of alarms to assist the watch keeper.

Chart 5 - I am aware of all of the bridge alarms, the equipment they represent and their location.

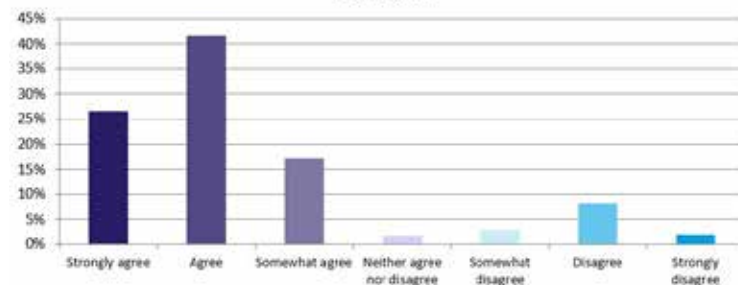
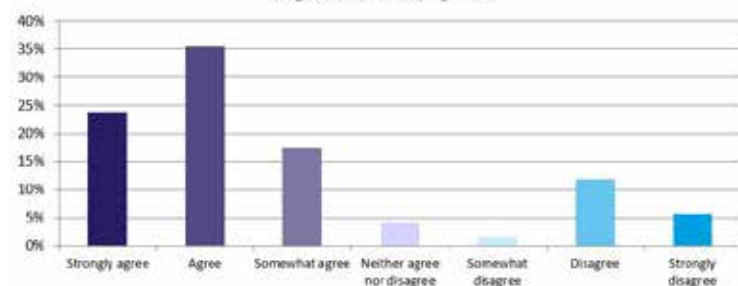


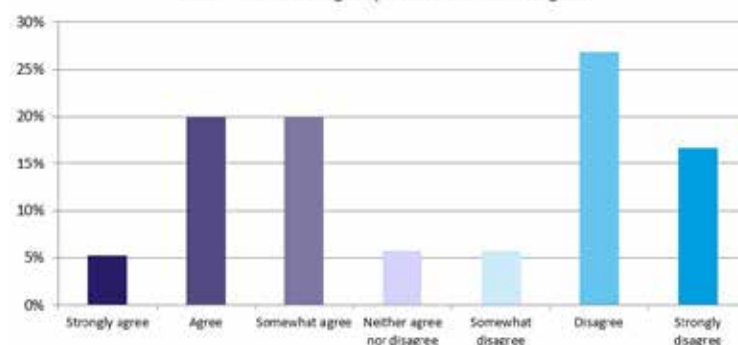
Chart 6 - Alarms that reoccur frequently are sometimes ignored/silenced and not actioned, as they are not considered a priority when carrying out other navigation/watch-keeping duties.



Another factor that appeared frequently in the free text answers was the crew's readiness to silence alarms without investigation due to 'alarm fatigue' caused by repeated alarm soundings for no apparent reason (Chart 7). This is reflected in this chart where 45% of the respondents agreed that this happened. When this was analysed by the level of role, 44% of Masters, 41% of Chief Officers, 48% of Second Officers and 60% of Third Officers agreed, showing that this practice was prevalent among all ranks.

A further concern is that, with respect to the Bridge Navigational Watch Alarm System, 24% (56) of participants reported that they never or seldom engaged this system (not shown graphically).

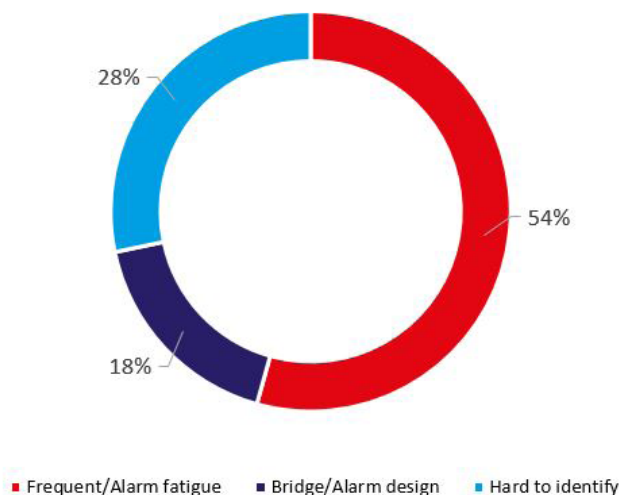
Chart 7 - Alarms are regularly silenced and not investigated.



To conclude the survey evaluation (chart 8), we have reviewed and collated all the free text comments received in the survey. As chart 8 identifies, the main issue raised was frequent alarm fatigue followed by the alarms being hard to identify and then the design of the alarms system or bridge itself.

It is evident from the feedback of these seafarers that the

Chart 8 - Free Text Comments by Area of Matter



current regulations and arrangements relating to bridge alarm monitoring and systems can be improved upon to allow crew to fully utilise the benefits of the technology being made available to them. Doing so would improve the working environment of seafarers and may assist with the reduction of related claims experienced by Members and the wider maritime industry. The Club is sharing this information to help facilitate further discussion of the topic in the industry with the hope of finding a method to provide a solution which improves bridge alarm management on board.

The Shipowners Club 2019 ©

## The IMO Digest

A summary of some of the news received from the IMO Media service in recent weeks

All illustrations (© IMO) downloaded from and with grateful thanks to [www.imo.org](http://www.imo.org)

### IMO pushes forward with work to meet ship emission reduction targets

According to news issued by IMO on 15 November the IMO Intersessional Working Group on Reduction of GHG Emissions from ships has made significant progress in pushing forward with work to help achieve the ambitious targets set out in the initial IMO strategy<sup>1</sup> on reduction of GHG emissions from ships, which aims, as a matter of urgency, to decarbonise international shipping in this century.

The IMO Intersessional Working Group on Reduction of GHG Emissions from Ships has made significant progress in pushing forward with work to help achieve the ambitious targets set out in the initial IMO strategy on reduction of GHG emissions from ships, which aims, as a matter of urgency, to decarbonise international shipping in this century.

IMO is committed to working to combat climate change, in line with the United Nations Sustainable Development Goal (SDG) 13 on climate action.

### National Action Plans – draft MEPC resolution agreed

The working group agreed the draft text of an MEPC resolution which would urge Member States to develop and update a voluntary National Action Plan (NAP) with a view to contributing to reducing GHG emissions from international shipping.

It suggested such National Action Plans could include but are not limited to: (a) improving domestic institutional and legislative arrangements for the effective implementation of existing IMO instruments; (b) developing activities to further enhance the energy efficiency of ships; (c) initiating research and advancing the uptake of alternative low-carbon and zero-carbon fuels; (d) accelerating port emission reduction activities, consistent with resolution MEPC.323(74); (e) fostering capacity-building, awareness-raising and regional cooperation and (f) facilitating the development of infrastructure for green shipping.

The resolution would invite Member States to elaborate those arrangements (legal, policy, institutional and so forth) that they put in place or plan to do so to support emission reduction from ships, in accordance with their national conditions, circumstances and priorities.

The resolution would encourage those States which had already adopted national action plans to share their experiences with IMO.

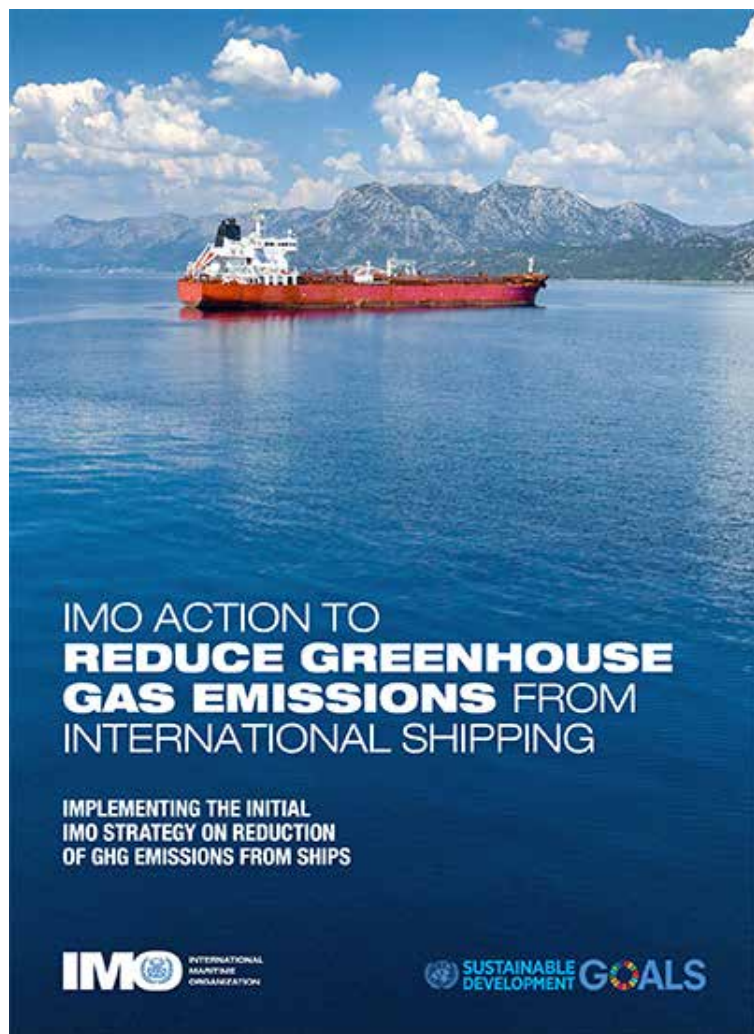
The draft resolution will be submitted to the next Marine Environment Protection Committee session, MEPC 75 (to be held from 30 March to 3 April 2020) with a view to its adoption.

### Candidate measures to further reduce GHG emissions

IMO has already adopted mandatory technical and operational measures to improve the energy efficiency of ships and reduce GHG emissions, including the energy Efficiency Design Index (EEDI) for new ships and the Ship Energy Efficiency Management Plan (SEEMP) for all ships of 400 GT and above (for more see here<sup>2</sup>). The initial strategy lists a number of candidate measures which could also be considered to further reduce emissions and help achieve the targets in the strategy, in particular 40% reduction of carbon intensity from shipping by 2030. Short-term measures could be measures finalized and agreed by the Committee between 2018 and 2023, although in aiming for early action, priority should be given to develop potential early measures with a view to achieving further reduction of GHG emissions from international shipping before 2023. Dates of entry into force and when the measure can effectively start to reduce GHG emissions would be defined for each measure individually. A procedure for assessing the impact on States of a measure has been approved.

During the working group session, a number of proposals were discussed.

The group noted that the proposals discussed fell into two goal-based approaches, a technical approach and an operational approach. Further discussion would be needed at the next intersessional working group meeting to develop such proposals further.



### Technical approach

Proposals for a technical approach which were discussed included an Energy Efficiency Existing Ship Index (EEXI), which could require ships to meet set energy efficiency requirements after the measure taking effect. Other technical proposals relate to mandatory power limitation on ships.

### Operational approach

Operational approaches would include focusing on strengthening the ship energy efficiency management plan, as required in SEEMP. This include proposals for mandatory carbon intensity reduction targets. Operational proposals also include measures to optimize speed for the voyage. Proposals to limit ship speed were also discussed.

There was general agreement in the group that a mandatory goal-based approach for both the technical and operational approaches would provide the needed flexibility and incentive for innovation (a goal-based

approach would set the objective to be achieved, while leaving room for a range of methods or innovation to achieve the set goal).

The group agreed that the technical and operational approaches should be further developed in parallel, with informal coordination before the next intersessional meeting.

### Assessment of impacts on States

Proponents of the various proposals were invited to provide further details on the initial impact assessment of their proposal, with a view to identifying the remaining issues to be further considered, including whether the proposed measure may generate disproportionately negative impact on some States. Key underlying issues identified by the chair for further consideration included, *inter alia*: the vital role of shipping for food security and disaster response; the impact on cost of transport and if cost change can be passed on to the customer or not; and special challenges faced by some remote areas.

### Alternative fuels

With a longer-term perspective, and in order to encourage the uptake of alternative low- and zero-carbon fuels in the shipping sector, the Working Group also agreed on the establishment of a dedicated work stream for the development of lifecycle GHG/carbon intensity guidelines for all relevant types of fuels. This could include, for example, biofuels, electro-/synthetic fuels such as hydrogen or ammonia, and so forth. Many participants to the meeting highlighted the importance of undertaking this work as soon as possible, in order to pave the way for the decarbonization of the shipping industry.

### Forthcoming meetings

The sixth session of the Intersessional Working Group on Reduction of GHG Emissions from Ships met from 11 to 15 November at IMO HQ. It was attended by nearly 400 representatives from nearly 70 Member States, as well as from the UNFCCC<sup>3</sup>, the European Commission, the League of Arab States and around 30 non-governmental organizations.

