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IFSMA

NEWSLETTER

The Shipmasters' International Voice



Thome provides confidential helpline service for its seafarers
See article on page 16



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Secretary General's Report

Last month we had some interesting news that the global merchant fleet of vessels above 100 grt has now reached over the 100,000-ship milestone for the first time, according to data from Clarksons Research. Across 100,001 ships in total, the average size of a vessel is 21,355 dwt, and the average age is 21.7 years. The estimated total value of the world fleet is \$976bn across 2.1bn dwt and 1.4bn grt. Asian owners account for 46% of the deadweight, with European owners controlling 30% of the fleet.

Shipping crossed the 70,000 mark in February 2006, 15 years ago almost to the day. The average vessel size has increased by 57% since then. It is therefore of no surprise that the shipping industry is worth over US\$14trillion to the world-economy and it is for this reason all of the UN Agencies key NGOs are pressurising nations to treat all mariners as key workers and to ensure that mariners are vaccinated against COVID-19 to ensure this global market keeps running smoothly.

As your Secretary General I work hard with other Agencies and NGOs, but in particular the International Chamber of Shipping (ICS) and International Transport Workers' Federation (ITF), to try and make this happen, but it is extremely difficult when the nations' governments are so busy looking at their own individual issues. Notwithstanding, I want you to know how much we appreciate your resilience and tolerance with the difficult situation in which you find yourselves as it has once again become more difficult to achieve regular crew changes.

In the middle of February we once again started contributing to IMO meetings with the Human Resource Training and Watchkeeping Sub-Committee, but being conducted remotely via video conferencing. This is far from ideal as we try and accommodate delegates around the world in different time zones, we are only able to meet for 3.5 hours a day for 4 days in a week's programme. With this much reduced timescale we were only able to cover some of the issues that were related to the current pandemic. Little was decided, but we were able to understand better what needs to be done in future meetings and clear the backlog of work. I hope that the important Maritime Safety Committee will be held at the beginning of May and I aim to report on better progress.

I am sure you enjoy the very interesting articles that Paul Owen and Paul Ridgway have put together for you again and I reiterate that we always welcome hearing from you with your articles and news, so please keep them coming. I send all my very best wishes to you, your families and crews. Stay safe.

Jim Scorer

From the Editor

UN Decade of Ocean Science for Sustainable Development

UNESCO's Intergovernmental Oceanographic Commission has introduced the Ocean Decade (2021-2030) with *A Brave New Ocean*, a virtual event that has brought together ocean experts and leaders from around the world to highlight challenges and opportunities that ocean knowledge can offer.

IOC-UNESCO has been tasked by the UN General Assembly with coordinating its crucial ten-year global initiative to transform how we generate and use ocean knowledge for sustainable development.

An IPCC Special Report on the Ocean and Cryosphere (<https://www.ipcc.ch/srocc/>) has revealed alarming trends and overwhelming evidence of the consequences if the world does not make choices for a healthier ocean critical for the planet's future. From the equator to the poles, melting ice caps and rising sea levels, ocean warming, extreme weather, ocean acidification and other processes are disrupting marine ecosystems and life on the planet.

Audrey Azoulay, Director-General of UNESCO commented: *'The COVID-19 crisis must be the start of a global wake-up call. We must reforge our relationship with nature and the living world. We also need to reinvent our relationship with the oceans. It is this revolution that we wish to bring about with the UN Decade of Ocean Science for Sustainable Development which I am delighted to be launching as we begin 2021.'*

The IMO Digest

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

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UN Special Rapporteur on Toxics and Human Rights visits IMO

Special Rapporteur assesses effectiveness of international regulatory mechanisms concerning hazardous substances and wastes

In October 2020, the UN Human Rights Council renewed the mandate of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes. (See here: <https://undocs.org/en/A/HRC/RES/45/17>)

The Special Rapporteur, first appointed in 1995, has a mandate to provide detailed, up-to-date information on a number of areas, including the developments, gaps and shortcomings in the effectiveness of international regulatory mechanisms concerning hazardous substances and wastes and their impact on the enjoyment of human rights. The Special Rapporteur seeks views and contributions from Governments, United Nations agencies and other relevant international organizations, civil society and other stakeholders.

As part of his mandate, the current Special Rapporteur, Marcos Orellana, requested a visit to the IMO Secretariat. The visit allows the Special Rapporteur to assess the work of IMO on questions relating to the toxics mandate in order to identify good practices, as well as areas that may need improvement to make constructive and concrete recommendations.

The assessment is expected to focus on areas within IMO's mandate, under international treaties adopted by IMO, including:

- The International Convention for the Prevention of Pollution from Ships (MARPOL).
- The International Convention for the Safety of Life at Sea (SOLAS).
- Conventions covering ship recycling (Hong Kong Convention).
- The control of harmful anti-fouling systems on ships (Anti-Fouling Convention).
- The control and management of ships' ballast water and sediments (BWM Convention).
- The dumping of wastes at sea (London Convention and Protocol), and those covering limitation of liability for pollution damage.

The Special Rapporteur conducted online meetings with key members of the IMO Secretariat from 9 to 18 December 2020. Follow-on meetings, including in-person meetings, when permissible, are expected during 2021, and the Special Rapporteurs' report is expected in September 2021. The Secretary-General is committed to cooperating with the Special Rapporteur in an open and transparent manner.



Submitting information

The Special Rapporteur has invited all interested stakeholder organizations, including civil society organizations, defenders of human rights and academics, to submit relevant information to support his work.

The deadline for submissions is 31 March 2021.

Further details are available here: <https://tinyurl.com/yykw9wpd>

IMO Member States have also been invited to respond to the following questionnaire and provide any additional information they deem relevant:

Mandate of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes (SR on toxics and human rights). Impact analysis of the IMO <https://tinyurl.com/y3f3dqrq>

Cleaner air, healthier planet

On 1 January 2020, new reduced limits on sulphur in fuel oil brought about a 70% cut in total sulphur oxide emissions from shipping, ushering in a new era of cleaner air in ports and coastal areas by using less polluting fuels.

One year on, indications are that the transition has been extremely smooth, a testament to the preparations of all stakeholders prior to the new rules entering into force. The *status quo* was reported by IMO on 28 January.



The upper limit of the sulphur content of ships' fuel oil was reduced to 0.5% (from 3.5% previously) – under the so-called IMO 2020 regulation prescribed in the MARPOL Convention. This significantly reduces the amount of sulphur oxide emanating from ships.

To quote Roel Hoenders, Head of Air Pollution and Energy Efficiency at IMO:

'Through 2020, just 55 cases of 0.50% compliant fuel being unavailable had been reported in IMO's Global Integrated Shipping Information System (GISIS).

'Given that more than 60,000 ships plied the world's oceans in trade last year, this was a remarkably low percentage of ships encountering difficulty in obtaining compliant fuel. We had a great deal of preparation during 2019 and before, from all stakeholders and all indications are that there have been no significant issues with supply of low sulphur fuel oil.'

Even during the COVID-19 pandemic, cargo vessels have continued to deliver goods and commodities, including essential foods and medicines, around the world and the introduction and implementation of IMO 2020 did not cause any disruptions in trade.

Compliant fuels include very low sulphur fuel oil (VLSFO) and marine gas oil (MGO). Some ships limit their air pollutants by installing exhaust gas cleaning systems, scrubbers. This is accepted under the MARPOL Convention as an alternative means to meet the sulphur limit requirement. Over 2,350 systems have formally been reported to IMO as an approved equivalent method by Administrations, that is flag States.

Ships can also have engines which are able to use different fuels, which may contain low or zero sulphur, such as liquefied natural gas or biofuels.

The majority of ships trading worldwide switched from using heavy fuel oil (HFO) to using VLSFO. Generally speaking, these are new blends of fuel oil, produced by refineries to meet the new limit, in accordance with IMO guidance and ISO standards.

Guidance issued by IMO on dealing with the new fuel blends in advance of the new requirement addressed implications of switching to VLSFO, including assessing and managing risks and highlighting potential safety risks, so that the risks can be mitigated. Through 2020, and into 2021 to date, IMO has not received any reports of safety issues linked to VLSFO.

Nonetheless, during 2020, an IMO correspondence group considered fuel oil safety issues in general and the need for further mandatory requirements to ensure fuel oil supplied meets the required standards and quality. The report of the group (MSC 102/6) will be discussed at the next session of IMO's Maritime Safety Committee (MSC), MSC 103 in May 2021.



Prior to that, the eighth session of the Sub-Committee on Prevention of Pollution from Ships (PPR 8), scheduled to meet remotely from 22 to 26 March 2021, will further consider VLSFO fuel quality issues, including possible effects on black carbon emissions.

Fuel oil quality requirements

Provisions in regulation 18 of Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL) regulate fuel oil quality. The International Convention for the Safety of Life at Sea (SOLAS) covers issues such as flashpoint (SOLAS regulation II- 2/4.2.1).

Apart from the requirements in MARPOL Annex VI and SOLAS, VLSFO is required to meet ISO standard 8217 as well as ISO Publicly Available Specification (PAS) 23263, providing guidance as to the application of the existing ISO 8217 marine fuel standard to 0.50% sulphur limit compliant fuel oils.

These measures and standards are designed to ensure ships' safety and the protection of the marine environment and oceans.

Leaders from the financial, public and private sectors participate in the Financing Sustainable Maritime Transport (FIN-SMART) Roundtable Addressing financial challenges of sustainable shipping

Workstream 1

IMO's Media service announced on 29 January that work to address the financial challenges of shipping's transition to a more sustainable future took place that week with a meeting of the FIN-SMART Roundtable Workstream 1.



This Roundtable provides a platform for regular dialogue among key maritime stakeholders to support accelerating financial flows, particularly in developing countries, for the decarbonization of the maritime sector. This is carried out in line with country priorities and the goals of the IMO Initial Strategy¹ on the reduction of GHG emissions from ships.

In the latest meeting of Workstream 1, held on 28 January, the basis of discussion was a mapping analysis undertaken by a technical specialist, under the guidance of the European Bank for Reconstruction and Development (EBRD), the World Bank and IMO.

Discussion focused on investment risks, financing and other barriers which pose challenges for the needed investments to materialize – especially in developing countries, both in relation to investments in public and private assets.

It was reported by IMO that Workstream 1 recognised the need to come up with innovative financial means to address decarbonization needs of the maritime sector in line with the IMO Initial GHG Strategy.

Risk-sharing financial structures

Participants highlighted the importance of new risk-sharing financial structures. Financial instruments for gap-funding, grant funding and a new distinct approach that considers the needs of Least Developed Countries (LDCs) and Small Island Developing States (SIDS).

Workstream 2

A more detailed analysis will be conducted in Workstream 2 that will concentrate on financial solutions to support regional needs, port and shipping finance, with a focus on the needs of developing countries, especially LDCs² and SIDS³.

High Level Roundtable

All technical outcomes will then be discussed at a Second High Level Roundtable Meeting, due to take place in June/ July 2021.

¹See: <https://tinyurl.com/yxsdznou>

² <https://tinyurl.com/yaunlups>

³ <https://tinyurl.com/y67ngkxz>

Illustration per www.imo.org ©

IMO welcomes Neptune Declaration

On 3 February the IMO Media service informed that Secretary-General Kitack Lim welcomed the industry-led Neptune Declaration, which calls for seafarers to be designated as key workers and for cooperation to end the crew change crisis.

It is a privilege to report that IFSMA is a signatory along with more than 300 like minded organisations in the international shipping community.



Present circumstances are not only putting seafarers in a desperate situation but also threatening the safety of shipping and world trade.

(See here: <https://tinyurl.com/y3wnag97>)

It has been reported once again that hundreds of thousands of seafarers around the globe are unable to leave ships, while others cannot join, due to travel restrictions imposed as a result of the COVID-19 pandemic.

Secretary General Lim commented: *'I am pleased to see the industry come together under the Neptune Declaration to support ways to resolve the crew change crisis. This very much reflects the calls made by IMO, its sister UN entities and more recently the United Nations General*

Assembly, in its recent resolution on seafarers. I encourage more companies, including charterers, to get involved and show their support for our seafarers.'

In December, the UN General Assembly adopted a resolution on international cooperation to address challenges faced by seafarers who are supporting global supply chains during the Covid19 pandemic.



(Readers of this newsletter will be able to read more on this topic here: <https://tinyurl.com/y5rjs64b>)

As at mid-February the IMO Secretary-General had received 53 notifications from Member States that they have designated seafarers as key workers and one from an Associate Member.

The latest list of Member State signatories may be download here: <https://tinyurl.com/yy2qjh3x>).

Secretary-General Lim urged more Governments to designate seafarers as key workers.

The 2021 World Maritime Theme

Finally he also highlighted IMO's World Maritime Theme for 2021: **Seafarers: at the core of shipping's future** *.

This choice of theme recognizes the efforts of seafarers who have shown tremendous fortitude and perseverance in continuing to deliver global trade during the current unprecedented situation the world is facing.

Photo per www.imo.org IMO ©

*<https://tinyurl.com/yxc26lm5>

The IMO FAL Committee

The Convention at heart of IMO response to illegal wildlife trade

As is the case for other goods being carried by sea, much of the world's illegal wildlife trade is transported on board vessels, underscoring the need for IMO's involvement in the fight against this illegal activity.

According to a briefing by IMO on 11February a webinar was held with the title: *Asia Dialogue on Responses to*

Wildlife Trafficking in Maritime Transport. As part of the programme Josephine Uranza, IMO Regional Coordinator, Regional Presence for Technical Cooperation in East Asia highlighted the efforts being undertaken to curb illegal wildlife trade. This crime is once more on the rise as trade restrictions caused by the Covid19 pandemic ease.

Uranza explained: 'While IMO is not the lead agency for the prevention and suppression of the illegal wildlife trade or the smuggling of drugs, the involvement of ships in illicit trade is clearly of interest, since one of our strategic directions is to enhance global facilitation and security of international maritime trade.' She added that the IMO is working towards this goal.

In addition to co-ordinating with other agencies working in this field and raising awareness of illegal wildlife trade via tools such as webinars, Uranza emphasised the role that the IMO Facilitation Committee (otherwise known as the FAL Committee) was playing in tackling this issue. Following a proposal from the Government of Kenya, the Committee has agreed to develop guidelines for the prevention and suppression of the smuggling of wildlife on ships engaged in international maritime trade.

During the online gathering the work of the IMO was welcomed by other speakers on the panel, who pointed out that a regulatory inducement to combat illegal wildlife trade would provide the necessary incentive for global adherence to best practice.

Furthermore, IMO has reported that there was consensus that greater cooperation and cross-border information sharing is integral to enforcement of any regional anti-trafficking regulation, as is stronger support from private companies along the supply chain as well as governments.