To keep up the momentum, a further seventh meeting of the Intersessional Working Group on Reduction of GHG Emissions from Ships will be held 23-27 March 2020. This is just before and back-to-back with the next Marine Environment Protection Committee session, MEPC 75 (to be held from 30 March to 3 April 2020). The MEPC is the decision-making body.

The MEPC is also expected to establish a Working Group on Reduction of GHG Emissions from Ships, to meet during the MEPC session.

**MEPC 76 meet from 19 to 23 October 2020. MEPC 76 is expected to receive the completed Fourth IMO GHG Study .**

## Fourth IMO GHG Study

The Fourth IMO GHG Study will include the following:

- Inventory of current global emissions of GHGs and relevant substances emitted from ships of 100 GT and above engaged in international voyages. The inventory should include total annual GHG emission series from 2012 to 2018, or as far as statistical data are available.

- GHGs are defined as the six gases initially considered under the UNFCCC process: Carbon dioxide (CO<sub>2</sub>),

Methane (CH<sub>4</sub>),

Nitrous oxide (N<sub>2</sub>O),

Hydrofluorocarbons (HFCs),

Perfluorocarbons (PFCs) and

Sulphur hexafluoride (SF<sub>6</sub>).

The inventory should also include other relevant substances that may contribute to climate change, including Black Carbon (BC).

- Estimates of carbon intensity (estimates of the world fleet's CO<sub>2</sub> emissions per transport work, from 2012 to 2018, or as far as statistical data are available).
- Possible estimates of carbon intensity of international shipping for the year 2008 (the baseline year for the levels of ambition identified in the Initial Strategy).
- Scenarios for future international shipping emissions 2018-2050

The previous, Third IMO GHG Study, was published in 2014<sup>4</sup>

<sup>1</sup> <http://tinyurl.com/ya58yvl7>

<sup>2</sup> <http://tinyurl.com/hur9caq>

<sup>3</sup> The United Nations Framework Convention on Climate Change: <https://unfccc.int/>

<sup>4</sup> <http://tinyurl.com/jeshh8s>

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## New IMO Council elected

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IMO reported on 29 November that the organization's Assembly had elected the following States to be Members of its Council for the 2020-2021 biennium:

### Category (a)

Ten States with the largest interest in providing international shipping services:

*China, Greece, Italy, Japan, Norway, Panama, Republic of Korea, Russian Federation, United Kingdom, United States.*

### Category (b)

Ten States with the largest interest in international seaborne trade:

*Argentina, Australia, Brazil, Canada, France, Germany, India, the Netherlands, Spain and the United Arab Emirates.*

### Category (c)

Twenty States not elected under (a) or (b) above, which have special interests in maritime transport or navigation and whose election to the Council will ensure the representation of all major geographic areas of the world:

*Bahamas, Belgium, Chile, Cyprus, Denmark, Egypt, Indonesia, Jamaica, Kenya, Kuwait, Malaysia, Malta, Mexico, Morocco, Peru, the Philippines, Singapore, South Africa, Thailand and Turkey.*

## The IMO Council

The Council is the executive organ of IMO and is responsible, under the Assembly, for supervising the work of the Organization. Between sessions of the Assembly, the Council performs all the functions of the Assembly, except that of making recommendations to Governments on maritime safety and pollution prevention.

The newly elected Council met, following the conclusion of the 31<sup>st</sup> Assembly, for its 123<sup>rd</sup> session on 5 December and elected its Chair and Vice-Chair for the next biennium.



## The IMO Assembly

After convening on 25 November the 31<sup>st</sup> Assembly of IMO met in London and closed on 4 December 2019.

All 174 Member States and three Associate Members are entitled to attend the Assembly, which is IMO's highest governing body. The intergovernmental organizations with which agreements of co-operation have been concluded and international non-governmental organizations in consultative status with IMO are also invited to attend.

At IMO the Assembly normally meets once every two years in regular session. It is responsible for approving the work programme, voting the budget and determining the financial arrangements of the Organization. It also elects the Organization's 40-Member Council.

### Footnote

The newly formed Council re-elected Mr Xiaojie Zhang

(China) as Chair of the Council and Mr Edmundo Deville del Campo (Peru) was re-elected as Vice-Chair.



The Council approved the appointment of Mr Kitack Lim as Secretary-General of the IMO for his second term.

Council 124 will be held from 29 June to 3 July 2020.

The illustrations here are reproduced by kind courtesy of IMO ©

## The Quasi-Zenith Satellite System (QZSS)

### Introduction

QZSS is a regional navigation satellite system (RNSS) that is developed and operated by Japan. One of the important features of QZSS is its capability to send positioning signals that are highly compatible with the US GPS. To obtain stable positioning information, it is desirable to use more satellites, and using QZSS and GPS together greatly improves the environment of satellite positioning in Asia and Oceania.

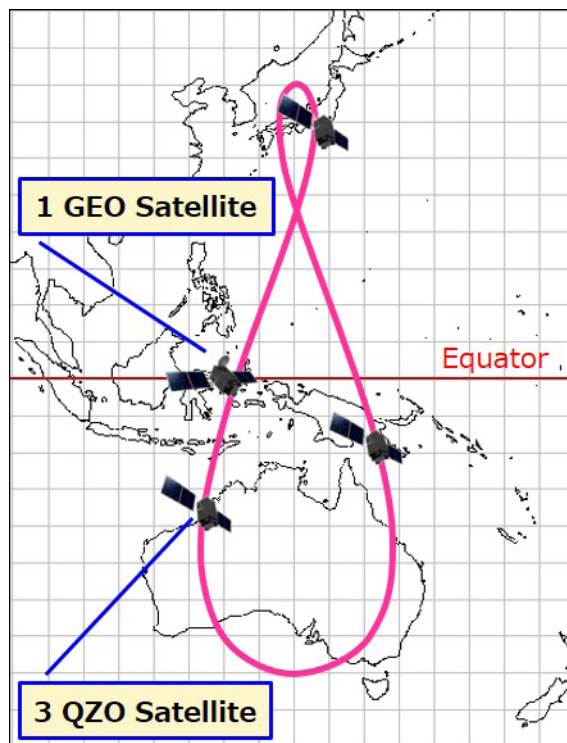
QZSS started its service in November 2018 with four-satellite constellation. By adding three more satellites, a service utilizing a total of seven satellites is to be launched after 2023.

### System description

The current four-satellite constellation consists of three QZO (Quasi-Zenith Orbit) satellites and one GEO (Geostationary Orbit) satellite. QZO is a type of IGSO (Inclined Geosynchronous Orbit) that has a slope of approximately 40 degrees from the equator and an elliptical orbit that moves away from the earth in the northern hemisphere and comes closer to the earth in the southern hemisphere, making it travel in a north-south asymmetric figure of eight motion when viewed from the ground. The QZO satellite travels in the figure of eight motion in approximately 24 hours. By tracing this trajectory, it remains within the northern hemisphere for approximately 13 hours and for approximately 11 hours in the southern

hemisphere. It is also capable of remaining in the skies above Japan for a long period of time. Furthermore, the stationary satellite is located at 127° east longitude on the equator.

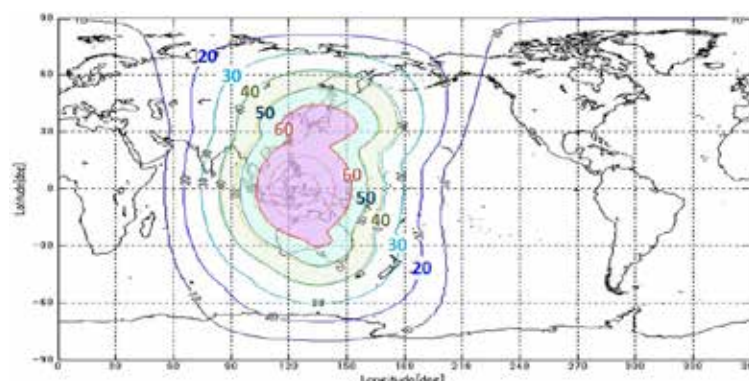
Figure-1



### Coverage

QZSS is available for use in Asia and Oceania. The red part shown below is the area where at least one satellite signal can be received from a high position above the elevation angle of 60°. It is possible to receive a signal from a satellite that is always near the zenith. In an open sky environment such as the ocean, it is possible to receive sufficient signals even with an elevation angle of 20 to 30°.

Figure-2



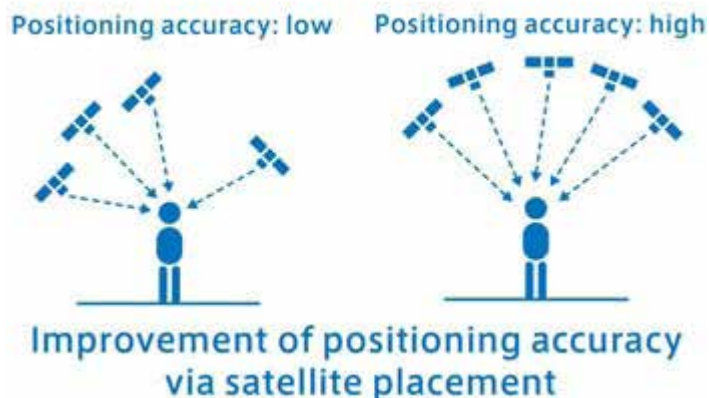
### Positioning Signal

QZSS offers three types of services. The first is a GPS complementary service that transmits a signal with the same frequency as the GPS. The use of this service in conjunction with GPS increases the number of satellites used for positioning and makes it possible to arrange the satellite positions in a well-balanced way and achieve



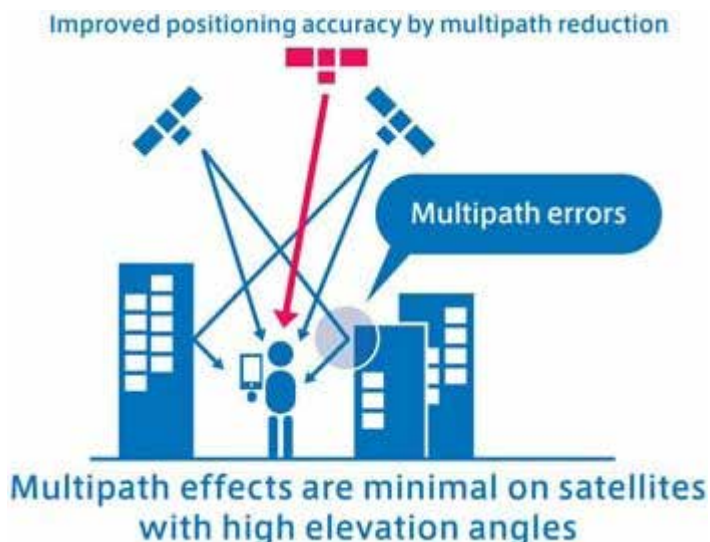
stable positioning.

Figure-3



The positioning signals sent from QZSS with a high elevation angle can reduce errors due to multipaths such as reflection waves.

Figure-4



The second is the GNSS augmentation service. It achieves high positioning accuracy by providing a signal that corrects the effect of the ionospheric delay generated by satellite positioning and the clock error. In QZSS, two types of augmentation signals are transmitted: the centimetre level augmentation signal and sub-metre level augmentation signal.

The centimetre level augmentation signal has a 6 cm horizontal and 12 cm vertical accuracy as a stationary body, 12 cm horizontal and 24 cm vertical accuracy as a moving body, and the service area is limited to Japanese land and coastal areas. The other sub-metre level augmentation signal uses an L1 frequency and has an accuracy of one metre horizontally and two metres vertically. The service area is limited to areas around Japan.

Additionally, the SBAS signal is scheduled to be provided by QZSS from 2020.

The third is the DC Report service which sends a message.

Disaster information such as the tsunami warning and earthquake alert provided by the Japan Meteorological Agency are transmitted by using the gap between the data of the sub-meter level positioning augmentation signal.

In addition to the above, experimental signals such as high precision positioning signals for wide area services and experimental signals of DFMC SBAS which are being examined for standardization by the ICAO are being transmitted.