The other speakers on the panel were:

- Kanitha Krishnasamy, Director, TRAFFIC in Southeast Asia
- Mark Watson, Group Head of Sustainability, John Swire & Sons (HK) Ltd and Asia Pacific Chair of the United for Wildlife's Transport Taskforce
- Giovanni Broussard, Regional Coordinator, United Nations Office on Drugs and Crime (UNDOC) Global Programme for Combatting Wildlife and Forest Crimes in Southeast Asia

Implementation of Best Management Practices on ships

as well as good coordination onshore can help deter and resolve attacks on ships.

IMO Secretary-General Kitack Lim has expressed his deep concern about the escalation in the number and severity of attacks on ships and crew in the Gulf of Guinea region. He insisted on the need for all stakeholders to work together to restore security and reduce the threats to the safety and security of crews and vessels operating in the region.

The urgency of the situation has been underlined by the attack on the container ship *Mozart* on 23 January 2021, which resulted in a fatality and the kidnapping of 15 seafarers.



Image shown here provided by Inter-Regional Coordination Center (ICC) Yaoundé, Cameroon.

It relates to an attempted attack on 7 February 2021, when the Oil/Chemical tanker mv Sea Phantom was boarded by suspected pirates on the high seas off Sao Tome & Principe.

Following coordination between the Cameroon and Equatorial Guinea navies, response units were dispatched. As a helicopter from Equatorial Guinea arrived on scene, at least eight people that had managed to board the vessel fled the ship.

The Cameroonian patrol boat Dipikar also arrived on scene to assist. Fortunately, the crew was found uninjured in the tanker's intact citadel. The vessel has since been escorted to the port of Malabo, in Equatorial Guinea.

In a circular letter (No. 4382, issued 10 February¹), the Secretary-General said that IMO has been taking action to enhance the coordination of initiatives among stakeholders, including facilitating meetings with representatives of the industry, the Nigeria Maritime Administration and Safety Agency (NIMASA) and the Interregional Coordination Centre for the Implementation of Regional Strategy for Maritime Safety and Security in Central and West Africa (ICC).

The Secretary-General also highlighted that ships need to implement the IMO endorsed Best Management Practices (BMP) for West Africa (WA) to avoid, deter, delay and report attacks. The BMP cover risk assessment, ship protection measures and reporting.

The BMP can be downloaded here:
<https://tinyurl.com/y9esd686>

IMO intends to convene a maritime security working group focusing on the Gulf of Guinea at the next session of the Maritime Safety Committee, MSC 103, scheduled to take place in May 2021. This will provide an opportunity for Member States and international organizations to discuss further collaboration and possible action to address the existing problems.

IMO continues to provide technical assistance to Member States in the region regarding the implementation of maritime security measures. The Organization is currently working with the Interregional Coordination Centre (ICC) to assist with the implementation of the Yaoundé Code of Conduct (YCC), a regional code aimed at enhancing maritime security and addressing piracy, armed robbery against ships, illegal fishing and other illicit maritime activity.

The IMO West and Central Africa Maritime Security Trust Fund enables the Organization's maritime security capacity-building programme to assist Gulf of Guinea coastal States as well as regional centres under the framework of the Yaoundé Code of Conduct.

¹ <https://tinyurl.com/ycvvbu9o>



Downloads

IMO Circular Letter No.4382 (10 February 2021) *Piracy in the Gulf of Guinea*

A comprehensive list of recommendations and guidance adopted/approved by the Maritime Safety Committee on the prevention and response to acts of piracy and armed robbery against ships can be found in the Guidance on piracy section of IMO's maritime security webpage to be found here: <https://tinyurl.com/ych7yuf2>

Port of Felixstowe selected for UK Government 5G trial

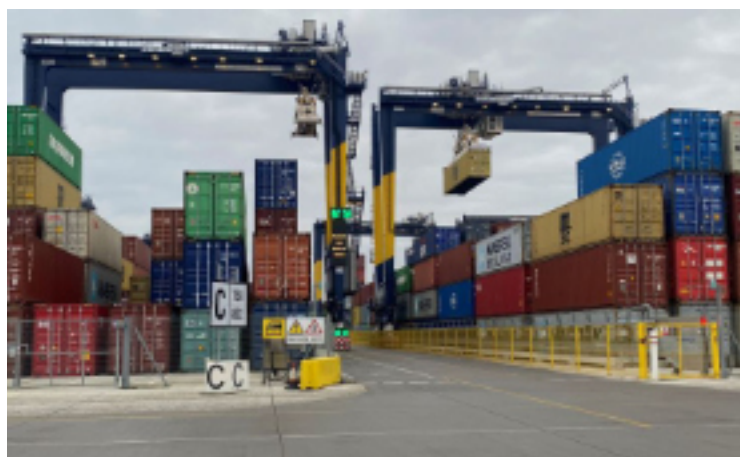
Hutchison Ports Port of Felixstowe will be the largest UK port to deploy 5G technology and the Internet of Things (IoT) to enhance productivity, efficiency and safety across its core operations. This was reported by the port on 13 January.

Using a 5G Private Network installed by Three UK, the port's installation has been selected as part of the Government's 5G Trials and Testbeds Programme to drive investment and innovation in 5G and to support the development of new use cases and commercial deployment.

The £3.4 million project has received £1.6 million from the Government as part of 5G Create, a competition to support innovators exploring new uses for 5G to improve people's lives and boost British businesses.

Working with its partners Three UK, Cambridge University and Blue Mesh Solutions, along with key subcontractors Ericsson and Siemens, the project will test the potential of 5G across two use cases:

1. enabling remote-controlled cranes via the transmission of CCTV and;
2. deploying Internet of Things sensors and Artificial Intelligence to optimise the predictive maintenance cycle of Felixstowe's 31 quay-side and 82 yard cranes. Harnessing the speed, low-latency and high-capacity of 5G, the project will demonstrate the productivity and efficiency gains of such technology, whilst reducing unplanned outage.



Matt Warman, Minister for Digital Infrastructure commented: *'We want to unlock 5G's potential to revolutionise a wide range of UK industries and 5G Ports is just one project the government is backing to achieve this.'*

'Our ports will be more vital than ever as we forge an ambitious new global trading position for the UK post-Brexit, so I'm eager to see what 5G can do to maximise efficiency at Britain's biggest and busiest container port in Felixstowe.'

Chris Lewis, Chief Executive Officer Hutchison Ports UK, added: *'We are delighted to be part of this exciting 5G Create programme. Being the largest UK port to introduce 5G technology will allow the Port of Felixstowe to deploy innovative technologies to boost efficiency and improve safety for our workforce. It ties in well with Government policy to create a network of Freeports to act as hotbeds for innovation and to act as hubs for global trade.'*

Mike Tomlinson, Managing Director, Business Three UK, said: *'This project brings together the UK's largest holder of 5G Spectrum with the UK's largest container port, supported by world-leading experts in Operational Technology and Narrow Band Internet of Things. This is the perfect platform to test and demonstrate the full potential of 5G mobile technology to a vital and complex industry and develop use cases for wider industries.'*

Dr Ajith Parlikad, Reader in Asset Management at Cambridge University, said: *'This is a fantastic opportunity to explore how we can bring together the advances in Industrial Internet of Things (IIoT), 5G, and advanced machine learning and artificial intelligence to radically transform the way in which assets are managed and maintained in a complex industrial environment.'*

In conclusion Richard Brooks, Managing Director and CTO of Blue Mesh Solutions said: *'Connecting IoT sensors into high speed, low latency 5G networks creates a new paradigm for automation and fast decision making.'*

'5G telecommunications infrastructure needs large industry partners, but the creation of new IoT devices and solutions can be commercially exploited by small fast-moving innovative businesses such as Blue Mesh Solutions.'

'We welcome the opportunity to work with amazing world leading partners and to have the exciting opportunity to create new high-tech knowledge economy jobs for our smart UK workforce.'

The Port of Felixstowe, together with Hutchison Ports' Harwich International Port, is part of the Freeport East project team to create a major Freeport centred on the two East coast ports. The 5G trial will help deliver on the Government's objective for Freeports to act as hotbeds for innovation.

About Hutchison Ports Port of Felixstowe and CK Hutchison

Hutchison Ports Port of Felixstowe is strategically located on the UK's South East coast and within easy reach of major ports in North West continental Europe.

As the UK's first purpose-built container-handling facility, it is also the largest and busiest container port in the country. With three rail terminals, it also has the busiest and biggest intermodal rail freight facility in the UK. The latest phase of development, Berths 8&9, provides additional deep-water capacity for the world's largest container ships.

Hutchison Ports Port of Felixstowe is a member of Hutchison Ports, the port and related services division of

CK Hutchison Holdings Limited (CK Hutchison). Hutchison Ports has a network of port operations in 52 ports spanning 26 countries throughout Asia, the Middle East, Africa, Europe, the Americas and Australasia. Over the years, Hutchison Ports has expanded into other logistics and transportation-related businesses, including cruise ship terminals, airport operations, distribution centres, rail services and ship repair facilities.

Essential Tanker Safety Guide for Chemical Cargoes

ICS launches new edition

With a background of unprecedented challenges for the maritime sector, safety continues to be a priority for the International Chamber of Shipping (ICS).

To ensure that the very best guidance is available for the chemical tanker sector, ICS has launched a new edition, the fifth, of the standard reference work for those working on tankers carrying chemical cargoes, the *ICS Tanker Safety Guide (Chemicals)*.

This edition of the Guide provides chemical tanker operators and crew with up-to-date best practice guidance for safe and pollution-free operations on ships regulated under MARPOL Annex II. This includes oil tankers operating in accordance with Annex II when they are carrying chemical cargoes.

Fully aligned with the latest edition of ISGOTT (the International Safety Guide for Oil Tankers and Terminals), the ICS Tanker Safety Guide (Chemicals) can be purchased from ICS Publications at <https://tinyurl.com/y4qp2esy> or from maritime booksellers worldwide. The price is listed at £435.00

More crew change complications emerge as virus mutates

Crew changes are once more becoming difficult as much of the world locks down again following the emergence of several new and more transmissible variants of Covid-19, crew specialist Danica has warned.



With travel corridors being closed and new travel restrictions imposed, airlines are once again cancelling or reducing flights which poses a problem for crew transiting to vessels. It is understood from Danica that ports too, if they have reopened, are imposing greater restrictions.

Henrik Jensen, Managing Director of Danica Crewing Services, has warned: *'I believe we may be heading for a new crew change crisis every bit as bad as last spring. Over the past six months crew changes have been*

possible in many cases, although they have been costly and complex. However, now we are seeing a range of new restrictions and barriers to crew travel while also facing some serious issues in relation to crew health risk factors. I can foresee this impacting heavily on crew changes for the next few months.'

Danica specialises in crew deployment and has been assisting a range of ship operators in order to achieve crew changes over the past year. As a result, the company is fully aware of the latest rules and restrictions and well-placed to notice how they are impacting crewing.

Jensen explained: *'In response to the rapid increase in infections around the world, governments are imposing new or additional measures including travel restrictions. Although these measures are understandable in the circumstances, based on scientific evidence, and intended to provide protection for their populations, they also cause operational and logistical problems for crew changes.'*

'For example, requiring Covid-19 tests at a set period before travel isn't always easy to comply with depending on where the crew change is being effected from. Tests may not be available at short notice and there may not be available accommodation in which to isolate crew members while they await the results.'



Jensen pointed out that the more rapidly transmissible new coronavirus variants also pose a greater threat to seafarers and ships. He explained: *'The new, more infectious variants present a higher risk that a crew member may be infected on the way to the vessel and transfer the infection to his ship mates on board. This is a particular concern during air travel, which requires crew to spend many hours in a contained space with large numbers of other people. Due to all the flight cancellations there are plenty of aircraft available to lease for private transits but this option is really only economically viable if there are large numbers of crew which is not usually the case.'*

'One or more Covid-19 infected patients on a vessel is a very serious situation as there is insufficient medical care available on board to treat a serious case. It is very difficult to mitigate this risk and in some cases we have to abandon crew change plans if they involve a long transit or a high-risk area.'

Greater implementation of the IMO's crew change protocols instead of national rules could improve the situation but Jensen is not optimistic of this being a solution at present. He commented in conclusion: *'While I appreciate and support the international cooperation and effort that has gone into producing this excellent protocol, unfortunately I think that it may be a remote dream as we have local government rules, rules in the transit airports/ countries and individual airline rules, and I do not think it is realistic to expect all these parties to come together.'*

'We have seen that, when a country's health service is at full stretch trying to cope with infected patients, then broad and strict restrictions are imposed quickly. Sadly we have to realise that, when a country has a citizen dying every minute from Covid-19, then a handful of seafarers of foreign nationality left behind on a vessel are not a high priority for them.'

He predicted: *'We are looking at some hard months ahead. It seems likely that things will only get better once the vaccination programmes around the globe begin to take effect.'*

Thinking green in ro-ro – UECC opening doors to a sustainable future

Those who have been following the development of sustainable shipping will recognize the UECC name*. Those who have been following UECC will know why: with two dual-fuel LNG ships afloat and three battery-hybrid LNG vessels to be commissioned, UECC is making investments that will make it possible to see a path to sustainable shipping.

These moves have put UECC far ahead of compliance requirements for emissions reduction, it was reported by the company on 14 January.



UECC battery hybrid LNG ro-ro scheduled for delivery late 2021.

CEO Glenn Edvardsen explained the thinking behind the investments: *'We are aware of the climate challenge that the world is facing, and we know it is everyone's responsibility to try and make a difference. This also means helping others if you can. UECC is trying to provide the possibility for green transport so that our customers*

can join in and make a difference. That is our motivation. We genuinely want to provide this alternative.'

The first best choice

For UECC, that means that acting now. Edvardsen stated *'We can't just wait twenty years for the optimal solution. When we built the dual fuel vessels, we knew that LNG would not be the ultimate future fuel, but it is the best available option now.'*

'We can use LNG, but also synthetic oil or biogas, to mention only a couple of alternatives. The present structure allows for progress in several possible directions.'

UECC is banking not just on LNG as fuel, but also on the infrastructure supporting dual fuel.

The same pragmatic thinking applies to the batteries on their new ships. Edvardsen said: *'They will not be for pure propulsion, but they will allow us to take the next step, to squeeze even more transport out of the fuel we burn and reduce emissions even further.'*

While UECC is confident of its choices thus far, Edvardsen is on guard against inertia. He added: *'We know well enough what we have to do, but we don't want to become complacent. We will continue to try any good option.'*

Furthermore, he observed that no company can afford to throw money at every new idea: *'The interim solution needs to be viable too. There are many decarbonization solutions already available, but they might not be sustainable. Some of the potential solutions can be very expensive, so we need to work at making the smart choices.'*



UECC CEO Glen Edvardsen.

Emissions gaining currency

Edvardsen relates that emissions have become a part of contract negotiations. He commented: *'Every potential customer sends us emissions paperwork to fill out. They are eager to understand the emissions picture, and they are logging and documenting it for use in meetings and audits. They are feeling the pressure from their own customers and from regulators, so it comes back to us being able to help them.'*

'It would not be hard to get them on board if there were no price tag. We can provide them the opportunity to join us, and we are doing this as competitively as possible. Everybody has to be willing to contribute. It is more about sharing the burden. The payoff is being able to lower emissions. That is what they will achieve.'

Team spirit driving progress

Owners Wallenius Lines of Sweden and NYK of Japan are enthusiastic backers of UECC's green initiatives. Edvardsen reported: *'It is UECC's mission to be the sustainable leader in the short sea segment. That is the company vision, and our owners are very supportive of this effort. Wallenius has a long tradition of taking the lead on sustainable issues.'*

'It is in their DNA, not only this time around but historically. NYK is the same, a big company with strong commitment to Environmental, Social, and Corporate Governance going forward, and they stand fully behind our efforts to reach sustainability. It helps to have such good support. All the sudden there are three of us in the game.'

To compliment their supportive ownership, Edvardsen tells that UECC strives for a proactive, inclusive culture: *'Many of our initiatives are bottom-up. Whenever our people see something of interest, they bring it up. We are proud that we can motivate everyone in the UECC organization to take the initiative. We have a team of highly motivated, qualified, dedicated and smart people, and they know we need to make this change together. For us, that's what makes it fun to come to work.'*

The view from in front

Edvardsen noted that UECC continues to build advanced vessels while others in the segment are not building at all: *'We take a long-term view on things. We know not everything will pay off tomorrow, but we believe in what we are doing. We accept that the one in front needs to work a little harder. Even if not everyone is following now, we know this is the only way forward.'*

He trusts that markets will reward this attitude: *'Stakeholders along the whole supply chain have become very well informed. The level of engagement is different today from what it was only a few years ago, and the awareness curve is steep. People understand that someone has to make the first move if we are going to see real change.'*

A call to action

Edvardsen maintained: *'A lot has happened with sustainability in a little time, but we are not there yet. We have no option but to continue, and the industry needs to embrace this. Shipping has been talking about the green shift for years. Now we have to put words into action. If we don't make a change now it will be too late.'*

While acknowledging the urgency of action, he cautioned against making perfect the enemy of the good and added in conclusion: *'It is important not to try and do everything at once. We have to find motivation in doing what is*

possible now and building on that. The biggest mistake you can make right now is not doing anything.'

*United European Car Carriers. See here: <https://www.uecc.com/>

ABB Azipod® electric propulsion

Bulk carrier debut in Oldendorff ship delivery

China's Chengxi Shipyard had handed over the first of twin self-unloading trans-shipment new builds after both owner and builder highlighted successful installation and commissioning for Azipod® propulsion. This was reported by ABB from Shanghai on 18 January.

Delivery saw two 1.9-MW Azipod® units installed on each of the 21,500dwt trans-shipment bulkers for Germany's largest bulk carrier owner, as part of a package of electric, digital and connected solutions from ABB.



The scope of supply also included diesel-electric power plant, drive systems complete with two bow thruster motors, power management systems for propulsion and cargo handling, as well as a 50/60-Hz connectors to draw on zero emission shore power when in port.

In the words of Joern Westfeling, Newbuilding Manager, Oldendorff Carriers: *'Collaborating with ABB has been a very positive experience. We look forward to reaping the operational rewards of Azipod® propulsion, such as enhanced vessel efficiency and increased manoeuvrability.'*

Mr Jiafa Jiang, Vice General Manager of Chenxi Shipyard (Yangzhou) Co., Ltd added: *'This was Chengxi Shipyard's first time installing Azipod® technology, and the process went remarkably smoothly. Compared to a conventional propulsion system, ABB Azipod® propulsion has greatly reduced the construction complexity for the yard thanks to its simple design and ease of installation. ABB worked seamlessly with Chenxi Shipyard to ensure successful delivery of this world's first self-unloading transshipment vessel. I would like to devote my appreciation to the ABB project and commissioning team for their professional working spirit.'*

Controlling a fleet of some 700 ships, around 95% of Oldendorff's owned fleet is comprised of 'eco' new builds

delivered since 2014, which are specifically designed for low fuel consumption and reduced carbon footprint. Since its forthcoming vessels will be tasked with transferring cargo from ocean going ships in deep water for delivery to a port with restricted draft and space, manoeuvrability is also a vital consideration.

'We are delighted that the first bulk carriers to feature Azipod® propulsion have been successfully delivered,' said Juha Koskela, Division President, ABB Marine & Ports who added: *'The project fully demonstrates that Azipod® is the go-to solution for environmentally conscious operators of all ship types. Because the electric drive motor is housed within a submerged pod outside the ship's hull, the Azipod® unit is capable of 360-degree rotation, improving manoeuvrability and operational efficiency. This also frees up cargo space on board, potentially boosting vessel profitability further.'*

Over the course of three decades, ABB has supplied Azipod® units for around 25 vessel types, with the propulsion system accumulating more than 17 million running hours in that time. As a flexible, proven fuel-saving technology, Azipod® system has played a key role in developing ABB's strong position for environmentally-friendly electric propulsion.

The year 2020

One of the three warmest on record

USA re-enters the Paris Agreement on Climate Change

The COVID-19 pandemic was not the only long-term crisis the world will remember from 2020. In terms of climate change, the year was also one of the three warmest on record, and rivalled 2016 for the top spot. This was reported by the UN weather agency on 4 January.

In the words of UN Secretary-General António Guterres: *'The confirmation by the World Meteorological Organization (WMO) that 2020 was one of the warmest years on record is yet another stark reminder of the relentless pace of climate change, which is destroying lives and livelihoods across our planet.'*

He pointed out that at 1.2 degrees of warming above pre-industrial levels, the world is already witnessing unprecedented weather extremes in every region and on every continent.

He warned: *'We are headed for a catastrophic temperature rise of 3 to 5 degrees Celsius this century. Making peace with nature is the defining task of the 21st century. It must be the top priority for everyone, everywhere.'*

Powerful force

La Niña, which began in late last year, is expected to continue into the early-middle part of 2021.

'The exceptional heat of 2020 is despite a La Niña event, which has a temporary cooling effect', said WMO Secretary-General Professor Petteri Taalas.

La Niña and *El Niño* effects on average global temperatures are typically strongest in the second year of the event.

Taalas added: *'It is remarkable that temperatures in 2020 were virtually on a par with 2016, when we saw one of the strongest El Niño warming events on record. This is a clear indication that the global signal from human-induced climate change is now as powerful as the force of nature,'*

The extent to which the continued cooling effects of *La Niña* this year may temporarily diminish the overall long-term warming trend remains to be seen.

Following atypical patterns

WMO pointed to sustained heat and wildfires in Siberia, diminishing Arctic sea ice and record-breaking hurricanes in the Atlantic as being among the climate events that most stood out in 2020.

The WMO also reminded that temperature is just one climate change indicator. Greenhouse gas concentrations, ocean heat content, global mean sea level, sea ice extent and extreme events are also factors.



The ten years to 2020 were the warmest decade on record, according to the World Meteorological Organization.

Illustration provided by courtesy of Unsplash/John Towner.

Backed by science

WMO's consolidated global temperature update incorporates information from five leading international sets of data. It also uses datasets that combine millions of meteorological and marine observations, including from satellites, with models to produce a complete reanalysis of the atmosphere.

According to WMO: *'The combination of observations with models makes it possible to estimate temperatures at any time and in any place across the globe, even in data-sparse areas such as the polar regions.'*

Looking to the future

The Paris Agreement aims to limit global warming to well below 2°C, preferably to 1.5°C degrees, compared to pre-

industrial levels. However, the global average temperature in 2020 had already approached the lower limit of the temperature increase that the Agreement seeks to avert. Moreover, there is at least a one-in-five chance that the average global temperature will temporarily exceed 1.5 °C by 2024, according to WMO's Global Annual to Decadal Climate Update, led by the UK's Met Office.

The 2021 Met Office annual global temperature forecast also suggests that next year will again be one of the earth's hottest years.

Updating its provisional December report, WMO will issue its final publication in March, which will incorporate temperature figures, information on all leading climate indicators and selected climate impacts.

USA re-enters the Paris Agreement

The World Meteorological Organization has joined the international community in welcoming the announcement by President Joe Biden that the United States of America will re-enter the Paris Agreement on Climate Change.

UN Secretary-General António Guterres issued the following statement:

'I warmly welcome President Biden's steps to re-enter the Paris Agreement on Climate Change and join the growing coalition of governments, cities, states, businesses and people taking ambitious action to confront the climate crisis.'

RightShip and INTERCARGO

An important new quality standard for the dry bulk sector

To be governed by new NGO

RightShip and INTERCARGO announced on 21 January the launch of an important new quality standard for the dry bulk sector, DryBMS. The standard will be governed by a new NGO to be established later this year and will support the improvement of safety in the dry bulk segment.

Both RightShip and INTERCARGO have strongly and consistently advocated the need for significant improvements to dry bulk safety standards. In August 2020 both organisations combined their expertise to create a single framework for the whole industry.

Supported by the International Chamber of Shipping (ICS) and BIMCO, DryBMS now exists as a simple set of best practices and key performance indicators and raises the bar on safety, environmental and operational excellence.

RightShip's CEO Steen Lund says that he is confident that such a programme will be supported and adopted: *'We are proud to launch DryBMS to the industry. The standard is a product of extensive collaboration with many stakeholders within the dry bulk sector.'*

'We believe that this ensures the program will be supported and adopted across the industry as a whole. The rapid delivery of the initial consultation document means that we are a step closer to providing consistent, meaningful safety expectations for the dry bulk industry.'

'Handing the standard over to a new and independent NGO will ensure the standard is protected and governed with the industry's best intentions at heart.'

Dimitrios Fafalios, Chairman of INTERCARGO agrees: *'This is an important step, not only for the industry, but for the sector as a whole. We are all collaborating in a scheme that is being developed by the industry and for the industry, which will deliver a truly robust standard with the buy-in of those that the industry relies upon to implement and support it.'*

RightShip and INTERCARGO are grateful to the joint secretaries, project managers, the industry experts, as well as the observers from ICS and BIMCO, for their great support leading up to this important milestone.

'We cannot achieve the best possible result without input from a broad range of maritime organisations. Each viewpoint helps us gain a comprehensive insight into the needs and wants of our industry,' added Fafalios.



'We would also like to recognise the leadership and contribution of David Peel, Martin Crawford-Brunt and everyone who played a role in this collaborative effort for the past two years,' said Lund.

David Loosley, Secretary General & CEO of BIMCO, commented: *'Safety, of people, environment and assets is the primary focus of DryBMS, but the anticipated cascading effect is operational excellence which will benefit all stakeholders. We very much support this collaborative industry effort to develop a single standard and congratulate the efforts of RightShip and INTERCARGO in bringing this initiative to fruition.'*

Guy Platten, Secretary General of International Chamber of Shipping, said: *'We're pleased to have worked closely with RightShip and INTERCARGO to bring this important new quality standard to the dry bulk sector. Shipping has, and always will, adhere to the highest possible standards and best practices. The introduction of DryBMS is yet another example of the industries continued efforts to raise the bar on safety, environmental impact and operational excellence.'*

Interested parties are invited to sign up for the DryBMS newsletter to receive regular updates regarding the development of the NGO and the finalised standard.

The final draft version of the standard is now available to download on the DryBMS website here: <https://drybms.org/> and the team will continue to review feedback sent to enquiries@drybms.org

About RightShip

Established in 2001, RightShip is the world's biggest third-party maritime due diligence organisation, providing expertise in global safety, sustainability and social responsibility practises. Founded with the mission to drive operational improvements in the global shipping industry, more than 3,000 people

use RightShip's due diligence, environmental and inspections services to help them manage risk and improve overall maritime safety standards.

About INTERCARGO

The International Association of Dry Cargo Shipowners (INTERCARGO) represents the interests of quality dry bulk shipowners, with close to 2,400 registered ships out of more than 11,000 ships in the global dry bulk fleet, corresponding to over 25% of the global dry bulk fleet basis deadweight.

INTERCARGO convened for the first time in 1980 in London and has been participating with consultative status at the International Maritime Organization (IMO) since 1993. INTERCARGO provides the forum where dry bulk ship owners, managers and operators are informed about, discuss and share concerns on key topics and regulatory challenges, especially in relation to safety, the environment and operational excellence. The Association takes forward its Members' positions to IMO, as well as to other shipping and international industry fora, having free and fair competition as a principle.

DNV GL awards AIP to KSOE for wing sail propulsion system

It was announced from Busan, ROK on 22 January that DNV GL has awarded an Approval in Principle (AIP) to Korea Shipbuilding and Offshore Engineering (KSOE) for a wing-sail auxiliary propulsion system for ships – the result of a joint research project between KSOE and SK Shipping. The virtual award ceremony recently took place in the presence of Hyunjoon Shin, Head of the Future Ship Research Department of KSOE, Haeyong Son, Vice President of SK Shipping, and Sung Ho Shin, Key Account Manager of DNV GL Korea.

This wind-powered auxiliary propulsion system for ships is the result of a joint research project from KSOE, the shipbuilding holding company of Hyundai Heavy Industries Group, and SK Shipping, to develop wind-powered eco-friendly propulsion solutions.

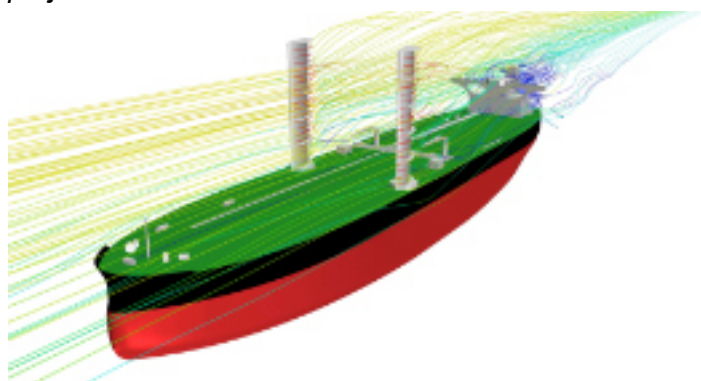
Hyunjoon Shin of KSOE said: *'We are speeding up efforts to bring eco-friendly technologies to the market. The wing sail system will reduce fuel consumption by more than 6%. We will take the lead in the next-generation ship market and continue to strengthen our technological competitiveness.'*

Haeyong Son of SK Shipping added: *'This is a promising technology that shows new possibilities for ship owners to be able to meet IMO standards for reducing carbon emissions.'*

The wing sail design is 20 metres wide, 50 metres high and installed vertically on both sides of the deck. It rotates its wings according to the direction and intensity of the wind to provide auxiliary propulsion to the ship. The wing can be lowered to 10 metres in height, making it flexible in case of bad weather or when passing under a bridge.