Figure-5

Signal	Frequency MHz	Service	Compatibility	QZS-1	QZS-2/4	QZS-3
				QZO	QZO	GEO
L1C/A	1575.42	Positioning	Complement GPS	✓	✓	✓
L1C		Positioning	Complement GPS	✓	✓	✓
L1S		Augmentation(SLAS)	DGPS	✓	✓	✓
		Messaging	DC Report Service	✓	✓	✓
L1Sb		Augmentation(SBAS)	SBAS (L1) Service	-	-	✓
L2C	1227.60	Positioning	Complement GPS	✓	✓	✓
L5 I/Q	1176.45	Positioning	Complement GPS	✓	✓	✓
L5S		Experimental(L5 SBAS)	L5 SBAS (DFMC)	-	✓	✓
L6D	1278.75	Augmentation(CLAS)	PPP-RTK	✓	✓	✓
L6E		Experimental(MADCCA)	PPP, PPP-AR	-	✓	✓

### Utilization of QZSS

QZSS is being considered for use in a variety of fields including Autonomous Driving, control of robot farm machines and drones, positioning in offshore construction, as well as other applications.

Additionally, for the purpose of promoting the maritime use of QZSS, Japan proposed the recognition of QZSS as a component of the WWRNS (World-Wide Radionavigation System) during the IMO MSC 99 (Maritime Safety Committee 99<sup>th</sup> session) in 2018. Deliberations will be held by NCSR (Sub-Committee on Navigation, Communications and Search and Rescue) for a period of two years starting from 2020. Prior to this, in January 2019, a presentation by a Japanese delegation was held in NCSR 6 to increase the awareness and understanding of QZSS. The features of QZSS services as well as the news concerning the launch of QZSS services in November 2018 were reported in the presentation.



Figure-6

QZSS contributes to the improvement of the satellite positioning environment in Asia and Oceania, and contributes to many users in a wide range of fields including the maritime sector.

## QZSS website

For more information on the satellite service QZSS readers are invited to view the website here :

<https://qzss.go.jp/en/>

### Editor's Note:

We are grateful to the QZSS office in Japan for their kind assistance with provision of this article.

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## The Maritime Labour Convention, 2006, as amended – A status report

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By Brandt Wagner, Head, Transport and Maritime Unit

### Sectoral Policies Department, ILO

The Maritime Labour Convention, 2006, was adopted thirteen years ago and has been in force since August 2013. As of 13 December 2019, it has been ratified by 95 States, representing 91% of gross tonnage of the world fleet.

The Convention sets out seafarers' rights regarding almost every aspect of their working and living conditions including, among others, minimum age, employment agreements, hours of work or rest, payment of wages, paid annual leave, repatriation at the end of contract, on-board medical care, the use of licensed private recruitment and placement services, accommodation, food and catering, health and safety protection and accident prevention and seafarers' complaint handling. It is considered the "fourth pillar" of the international regulatory regime for quality shipping, complementing the key Conventions of the IMO dealing with safety and security of ships and protection of the marine environment (SOLAS, STCW and MARPOL).

The Convention has already been amended three times, and its official title is now "the Maritime Labour Convention, 2006, as amended".

- The 2014 amendments addressed the issues of abandonment of seafarers and shipowners' liability for death or long-term disability by seeking to ensure the provision of financial security in case of abandonment of seafarers and for shipowners' responsibilities in respect of contractual claims for personal injury to, or death of seafarers.
- The 2016 amendments called upon States to take into account the latest version of the guidance on eliminating shipboard harassment and bullying published by the International Chamber of Shipping and the International Transport Workers' Federation. They also provided for the extension of the validity of the maritime labour certificate issued for ships in cases where the renewal inspection required by the Convention has been successfully completed but where a new certificate cannot immediately be issued.

- The 2018 amendments addressed the issue of payment and repatriation of seafarers held captive on or off the ship as a result of acts of piracy and armed robbery against ships. This included amendments to MLC, 2006 provisions concerning seafarers' employment agreements, wages and entitlement to repatriation. The amendments seek to ensure the continued validity of the seafarer's employment agreement and the continued payment of wages and other entitlements during the period of captivity.

In accordance with the ILO Constitution, a State which ratifies an ILO Convention is to report to the ILO on the measures it has taken to implement it. The ILO's Committee of Experts on Application of Conventions and Recommendations undertakes an impartial and technical evaluation of the application of the Convention, with the aim of ensuring that the Convention is fully and effectively implemented. Reports of States which have ratified the MLC, 2006 have been subject to this process for several years.

Port State control plays an important role in ensuring uniform compliance with the MLC, 2006, which is a relevant instrument in nearly all regional port State control agreements on ship inspection. As of 12 December 2019, the following reflects the percentage of States within each MOU that have ratified the Convention: Paris MOU 100 %, Tokyo MOU 85 %, Mediterranean MOU 70 %, Caribbean MOU 65 %, Indian Ocean MOU 70%, Abuja MOU 61%, Black Sea MOU 50 %, Viña del Mar MOU 26.66 % and Riyadh MOU 0%.

What kinds of deficiencies are being reported by port State control authorities? In 2018 in the Paris MOU, for example, 14.9% of all deficiencies concerning working and living conditions. This was a decrease from 15.5% in 2017 and 16.1% in 2016. Deficiencies on working and living conditions have been found with respect to: health and safety and accident prevention - 3,090 (41.8% of all MLC deficiencies), food and catering - 1,260 (17.1%); hours of work and rest - 628 (8.5%) accommodation - 639 (8.6%) and seafarer's employment agreements - 554 (7.5%) deficiencies.<sup>1</sup>

### Abandonment

The ILO and IMO jointly operate a database on incidents of abandonment of seafarers in order to monitor the problem of abandonment in a transparent and informative manner. The database has been operated since 2005.

As of 13 December 2019, there were 415 abandonment incidents listed in the database since it was established. These concerned 5,297 seafarers. 176 cases were resolved,<sup>2</sup> 79 cases were disputed and 52 cases were

<sup>1</sup> *Port State Control Consistent Compliance, Annual Report 2018, Annual Report 2018, Paris MOU on Port State Control.*

<sup>2</sup> A case of abandonment is considered as resolved if the ILO has received clear advice from the Member State or organization having originally provided the information that the totality of the crew has been successfully repatriated and the totality of all outstanding

inactive. In 2017, there were 55 cases reported, 14 of which were resolved that year and eight were resolved in 2018. In 2018, the total number of reported cases was 44 and of these, 15 cases had so far been resolved. In 2019, the total number of reported cases was 40, as of 13 December. Following the entry into force on 18 January 2017 of the 2014 amendments to the MLC, 2006 concerning financial security in cases of abandonment, 137 abandonment cases have been reported to the joint IMO/ILO database. The amendments should shorten the periods of abandonment cases and expedite their resolution.

### Upcoming

The next major ILO meeting concerning the MLC, 2006 will be the Fourth Meeting of the Special Tripartite Committee (STC) of the Maritime Labour Convention, 2006 (MLC, 2006) in Geneva in April 2021. The STC will keep the Convention under review and consider any proposed amendments from the governments, shipowner or seafarer groups. The Subcommittee on Wages of Seafarers of the Joint Maritime Commission will be held back to back with the STC, and will discuss the possible updating of the minimum monthly basic pay or wage figure for able seafarers (as referred to in the MLC, 2006). The last meeting of the Subcommittee, in November 2018, increased the wage figure from US\$614 to US\$618 as of 1 July 2019, US\$625 as of 1 January 2020 and US\$641 as of 1 January 2021, representing an overall increase of 4.5%.

**For more information readers are invited to see:**

[www.ilo.org/mlc](http://www.ilo.org/mlc)

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## WMO-IMO symposium addresses extreme maritime weather

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**23-25 October**

### A major contribution to the UN Decade of Ocean Science for Sustainable Development (2021-2030)

From 23-25 October the World Meteorological Organisation (WMO) and the IMO held the first joint Symposium on Extreme Maritime Weather. The theme was: Towards Safety of Life at Sea and a Sustainable Blue Economy.

This event at IMO HQ in London brought together about 200 stakeholders from shipping (including freight, passenger ferries, cruise liners), offshore industry, ports and harbours, coast guards, insurance providers and the met-ocean community – both public and private).

### To improve services

It provided a key platform for WMO to identify best practices and improve services for safety and risk reduction, remuneration and contractual entitlements have been paid and duly received by all the crewmembers.

emergency response, sustainable shipping practices and greater collection and sharing of ship observations.

### Ministerial comment

Nusrat Ghani, UK Parliamentary Under-Secretary in the Department of Transport (otherwise known as the Maritime Minister) stressed the need for met-ocean and shipping communities to build dialogue on global solutions in shipping and maritime transport, especially in the changing climate.

In an opening video address, Peter Thomson, UN Special Envoy for the Ocean, hailed the symposium as timely. He said: *'With the great majority of world trade carried by ships, the value of the historical loss of cargo due to extreme weather conditions is simply vast. Most of these tragedies could have been avoided if better information, communication and preparedness measures had been available at the time. The good news is that ocean information services are being continually developed, including early warnings and improved predictions.'*

The blue economy is estimated at US\$ 3-6 trillion/year, accounting for 70% of world trade, which provides livelihoods for over 6 billion people.



Accuracy and timeliness of weather forecasting over recent decades has improved, however, millions of dollars in goods and thousands of lives are still lost at sea each year due to extreme weather conditions such as high winds, large waves, fog, thunderstorms, sea ice, freezing spray and volcanic ash.

In the words of Symposium Chair, Tom Cuff, of the U.S. National Oceanic and Atmospheric Administration: *'We must apply the gains we've made in science, observing, computing, and communications to bring relevant 21<sup>st</sup>*

century services to the maritime community. We must develop a stronger partnership with this community to improve safety of life and property at sea.'

In addition to science, participation of local mariner and coastal communities is also important, especially, in polar regions where communication bandwidth is restricted. John Parker, Environment and Climate Change Canada said: 'Canadian Inuit communities play a critical role in the development of future weather and sea-ice products for the Arctic. By working together, we are currently examining how Inuit weather and sea-ice forecasting knowledge combined with western monitoring and modelling techniques could lead to better Arctic forecasts to meet local decision-making needs'.

### Improvements in skill needed

Forecasts need more observations to improve their skill. Peter Hinchliffe (Chair of the Nautical Institute Executive Board and former Secretary General International Chamber of Shipping) emphasised that 'only 2500 ships voluntarily provide met data. Out of a total of around 80,000 ships in international trade this is a shockingly small number and efforts must be made to increase the contribution of this vital data to improve forecasting and weather warnings'. More weather data collected by ships at sea will improve forecasts, helping the maritime industry as well as the public.

Developing country situations were addressed and it is apparent that improved end-user understanding is needed. Nelly Florida Riama of Indonesia's BMKG\* added: 'We need to understand that different users have different requirements and understanding - this is especially challenging in island countries where, for example, local fishing communities may not understand the technical terms that we use in the forecasts, which has led to misinterpretation'.

Ultimately, the Symposium has shone a spotlight on the urgent need to close the gap between the met-ocean providers and users of this information in the maritime industry. Nick Cutmore, Secretary General of the International Maritime Pilots' Association (IMPA) reflected: 'There's a need for a greater understanding and awareness of the benefits that met-ocean data can provide to the mariner on a day-to-day basis. Similarly, the met-ocean community needs greater awareness of the kinds of decisions that mariners must make.'

Highlighting global examples of extreme maritime weather, broad discussion also included views of insurance, investigation and indemnity with ocean forecasting to improve decision making by maritime sectors, digital delivery of maritime safety information, decision support in polar regions from short to longer term seasonal time scales, voyage route optimization, decision support for the offshore industry, and search and rescue.

**Other key areas identified that need urgent attention are:**

- With the met-ocean community increasingly using thresholds to convey impacts of weather hazards to the public, nascent efforts in this for marine weather are being undertaken by some NMHSs. These impact thresholds must be reconciled with concerns from the shipping industry, in which many different ship types and activities have different operating limits, and setting fixed thresholds may have an unintended negative impact on operations.
- There is a need for better awareness of the value met-ocean data can add to maritime operations.
- With so many commercial weather providers, it is essential to ensure that users know what data is authoritative.
- **The maritime community desires clearer and simplified met-ocean data and information where possible, to ensure they are understood and that proper decisions are made with the information.**
- **Ports and Harbours are expected be subject in the future, to more frequent and intense storms and rising sea levels. Inundation in ports and harbours will be challenging from both a safety and economic perspective.**
- **The design of vessels, industry, ports and harbour infrastructure also plays a role in safety and resilience to poor weather.**

\*Badan Meteorologi Klimatologi dan Geofisika, the Indonesian non-departmental government agency for meteorology, climatology, and geophysics.

Photo: WMO ©.

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## ClassNK releases Guidelines for the Inventory of Hazardous Materials (Ver.4.00)

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It was reported from Tokyo on 29 October that ClassNK had released its *Guidelines for the Inventory of Hazardous Materials (Ver.4.00)*.



The *Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009* (otherwise known as the HKC) was adopted in 2009. After the entry into force of the HKC, the development and maintenance of an Inventory of Hazardous Materials (IHM), which identifies the location and approximate quantities of hazardous materials onboard a ship, will be required for all ships over 500gt.

According to ClassNK hopes are high for entry into force, as currently, 13 countries making up 30% of the merchant fleet have acceded to the HKC\*.

Ahead of the HKC's entry into force, EU ship recycling regulations will require all existing ships sailing under the flag of EU Member States as well as ships flying the flag of a third country and calling at an EU port or anchorage to have an IHM from 31 December 2020.

In light of the situation, ClassNK has revised its guidelines to include comprehensive content on the development and maintenance of IHM in line with not only the HKC, but also EU regulations, including the validity of an existing statement of compliance.

The publication *Guidelines for the Inventory of Hazardous Materials (Ver.4.00)* at 88 pages is available to download at no charge via ClassNK's website here: [www.classnk.com](http://www.classnk.com) for those who have registered for the ClassNK My Page service.

To register for the My Page service at no charge, readers are advised to go to the ClassNK website to be found at: [www.classnk.com](http://www.classnk.com) and click on the My Page Login button.

\* The HKC will enter into force 24 months after the date on which 15 States, representing 40% of world merchant shipping by gross tonnage, have either signed it without reservation as to ratification, acceptance or approval or have deposited instruments of ratification, acceptance, approval or accession with the Secretary-General. Furthermore, the combined maximum annual ship recycling volume of those States must, during the preceding ten years, constitute not less than 3% of their combined merchant shipping tonnage.

## Electric tug e5 powered by battery and hydrogen fuel cell

At the end of October Tokyo Kisen Co Ltd and e5 Lab Inc reported that they had jointly developed a new design concept of what is known as the e5 Tug. Designed to minimize its environmental footprint this electric propulsion harbour tug is powered by a large-capacity battery and a hydrogen fuel cell.

The e5 is equipped with a propulsion system running on what is known as the e5 powertrain platform, devised and planned by e5 Lab and which utilizes a large-capacity battery system as a main power source and a hydrogen fuel cell and generator as the auxiliary power source.

It is reported that this electric propulsion system will ensure sufficient bollard pull and continuous cruising time necessary for a harbour tug and which requires large-capacity power to function. Furthermore, CO<sub>2</sub> emissions are minimized by incorporating the fuel cell.

This joint project is drawing upon knowledge and experience of Tokyo Kisen as a tug operator and e5 Lab is undertaking concept planning and development, design, and project management.

It is understood that Tokyo Kisen will proceed with the

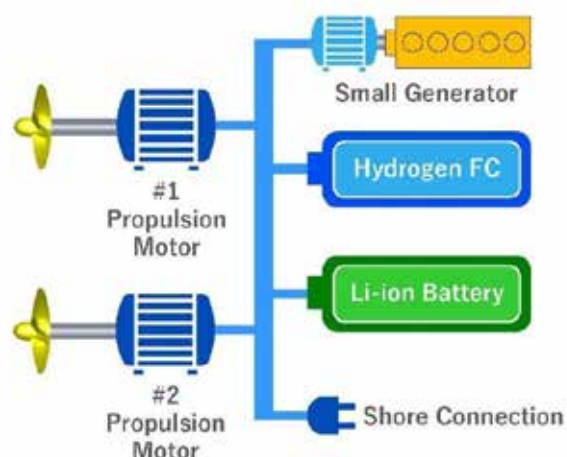
project by seeking advice from the Ministry of Land, Infrastructure, Transport and Tourism Japan, from ClassNK, and from others for regulatory compliance. It has been learnt that after the final investment decision Tokyo Kisen aims to launch the tug for commercial operations at Yokohama Port and Kawasaki Port in 2022.

### Technical details

In outline the e5 tug will be propelled by two 1500kW azimuth thrusters, will have a towing power of 50 tons and a service speed of 14 knots.

As for its environmental performance the tug's systems are expected to reduce CO<sub>2</sub> emissions in all operational phases such as push / pull, transit and standby.

The tug may be able to offer value at the time of a disaster for it could function as a power supply from ship to shore. With regard to future advances the tug's fully electrified powertrains can adapt to most suitable energy sources: lithium-ion battery, hydrogen fuel cell, all-solid-state battery, LNG generators and so forth as technology progresses and it will be possible to achieve zero emissions in combination with renewable energy.



*The e5 tug's Li-ion battery + hydrogen pure electric power train.*

### About Tokyo Kisen

Tokyo Kisen Co Ltd with HQ in Yokohama is a major tug company in Japan with the mission of supporting maritime safety. Since its founding in 1947, the company has been consistently engaged in the operation of assisting navigational safety of ships throughout Tokyo Bay, the centre of Japanese marine transport, and one of the busiest sea traffic areas in the world.

Tokyo Kisen operates harbour and escort tugs, pilot boats and crew transfer vessels (CTVs) for offshore wind farms. In addition, its group companies operate water buses, harbour cruise ships and car ferries. In 2013, the company launched a (non-battery type) hybrid tug.

### About e5 Lab Inc

e5 Lab Inc with HQ in Tokyo is a shipping systems provider

based on the electrification and digitization of ships. With the mission of sustainable domestic shipping, the lifeline of Japan, e5Lab Inc aims to create new added value by combining the latest technology and ideas, and solving problems of domestic shipping, thereby ensuring safe navigation. Currently the company is proceeding with a project aimed at completing an electric propulsion Tanker *EV Tanker* of the Asahi Tanker Co Ltd. in 2021.



The e5 electric tug powered by battery and hydrogen fuel cell.

Five values provided by e5 Lab are: electrification, environment, efficiency, economics, evolution.

## Grounding of container ship *Leda Maersk*

**Lower Otago Harbour 10 June 2018**

### New Zealand Transport Accident Investigation Commission report

The container ship *Leda Maersk*, with harbour pilot on board directing course and speed, grounded on a channel bank while entering Port Otago on 10 June 2018. Nobody was injured and damage to the ship was minor.

#### Lessons

Pilots using portable pilot units should be fully trained and proficient in their use, and there should be a robust system to ensure the equipment is accurate. The New Zealand TAIC report repeated lessons from a similar incident in the same harbour two years before, focussing on bridge resource management and correctly-configured navigation technology.

#### TAIC recommendations

Within the TAIC report the Commission recommended that:

- Maersk Line conduct a fleet wide review of its safety systems for navigation and pilotage. Maersk responded positively with enhanced training and scheduled refreshers and has a six-year programme to improve bridge resource management.

- Port Otago ensure its pilotage operations meet good industry practice and guidance provided in the NZ Port and Harbour Marine Safety Code.



*Leda Maersk* at dock in Port Chalmers - TAIC photo ©

#### Findings

In the published report the Commission found that:

- Neither the pilot nor the bridge team recognised that *Leda Maersk* was off track. They primarily used visual cues outside the ship, not the electronic navigation aids, all of which clearly showed the ship deviating from the planned track.
- Bridge resource management was below industry good practice and the bridge team did not follow all company policies and procedures for navigating in pilotage waters.
- At the time of the grounding, Port Otago's policies, procedures and compliance monitoring of pilotage operations did not meet good industry standards for safety management systems.

To download the Final NZ TAIC Report on this inquiry, readers are invited to visit:

[www.taic.org.nz/inquiry/mo-2018-203](http://www.taic.org.nz/inquiry/mo-2018-203)

## UNCTAD's Review of Maritime Transport 2019

**Maritime transport sails stormy seas against political and structural headwinds**

**Shaky outlook for seaborne trade as uncertainty over world economy remains**

**Environmental sustainability agenda steers maritime industry towards cleaner fuel sources**

Global maritime trade expanded at a slower pace in 2018, while volumes reached 11 billion tons reflecting

developments in the world economy and trade activity, international maritime trade lost momentum in 2018. Volumes expanded at 2.7% in 2018, down from 4.1% in 2017. The slowdown was broad based and affected nearly all maritime cargo segments. It undermined global port cargo-handling activities, and growth in containerized global port throughput decelerated to 4.7%, down from 6.7% in 2017.

UNCTAD is projecting 2.6% growth in 2019 and an annual average growth rate of 3.4% for the period 2019–2024. However, the outlook remains challenging, given the heightened uncertainty regarding trade policy and wide-



ranging downside risks clouding the horizon.

Said UNCTAD Secretary-General Mukhisa Kituyi: *‘The dip in maritime trade growth is a result of several trends including a weakening multilateral trading system and growing protectionism. It is a warning that national policies can have a negative impact on the maritime trade and development aspirations of all.’*

In 2018, world merchandise trade growth decelerated at an unexpected rate, and tariffs on trade between China and the United States of America escalated amid mounting trade tensions and a proliferation of national trade-restrictive measures.

Apart from trade policy crosscurrents, geopolitics and sanctions, environmental concerns, fuel economics and

tensions involving the Strait of Hormuz – a strategic maritime chokepoint – were in the headlines.

Other forces at work continued to slowly reshape the maritime transport landscape. A new normal, contrasting with the historical perspective, appears to be taking hold. This trend is characterized by overall moderate growth in the global economy and trade, a supply chain restructuring in favour of more regionalized trade flows, a continued rebalancing of the Chinese economy, a larger role of technology and services in value chains and logistics, intensified and more frequent natural disasters and climate-related disruptions, and an accelerated environmental sustainability agenda with an increased awareness of the impact of global warming.

A transition to the new normal calls for an improved understanding of the main issues at stake, better planning, and flexible and forward-looking-policies that can effectively anticipate change and enable appropriate response measures that take into account the heterogeneous nature of developing countries as a group and their varied local conditions and needs.

**A copy of the UNCTAD Review of Maritime Transport 2019 is available here:**

<http://tinyurl.com/vkwu3w2>

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## **Indian Register of Shipping (IRClass) opens office in the Netherlands Participates at Europort**

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To further strengthen its presence in Europe the Indian Register of Shipping (IRClass) has opened an office in the Netherlands.

The office is located in Leiden and has been operational for a while, being managed by IRClass’ London office.



**Mr PK Mishra IRClass’ Vice President and Regional Manager for the EU**

*‘Opening an office in the Netherlands is important for IRClass,’* said Mr PK Mishra IRClass’ Vice President and Regional Manager for the EU. He added: *‘especially as*

we have recently been working for some shipyards in the region. Having an office nearby is important to our clients as they know we will be able to respond quickly to their requirements.'

IRClass received recognition from the European Union in 2016 and in addition to the Netherlands, it has offices in the UK, Greece, and Turkey as well as representative offices in Malta, Cyprus and Bulgaria. It is also planning to open an office in Germany soon.

To capitalise on its growing business successes in Europe, IRClass exhibited at Europort this year which took place from 5-8 November in Rotterdam.

With Europort's strong emphasis on innovative technology and shipbuilding capabilities, IRClass considered this exhibition an ideal venue for it to showcase its classification services covering the maritime and offshore sectors.

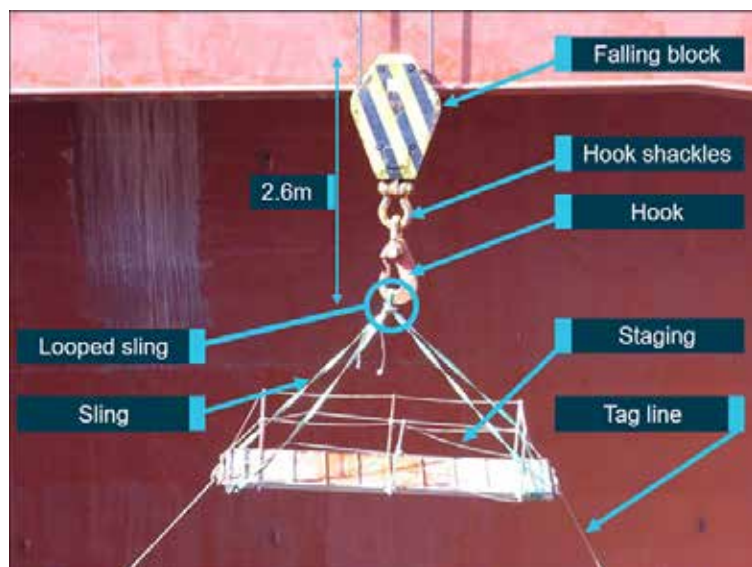
## ***Berge Daisetsu***

### **Makeshift platform leads to serious injury**

#### **ATSB report**

The Australian Transport Safety Bureau (ATSB) has released its final report into the serious injury on board *Berge Daisetsu*, in Portland, Victoria on 11 January 2018. Here the Bureau highlighted the importance of following procedures and applying best practice after two crewmen working aloft on a bulk carrier were seriously injured.