DNV GL undertook the AIP by reviewing the initial drawings related to design loads, system responses, redundancies and components submitted by KSOE, while SK Shipping provided their expertise and insights on the technology from an owner's point of view.

Vidar Dolonen, DNV GL Regional Manager Korea & Japan commented: *'As a result of the joint research with two leaders of Korea's maritime cluster, it was a meaningful project to which we contributed our expertise. The wind propulsion for ships is an effective solution which helps meeting IMO regulations for greener shipping. DNV GL is ready to deliver a wide range of related services for further projects.'*



Artist's impression of the VLCC with the wing sails in place.

Photo: KSOE©

The new wing sail propulsion system can be installed on many types of vessel and is expected to further increase the efficiency of future ship operations. The AIP is also a big step towards awarding a ship DNV GL's new additional class notation, WAPS (Wind Assisted Propulsion System). In addition, DNV GL has recently developed a standard for the certification of wind assisted propulsion systems in response to enquiries for the independent assessment of those systems.



The virtual award ceremony. (Standing and top of screen, from left): Hyun-Joon Shin (KSOE, Head of Future Ship Department), Hae-Yong Son (SK Shipping, Vice President), Shi-Wong Noh (KSOE, Senior Researcher), Kyo-Hun Ku (HHI, Head of Initial Design Department), Se Yong Jeong (KSOE, Senior Researcher)

(On screen bottom row, from left): Sung-Ho Shin (DNV GL, Key Account Manager), Jae-Hun Lim (DNV GL, Decarbonization Expert)

Thome Group launches new Navigation Bridge Simulator

The Thome Group recognises the importance of its seafarers keeping pace with the rapidly changing technology on board today's modern vessels which is why it has recently invested in the installation of a new Full Mission Navigation Bridge Simulator with a 320° view.

The new system was formally opened, following all relevant COVID-19 protocols, on 20 January at the TSM Building, Makati City, in the Philippines.



At the controls of Thome's new navigation bridge simulator.

Present at the event were Per Selmer Olsen, VP for Thome Ship Management, ROHQ, Ian R. Garcia, CEO of the TSM Group and Elmer Pulumbarit from the International Maritime Training Fund (IMTF) together with other participants joining online.

Using Kongsberg Digital's latest K-Sim navigation simulator, trainees will be able to use equipment that looks, feels and has the same functions as real on board

equipment, while operating in a safe training room environment.

The sophisticated new visual system brings to life geographic locations, different weather conditions and other nearby vessels so trainees can have better seascape and interact with multiple scenarios.

This is the second navigation simulator which the Thome Group has setup at its state-of-the-art training centre in Manila. The new system will be used for conducting various levels of navigational training including bridge team management, ship handling, ship-to-ship manoeuvres, deck simulator assessments, ice navigation, to name but a few. All the training can be customized to specific client requirements to enable bespoke courses on specific ship types, geographical regions, operation type and so forth which provides a valuable training experience for the crew.

In the words of Olav Nortun, CEO, Thome Group: *'Making sure our crew is fully trained on the latest equipment before they go onboard is a necessity, which is why we have invested in the most up to date technology from Kongsberg.'*



The new full mission navigation bridge simulator with a 320° view.

'The new bridge system can be integrated with the K-Sim engine simulator which enables a comprehensive range of training scenarios that will help support inter-departmental operations. The system also has a playback facility which allows full de-briefing sessions with the trainees.'

This latest system has the capability to remotely view live classes from anywhere in the world, allowing clients to observe their crews in training.

Claes Eek Thorstensen, Executive Vice Chairman, Thome Group, added: *'This new simulator will teach our teams how to use on board equipment in a controlled environment. People tend to retain much more knowledge when having to perform an actual task than just passively listening to someone talking and so these incredibly realistic simulators are the ideal way to learn by doing. In a time where travel is limited having the ability to view these simulators in real time from other locations is an added bonus.'*

Thome provides confidential helpline service for its seafarers

The Thome Group has always put the mental health and well-being of its staff at the top of its priority list and this year has been no exception, particularly as both office-based and sea staff have been under increased stress due to the changes and disruptions brought about by COVID-19.



Its seafarers already had access to help and support but Thome upgraded this service recently with a continuous free and confidential helpline service provided by the International Seafarers' Welfare and Assistance Network (ISWAN).

This has been further enhanced with Seafarer Assistance, a bespoke emotional support service operated by SWAN Ltd, a subsidiary of ISWAN. This includes a free, confidential helpline at all times manned by specially trained counsellors which is available not only to Thome's employees but also to its seafarers' families, as the company recognises the extra strain that its crews' loved ones are enduring due to the uncertainties brought about by the virus.

The Seafarer Assistance service can also be accessed using e-mail, live chat, Facebook and Whatsapp giving Thome employees valuable tips and hints on how to cope with feeling low, stressed and fatigued, and helping them maximise their psychological wellbeing.

In specific circumstances, face-to-face consultations and counselling can be provided if deemed necessary to help staff or family members mitigate any serious risks to their overall mental well-being.

Olav Nortun, Thome Group's CEO, commented: *'Ensuring that our staff and their families are being supported by trained professionals is vital. None more so than this year which has brought about some exceptional circumstances for our teams to endure as the pandemic caused unprecedented changes to our working and personal lives. This is why we decided to introduce a bespoke confidential support service for all our employees and their families which can be accessed 24/7 wherever you're located in the world.'*

Claes Eek Thorstensen, Thome President and CCO, added: *'Removing the stigma of mental health issues through training and support with initiatives like Seafarer Assistance is so important. Our staff are the key to our success so we owe it to them to provide this free and confidential support to help them reduce their anxieties and stress levels and those of their families.'*

SAFEMODE Project meets IFSMA

On 13 January, SAFEMODE's project lead partner for institutionalization activities, the World Maritime University (WMU) represented by Dr Maria Carrera, held a video call with IFSMA representatives.

The stakeholder identification and analysis conducted on the project has led to identify IFSMA as one of the primary stakeholders to support institutionalization activities of SAFEMODE.

These activities are mainly oriented to engage with stakeholders involved in policy recommendations and decision-making relating to Human Factors (HF) and channel key SAFEMODE developments adequately to contribute to industry uptake and regulatory developments.

Ship masters are contributing to SAFEMODE project by sharing their knowledge and expertise for the benefit of different tasks, including the development of an incidents database for learning from safety events, maritime cases studies validation, or a just culture framework among other developments, and by ensuring that end-users' interests and needs are considered at all levels.

Masters represent main maritime end-users along with other ship crews and front-line operators, who will benefit from SAFEMODE outcomes relating to better systems and operations designs. Other SAFEMODE's end users include designers and developers, safety experts, human factors (HF) practitioners, investigators, inspectors, surveyors, auditors and HF non-experts, all of whom are involved in risk assessment and HF integration into their decision-making practices.

SAFEMODE project is sailing half way through (May 2019-June 2022) and primary stakeholders who may influence or be influenced by HF policy recommendations, decision-making processes and implementation of regulations resulting of the project are being consulted, IFSMA among them.

Key developments of the project are being presented through a series of individual consultations that are taking place with maritime administrations, IGOs, and NGOs both representing industry and seafarers' interest. Consultations are the first step of the institutionalization process that will be followed by other engagement activities through 2021 and 2022.

These activities include workshops with primary stakeholders around some selected outcomes and participation of SAFEMODE in discussions organized by primary stakeholders about HF integration into design of systems and operations effectively.

World Maritime University (WMU) at Malmö is the IMO's centre of excellence for postgraduate maritime education. WMU's mission is to be the world leader in postgraduate maritime and oceans education, professional training and research, while building global capacity and promoting sustainable development. WMU is leading SAFEMODE work on policy recommendations and institutionalization in collaboration with the rest of the project consortium (see here: <https://www.safemodeproject.eu/partners>)

SAFEMODE in a nutshell

The SAFEMODE project (see here: <https://www.safemodeproject.eu/>) is a three-year research and innovation action project funded under the Horizon 2020 programme which brings together partners from both the maritime and aviation sectors representing academia, industry, and research centres as well as small and medium-sized enterprises across Europe and internationally.

The main aim of the project is to develop a novel Human Risk Informed Design (HURID) framework in order to identify, collect and assess HF data in a systemic way.

HURID will offer data and tools for designers and risk assessors, enabling them to take HF risk-based considerations when designing transport systems and operations.

SAFEMODE is strengthening synergies between the aviation and maritime transport sectors in order to create shared methodologies for capturing HF. The consortium through different technical tasks is developing unified solutions for maritime and aviation to facilitate cross-domain learning, including an incidents database, a HF taxonomy to classify root causes of accidents and near misses with a systemic approach, human risk models, and a just culture framework in both domains.

LEARNING (correctly) from safety events in shipping takes two: Incidents Root causes & Just Culture

There is lack of HF data derived from investigation of safety events, which affects the correct learning from accidents and near miss reporting in maritime and cross-sectors.

In addition, there is also a lack of effective learning loops from operations back to design. SAFEMODE developments are driven by data derived from frontline operators. Data derived from accident investigation and near miss reporting is analysed through SAFEMODE solutions to inform designers and safety experts, information in which they base their decisions when designing systems and operations. This produces learning loops from previous safety occurrences, so HF can be safely and effectively integrated in the new designs or redesigns.

Two SAFEMODE unified outcomes for maritime and aviation include an incidents database that identifies, collects and analyses root causes of accidents and near misses and a just culture framework.

SHIELD database-Unified HF taxonomy

This project is developing the SHIELD (Safety Human Incidents & Error Learning Design) database, which identifies, collects and analyses HF data from different sources related to safety events.

The database is multi-layered and applies a systemic approach to collect and analyse information about accidents and accidents root causes. It contains a unified HF taxonomy for maritime and aviation to produce cross-domain learning, which allows classifying and analysing individual, contextual and organizational factors.

The SAFEMODE HF taxonomy has been developed after reviewing 16 taxonomies used in maritime and aviation but also in other safety critical industries such as railway, nuclear and space. It is designed to be used by different users involved in the design-operation loops, including then operators, investigators, designers, HF experts, safety assessors, and Non HF-experts.

Just Culture Framework

'The quasi-absence of just culture in shipping affects all types of reporting' (WMU, 2020). A culture in which individuals will not be punished by their honest mistakes and are encouraged for providing essential safety-related information must be promoted in the maritime industry.

Benefits of just culture include increasing reporting of safety events, learning (correctly) from these events, making safer systems and operations design and increasing motivation and wellbeing of operators.

Qualitative research involving main stakeholders is being conducted. Seafarers from different nationalities, gender, ranks and working on different types of vessels have been interviewed.

Causality investigators from inside and outside Europe, and at both flag and organizational levels, have also been interviewed. The second phase of the research (March-April 2020) will include shipping companies and governmental and non-governmental organizations, as well as maritime training colleges.

Commodore Jim Scorer, IFSMA Secretary General, welcomed research about just culture, work and rest hours, basic health and safety aspects and highlighted the role of administrations and flags of convenience. These are all important aspects to be tackled and directly link to the fact that "HE is not respected at all" in shipping.

Captain Paul Owen, IFSMA Assistant Secretary General, highlighted that organizational aspects and their oversight are clearly important in casualty investigation reports, so pointing them out is positive.

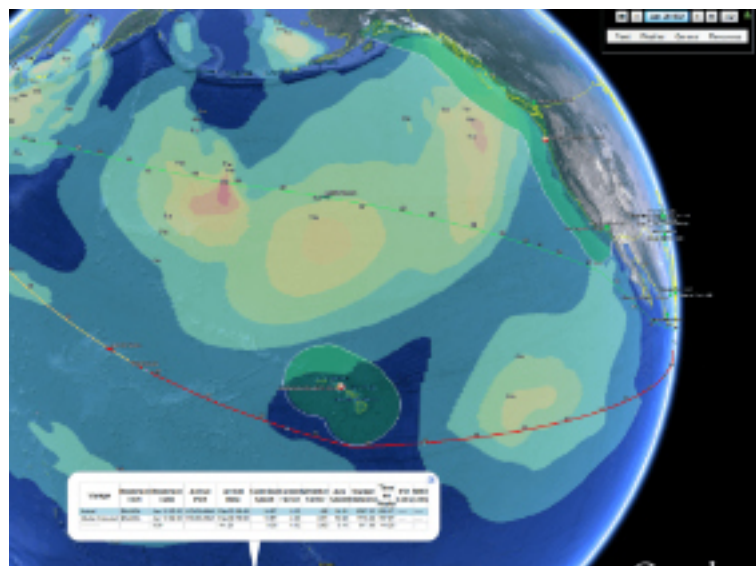
Dr Maria Carrera, Research Associate at WMU, highlighted the importance of having IFSMA as part of the institutionalization pathway and really welcomed IFSMA input and support to the activities to come. "IFSMA represents Shipmasters' interests, and ship crews are the reason why improved Human Factors best practice and

design policies exist. She was confident the meeting represented the first step of a closer collaboration in the near future."

For further information on SAFEMODE see: <https://www.safemodeproject.eu/>

StormGeo voyage planning

It was announced from Bergen on 1 February that StormGeo, a global leader delivering shipping solutions in voyage planning, route advisory and fleet performance management, was opening a new office in Copenhagen. Expansion in Denmark will strengthen the company's partnership with shipping customers in this market.



By StormGeo, an example of ship routeing for a passage Panama to Yokohama.

Photo: StormGeo©

In the words of Kim Sørensen, COO Shipping Division, StormGeo: *'The decision to expand into Denmark was a logical move in our growth strategy. We are experiencing a growing demand in Denmark for integrated shipping solutions such as StormGeo's s-Suite and having local people with shipping expertise is a natural step forward.'*

Denmark is a well-known market for StormGeo, having supported customers in offshore wind for many years. StormGeo's CEO, Søren Andersen, its COO of shipping Kim Sørensen and its chairman, Carsten Mortensen are Danish with shipping backgrounds.

Sørensen added: *'This has definitely opened some doors for us, and now we feel it is the right time to have dedicated staff in the region.'*

'Danish shipping companies are usually very technology driven and put a lot of resources into processes and systems to reduce bunker consumption and greenhouse gas emissions,' said Carsten Mortensen, Chairman of the Board. He added: *'StormGeo is well suited to solve these challenges, in addition of course to safeguarding the crew, ship and cargo.'*

StormGeo's s-Suite is an innovative software and services suite integrating voyage planning, route optimization, route advisory and fleet performance management, all from one company. s-Suite delivers cost efficiencies by optimizing time, fuel and vessel performance while ensuring navigational and environmental compliance on a single platform.