ATSB's investigation found that the equipment and machinery were not suitable for the task, making hazard identification difficult, and exposed the workers to increased risk.



**Illustration reproduced by kind courtesy of ATSB ©.**

On 11 January 2018, bulk carrier *Berge Daisetsu* was berthed in Portland, Victoria. A team of six crewmembers were cleaning and painting the cargo hold under the supervision of the chief mate. While the vessel did not have portable scaffolding equipment or approved suspended

access platforms for this task, the master discussed other options with the chief mate and bosun for how the upper sections of the hold could be tended to.

The decision was made to jury-rig a portable gangway into a work stage which could then be suspended from the cargo crane hook via slings. The ship's crewmembers had several discussions, made plans and completed a risk assessment in accordance with the safety management system requirements. However, the equipment and machinery use was contrary to company policy and procedures.

As two crewmembers worked aloft on the platform suspended from the cargo crane, the crane's block caught on the coaming and suddenly came free, sending an unexpected heavy shock into the platform. The two crewmembers were knocked over by the force of the sudden movement and landed heavily on their knees and lower body, causing serious injury.

#### **Findings**

At the ATSB the investigation found that the equipment and machinery were not suitable for the task, making hazard identification difficult, and exposed the workers to increased risk.

In the words of ATSB Director Transport Safety Stuart Macleod: *'This accident illustrates the consequence of deviating from accepted safety management procedures and industry best practice. The use of machinery and equipment contrary to its intended purpose, makes hazard identification difficult and exposes those directly involved to significantly increased risk.'*

The investigation also found that the fall arrest equipment used was incorrectly attached to the workers on the suspended platform. Consequently, had either of them fallen from the platform, the equipment would not have worked correctly, resulting in serious or fatal injuries.

#### **Action taken**

As a result of this serious incident, Berge Bulk Maritime has completed the supply of approved working aloft equipment to its geared bulk carriers and is progressing modification of vessel cranes for personnel lifting. Specific working aloft and bulk carrier safety training has been conducted and made mandatory for crewmembers every two years.

**ATSB's report may be read here:**

<http://tinyurl.com/tlqg96b>



## **Carnival Horizon**

### **Manhattan Cruise Terminal Pier 88 / 90**

#### **NTSB Report**

On the morning of 28 August 2018, the cruise ship *Carnival Horizon*, with a total of 6,361 people on board, was manoeuvring to berth No. 2 at Manhattan Cruise Terminal's Pier 88 in New York City, New York, when its bow struck the southwest corner of adjacent Pier 90. No one was injured and no pollution occurred, but Pier 90's walkway, roof parking garage, and facilities suffered extensive structural damage, and the ship sustained minor damage above the waterline, totalling about \$2.5 million in cumulative damage. Illustrated in the NTSB report is a screenshot from the *Carnival Horizon's* ECDIS, showing the vessel's track beginning at 0539 and ending at 0611.

#### **Probable Cause**

The National Transportation Safety Board determined that the probable cause of the *Carnival Horizon's* contact with Pier 90 was the ineffective interaction and communication between the master and the docking pilot who were manoeuvring the vessel, and the bridge team's ineffective oversight of the docking manoeuvre. Contributing was the placement of the third officer in a location without a view of the bow to monitor the close approach to Pier 90.

#### **Findings**

At the time of the contact there was clear visibility at 10 miles with winds SW at 6–8knots, an ebb current of 1.3knots.

*Carnival Horizon* was returning to Manhattan from an eight-night Eastern Caribbean cruise, and at 0318 on the morning of the accident, the ship arrived at the entrance to New York harbour. There, a pilot from the Sandy Hook Pilots Association boarded the *Carnival Horizon* for the inbound transit to the Manhattan Cruise Terminal. About 0329, after a master/pilot exchange about the ship and the inbound transit, the Sandy Hook pilot assumed navigational control of *Carnival Horizon*. The master remained on the bridge, with overall responsibility for the safe navigation of the vessel for the duration of the arrival in port.

There were no reported problems with *Carnival Horizon's* machinery, steering, thrusters or propulsion systems at the time of the accident.

#### **Data recorded**

The ship was equipped with an Interschalt VDR-G4e voyage data recorder. Investigators were able to extract data from the recorder, including bridge and engine control room audio, navigational information, bow thruster and azipod orders and response, and radar images, to analyse the events leading up to and during the accident.

During interviews with the master, the staff captain, and

the third officer, investigators inquired about the position of the forward lookout. The third officer stated that he went back and forth between the port-and starboard-side mooring platforms to estimate the distance from the bow to Pier 90 by line of sight.

When switching position between the port and starboard mooring platforms, he would have to walk about 15metres across the mooring deck. No crewmember was positioned on the tip of the bow to observe the clearing distances. The master and the staff captain both stated that, in the future, they would place a crewmember on the tip of the bow (one deck higher and farther forward than during the accident) for docking manoeuvres.

In a subsequent interview, the master told investigators that during the ship's next return trip to Pier 88 on 5 September 2018, a crewmember was placed at the tip of the bow. In fact, the ship's standard operating procedures were revised to include the addition of a crewmember on the bow specifically for manoeuvres where the bow is expected to come in close proximity of objects while manoeuvring in and out of port.



The New Jersey Maritime Pilot & Docking Pilot Commission conducted its own investigation and concluded that the Metro docking pilot failed to perform the appropriate pilot-to-pilot and master/pilot exchanges

Carnival's navigation policy requires closed-loop communication and a process called 'thinking aloud,' meaning 'sharing verbally a mental model of the current situation and future situations,' which allows for greater situational awareness of the bridge team, while closed-loop communications ensure that when an order or request is made, the person executing it understands and acknowledges that order. By repeating it back (acknowledging the order), the likelihood of miscommunication and misunderstanding is significantly reduced.

There was little audible evidence that the thinking-aloud concept was in practice during this accident sequence. While the pilot was issuing bow thruster and tug orders, the master used the stern azipods with the intention to bring the ship closer to Pier 90, but did not verbalize his actions to the pilot or bridge team.

#### **BRM**

The ship's bridge team could have been more effectively engaged in the ship's manoeuvring to the dock. The Metro docking pilot was conning the vessel, and the master was

focusing on the starboard side, concerned about the ship being set onto the corner of Pier88 due to the ebb current.

Although Carnival's navigation policy and task assignments require monitoring of the person conning the vessel, cross-checking of the ship's position, and predicting track and headway, there was no evidence that any bridge team member probed or alerted the master and pilot of the headway of the vessel toward the corner of Pier90. For example, the staff captain was responsible for overseeing the entire bridge operation and monitoring the master and the pilot, yet he never voiced concern about the vessel's speed of approach toward Pier 90 before impact.



Screenshot from the Carnival Horizon's ECDIS, showing the vessel's track beginning at 0539 and ending at 0611 on 28 August 2018.

Photo: NTSB ©.

The NTSB Report is available here:  
<http://tinyurl.com/w5z6jka>

## ICS OCIMF polar guide

### New joint Guidelines from ICS and OCIMF

#### To improve safety in polar waters

Maritime trade between the Arctic and the rest of the world is expected to expand and an increasing number of ships are now undertaking voyages in polar waters. Technical developments in ship design and equipment continue to facilitate more and more ship operations in remote polar areas, despite challenging and unpredictable sea conditions and weather.

*The International Code for Ships Operating in Polar Waters* (Polar Code, see here <http://tinyurl.com/vwfwptz>), adopted by the IMO, requires shipping companies intending to operate in polar waters to develop a Polar Water Operational Manual (PWOM) in order for their ships to be issued with a Polar Ship Certificate.

New joint guidelines from the International Chamber of Shipping (ICS) and the Oil Companies International Marine Forum (OCIMF) aim to support shipping companies by

providing advice on how to develop a PWOM that best suits their needs.

Appendix II of the IMO Polar Code already provides a model PWOM.

#### Additional guidance necessary

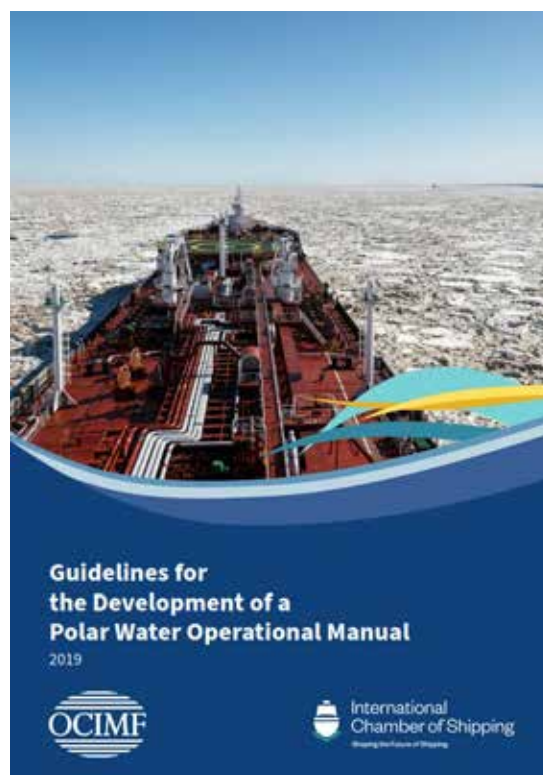
The ICS and the OCIMF have recognised that additional guidance is necessary to help shipping companies develop a quality PWOM that is truly fit for purpose.

In extreme conditions, and especially in ice, the way in which a ship is operated is critical for safety and environmental protection.

The purpose of the new Guidelines is to provide the means for shipping companies and Masters to develop a comprehensive PWOM tailored to the needs of their individual ships, taking into account the environmental hazards and the nature of their operations.

*Guidelines for the Development of a Polar Water Operational Manual* has been prepared by expert contributors with much experience of operating ships in polar waters, as well as knowledge of the challenges faced by seafarers.

Topics addressed include: identifying hazards; understanding operational limitations; updating procedures; upgrading equipment and systems; understanding relevant legislation and ensuring that the results of assessments are fully addressed in the PWOM.



#### How to obtain the Guidelines

Available free of charge, the ICS/OCIMF Guidelines can be downloaded from the ICS\* and OCIMF\*\* websites and at the Arctic Shipping Best Practice Information Forum (ASBPIF) web portal.

\*See here: <http://tinyurl.com/ras24lq>

\*\*And here: <http://tinyurl.com/grmxhag>

### Investigation of marine accident at Hustadvika, Møre og Romsdal county

#### Norway

The Accident Investigation Board Norway (AIBN) initiated a safety investigation after the incident with the cruise ship *Viking Sky*'s engine failure at Hustadvika on 23 March this year. It is understood that the US and the UK are participating in the investigation as substantially interested states.

#### Interim report

On 13 November 2019 AIBN issued an interim report with a simplified narrative and initial findings from the incident.

The interim report is available by a link to be here: <http://tinyurl.com/uq2gkh7>

This report also includes action taken by the company. Further, the AIBN support the Norwegian Maritime Administration's recommendations issued shortly after the incident.

This investigation will continue with analysis of the sequence of events and systematise and analyse factual information. Areas of further investigation are described in the interim report.

#### In brief

On the afternoon of 23 March 2019, the cruise vessel *Viking Sky* experienced a black-out and loss of propulsion in gale to storm force conditions in the Hustadvika area of the Norwegian Coast. The vessel's master immediately sent out a Mayday as the ship drifted towards shore. On receipt of the Mayday, Southern Norway Joint Rescue Coordination Centre (JRCC) launched a major rescue operation and started scrambling resources, including helicopters, on a large scale. The local Police reported 479 evacuated passengers had been received at the emergency centre ashore over 16 hours.

*Viking Sky* was owned by Viking Ocean Cruises with technical management provided by Wilhelmsen Ship Management. It was the third in the Viking Star class of cruise vessels, was classed by Lloyd's Register and was registered with the Norwegian International Ship registry (NIS). The vessel had been built at Fincantieri in Italy and was delivered in January 2017.

*Viking Sky* was manned by 458 crew and was carrying 915 passengers. Most of the passengers were US (602) and UK (197) citizens, followed by Australians (69) and other nations (47).

The Admiralty Sailing directions state:

*Area 11, Hustadvika (63°00.00'N 7°00.00'E) is a notoriously dangerous area; the coast is completely exposed to the weather and extensive shoals lie offshore. Strong winds from SW to NW raise a large steep swell with hollow breaking seas, especially during the out-going tidal stream. These conditions are likely to be particularly severe in the area of Budadjupet between Bjørnsund (62°53.75'N 6°48.96'E) and Kolbeinsflua, 5 miles NNE. Breaking surf is reported to occur throughout the whole area.*

#### Initial findings

The lubricating oil sump tanks of all the diesel generators were maintained at 28%–40% capacity. MAN's recommendation was to maintain them at 68%–75% capacity.

The diesel generators shut down as a result of the loss of lubricating oil suction due to low sump tank levels, combined with pitching and rolling.

All three operational diesel generators shut down within 19 minutes of each other, causing blackout and loss of propulsion.

AIBN estimate that *Viking Sky* came within a ship's length of grounding, having passed over or in immediate proximity to 10 m shoals, before propulsion could be re-established.

#### Action taken

In addition to action taken by the vessel's managers on 27 March 2019 the Norwegian Maritime Authority issued a Safety Message on risk assessment of critical systems which asked: '*All shipping companies to take the necessary precautions to ensure the supply of lubricating oil to engines and other critical systems under expected weather conditions. This should be done in collaboration with the engine supplier and included as part of the ship's risk assessments in the safety management system.*'

#### Recommendation

Safety advice issued by the Norwegian Maritime Authority is supported by the ongoing safety investigation, with the following recommendation:

***All vessel owners and operators are recommended to ensure that engine lubricating oil tank levels are maintained in accordance with engine manufacturer's instructions and topped up in the event of poor weather being forecast.***

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## Introducing ShipMoney Cares

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### A new partnership between ISWAN and ShipMoney providing relief to seafarers in need

On 18 November ShipMoney announced the initiative at the Crew Connect conference in Manila available to seafarers and their families: including parents, spouses, children, and siblings, who can demonstrate that they or their family are experiencing some form of hardship that impacts on their livelihood or income.

It is understood that ShipMoney Cares will be managed by ISWAN, the International Seafarers' Welfare and Assistance Network. This arrangement is designed to provide one-time financial grants to seafarers in need, which could include medical or educational support. ShipMoney along with its strategic remittance partners will make a sizable annual donation to the programme. There is a maximum grant of \$500 and seafarers can apply once a year, it is reported.

Stuart Ostrow, President of ShipMoney stated: *'We are very excited about this initiative. As a company, it's very important that we give back to the community that supports us. It's ingrained in our ethos and as one of our core values states "It's always about the crew". They work for our clients and we work for them. Together with ISWAN, we will be able to make a real difference in the lives of seafarers who need a helping hand. Once we get this rolling, we will be engaging with our clients, vendors, strategic partners and seafarers to participate alongside us.'*

Caitlin Vaughan, Project Manager at ISWAN, said: *'This initiative will provide a welcome safety net for seafarers in the Philippines. It differs from our other welfare funds because it is for basic individual grants of \$50 - \$500. Seafarers, or their family members, in need of an urgent small grant will receive a ShipMoney prepaid card allowing autonomy as to how the money is used to best alleviate their hardship.'*

### About ShipMoney

Maritime Payment Solutions, LLC (ShipMoney) is an industry-leading provider of payment methods for maritime companies throughout the world facilitating crew payroll payments, international corporate remittances, money transfers, mobile top-ups, payroll advances, onboard expenses and all other forms of shoreside and onboard payments.

The founder of ShipMoney, Stuart Ostrow, was directly responsible for, and instrumental in the initial development of prepaid payment programmes for the cruise line industry. ShipMoney is the second generation of that endeavour. It is an operating subsidiary of Global Technology Partners, LLC. GTP is said to be one of the largest international prepaid payment processors in the world providing services and programmes in over 30 countries.

### About ISWAN

The International Seafarers' Welfare and Assistance Network (ISWAN) is a membership organisation which works to promote and support the welfare of seafarers all over the world.

ISWAN's free, 24-hour, multilingual helpline, SeafarerHelp, is one of the direct welfare services it provides to seafarers. Others include relief funds for seafarers and their family members in need and a range of health information resources.

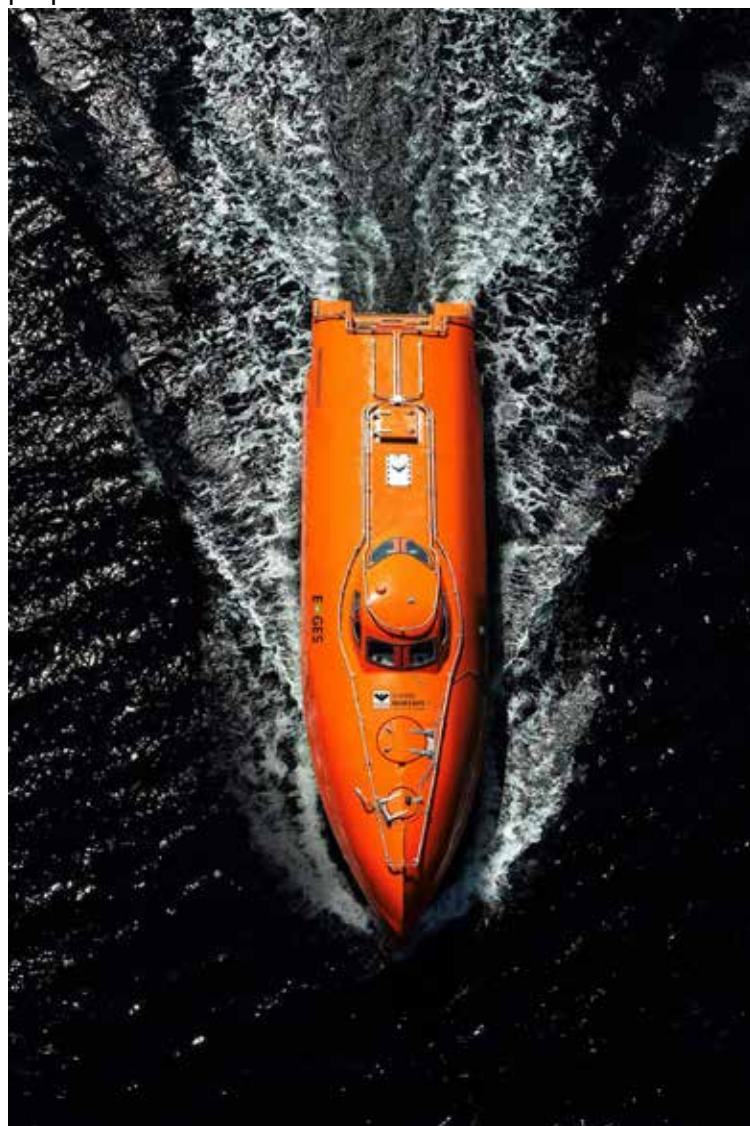
The Network works with companies, unions, governments, welfare organisations and ports for the implementation of the ILO Maritime Labour Convention, 2006, and supports those who provide welfare services in port and on ships.

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## VIKING's new electric lifeboats for the Njord A platform

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It was reported early in December that VIKING has secured a contract from Kværner AS to deliver three VIKING Norsafe E-GES 52 electric free-fall lifeboats and compatible davits, in a significant advance for electric propulsion.



This contract, part of the upgrade of Equinor's Njord A platform in the Norwegian Sea, initially called for diesel-

powered lifeboats but has been amended to specify VIKING Norsafe E-GES 52 units based on performance, assured availability and lower maintenance requirements.

Dag Songedal, MD VIKING Norsafe Boats & Davits commented: *'Developing this ground-breaking electric freefall lifeboat has been a great team effort and I would like to congratulate our designers, engineers and partners in turning this concept into reality.'*



*The VIKING Norsafe E-GES electric lifeboat.  
Photo kindly provided by VIKING Norsafe ©.*

The electric lifeboat is powered by 3x25kWh batteries contained in robust, waterproof cases with their own fire extinguishing systems and an electric motor complete with gearbox and ventilation system.

Songedal said VIKING is delighted to work in partnership with Equinor in a step forward for battery power that will also result in enhanced maritime safety. The VIKING Norsafe E-GES performs the launch phase of an evacuation at a higher sprint speed than lifeboats featuring diesel propulsion, thereby transporting evacuees more quickly and safely away from the platform in the case of an emergency, he explained.

Significant long-term cost savings achieved through reduced maintenance and remote monitoring capabilities are reported as valuable for offshore operators. Other benefits include better onboard comfort due to the absence of the exhaust fumes, heat, noise and vibration from diesel engines.

Built in compliance with DNV GL-ST-E406, the VIKING Norsafe E-GES development is in the final test phase at VIKING's direct ocean-access premises in Arendal, Norway, with full production ready in time to meet the agreed delivery date to the Njord A platform.

## **New DNV GL class notation helps to boost LPG as ship fuel**

As the maritime industry looks to reduce emissions to air and to work towards the IMO's greenhouse gas reduction strategy, alternative fuels are coming to the fore.

It was reported from the Marintec China trade fair in Shanghai on 3 December that classification society DNV GL recognizes that, with the exception of LNG, international regulations for such fuels are absent. DNV GL have developed new class rules and a class notation Gas Fuelled LPG for using liquefied petroleum gas (LPG) as fuel in anticipation of growing industry interest.

Except for liquefied natural gas, currently all gases and low-flashpoint fuels are subject to what is known as the alternative design approach, which means that they may be used if their safety, reliability and dependability of the systems can be shown to be equivalent to those achieved by new and comparable conventionally fuelled main and auxiliary machinery. This can be a time-consuming and costly process and may impede the uptake and expansion of lower emission alternative fuels, it is understood.

Geir Dugstad, Director of Ship Classification & Technical Director at DNV GL – Maritime commented: *'With the new rules and class notation, we want to offer owners interested in LPG a straightforward path towards compliance with the alternative design approach mandated by the IGF Code,'* said. *"As the fuel environment within the maritime industry becomes more diverse, it is essential that we continue to broaden the enabling rules and regulation to support these new choices.'*



*In 2019, BW LPG announced plans to retrofit several vessels with LPG-propelled dual-fuel engines.*

*Image kindly provided by BW LPG ©*

### **DNV GL's rules**

The rules and notation are based on DNV GL's rules for ships using LNG as fuel but account for the differences in properties and phases between LPG and LNG.

The Gas Fuelled LPG notation covers internal combustion engines, boilers and gas turbines for both gas-only and dual-fuel operations. It also includes requirements for the ship's fuel supply, considering all aspects of the installation from the bunkering connection up to and including the LPG consumers (main and auxiliary engines, boilers and so forth).

LPG as a fuel can lower a vessel's emissions to air, both in terms of greenhouse gases and other pollutants. It virtually eliminates sulphur emissions and reduces GHG output by approximately 17% compared to burning HFO or MGO. LPG could also act as a bridging fuel to ammonia, as the materials used for LPG tanks and systems is, in most cases, suitable for ammonia. With advanced planning, the adjustments needed for a switch to ammonia from LPG could also be minimized, DNV GL reported.

### To learn more

Readers are invited to learn more about LPG as ship fuel in the classification society's online journal *Maritime Impact* portal to be found here: [www.dnvgl.com/MI](http://www.dnvgl.com/MI)

Also in *Maritime Impact* there is an interview with Pontus Berg, EVP Technical & Operations at BW LNG on the company's plans to retrofit four vessels with LPG-propelled dual-fuel engines. This can be found here: <http://tinyurl.com/yx5lr6qx>

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## Gas-fuelled 25,000 TEU containership design

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### DNV GL awards Hudong-Zhonghua AiP certificate

At the Marintec China trade fair in Shanghai on 5 December DNV GL awarded an Approval in Principle (AiP) certificate to Hudong-Zhonghua Shipbuilding for its new gas-fuelled 25000 TEU Ultra Large Container Ship (ULCS) design at the CSSC booth. The AiP is for a design that would be the largest containership in the world.

Knut Ørbeck-Nilssen, CEO DNV GL – Maritime, presented the certificate to Chen Jun, President of Hudong-Zhonghua, at the CSSC booth in Shanghai. The ceremony was witnessed by Chen Jianliang, Chairman of Hudong-Zhonghua, and Norbert Kray, Regional Manager of DNV GL – Maritime for Greater China.

Kray said: *'We are very proud to cooperate with Hudong-Zhonghua on this project. Hudong-Zhonghua has been a leading player in pushing the ship design envelope forward, especially for large vessels. In addition, the use of LNG is a sign of the continuing momentum for the fuel, as shipping transitions to a lower emission, lower carbon future. We look forward to supporting Hudong-Zhonghua on this project and its successful realization with ground breaking new vessels.'*

DNV GL and Hudong-Zhonghua have cooperated on

many innovative projects, including on the Hapag Lloyd vessel *Sajir*, the world's first LNG conversion of a large container ship.