Photo: StormGeo©

The new office is located near the Danish maritime cluster in Copenhagen.

StormGeo provides more than 12,000 ships with voyage planning, onboard route optimization, route advisory and fleet performance management products and services. It is claimed that 65,000 voyages are routed by StormGeo annually. In addition, StormGeo supports nearly 3000 vessels in achieving EU-MRV and/or IMO-DCS emission goals.

Shipowners' everyday challenges

Fleet managers' views

A few weeks ago staff at NAVTOR, a global provider of maritime e-Navigation devices and services, discussed with leading Norwegian headquartered ship owners the most important day-to-day operational challenges facing them in 2021, and the solutions they desire.

The Round Table style of event comprised: Anders Tønnessen, Performance Manager, Høegh LNG; Torfinn Jølle, Senior Marine Superintendent; Thomas Strand Knudsen of Bergen headquartered Spar Shipping and Tor Svanes Founder and CEO of NAVTOR,

One question was: **Could greater data integration and utilisation help them successfully navigate an increasingly demanding future?**

There were four headings: **Environmental efficiency; Administration; Proving performance and Trouble shooting**

Anders Tønnessen, Performance Manager, Høegh LNG, addressed the one subject that impacts upon every stakeholder within the shipping value chain –

sustainability. He commented: *'It's a constant battle, but one we're committed to fighting.'*

Improving the industry's environmental performance is intrinsic to survival: of individual companies, of commercial maritime, and of wider society itself.

The IMO has set an ambitious industry wide goal of decarbonisation by 2100, while forward thinking owners are positioning to sit at the vanguard of change, supercharging their own transitions to carbon-neutrality.

Höegh LNG is in a strong position – thanks to the relatively clean nature of LNG, a modern fleet, and large investments in technology and people to monitor performance and emissions – but that doesn't breed complacency. Far from it in fact.

'We have the responsibility to continually work to reduce our carbon footprint,' Tønnessen explained then added: *'That's good for the environment, but it also makes good business sense – enhancing energy efficiency, lowering costs, and ensuring compliance with both regulatory demands and the requirements of our charterers. It necessitates an on-going process of optimisation; on every vessel, for every day of operations, no matter where they are.'*

For Oslo-based Tønnessen it means his battle is fighting to gather and analyse all relevant performance data for an advanced fleet of 12 vessels, benchmarking individual vessel results to incorporate best practice into a fleet-wide systematic approach.

Administration

Greater regulatory demands, a competitive commercial landscape, and increasing operational complexity create an environment where documentation and reporting is more essential – and expected – than ever before.

Port authorities, charterers, business stakeholders and a diverse spectrum of interested parties place a heavy burden of proof upon individual vessels and fleets. **Torfinn Jølle, Senior Marine Superintendent**, and a colleague of Tønnessen, sums it up concisely:

'Put simply, there's too much administration,' he noted. *'It's definitely one of the main challenges facing crews, and onshore teams, that already shoulder a great deal of responsibility.'*

Jølle said that a greater integration of systems and data would assist those in his role as much as Tønnessen's, making insights easier for his colleague and enabling the possibility of increased automation of tasks for vessel crews and himself.

Proving performance

For owners chartering out vessels, meeting contractual covenants is essential to running a profitable, reputable and successful business. Charter party agreements may have implicit warranties or performance guarantees, with promise of a minimum standard related to fuel consumption and set speed. If this level of performance

cannot be achieved, a charterer can potentially submit a performance claim, which could be substantial, eating into a company's bottom line.

In today's harsh trading environment there's simply no room for such excesses, opined **Thomas Strand Knudsen of Bergen headquartered Spar Shipping**. Knudsen said there's a clear need to both protect profitability, reduce environmental impact and, at the same time, demonstrate integrity.

He said: *'Good shipping companies invest in building strong relationships with customers and for Spar that means operating with integrity, trust and transparency. Proving performance is key. But, it is often easier said than done.'*

Traditionally, performance is assessed-based on a raft of different documentation from vessels detailing, for instance, average speed, weather and bunker consumption. This requirement places an administrative burden on ships staff, as highlighted by Höegh's Jølle. Despite the best intentions and efforts of crew, results can sometimes be disputed and the integrity of Masters and bridge teams questioned, as Knudsen explained.

A platform capable of channelling various real-time data sources into one system, which then can be used to automatically generate reports, and provide immediate feedback, may be the way forward, the Spar executive suggested then continued. Data provided by respected suppliers, with proven integrity, could potentially provide a solid foundation of proof... all at the touch of a button.

Knudsen concluded with: *'In an increasingly connected, digital industry, the less analogue work we are required to do the better. A system that unequivocally demonstrates performance would be a real step forward.'*

Trouble shooting

The need for digitisation is something **Tor Svanes** appreciates more than most. For a supplier perspective on challenges, Svanes, the **Founder and CEO of NAVTOR**, is a perfect port of call. His company, formed in 2012, has quickly established itself as the leading authority on e-Navigation, delivering innovative products and services to over 6000 vessels – and a wide variety of ship owners – worldwide. He is used to speaking to owners and, along with his team, devising solutions to meet demands. He agrees that data and integration is the way forward.

'This,' Svanes stressed, *'is something that is of particular interest to today's owners.'*

Here he explains, as Tønnessen hinted, that it is challenging to manage multiple, geographically scattered assets, and address issues, from afar. To really understand what is happening and deliver solutions you need to have eyes on the ship and, he says, data can deliver that vision.

In short, the NAVTOR chief sees smarter data utilisation and integration as the answer to all of the ship owners' top challenges here – from better environmental performance to cutting administration.

He remarked in conclusion: *'It's clearly not a panacea, but it is a powerful tool for addressing day-to-day challenges and facilitating better fleet wide business decisions.'*

'I firmly believe data will be the key to unlocking smarter shipping, for existing vessels as well as newbuilds. We may not have the systems in place to enable this just yet, but they are on the horizon.'

'This is the future. This will set a new course for a more sustainable, profitable and efficient shipping industry. For owners... and for everybody.'

The plastic scourge

We hear and see so much these days of the enormous amount of discarded plastic in the oceans and in our waterways. CSIRO¹, Australia's national science agency, has provided the first ever global estimate for microplastics on the seafloor, with results suggesting there are 14 million tonnes in the deep ocean. See report "Frontiers | Microplastic Pollution in Deep-Sea Sediments From the Great Australian Bight | Marine Science (frontiersin.org) here: <https://tinyurl.com/y3b7yhr6>

As there seems to be more and more of this waste and discards being dumped at sea from ships the burning question is: What we can do about it?



Australian researchers collected and analysed samples from the seafloor to estimate the amount of microplastics.

Photo: www.CSIRO.au ©

It is sad to relate that information gleaned from recovered plastics with dates and point of origin has shown a significant proportion of this material can only have come from ships.

Working with BIMCO, ICS and the ITF we aim to consider how we can make an impact and reduce the amount of single-use plastics being dumped at sea.

Through our members it is our aim to see if we can produce some good ideas as to how this can be achieved and we welcome any thoughts you may have.

Questions

For example, it is known that some shipping companies carry only bottled water for crew consumption. The water is most likely to be in plastic bottles.

A question: Is plastic waste landed for salvage at the next port of call?

One can go further: Are there port reception facilities at the ports at which you call available for this type of waste?

If the plastic waste cannot be discharged ashore at the next port of call what do you, as shipmaster do with it?

¹ Commonwealth Scientific and Industrial Research Organization.

MENAS and Inchcape reach strategic agreement for Middle East nav dues

The Middle East Navigation Aids Service (MENAS) has taken a huge step forward in its effort to ensure ship owners are able to pay for aids to navigational provision in the Middle East Gulf, by signing a cooperation agreement with Inchcape Shipping Services that will contract the ship agency company to collect aid to navigation aids dues from the ships it looks after in the waterway.

The agreement, covering all Inchcape offices in the Middle East, is the first one in a series to formalise and standardise the collection of navigation dues processes and accountabilities across all ship agencies working with MENAS on the collection of the dues.

Operating from its main base in Bahrain and a support base in Abu Dhabi, The Middle East Navigation Aids Service (MENAS), a subsidiary of the International Foundation for Aids to Navigation (IFAN), owns and maintains an extensive network of 58 buoys, lighthouses and Racons, mostly located in remote areas more than 12 nautical miles from the shore, and generally in hazardous areas such as narrow waterways leading to main ports. Most of these Aids to Navigation (AtoNs) are classified as Category 1 (Vital), according to International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) principles. MENAS also owns four DGPS transmitters providing essential positioning information and also broadcasts on VHF giving advice such as the issuance of Notices to Mariners, advising on hazards to shipping and co-ordinating additions to navigation charts for the Gulf. Over 2,000 vessels rely upon MENAS equipment and services each month.

Peter Stanley, CEO of MENAS and IFAN, welcomed the agency agreement as the first step in ensuring that owners honour their responsibilities when it comes to paying for safe navigation in the Middle East Gulf. This agreement provides them with a simple and effective means of paying Nav Dues, he stressed.

He said: *'This formal agreement with Inchcape Shipping Services now means that we have a clear understanding of the standards that are expected over collections and certificates issued to ship owners.'*

Stanley added: *'Both companies support the safe navigation in all the world's trade lanes, not least in the Middle East Gulf, and owners must step up to the mark and do their bit by paying the necessary nav dues. We remain committed to ensuring navigational aids in the region are properly maintained and modernised, but this takes significant investment.'*

Errol Seaman, Inchcape Shipping Services, Area General Manager for the Southern Gulf, praised the work of MENAS in helping to ensure safe navigation in the Gulf. He said: *'Light dues and aids to navigation are a very important element in our business and for the shipping industry in general. Without them, global trade would struggle. This agreement reflects the tremendous effort by MENAS in ensuring navigational aids in the region are well maintained.'*

Captain Atul Shukla, Inchcape Shipping Services, Cluster Manager for the Southern Gulf, Marine Survey and Inspection Division, added: *'Inchcape and MENAS have a long history of successfully working together and we welcome this service agreement, as it enforces our joint commitment to safe navigation in the area. Inchcape is and has always been a strong supporter of safe navigation and is committed to contributing to making our oceans safer. We are delighted to be able to dedicate our resources in this way to assist MENAS in its excellent work.'*

MENAS has previously warned of the need to upgrade or replace the navigational aids as they near the end of their life expectancy. Plans for investments are being drawn up to renew the four DGPS transmitters so that they continue to deliver quality navigational signals in the Gulf region.

US DOT releases report to Congress

Complementary Positioning, Navigation, and Timing (PNT) and GPS Backup Technologies Demonstration

The report details the results of field demonstrations of mature PNT technologies that could offer complementary service in the event of GPS disruptions

On 15 January the US Department of Transportation (USDOT) released the report to Congress entitled: *Complementary Positioning, Navigation, and Timing (PNT) and GPS Backup Technologies Demonstration*¹.

USDOT's Volpe National Transportation Systems Center (Volpe Center) conducted field demonstrations of candidate PNT technologies that could offer complementary service in the event of Global Positioning System (GPS) disruptions. The purpose of the demonstrations was to gather information on PNT technologies at a high Technology Readiness Level that can work in the absence of GPS.

Diana Furchtgott-Roth, USDOT's Deputy Assistant Secretary for Research and Technology commented: *'The*

results of the thorough scientific research conducted by this demonstration effort indicate that there are suitable, mature, and commercially available technologies to back up or to complement the timing services provided by GPS. However, the demonstration also indicates that none of the systems alone can universally back up the positioning and navigation capabilities provided by GPS and its augmentations. This necessitates a diverse universe of positioning and navigation technologies.'

The Volpe Center, through a competitive acquisition process, selected eleven candidate technologies to demonstrate positioning and/or timing functions in the absence of GPS.



Demonstrations were conducted in March 2020 at NASA's Langley Research Center (Hampton, Virginia) and Joint Base Cape Cod (Bourne, Massachusetts).

Results from the demonstrations were evaluated against fourteen measures of effectiveness. The findings indicate that the best strategy for achieving resilient PNT service is to pursue multiple technologies to promote diversity in the PNT functions that support transportation and other critical infrastructure sectors in urban, rural, and maritime areas.

The report details the results of USDOT activities covering GPS backup demonstration planning, the PNT technologies demonstrated, the government reference system used to collect and verify results, and an information framework to convey measures of effectiveness of the demonstrated technologies.

More information on GPS Backup/Complementary PNT Demonstrations can be found here: <https://tinyurl.com/yyjmlu8v>

¹See: <https://tinyurl.com/y57jd7vz>

ISWAN's Social Interaction Matters (SIM) Project

ISWAN is the International Seafarers' Welfare and Assistance Network, with HQ in Croydon, South London.

At ISWAN its Social Interaction Matters (SIM) Project aims to help shipping and ship management companies improve seafarers' social interaction on board, and to positively impact the wellbeing of their seafarers through using programmes with proven success.

In January 2021 ISWAN published a report on Phase One of the project (see here: <https://tinyurl.com/y64uu3qy>),

Here the charity surveyed and interviewed seafarers and others in the maritime industry to examine the relevant drivers and barriers to social interaction and identify specific activities which help to engage people.

This article here, kindly provided by ISWAN, is the first in a series which will explore the themes emerging from research findings. Written in February, the charity takes a look at the effects of leadership on social interaction on board.



Creating an environment on board which makes the crew feel comfortable enough and motivated to socialise is fundamental, and the influence of senior officers can have a significant impact.

Creating an environment on board which makes the crew feel comfortable enough and motivated to socialise is fundamental, and the influence of senior officers can have a significant impact.

During Phase One of ISWAN's Social Interaction Matters (SIM) Project, the charity asked over 900 seafarers and others in the maritime world to select which drivers helped them to socialise on board. The most popular answer, chosen by over a third of survey participants, was strong leadership, that is to say an on board culture established by senior officers which encouraged social interaction.

The hierarchical nature of the Merchant Navy means that the ship's environment is strongly influenced by the behaviour and actions of the captain and other senior officers. When interviewed, one respondent said of his captain: *'...it was all his leadership. As soon as he left we had a completely different [Master]...and the whole atmosphere died overnight. It went down the gangway.'*

This means that senior officers' engagement in, or sanction of, activities on board is crucial.

Leading by example can promote a more relaxed and trusting environment on board.

ISWAN is seeing examples of positive leadership in Phase Two of the SIM Project, currently underway, in which the charity is working with a number of vessels trialling social engagement initiatives on board.

The captain of one vessel helped to prepare a New Year's Eve meal in the galley for her crew (*pictured*), and captains of other vessels have joined in onboard basketball tournaments and other activities. This strong leadership creates positive role models for junior officers,

helping them to pass good practice to the next generation of seafarers.

Crew cohesiveness is vital

The COVID-19 pandemic is an extreme example of how vital crew cohesiveness can be. One interviewee in ISWAN's Phase One research described how leadership is about more than just hierarchy: *'...in my five months on board we had an amazing crew, and our management handled the situation brilliantly, they were encouraging, and they were setting out games, and they were informing their crew.'*

'Every night the Captain would go down for dinner and he would just say a few words about the situation. So, there was a constant flow of information, and people felt included. When you have a situation like this, it is the management's job to keep their humour up and make some effort...'

Clear communication and the ability to motivate crew are skills a good leader needs to encourage social interaction on board their vessel, as well as an understanding of the factors affecting how crew interact with each other and an appreciation of the benefits of inclusivity (and the damaging effects of exclusion).

Training is key but dedicated leadership training, particularly on soft skills, is largely missing within the Merchant Navy, so this may be an important consideration for the future.

To find out more about ISWAN's SIM Project and download the Phase One report released in January 2021 readers are invited to see here: <https://tinyurl.com/yvj4xdfg>

ICS launches new Flag State Performance Table

Towards the end of January the International Chamber of Shipping (ICS) published the latest Flag State Performance Table (2020/2021) which finds that many of the largest flag states – including the Marshall Islands, Hong Kong (China), Singapore as well as the Bahamas and Cyprus– continue to perform to an exceptionally high standard, with traditional flags and open registers performing equally well.

Among the ten largest ship registers (by deadweight tonnage), covering more than 70% of the world fleet, none have more than two indicators of potentially negative performance, and five have no negative indicators at all.

Due to the unprecedented nature of the COVID-19 outbreak, the previous period's Flag State Performance Table (2019/2020) was not published. In order to maintain a complete and accurate record of Port State Control performance of flag States in 2019, ICS has published the relevant PSC data on the last page of the report, corresponding to information released in 2019 by the Paris MOU, the Tokyo MOU and the United States Coast Guard in their respective annual PSC reports.

The Flag State Performance Table can be accessed free of charge from the new ICS website here: <https://www.ics-shipping.org/>

With the Flying Angel in Kobe amid the Covid-19 pandemic

By Captain Peter Pratley, Individual Member

Members of IFSMA will doubtless recall the “Mish” (Flying Angel, the Missions to Seamen or MtS) that welcomed us at many ports around the world. And is still here for all mariners. And, is welcome to all those who live for and with the sea.



Marine Society, London

This author's first voyage deep sea was in 1962, from London to the Far East via the Suez Canal, Ceylon and Singapore, as Indentured Deck Apprentice on a general cargo vessel.

The officers' lounge had a UK ships' library, supplied at company expense by the SES (Seafarers' Education Service) based in Balham, South London. At that time missions were assisting with delivery and collection, evidenced by the weighty orange-painted wooden boxes full of books with their sea-dog logo that were a familiar sight at the Mission in many ports.



Gangway Head

I recall that the Scottish shipping company Ben Line carried libraries to and from Kobe MtS. That good scheme of Seafarers' Libraries seems to have stopped some years back now, being replaced by very handy and ecologically sound CDs, DVDs and internet applications.

In those early days at sea we could also watch reel-to-reel films with the ship's projector and in fine weather the viewing was on the cargo-hatch top. Hatch-cover film night was the nearest thing to that American invention, the drive-in movie.

That was in the 'sixties when Netflix was perhaps

producing fishing documentaries and YouTube was an original if skinny Christmas cake. 'Skinny' being ship owners' preference for the victualling rate in any case. For sure neither word was found in any dictionary in those days.



S.S. Aronda's Bell

The Flying Angel Missions were at most ports and were kind to us in many ways over the ensuing years; always there to welcome us when we were alongside our berth.

Often just a chat with the padre or sitting somewhere quiet was enough for those away from home. Visiting the Mission opened us up to new friends in faraway places, and introduced different ways of life.



MtoS On the Map in Kobe City

For many seafarers, going off the ship and taking a walk where the deck didn't move; feeling grass, not steel, under the feet was such a relief. Many social events were arranged by the Mission – games of football or cricket with local teams. Cultural trips to places of interest. BBQ's on the beach. Safari parks. Religious services for those in need; any belief or creed or... none. All visitors welcome. Always a haven to relax, away from the smell and clangour of the ship.

The Missions worked hard for the care and well-being of Seafarers – for that is the Mission's Mission: *Caring for the seafarers.*

And to do that now, when restrictions such as lockdown and states of emergency render normal freedoms unattainable, the Missions have not ceased their work of

care for seafarers.

Here in Kobe during this pandemic when shore leave is restricted, the Mission chaplain visits the ships every day, mostly to the top of the gangway, but on the pier where the gangway lands is also possible and crew can meet there at the lower platform. Entering the ship is not allowed at present nor is it prudent. And for any meeting, upper or lower, there is a person's temperature check first, before words are spoken. Meeting on deck at the gangway head is most popular and gifts can be delivered with ease, words exchanged, opinions expressed. Talk is good for all.

PPE and health and safety rules are naturally observed.



MtoS Kobe Mariners Centre

Gifts such as wooly hats, made by busy needles of volunteers, are really appreciated by the crew, and right now, in these cold winter months (northern hemisphere at the turn of the year), especially so. Calendars and sweets, shaving kits, stationery, diaries and pens. Badges and pins.

All those gifts are mostly collected from those ashore and who are happy to give. And even gift-wrapped – a real treasure for many.



Gangway Watch ready with Temperature Check

Christmas and other special times become happier for the seafarers away from home.

Here in Kobe the Chaplain visits berthed vessels in the port daily, and when arranged will take one of the mini-

buses and bring seafarers ashore, shops being the favourite destination. A time is arranged for them to be at the Mission for collection and, later, transport back to their ship.

The mission building is comfortably furnished and visitors from ships can enjoy its amenities of music, computers and Wi-Fi and there is a well-stocked bar with its fair tariff. Visitors can have a beer and a snack, a mug of tea or coffee. Use the free Wi-Fi, visit the Chapel of St. Andrew on the premises. When a service is requested, as well as for regular worship, this is where it takes place. Under current restrictions, social distancing being always observed. If there are too many in the congregation, the lounge and/or library-cum billiards room are used in conjunction.



Lounge before Covid-19

Some years ago a baby was baptized here, ship's bell from the old British India cargo ship *Aronda* being put to good use as the font.

On the lounge wall a prayer written in the note book from visitors to anyone to read. Latest entry is asking God to be with crew and cows lost at sea, remembering a livestock carrier which sank with the loss of 43 crew and near 6000 cattle in September 2020.

A good number of the faithful who frequent the Kobe Mission are, like this author, resident in Japan. Under any conditions the Kobe Mission has always been a popular destination, for seamen and former seamen and others connected with the sea. It is handy for access, close to the port yet within the busy and entertaining Central District of Kobe City.

The care and kindnesses given to seamen by the Missions are quite astounding in normal times. But in a pandemic such as the current one is there is nothing that is 'normal'.

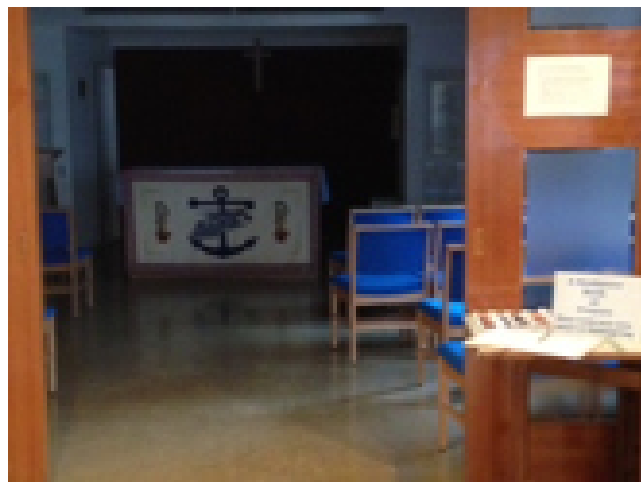
And for seafarers working far away from home the abnormalities are various, severe and many.

Seamen cannot go ashore from their ship; cannot join or leave under contracted durations when countries ban border crossing.

From experience we know that after joining the ship and

signing the Articles of Agreement (specifying on-board terms and conditions), some few extra days either side of that contract are not unusual because shipping is bound by weather, civil unrest and other unknowns, frequently logged as 'Act of God'. He/She certainly gets a lot of human error...

The extra duration of time away from home forced upon seafarers by the strictures of countries protecting their own as well as trying to stop the disease spreading in this current pandemic, is something relatively new.



St. Andrews Chapel.

When it ceases, and it will cease, because a cure will have been found, along with vaccination that is safe and successful, the research and innovation has to continue so that the future brings no terrible surprises for which human preparedness has no immediate defence.

This time, perhaps blame (vengeance really) is desired but that is not the answer.

Education is. Good, relevant, useful education. And lots of help from 'Upstairs'.

In closing, we know that many are the past mixed bunches of visitors to the Kobe Flying Angel and we hope and pray for the Mission's continuing existence – an oasis of goodness and peace in this troubled world. A really true haven for all.

New cable ship design

VARD, one of the major global designers and shipbuilders of specialized vessels, announced in mid-February that Orange Marine had selected design from its extensive portfolio when expanding their fleet of cable ships. This vessel is specifically designed for fibre-optic cable repair.

VARD and Orange Marine's cooperation goes back to 2012 when VARD was selected for the design and construction of their cable laying and repair vessel to VARD 9 01 design, *Pierre de Fermat*. The vessel will be built by Colombo Dockyard which has experience from building the cable laying and repair vessel *KDDI Cable Infinity* to the same design in 2019 for delivery to Kokusai Cable Ship Ltd of Japan.

The VARD 9 03 design for Orange Marine is specially created for the maintenance of submarine cables, both

fibre-optic telecommunication cables and inter-array power cables used in offshore windfarms. VARD developed the vessel design according to the client's operating requirements with special attention given to hull design in terms of good sea-keeping qualities and low fuel consumption. Together with its manoeuvrability it is said to be a specialized element for the cable repair fleet market.

Well positioned in the cable ship market

VARD is continuously expanding its portfolio for power- and telecom cable laying and repair vessels as well as developing inhouse competence and experience within this segment, working with significant companies in the industry. Currently VARD has two power cable-laying vessels under construction. The VARD 9 04 design for Prysmian, and the recently signed contract for the VARD 9 02 design for Van Oord.

Experience also includes design and construction from 2011 of the offshore construction and cable laying vessel *Connector* now owned by Jan De Nul Group, and the inter-array cable laying vessel of VARD 9 01 design *Seaway Aimery* built at Remontowa Shipyard for Siem Offshore in 2016, in addition to the fibre-optic cable laying vessels *Pierre de Fermat* and *KDDI Cable Infinity*. With this extensive track record VARD is positioned as one of the most experienced designers of cable laying vessels.



Cable repair vessel design for Orange Marine by VARD of Norway. Of 10 metres loa, beam 18.8 metres.

VARD indicated that it is pleased to continue cooperation with Orange Marine and Colombo Dockyard and for the trust the cable ship market is showing.

Fredrik Hessen, General Manager of Business Unit Offshore and Specialized vessels commented: 'We highly appreciate the close cooperation between Orange Marine, Colombo Dockyard and VARD to enable another innovative vessel design within the fibre-optic cable ship segment.'

About Orange Marine

Orange Marine specializes in the field of submarine telecommunications from the initial design and engineering, to installation of intercontinental and regional links, and maintenance of existing cables.

In operation since the mid-nineteenth century, the submarine cable industry FCR – France Cables and Radio – became a 100% subsidiary of Orange Group in 1999.

The Orange Marine fleet is one of the most experienced in the world and represents 15% of the world cable ship fleet. In total, Orange Marine has installed more than 200,000 kilometres of fibre-optic submarine cables in all oceans. Its ships have carried out over 670 repairs on routes, some of which are in 6000 metres of water.

In October 2010, Orange took control of Elettra, a subsidiary of Telecom Italia. Its management is delegated to Orange Marine, which now operates six cable ships and a survey vessel from marine bases or from foreign ports. See also: <https://marine.orange.com/en/>

Colombo Dockyard

Established in 1974, Colombo Dockyard is Sri Lanka's leading shipbuilding, ship repairing, heavy engineering, and offshore engineering facility conveniently located within the port of Colombo.

Colombo Dockyard operates in joint collaboration with Onomichi Dockyard Company Ltd of Japan and the collaboration has enabled Colombo Dockyard to blend in Japanese technological capability with the skill and competence of a fully Sri Lankan workforce.

This yard specializes in the construction of cable laying and repair vessels, offshore support vessels for offshore wind, oil and gas operations; eco-bulkers; passenger vessels of SOLAS class; harbour tugs; high speed patrol vessels; crew boats and workboats of diverse design for different services. Colombo Dockyard has successfully adopted latest advanced technology to stay updated and successful in what it calls its odyssey of excellence. See also: www.cdl.lk

VARD

VARD is one of the major global designers and shipbuilders of specialized vessels. Headquartered in Norway and with approximately 8,200 employees, VARD operates shipbuilding facilities in Norway, Romania, Brazil and Vietnam. Through its specialized subsidiaries it develops power and automation systems, deck handling equipment, and vessel accommodation solutions, and provides design and engineering services to the global maritime industry.

VARD's long shipbuilding traditions, cutting-edge innovation and technology coupled with its global operations and track record in constructing complex and highly customized vessels have earned it recognition from industry players and enabled it to build strong relationships with its customers.

The majority shareholder of VARD is Fincantieri Oil & Gas SpA, a wholly owned subsidiary of FINCANTIERI SpA, with HQ in Trieste. This is one of the world's largest shipbuilding groups and has, over its 200 years of maritime history, built more than 7,000 vessels. For more information see here: www.vard.com

Maritime fuel-cell stems and hydrogen fuel cell technology

Corvus Energy to start development with Toyota

Energy storage pioneer Corvus Energy is set to start development and production of sustainable, large scale maritime-certified hydrogen fuel cell systems. Production will be located in Bergen, Norway, with Toyota on board as key partner and supplier of mass-produced fuel cell technology. This was reported by Corvus at the beginning of February

Corvus is spearheading collaboration with a group of Norwegian partners: energy supplier Equinor; ship owners Norled and Wilhelmsen and ship design company LMG Marin with the NCE Maritime CleanTech cluster and R&D institution the University of South-Eastern Norway (USN). They will develop and produce modularised and cost-effective PEM (Proton Exchange Membrane) fuel-cell systems for the international marine market, it is understood.