A recent strategic cooperation focussed on driving new developments in shipbuilding in the gas carrier segment. In addition, in 2015, Hudong-Zhonghua developed a B type tank design and mock-up and obtained a GASA certification from DNV GL. DNV GL is also providing support on the application of the Type B tank in new containership designs.

### About Hudong-Zhonghua Shipbuilding

Hudong-Zhonghua Shipbuilding (Group) Co., Ltd. is one of the major shipbuilding enterprises under the flag of China State Shipbuilding Corporation (CSSC). The Company consists of HQ in Pudong of Shanghai, and three shipyards: the main yard; Shanghai Shipyard Co. Ltd., and Shanghai Jiangnan-Changxing Shipbuilding Co., Ltd., being a comprehensive industrial conglomerate specialized in building ships, offshore engineering projects and non-ship products.

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## New UNCTAD report

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### International trade and the global economy cooling

After a continued surge last year, global trade and economic output have stagnated this year, according to UNCTAD's studies published on 10 December in the 2019 Handbook of Statistics. See here: <http://tinyurl.com/v9vn32j>

Merchandise trade is predicted to drop by 2.4% to US\$19 trillion, after significant growth rates in 2018 (9.7%) and 2017 (10.7%). Trade in services is predicted to only increase by 2.7% to \$6 trillion, a considerable deceleration from 7.7% in 2018 and 7.9% in 2017.

Real global economic output (gross domestic product) is now expected to grow by 2.3% this year, 0.7 percentage points less than last year.

In the words of Steve MacFeely, UNCTAD's chief statistician: *'We see consistency across a range of indicators – the global economy is slowing.'*

He added: *'The handbook is designed to supply a broad range of users, from all regions of the world and working in different domains, be they policymakers, businesses, researchers, journalists or the person on the street who is interested in global economic and social affairs, with high-quality, impartial and easily readable information on latest trends and patterns.'*

Last year, world merchandise trade increased by 2.3% in volume terms. The 9.7% increase in values could to a large extent be attributed to changes in prices. For example, fuel prices recorded substantial growth, year-on-year, during all the months of 2018, a trend that was reversed at the beginning of 2019, as UNCTAD's free market commodity

price index shows.

Of particular relevance to us at IFSMA are the sections on **shipping** and **ports**. See here:

## Shipping

Maritime transport lost momentum in 2018. World seaborne trade volumes rose by only 2.7%, compared with 4.7% in 2017, and port container traffic grew by 4.7%, two percentage points less than the year before.

## Ports

In 2018, 793 million TEUs of containers were handled in ports worldwide. World container port throughput grew by 4.7% between 2017 and 2018. Thus some momentum was lost – in tandem with world seaborne trade after a year of significant growth (+6.7%) from 2016 to 2017.

The number of port calls and the time spent in ports are derived from the fusion of automatic identification system data with port mapping intelligence, covering ships of 1000 gt and above.

## Further material

In parallel to the printed document, UNCTAD has released a web-ready version of the report and updated factsheets of the main themes covered by the report. See also here: <https://unctadstat.unctad.org/EN/>

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## European Bank for Reconstruction and Development (EBRD)\* Privatisation of key port on the Sea of Marmara, Turkey

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**Investments to improve efficiency and expand port capacity**

**Modernisation will help shift cargo from roads to shipping and railway**



Turkey's maritime industry is receiving a boost thanks to a new loan from the London-based EBRD of US\$ 17.5 million to the operator of Tekirdag port on the Sea of Marmara. ICBC Turkey is providing an equal loan.

Ceyport Tekirdag Uluslararası Liman İşletmeciliği is

operating the port under a 36-year concession granted by the Turkish privatisation authority last year (2018).

It is understood that the EBRD loan will partially finance the acquisition of operating rights, the modernisation of the port and the expansion of its capacity, to which the company has committed under the concession agreement.

Tekirdag port handles general cargo, dry and liquid bulk, containers and ro-ro vessels and serves industrial and agricultural production and trade in the region.

It is the only port in the western Marmara Sea that provides both ro-ro and rail-ferry services to the eastern Marmara region. Enhanced port infrastructure will play a key role in directing a larger share of cargo from roads towards railway and shipping lines, which are more environmentally friendly alternatives.

The port operator is a subsidiary of Cey Group, one of the largest logistics groups in Turkey, which also includes Ceynak Lojistik and the operators of Samsun port and Mesbas port located in the Mersin Free Zone.

The EBRD is a major investor in Turkey. Since 2009 it has invested €11.5 billion in various sectors of the Turkish economy, with almost all investment made in the private sector. More than half of its investment in Turkey promotes sustainability and the rational use of energy.

## Editor's note:

**The assistance of EBRD in preparation of this article is much appreciated**

Illustration reproduced by kind courtesy of <http://www.ceyporrttekirdag.com.tr/tr/galeri/foto-galeri>

\*See: <https://www.ebrd.com/home>

*The EBRD was established to help build a new, post-Cold War era in Central and Eastern Europe. It has since played*

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*an historic role and gained unique expertise in fostering change in the region – and beyond – investing more than €130 billion in a total of over 5,200 projects.*

## Stink bug warning to importers

### New Zealand and Australia

Biosecurity New Zealand has sent a stark message to shippers, agents, and importers that imported cargo must meet new rules intended to keep brown marmorated stink bugs (BMSB) out of New Zealand.

In the words of Biosecurity New Zealand spokesperson Paul Hallett: *'The importing industry needs to be aware that high-risk cargo that hasn't been treated before arrival will not be allowed to come ashore in most instances. The aim is to keep out a highly invasive pest that could devastate New Zealand's horticulture industry if it established here.'*

Biosecurity New Zealand formally issued new import rules in July 2019. They require off-shore treatment of imported vehicles, machinery, and parts from 33 identified risk countries, and all sea containers from Italy during the stink bug season which runs from September to April.

In the past, only uncontainerised vehicle cargo from risk countries required treatment before arriving in New Zealand.

Biosecurity New Zealand is concerned that some importers and shippers may be unaware of the new rules.

Hallett added: *'We can give advice on approved off-shore treatment providers where necessary. Industry should also be aware that sensitive goods that would be damaged by fumigation or heat treatment can be managed by on-arrival inspection in some cases.'*

He said that Biosecurity New Zealand will work closely with industry to address any operational concerns about the changes. He is optimistic the rules will reduce clearance delays for cargo this season and added: *'There will be a lot less treatment required onshore, which should speed up the time it takes to get cargo released once it arrives in New Zealand.'*

Similar to previous years, this season will see increased surveillance and inspection of arriving vessels and cargo from countries with established stink bug populations.

To conclude Hallett said: *'Ultimately, if officers determine a ship is infested with stink bug, it could be prevented from discharging its cargo and directed to leave New Zealand.'*

Last season, Biosecurity New Zealand turned away four contaminated vessels from New Zealand waters and intercepted 151 live stink bugs at the border.

To check the new rules Members are invited to see here: <http://tinyurl.com/vnrmntr>

Any questions may be addressed here: [BMSB@mpi.govt.nz](mailto:BMSB@mpi.govt.nz)

### Australia

The Australian Department of Agriculture has also highlighted some of the activities ahead of the BMSB season for 2019-2020.

All roll-on-roll-off / PCTC vessels will be subject to thorough inspection.

There will be mandatory treatment for BMSB target of high risk goods/cargoes.

Goods exported from one of the target risk countries due to arrive in Australia before 1 May 2020 will be subject to BMSB inspections.



*Illustration kindly provided by Ministry for Primary Industries New Zealand ©*

Cargoes as target risk goods will be subjected to random inspections onshore.

See here <http://tinyurl.com/uc5onea> and for seasonal measures see here: <http://tinyurl.com/wm9gjvl>

The Australian Department of Agriculture highlighted some of the activities ahead of the BMSB season for 2019-2020.

- All roll-on-roll-off / PCTC vessels will be subject to thorough inspection.
- Mandatory treatment for BMSB target high risk goods/cargoes.



- Goods exported from one of the target risk countries on or after 1 September 2019 and that arrive in Australia before 1 May 2020 will be subject to BMSB inspections.
- Cargoes as target risk goods will be subjected to random inspections onshore.

### **Vessel operators face biosecurity fines, ETA reporting**

Biosecurity New Zealand officers are now able to fine commercial and recreational vessel operators for failure to report ETAs.

Since 2 September 2019 new offences have been in force allowing officers to issue infringement notices to operators that do not provide notice of a vessel's arrival in New Zealand.

Vessels that do not respond to an official request to declare what they have done to comply with risk management requirements will also face a fine.

In the words of Biosecurity New Zealand spokesperson Stu Rawnsley: *'Ultimately, we want masters to supply the required information to us as early as possible. This is to ensure we can target our efforts at vessels that pose the greatest biosecurity risk to New Zealand.'*

Penalties for the offences are \$400 for an individual and \$800 for a corporation.

Rawnsley added: *'The fines are aimed at lower-level offences that would have required prosecution to enforce in the past. We still have the option to prosecute if necessary. The infringement option gives us an additional tool to encourage vessels to take their biosecurity responsibilities seriously.'*

*'We are also keen to do what we can to encourage voluntary compliance among vessel operators. We want to send a strong message about the importance of biosecurity across all vessel operators and the entire cargo industry'*

The new infringement notices follow introduction in April 2019 of similar fines for containment and transitional facilities for actions that could allow invasive pests and diseases into New Zealand.

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## **€140 million EIB backing for Port of Piraeus transformation**

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**Prime Minister welcomes largest ever EIB port investment in Greece**

**Expanding principal port in Greece will create jobs and support growth nationwide**

**Scheme to expand and upgrade cruise, container and car terminal, develop new port logistics centre and improve infrastructure and equipment of the ship repair zone**

In mid-November the European Investment Bank (EIB) formally agreed to provide €140 million to support expansion and upgrading of the Port of Piraeus, the principal port of Greece. The largest ever loan for port investment in the country by Europe's long-term lending institution, will support the implementation of part of investments at the Port of Piraeus in a total investment plan of more than €600 million.

The 20-year loan was signed in Athens in the presence of Prime Minister of Greece Kyriakos Mitsotakis, Chinese President Xi Jinping and Xu Lirong, Chairman of COSCO Shipping Corporation, by Andrew McDowell, European Investment Bank Vice President, the Chairman of Piraeus Port Authority SA Yu Zenggang and Athanasios Liagkos, Board Member of the Piraeus Port Authority SA

Prime Minister Kyriakos Mitsotakis said: *'Greece welcomes the European Investment Bank's support for transformation at the Port of Piraeus. The EIB has been supporting strategic infrastructure across Greece for more than 50 years and has unique technical and financial expertise financing leading ports across Europe and worldwide.'*

Andrew McDowell, European Investment Bank Vice President added: *'Redevelopment of the Port of Piraeus will strengthen connections between Greece and the rest of the world and ensure that Greece benefits from a world-class maritime logistics hub. The European Investment Bank is pleased to provide a 20-year long-term loan for the principal maritime hub of Greece and the leading port in the Mediterranean. EIB support reflects the economic benefits to be unlocked in the coming years and the importance of ensuring competitive transport links for Greece and South Eastern Europe.'*

In the words of Yu Zenggang, Chairman of Piraeus Port Authority SA: *'Recent investment has shown how investment at the Port of Piraeus can support economic growth and benefit Greece. Confirmation of the European Investment Bank's support follows detailed due diligence and reflects the broad benefits to be unlocked by the largest investment programme in the history of the Port of Piraeus.'*

The first €100 million tranche of the EIB loan was signed on 11 November and the remainder agreed as project construction progresses.

The EIB loan is guaranteed by the Export-Import Bank of China (CEXIM), and the guarantee facility contract between PPA and CEXIM was also signed the same day in the presence of CEXIM Chairwoman Ms HU Xiaolian and Mr Athanasios Liagkos from PPA.

**Improving communications for millions of people across Europe**

New investment at the Port of Piraeus includes development of a new port logistics centre, construction of

a new cruise passenger handling facility, expansion of car shipping facilities, an improved ship repair area and the upgrade of the container terminal.



Illustrations EIB / Port of Piraeus ©

### EIB loan complements Greek and European funds

The long-term EIB loan will complement other investments in the Port currently under consideration by the European Commission and the Greek government plus Technical Assistance work undertaken by JASPERS\*.

### Port of Piraeus investment to support jobs and growth across Greece

Improvements to the Port of Piraeus are expected to support economic growth and job creation across the country, reduce transport costs and enable increased cruise tourism and shipping.

The Port of Piraeus is the busiest in the Mediterranean and the world's 32<sup>nd</sup> largest port in terms of container cargo traffic.