This project has received €5.2million in funding from state agency Innovation Norway bolstering Corvus' front-runner position in clean technology for maritime and other sectors.

Development is scheduled to showcase its first marine fuel cell system on a vessel in 2023 and the product, it is aimed, will be marine certified and available for commercial delivery from 2024.



Interior view of Corvus Energy factory in Bergen.

Corvus and Toyota MoU aim marine deployment of fuel cells

This initiative combines Norwegian maritime expertise together with fuel cell modules supplied by one of the world's largest fuel-cell producers Toyota, who has 30 years' experience in the development and production of fuel cells for the automotive market and other land-based applications.

In December Corvus and Toyota signed a partnership which agreement secures Corvus access to proven fuel cell technology while enabling large-scale production and competitive pricing.

It is understood that production will be Norway's first of its kind, strengthening the country's leading position in the global efforts towards decarbonising shipping.

Interest in hydrogen for maritime applications has been increasing rapidly, with hydrogen power seen as an important step to reach shipping's ambitious goal to cut greenhouse gas emissions by 50% by 2050.

Reducing the cost of fuel cells and increasing access to the technology is crucial to accelerate the transition. Reported here the initiative represents an important step towards achieving the goals of decarbonisation and hydrogen adoption by producing modularised systems currently not available on a large scale. The Corvus-Toyota partnership will become a strong player enabling a significant increase in capacity of marine fuel cells to the market.

In the words of Corvus Energy CEO Geir Bjørkeli: *'Adding fuel cell modules to our product portfolio is a natural step for Corvus and advances our vision to be the leading supplier of zero-emission marine solutions. Fuel cell technology has reached a maturity level where scale-up of systems will be the next step. Toyota is in the forefront of the development and is by far the best partner for us to make this a success.'*

To quote Thiebault Paquet, Director of the Fuel Cell Business Group at Toyota Motor Europe: *'Decarbonisation is inevitable and at Toyota, we are convinced that hydrogen will play a central role in creating a better future, both environmentally and economically. Our recently established Fuel Cell Business group in Brussels is looking forward to working with Corvus Energy and the consortium members to offer fuel cell solutions for marine applications. This project will play an important role in the development of the Hydrogen Society.'*

Strong ownership and collaborators in green shipping initiatives

Corvus' new dedicated fuel cell division will design and certify the marine fuel cell system using the Toyota fuel cell technology as a building block for larger systems. Furthermore, a specific marine control system uniting the battery and fuel cell operation will be developed for easy integration with power management systems from a range of system integrators.

Backed by strong owners such as Norsk Hydro, Equinor, Shell and BW Group, Corvus plans to scale up production to mirror its world-leading position in battery systems. The development partners USN and NCE Maritime CleanTech will contribute knowledge within hydrogen safety, while Equinor, Norled, Wilhelmsen and LMG Marin will bring key experience from continuing hydrogen projects.

About Corvus

Corvus Energy is the leading supplier of energy storage products and services in the form of modular lithium-ion battery systems for marine, oil and gas and port applications. Its purpose-built, field-proven battery systems provide sustained power to hybrid and all-electric heavy industrial equipment, including large marine propulsion drives.

Corvus Energy has amassed extensive experience from more than 400 projects, totalling over 300 MWh and more than 3 million operating hours.

CSM signs cloud-based ship simulator partnership with Wärtsilä Voyage

At the end of January Columbia Shipmanagement (CSM) reported that it had entered partnership with Wärtsilä Voyage to launch cloud-based simulator training for its maritime training centres worldwide (including in Russia, Latvia, Ukraine, Georgia, Republic of Korea, Croatia and the Philippines).

It is understood that the agreement with Wärtsilä's distributor in Manila, AWA Marine, will enable cloud-based simulators to be used for navigation, engineering, and liquid cargo-handling simulator-based training.

Columbia Shipmanagement is one of the world's leading ship management companies, with over 40 years of experience in the industry. It currently employs over 15,000 people worldwide and manages 380 vessels.



CSM Cloud Simulator

Welcoming the move, Captain Faouzi Fradi, Group Director Training at CSM, commented: *'While officers and crew have been kept away from classrooms and simulators for several months because of the pandemic, Columbia has worked hard creating innovative solutions to ensure continuation of their professional development as well as their readiness to operate safely and effectively on board.'*

'We are delighted to announce our partnership with Wärtsilä Voyage and we believe this solution will satisfy the training needs of our officers and meet the requirements of our clients. We will certainly continue our cooperation with AWA Marine and Wärtsilä in the Philippines and will install similar hardware simulators in our training centre when the restrictions will be lifted.'

Fradi stressed: *'Cloud-based solutions will continue to be the best choice in the future to train those seafarers located far from our training facilities, or those who are unable to travel during their vacations. Maintaining their training needs while supporting their wellbeing is our continuous goal.'*

Liam Murphy, Director at AWA Marine, added: *'For this project we will be providing CSM with Wärtsilä Voyage's cutting-edge cloud-based simulator technology. This will*

allow it to continue training its crew to the highest standards available in the maritime industry, from the world's leading provider of bridge and engine room simulators.

'This project is actually the result of another existing development, which was unfortunately delayed due to COVID-19, so we had to adjust our course to adapt to the ongoing situation. The Wärtsilä cloud-based simulation training will be a perfect stop gap solution while face-to-face training can't be allowed.'

He concluded by saying: *'We very much look forward to our ongoing partnership and cooperation with CSM, and for some exciting developments to be announced in 2021.'*

Tidewater accelerates digitalisation strategy with Fleet Xpress

At the end of January Inmarsat, the global, mobile satellite communications provider, reported that it had secured a fleet-wide agreement with offshore support vessel major Tidewater to advance its digitalisation strategy by upgrading the majority of its active fleet to Fleet Xpress.

Inmarsat has developed a product list of advanced vessel technological services with enhanced and reliable communications for crews.

It is understood that Tidewater was one of the largest users of Inmarsat's legacy iFusion service, which was scheduled for network shutdown on 31 December, 2020. Tidewater and Inmarsat created a joint project team and comprehensive plan to fast track vessel installations and upgrades to deliver the project in six months, with a scope of 60 active vessels, across 15 countries and involving a team of 75 from the combined organisations.



In January, Tidewater reported that it had 56 active vessels with Fleet Xpress providing new capabilities for operations, crews and customers.

This project was highly complex due to its scope and number of vessels, managing activities through the middle of a pandemic and requiring expert precision to achieve installations and upgrades on time and plan. All 60 vessels in the project were successfully transitioned before year-end and vessels experienced no disruptions during the iFusion shutdown events.

Cherise Brooks, the IT program manager for this project, stated: *'This transformational project advanced Tidewater to a new level of vessel communications with Fleet Xpress's combination of high-speed Ka-band and continuous back-up using L-band creating an always on bandwidth for our vessels.'*

'Tidewater has deployed this new technology to provide internet demands for crews and customers, a capability previously not available for these vessels. The project success of achieving an aggressive six month schedule and significantly upgrading our fleet with advanced technology was only made possible by the exceptional efforts of the Tidewater shore based teams, Tidewater crew members, Inmarsat and their partners.'

Inmarsat's Sales Director for Offshore and Fishing, Chuck Moseley added: *'Tidewater will be the first beneficiary of new investments Inmarsat has made in reporting capabilities and a new addition to Inmarsat's product portfolio.'*

About Tidewater

Tidewater owns and operates the largest fleet of Offshore Support Vessels in the industry, with over 60 years' experience supporting offshore energy exploration and production activities worldwide. To learn more readers are invited to see: www.tdw.com

Smaller containerhips can lose containers above the Wadden Islands

MARIN reports

After its investigations for the Dutch Safety Board related to the loss of 342 containers north of the Wadden Islands by MSC Zoe, MARIN performed a further investigation for the Ministry of Infrastructure and Water Management.

Besides an Ultra Large Container Ship such as MSC Zoe, a shorter and narrower Panamax and a smaller feeder container vessel were tested.

The importance of testing smaller ships was underscored when the feeder *Rauma* lost seven containers on 11 February, 2020. The new MARIN investigations confirmed that smaller containerhips can also lose containers above the Wadden Islands, in particular due to green water, solid seawater that can hit containers above the ship's side in heavy seas.

Videos of the simulation

Two videos are now available showing how these hull forms behave in simulated sea conditions using model ships in a laboratory. See here:

Top: <https://tinyurl.com/y4u7kscv>

Bottom: <https://tinyurl.com/y22cpa7a>

In its research for the Dutch Safety Board, MARIN concluded that four mechanisms are the most probable explanations for the loss of containers:

1. extreme ship motions and accelerations due to roll resonance;
2. ship contact with the sea bottom;
3. impulsive loading on containers due to green water and
4. slamming-induced impulsive loading on the hull.

To determine wave heights at which ships can safely sail above the Wadden Islands an Ultra Large Container Ship (ULCS), a PANAMAX and Feeder were tested in MARIN test facilities. Both the shallow southern route (where the water depth is 21,3m) as well as the deeper northern route (37,5m) were investigated.

Based on the results of the present investigations MARIN derived preliminary limiting wave heights for these ship types and routes. With wave heights above these preliminary limiting wave heights, the loading on the ships and their cargoes can exceed their capacity (safe values).

They are summarized in the table below, with the limiting mechanism between brackets. The limiting mechanism is different per ship type and route.



In general the limiting wave heights in the shallow southern route are lower than in the northern deeper route: the risk of losing containers in the shallow southern route is higher than the deeper northern route. However, also for the northern route limitations MARIN has derived preliminary limiting wave heights to prevent loss of containers. These limitations occur in beam seas relative to the route or ship heading.

These preliminary limiting wave heights for these three containership types are important to reduce the risk of container loss significantly. MARIN recommends to use these wave heights in the advice of the Coast Guard to ships sailing in the area and further decision making.

To come to the final limiting wave heights, it is necessary to investigate the problem of water loading on smaller ships such as Feeders with their low freeboard. It is further important to use these results for three (average) containerships in a risk analysis that includes all ships and conditions that sail in this area. Based on this it can be determined how the risk of containers in this Particularly Sensitive Sea Area (PSSA) can be minimized.

This also requires more transparent and consistent rules and regulations of international organizations such as IMO and the class societies. MARIN has observed that it is not transparent what the design limits are for the ship, cargo and cargo securing equipment and how they are determined. MARIN wants to support governments (coastal and flag states) and companies involved by starting the international Top Tier Joint Industry Project (JIP), as follow up of the Lashing @ Sea JIP that was performed successfully in the past.

For more information on the 'Top Tier' JIP, readers are invited to contact Jos Koning: j.koning@marin.nl

The summary of the MARIN report can be downloaded here: <https://tinyurl.com/y6ovcwpz>

The Complete report at 71 pages can be downloaded here: <https://tinyurl.com/y3hb7ydw>

Business risk for ship owners not meeting emissions requirements

An introduction by NAVTOR¹

There is now increasing pressure for ship owners to sharpen their environmental performance, driven by an IMO target to halve greenhouse gas emissions from shipping by 2050, regional regulations and market pull from charterers, banks and investors.

To quote DNV GL's Performance Advisory head Bjorn Berger: *'This represents a whole new ball game for the industry. Optimisation of ship operations has traditionally been dictated by the efficiency of delivery around the globe that has typically meant being able to sail at full speed, thereby burning more fuel, to minimise costs for the charterer. It has been driven by money, not emissions.'*

Adoption of new digital technologies is seen by DNV GL as vital to achieve decarbonisation goals for the shipping industry as the global green agenda shifts the business playing field for ship owners.

Berger continued: *'But the new green regime dictates that ship owners must minimise emissions from their operations and efficiency will be defined by their ability to reduce their environmental footprint, which will be a key differentiating factor in future competition for charter contracts.'*

Furthermore, he says failure to comply with new environmental rules will pose: *'a huge business risk'* as vessels that do not meet emissions requirements will be unable to trade, though *'not all ship owners have fully realised this.'*

As such, digitalisation of ship operations, in tandem with the use of alternative fuels, will be a key enabler to optimise the energy efficiency of fleets to meet low-carbon standards.

Lagging behind

However, much of the maritime sector is lagging behind other industries such as aviation and automotive – in which digitalisation has been widely applied for decades – as well as offshore where concepts such as data sensors on equipment, digital twins, artificial intelligence and remote operations are now rapidly gaining ground, according to Berger.

Berger believes there is massive untapped potential for the shipping industry to improve its efficiency through harnessing data flows from operations that can have a positive impact on commercial, environmental and safety performance.

Digitalisation facilitates the automation of processes and functions, and combining data streams from multiple

sources allows the maritime industry to make better-informed decisions more quickly, creating more efficient and responsive organisations, according to DNV GL.

Ships are increasingly being fitted with advanced sensors to monitor fuel consumption and energy efficiency, providing real-time data that can be integrated into an overall fleet management system for continuous learning and optimisation of operations.

According to Berger, there are several examples of ship owners installing a fuel monitoring device on the bridge and testing out different operational measures to check how this affected fuel consumption. In many cases, minor differences in operational behaviour reduced fuel consumption by 10%.

He explained: *'When such data monitoring is aligned with centralisation of fleet operations from an onshore control room, this gives the ship owner insight and transparency for better decision-making to assimilate best practices and thereby operate the fleet in the most cost and fuel-efficient way.'*



Digital navigation

Norway-based navigation software provider NAVTOR is already on board this trend with its so-called e-navigation system offering seamless transfer of data from ship to shore that covers route planning so any deviation from the passage plan can be rectified in co-ordination with the crew.

As such, NAVTOR is pointing the way for 'smart shipping' with a software suite that includes nautical charts, weather information, navigational warnings and performance analysis tools as part of an integrated ecosystem already serving nearly 7000 vessels worldwide.

Its system incorporates interpretation, validation and instant notification of data, as well as manual input and analysis, and assistance in compliance with regulations for different ports and jurisdictions.

NAVTOR's head of business development Arild Risholm Saether commented: *'Shipowners can use the digital tools available to take actions to reduce emissions. The add-on, of course, is you will have more profit and will be more attractive in the market for charterers and other types of customers.'*

One major advantage of digitalisation is the ability to optimise maintenance through continuous condition monitoring of engines, the hull and other equipment and structures using data sensors, as has been demonstrated on oil and gas platforms in the offshore industry.

Wider application of digitalisation will have a beneficial impact on the efficiency of the overall logistical chain covering source to delivery in which the vessel is only one of several forms of transport being used, with automated port handling of cargo being one example.

Commercial benefits

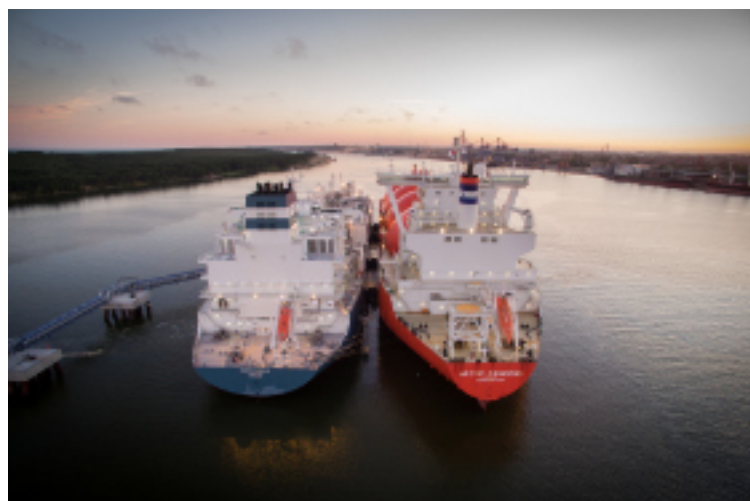
Berger highlights clear commercial, as well as environmental, benefits from the use of digital technology as being lower operating and fuel costs, efficiency gains, improved decision-making, improved operational and technical performance, as well as enhanced safety from transparency and real-time data allied with improved data analytics capabilities.

At the same time, digitalisation is transforming organisations from being reactive to proactive in areas such as maintenance.

Berger warned: *'Digitalisation represents a major competitive advantage and those that fail to adopt such technology will be quickly outmanoeuvred by more progressive players.'*

But only a handful of ship operators, notably in the containership and cruise sectors, have moved proactively on the digital front to realise the commercial benefits of centralised operations based on digitalisation that offer significant economies of scale in management of large fleets.

Application of digital technologies throughout a vessel's life-cycle – from new build design and construction to operations – as well as within the ship owner's administrative and logistical organisation will be key to optimising ship operations as the industry navigates a course into a low-carbon future.



These can serve to evaluate a range of greenhouse gas abatement technologies, such as systems for waste-heat recovery and battery-hybrid solutions, as well as to determine the optimal configuration of machinery and propulsion systems in relation to alternative fuels for which DNV GL uses state-of-the-art data simulation techniques.

Berger reveals that offshore companies are now also considering the use of digital twins for operational systems on board ships to provide instant feedback on actions such as dynamic positioning.

Future-proofing

Such digital tools are necessary in the new build phase to ensure a ship is designed and built to be as future-proof as possible with maximum fuel efficiency and a low environmental footprint so that it can remain competitive over its lifetime.

In the operations phases, DNV GL has found that digitally enabled operational and managerial measures can achieve 10% to 20% greater energy efficiency, and thus improved emissions performance.

These include voyage planning and execution, improved fleet performance and management, speed management, hull and propeller maintenance, optimised use of generators and power consumers, trim optimisation and increased use of remote functions.

Moreover, monitoring and reporting of key performance data such as carbon-intensity measurements will be required in relation to greenhouse gas ratings for regulators, charterers, ports, banks and finance institutions, making this a rite of passage for ship owners in future.

Berger believes digitalisation can result in a shift whereby charterers increasingly may take over the role as ship owner to include vessel operations within the entire logistical chain in order to meet environmental requirements, citing online retail giant Amazon as a possible candidate.

This trend is already evident in Norway where grocery supplier ASKO is developing an autonomous and electrically powered vessel to cross the Oslo fjord to cut the need for more polluting truck delivery over long distances.

This is part of the country's so-called Green Shipping research programme initiated by DNV GL that is engaged in similar projects including development of electrified ferries using digital technology, mirroring that used on electric road vehicles.

Berger added: *'Unlike self-driving cars, remote operations for maritime vessels are still a long way off as investments in this area are nowhere near that of the automotive industry where there are enormous data centres carrying out millions of simulations.'*

Cyber-security

Nonetheless, new cloud-based technologies such as big data platforms and digital twin technologies are starting to have a dramatic effect on how the industry manages information and how vessels and their components are designed, built and tested, according to DNV GL.

The advent of more digitalised ship operations does though present an increased cyber-security risk for fleet

assets as a vessel's legacy computer systems are more vulnerable to hacking when hooked up to a wider network.

While the breach of a company's administrative IT system can have a reputational and financial impact, a data attack against on board operation and control (OT) systems can endanger the safety of a vessel and its crew, for example by exposing it to piracy.

A disturbing increase in such OT incidents in recent years – including notable attacks on COSCO and Maersk vessels – has given rise to new IMO regulations on cyber-security effective from this year, with DNV GL extending its services to cover control systems, software, data procedures and human factors to ensure compliance with the code.

¹ See www.navtor.com

New WTO Director-General

Dr Ngozi Okonjo-Iweala of Nigeria

On 15 February WTO members made history when its General Council agreed by consensus to select Dr Ngozi Okonjo-Iweala of Nigeria as the organization's seventh Director-General.

When she takes office on 1 March, Dr Okonjo-Iweala will become the first woman and the first African to be chosen as Director-General. Her term, renewable, will expire on 31 August 2025.

'This is a very significant moment for the WTO. On behalf of the General Council, I extend our warmest congratulations to Dr Ngozi Okonjo-Iweala on her appointment as the WTO's next Director-General and formally welcome her to this General Council meeting,' said General Council Chair David Walker of New Zealand who, together with co-facilitators Ambassador Dacio Castillo (Honduras) and Ambassador Harald Aspelund (Iceland) led the nine-month DG selection process.

Walker added: *'Dr Ngozi, on behalf of all members I wish to sincerely thank you for your graciousness in these exceptional months, and for your patience. We look forward to collaborating closely with you, Dr Ngozi, and I am certain that all members will work with you constructively during your tenure as Director-General to shape the future of this organization.'*

Great challenges ahead

Dr Okonjo-Iweala said a key priority for her would be to work with members to quickly address the economic and health consequences brought about by the COVID-19 pandemic.

She said: *'I am honoured to have been selected by WTO members as WTO Director-General. A strong WTO is vital if we are to recover fully and rapidly from the devastation wrought by the COVID-19 pandemic.'*

'I look forward to working with members to shape and implement the policy responses we need to get the global economy going again. Our organization faces a great

many challenges but working together we can collectively make the WTO stronger, more agile and better adapted to the realities of today.'

A lengthy consultation process

The General Council decision follows months of uncertainty which arose when the United States initially refused to join the consensus around Dr Okonjo-Iweala and threw its support behind Trade Minister Yoo Myung-hee of the Republic of Korea. But following Ms Yoo's decision on 5 February to withdraw her candidacy, the administration of newly elected US President Joseph R Biden Jr. dropped the US objection and announced instead that Washington extends its '*strong support*' to the candidacy of Dr Okonjo-Iweala.



Ambassador Walker extended his thanks to all eight of the candidates who participated in the selection process and particularly to Ms Yoo: '*for her ongoing commitment to and support for the multilateral trading system and for the WTO.*'

The General Council agreed on 31 July that there would be three stages of consultations held over a two-month period commencing 7 September. During these confidential consultations, the field of candidates was narrowed from eight to five and then two.

On 28 October, General Council Chair David Walker of New Zealand had informed members that based on consultations with all delegations Dr Okonjo-Iweala was best poised to attain consensus of the 164 WTO members and that she had the deepest and the broadest support among the membership. At that meeting, the United States was the only WTO member which said it could not join the consensus.

The consultation process undertaken by the chair and facilitators was established through guidelines agreed by all WTO members in a 2002 General Council decision. These guidelines spelled out the key criteria in determining the candidate best positioned to gain consensus is the breadth of support each candidate receives from the members. During the DG selection processes of 2005 and 2013, breadth of support was defined as: '*the distribution of preferences across geographic regions and among the categories of members generally recognized in WTO provisions: that is (Least developed countries), developing countries and developed countries.*' This same process, agreed by all members in the General Council in 2020, was strictly

followed by Chair Walker and his colleagues throughout the 2020-21 DG selection process.

The process for selecting a new Director-General was triggered on 14 May when former Director-General Roberto Azevêdo informed WTO members he would be stepping down from his post one year before the expiry of his mandate. He subsequently left office on 31 August.

About the WTO

The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations. At its heart are the WTO agreements, negotiated and signed by the bulk of the world's trading nations and ratified in their parliaments. The goal is to ensure that trade flows as smoothly, predictably and freely as possible.

For more information readers are invited to see here:
www.wto.org

WTO has its HQ in Geneva. It was established on 1 January 1995, created by the Uruguay Round of negotiations over the period 1986-1994. There are 164 members representing 98% of world trade. Secretariat staff totals 623.

The crew change crisis

MAJ warns of potential seafarer shortages

The global crew change crisis could lead to a shortage of seafarers if exhausted crew choose to leave the shipping industry rather than risk another long period trapped at sea. This was the warning message from the Maritime Authority of Jamaica (MAJ).

Rear Admiral (retired) Peter Brady, MAJ Director General, advised of the potential danger to the shipping industry if there is a mass exodus of crews from their seagoing jobs to take up shore-based employment which gives them more time with their families.

He challenged, warning that the shipping industry needs to demonstrate to world leaders the vital role crew play in the supply chain: '*If seafarers are not available to operate the ships, those vessels will simply lay alongside idle. Does the world need that now?*'

Condemning the global '*ignorance – or is it apathy*' concerning the economic value of trade by sea to the world economy, he said: '*There is an absolute need to urgently inform, educate, and sensitize both business leaders and consumers across the world as to the important role shipping plays in delivering 90% of global trade.*'

'Then we must emphasize the stark fact that those ships are staffed by persons who need to be rotated promptly at the end of their contracted shift at sea and returned to their homes and families for the sake of their mental and physical health. Doing this is essential for the safe operation of ships, thereby protecting lives and the environment as well.'

Admiral Brady advised that now is the time to speak to a wider audience: *'I believe we need to now take the conversation to another level, to speak with the merchants, to speak with the financiers, the bankers, all the people who control the financial aspect of global trade.'*

With many countries focused on protecting their populations from the Covid-19 pandemic, borders have been closed and travel restrictions put in place. These have severely impacted the ability of ship operators to carry out crew changes when seafarers have reached the end of their contracted time at sea. The IMO has urged nations to classify seafarers as essential workers in order to facilitate their smooth transit on shore, but so far only about 55 countries have done this.

Admiral Brady, who chaired the IMO's Standard of Training and Watchkeeping (STW) Sub-committee (now Human Element, Training and Watchkeeping (HTW) Sub-committee) for ten years, and is currently Jamaica's chief technical delegate to the IMO, believes shipping industry leaders and legislators should come together to discuss the situation before crisis point is reached.

He commented: *'It seems that it is time for another global summit to include the United Nations, it's relevant agencies such as the IMO, ILO, industry bodies such as the ICS, and even the ICAO. It should not be a talk shop but one which pledges to set goals for the industry and then sends a compelling document to the global financial institutions to indicate the impact on global trade if seafarers are not available to crew ships.'*

In conclusion he added: *'What if the prevalence and malaise of this pandemic continue to cause uncertainty for the physical and mental health of seafarers, without some visible measures that recognize their special role in keeping the global economy viable? And they opt for not returning to sea? Let's get somewhat granular. If 5% of the principal carriers of global goods, commodities and energy are pulled out of service because of crewing shortages, in real terms, how would that impact the global economy? What if numbers are more, stark, and a total of 10% of the seafarers do not return to sea and renew their Seafarers Employment Agreements (SEA)? Can the world survive that now?'*

From the IFSMA office

Another busy month for the office keeping the admin, including subscriptions, up to date. If you haven't yet paid your subscription do not delay. If you need advice please send us an email.

Your Assistant Secretary General has been working from home for almost one year now. He noticed the following news item from his local port on the South Coast of UK.

Hydrogen Hub at Shoreham Port

Shoreham Port has begun work on an ambitious new partnership with H2evolution to create a green hydrogen hub. A planning application will shortly be developed to establish a 20-megawatt electrolysis plant to the south of the Port's famous lock gates.

The hydrogen produced at Shoreham will be fully certified as green as it will be produced from a combination of

captive renewable energy sources available at the Port and green energy, with guaranteed certificates of renewable origin, from the Grid. The production process is almost silent, produces no waste and emits no pollutants. The hydrogen hub, which we aim to have operational in 2024, has the potential to produce fuel cell grade hydrogen to supply local and regional operators of fuel cell electric vehicle (FCEV) buses, HGVs and waste collection vehicles, as well as vessels and the Port's own cranes and forklift trucks.

Tom Willis, Chief Executive at Shoreham Port commented "Through the creation of our hydrogen hub, which will supply zero emission green hydrogen, Shoreham Port can form part of the solution to the region's net-zero challenges. As a community organisation we would like to work with everyone to make this new stage of the Port's growth a success. The new plant will be clean, quiet and create good quality jobs at the Port and within the wider community".

The UK hydrogen supply chain is expected to grow rapidly in the next five to ten years as demand for practical zero emission and zero carbon diesel alternatives increases. In the UK Government's recent Policy paper, 'The Ten Point Plan for a Green Industrial Revolution', it states "Hydrogen is the lightest, simplest and most abundant chemical element in the universe. It could provide a clean source of fuel and heat for our homes, transport and industry". A recent research report by Aurora Energy Research, the leading European energy market analytics company, suggests that hydrogen demand could grow significantly from 327 Tera Watt Hour today to up 2,500 Tera Watt Hour by 2050.

Stephen David, Chairman at H2evolution commented "We are excited to be entering into a strategic partnership with Shoreham Port, as this is an excellent site for the creation of a game-changing green hydrogen facility. We will be producing entirely green, zero carbon fuel to decarbonise the equivalent of 300 buses; enough for towns and cities like Brighton & Hove and Worthing, which will prevent the emission of over 100 tonnes of CO2 per day. This will make a huge contribution to the climate change objectives of our community, local authority, and businesses, and can be a key enabler for the expansion of the Ultra Low Emission Zone in Brighton City Centre."

This partnership signifies the start of the development of the hydrogen hub - further announcements on expanding the number of organisations involved will be made as the project develops. The new partnership is actively engaged in the pioneering work recently announced by Ricardo. Steve Dyke, Automotive & Industrial Managing Director, commented "We are delighted to see hydrogen being promoted in the area and fully support its production so close to our planned hydrogen development and test facilities at our Shoreham Technical Centre."

Shoreham Port and H2evolution are both members of Hydrogen Sussex, part of the Greater Brighton Economic Board, which facilitates and supports the hydrogen economy across the region.

Questions about the hydrogen hub or anything else relating to the Port can be sent to info@shoreham-port.co.uk.

See here: <https://www.shoreham-port.co.uk/Home>