**This article is based on material kindly provided by the EIB and the Port of Piraeus.**

\*Joint Assistance to Support Projects in European Regions: [www.jaspers-europa-info.org/](http://www.jaspers-europa-info.org/)

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## Hollandia Seaways

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### New and largest DFDS ro-ro ship now trading Gothenburg and Ghent, North Sea Port

DFDS is now using the new ro-ro ship *Hollandia Seaways* on the route between North Sea Port Ghent and Gothenburg in Sweden.

On 5 December, DFDS's largest ship was officially named at the Mercatordok Multimodal Terminal in Ghent, North Sea Port.

The purpose of North Sea Port is to manage, operate and develop the 60 kilometres long cross-border port area from the Dutch port of Vlissingen to Ghent in Flanders. Within this framework, it intends to strengthen the position of the port and industrial complex in the area, both in a national and in an international perspective. North Sea Port employs 250 staff.

*Hollandia Seaways* can carry 450 trailers, representing a cargo capacity of 6,700 line metres. It has a length overall of 237.4 metres. With an extra floor for trailers, this new ship will immediately catch the eye when in the lock in Terneuzen or on the Ghent-Terneuzen Canal. The vessel is said to be not only larger than the three DFDS ships which currently sail between Ghent and Gothenburg six times a week, it will be by far the largest ship in the entire DFDS fleet. This larger vessel will take the place of one of the three existing ships on the route. As a result, capacity will increase by some 600 trailers per week.



### More trailers loaded and unloaded in the same time

*Hollandia Seaways* features a unique stern ramp system: it has three independent stern ramps which allow trailers to be loaded and unloaded at the same time, significantly shortening time in port. So even though this ship is much larger, the loading and unloading time remains eight hours but now for 450 trailers instead of 290. Mooring infrastructure and capacity of the gates at the terminal have been adapted for this purpose.

### Scrubbers and shore power

Due to the vessel's large cargo capacity, energy consumption per transported trailer will decrease significantly, it is reported. The ferry is also equipped with a system that scrubs the exhaust gases in order to reduce sulphur oxide emissions. In addition, the ship can be connected to shore power in the port.

### Huge freight ferries built in China

Danish shipping company DFDS is preparing for future growth by having six very large freight ro-ro ferries built at the Jinling Shipyard in China. The first two ships were delivered during the course of 2019 and have been taken into service between Turkey and the EU to meet the growing demand for shipping capacity from logistics companies. *Hollandia Seaways* is the third ship in this series.

## Explosion and fire on board the chemical tanker *Stolt Groenland*

### UK MAIB assistance to the Cayman Islands Maritime Authority

#### Interim report issued

#### An appeal for information on the carriage of styrene monomer

On 28 September 2019 the Maritime Authority of the Cayman Islands requested, in accordance with the IMO Casualty Investigation Code, that the UK Marine Accident Investigation Branch (MAIB) investigate an explosion and fire on board the chemical tanker *Stolt Groenland* which occurred that day in Ulsan, Republic of Korea.



#### Narrative

On 17 August 2019, *Stolt Groenland*, a Cayman Islands-registered chemical/ products tanker operated by Stolt Tankers BV sailed from Houston, USA for passage to Kobe, Japan via the Panama Canal. The tanker was carrying 20 different chemical cargoes in 37 of its 39 cargo tanks.

After discharging four cargo tanks off Kobe on 23 September and six cargo tanks at the Odfjell Terminal in Ulsan, Republic of Korea, between 26 and 27 September, *Stolt Groenland* moored alongside the Yeompo Quay in Ulsan. Two further cargo tanks were then discharged via a ship-to-ship transfer with *Stolt Voyager*. On completion, *Stolt Voyager* moored ahead of *Stolt Groenland*.

At about 0600 on 28 September, the Singapore-registered chemical/ products tanker *Bow Dalian* secured alongside *Stolt Groenland*'s port side. The purging of *Bow Dalian*'s cargo tanks with nitrogen supplied from shoreside vehicles was then commenced in readiness for a ship-to-ship cargo transfer with *Stolt Groenland*.

At 1043, vapour started to release from the pressure vacuum valve for *Stolt Groenland*'s No 9 starboard (9S) cargo tank, which contained styrene monomer. About two minutes later, a high level alarm indicated that the level in 9S cargo tank had reached 95%, soon followed by a high-

level alarm indicating that the level had increased to 98%.

By now, *Stolt Groenland*'s on-watch deck officer and chief officer had made their way to the cargo control room and they saw from the cargo monitoring system that the pressure inside 9S cargo tank was rapidly rising. Suddenly, at 1050, two explosions were seen and heard in rapid succession in way of the tanker's cargo manifold. The resulting fireball passed very close to a road bridge above the quay.

*Stolt Groenland*'s and *Bow Dalian*'s crews immediately operated and directed foam monitors towards the respective cargo manifolds. *Bow Dalian*'s cargo manifold drench system was also activated.

The fire on board *Stolt Groenland* was very intense and large plumes of thick black smoke were emitted. *Stolt Groenland*'s crew evacuated using the free-fall lifeboat at the stern while *Bow Dalian*'s crew were taken off by Korean Coastguard boats that had arrived at the scene. Damage in way of *Stolt Groenland*'s cargo manifold and accommodation block was extensive and there were injuries among ship's staff and those on shore.

#### Interim report

At the time of writing the investigation is ongoing and MAIB have produced an interim report to highlight issues to chemical tanker owners/operators

The seven-page interim report is available here: <http://tinyurl.com/t3qyuvu>

#### An appeal for information

**In the interim report MAIB requested information from ship owners, ship and terminal operators, or individuals regarding any accident or 'near-misses' involving the carriage of styrene monomer on board ships, including any actions subsequently taken.**

**MAIB has requested that if any persons have any relevant information, this should be should be addressed to the *Stolt Groenland* investigation team at [maib@dft.gov.uk](mailto:maib@dft.gov.uk) or, alternatively, may be communicated by telephone on +44 (0)23 8039 5500.**

#### Final report

A full report will be published after the completion of the MAIB investigation.

#### Acknowledgement

**We are most grateful to MAIB for approval to publish the details above taken from the seven-page *Stolt Groenland* interim report**

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## VIKING to supply HydroPen container firefighting system for V.Ships

Container firefighting across the V.Ships Hamburg container ship fleet has been entrusted to the HydroPen™ system, after VIKING Life-Saving Equipment secured a contract to protect over 40 ships against one of the industry's fastest growing safety hazards.

The alarming rise in the number of container fires has brought calls for urgent action from the International Union of Marine Insurance (IUMI), with stakeholders urged to encourage IMO to strengthen fire protection and review firefighting equipment onboard existing ships.

Fighting a fire high up in the stack from the deck is often ineffective, with containers dowsed on the outside while materials inside continue to burn. As ship sizes have increased, so have stack heights.



*The VIKING HydroPen device.*

### A revolutionary answer to a serious industry threat

The HydroPen™ system is based on an innovative drilling and spraying machine that allows deck crew to fight fires successfully high up in the stack. Developed by Rosenby Engineering and distributed exclusively by VIKING, the HydroPen unit is attached to existing ship hoses and raised by a single crew member using a telescopic lift. Powered by water pressure alone, the HydroPen drills through the container door before switching to spray mode to extinguish the fire with water, foam or CO<sub>2</sub>.

In the words of Franck Kayser, Group Managing Director, V.Ships Ship Management: *'For V.Ships, new technologies that support safety excellence are always welcome, while keeping customers ahead of the competition through innovation is one of our core values. HydroPen is an easy to use but ground-breaking system that addresses a specific industry concern. Its adoption fleetwide aligns with*

*our 'safety first' commitment.'*

VIKING will deliver 88 HydroPen systems to 45 V.Ships Hamburg container ships by February 2020. One unit will be positioned astern and the other towards the bow to enable rapid response.



*The VIKING HydroPen device in place.*

Added Lasse Boesen, Product Manager Trade, VIKING: *'Securing an order of this magnitude from one of the leading ship management companies in the world is a major vindication of the work behind bringing the HydroPen system to market. Several of the most recent container fires have occurred on very large ships. These ships can only call at a limited number of ports, making it critical that container fires are dealt with on board. The feedback that we are getting on HydroPen is that the system's true value comes from its being so easy to use.'*



*The VIKING HydroPen in action.*

Benny Carlsen, VIKING Senior Vice President concluded by saying: *'We continuously seek to offer the very latest technologies to our maritime customers and in the HydroPen we believe we have a solution that will quickly become a 'must-have' to address a serious and widespread issue. The HydroPen has already seen service, after a pilot system was used to extinguish a real fire at sea.'*

On the cooperation between VIKING and V.Ships, VIKING's Sales Director for Europe and Africa, Dorte M Hansen reported that V.Ships is a valued customer and a true first-mover when it comes to safety.

**Illustrations reproduced by kind courtesy of VIKING Life-Saving Equipment A/S ©**

## About VIKING

VIKING Life-Saving Equipment is a global market leader in maritime and offshore safety. With HQ in Denmark, the corporation manufactures, supplies and services everything from chute and slide-based evacuation systems to liferafts, lifejackets, immersion suits, firefighting equipment, aviation safety gear, lifeboats, hooks, davits and more.

VIKING brings its customers all the elements needed to simplify safety, including the world's broadest range of safety products and a highly efficient, worldwide servicing network. And it stands out in the ability to offer complete safety compliance solutions – all certified in accordance with the latest IMO, SOLAS, EU and USCG requirements. Known as VIKING Shipowner and Offshore Safety Agreements, these uniquely customisable solutions incorporate safety products, global servicing, exchange, single-source management, and financing in a variety of fixed price structures.

In 2018, VIKING acquired Norsafe, the Norwegian boatbuilder whose lifeboats are used throughout the world, adding further strength to an unmatched product and service offering in the global maritime safety industry.

Founded in 1960, the privately held corporation manufactures in Denmark, Norway, Bulgaria, Greece, China and Thailand, and provides safety solutions in all significant markets and locations.

For more information see: [www.VIKING-life.com](http://www.VIKING-life.com)

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## MOL and e5 Lab launch study on hydrogen hybrid pure car carrier

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### MOU aims at development of zero-emission vessels

Mitsui OSK Lines, Ltd. and e5 Lab Inc announced in December from Tokyo that they have been working together to develop and promote electrically powered zero emission vessels. The two companies have concluded an MOU to conduct a joint study of a hybrid pure car carrier equipped with a hydrogen fuel cell system and large-capacity batteries (hydrogen hybrid PCC).

The companies aim to develop a hydrogen hybrid PCC, which does not emit carbon dioxide, sulphur oxides, nitrogen oxides, or particulate matter while underway in coastal waters or in ports. In other words the vessels will achieve zero emissions, since its means of propulsion would come from electricity supplied by the hydrogen fuel cell system and large-capacity batteries.

When navigating in the open sea, the hydrogen hybrid PCC's motor would be powered by an LNG-fuelled generator and the large-capacity batteries, resulting in significantly lower emissions than current vessels equipped with diesel engines running on heavy oil.

MOL has worked to realize zero emissions of vessels while in port since it announced its future vision for the next-generation series ISHIN-I car carrier in 2009. In 2012, it launched the world's first hybrid car carrier, the *Emerald Ace*, which is equipped with the world's largest-scale solar power generating system and batteries. The hydrogen hybrid PCC concept marks a further step ahead from these past projects, and the company is pursuing the possibility of introducing more extensive and more advanced technologies with the goal of zero emissions.

Both companies, Mitsui OSK Lines, Ltd. and e5 Lab Inc., will first conduct technological and business feasibility studies of the hydrogen hybrid PCC, and when they gain positive results, they will move on to the next phase of joint development for a practical of hydrogen hybrid PCC based on the results.

MOL and e5 Lab continually engage in measures to reduce merchant vessels' environmental impact by taking full advantage of both companies' wide-ranging technological knowledge to ensure the sustainable growth of the shipping industry.



*Transition of propulsive force sources during voyage.*

*The world's first electric bunker tanker. A promotional video is available here: <https://youtu.be/JLDTYzr3Jt0>*

### About e5 Lab

Experts in vessel electrification and digitalization. e5 Lab employs technology related to electrically powered vessels to solve needs facing the shipping industry and social infrastructure in Japan, contributing to sustainable growth of the shipping industry.

e5 Lab delivers five kinds of e-value: Electrification, Environment, Efficiency, Economics, and Evolution.

Picture captions

*Transition of propulsive force sources during voyage.*

*The world's first electric bunker tanker. A promotional video is available here: <https://youtu.be/JLDTYzr3Jt0>*

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