# IIMS OCTOBER 2022 NEWS BULLETIN

#### **Dear Member**

Welcome to this News Bulletin from the International Institute of Marine Surveying (IIMS). This and previous bulletins are available in PDF and eReader format at https://bit.ly/3LQdDOw. It aims to keep members and non-members up to date with information on a monthly basis. Members are encouraged to share and forward this newsletter to colleagues, who they think might like to join the Institute, or who may be interested in its content. For more information about the Institute visit:

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www.iims.org.uk

### VIEW fram the HELM

#### **Dear Colleague**

On the 8th of September 2022, Her Majesty Queen Elizabeth II passed away peacefully. Much of the news headlines in the UK and further afield have been dominated by this story since. With more than 70 years unwavering service the Queen was ever present in our lives. No matter if you believe in the monarchy or not, we mourn the passing of a great lady of state.

So many tributes have poured in from the maritime world, enough in fact to fill an entire news bulletin, such is the high esteem in which the Queen was held around the globe. Those I have seen commenting, amongst others, include IMO, the P&I Clubs, and the UK Chamber of Shipping that has a strong connection with the Royal Family having been granted a Royal Charter back in 1920. Andrew Cassels, Chairman of the MNWB, the umbrella charity for the UK Merchant Navy and Fishing Fleets said, "For the Merchant Navy, she was truly the anchor around which the nation has stayed safely moored regardless of which way the tide flowed."



On behalf of myself and colleagues at IIMS, I would like to echo those sentiments and add our tributes as we now embark on a new era in the UK.

There is a new feature in this month's news bulletin. For the first time, as well as offering clickable weblinks to additional and expanded content, we have added QR codes, which can be easily scanned with your device to give you instant access to online material. I hope you will find this a beneficial additional feature.

Mid last month, once I had reviewed the number of incidents, accidents and mishaps that came into my inbox during August, I was shocked. Those of you who read my news bulletin introductions regularly will recall I highlighted a significant number of superyacht fires a couple of months ago. That all now seems rather tame by comparison to August's list of fires, sinkings, groundings and tragedies.

This prompted me to write a short blog entitled "Carnage at sea in August. What's happened and why?" You can read it at https://bit.ly/3x3gRsa, or scan the QR code.

But for now, here is the abridged version of the blog to give you a flavour. "We hear all the time about exciting breakthroughs in new technology and enhanced safety management systems designed to keep lives and assets safe at sea. We read in various reports that, in general, the number of serious incidents and accidents is falling year on year.

The number of 'mishaps' last month (August) at sea and in ports is eyewatering – beyond belief – and frankly, more than anyone would agree is acceptable.

It is not just the distress of the actual incident itself. In many of the recent cases, loss of life has been tragically high. This causes untold misery for partners and friends who have lost loved ones and whose lives are changed forever.

2022 is shaping up to be a thoroughly rotten year given the number of accidents leading to loss of life and marine assets. Media reports suggest some of the accidents are inevitably associated with human error – yes that old nugget again. So, are we to assume that people have become complacent, or are incompetent and poorly trained, and have lost sight of the basic requirements for being at sea? Or is mechanical failure and poor maintenance to blame?

August was a particularly bad month for superyacht incidents - the worst anyone can seem to recall, yet there seems to be no common thread.

Here are just three examples from the longer list of twenty plus media reports that reached me during August.

- New 44 metre superyacht destroyed by fire off Spanish coast
- Eleven missing after cargo ship capsizes in Makassar Strait
- Three seafarers dead in Italy after container explosion."

Tom Elder MIIMS is a name probably not known to many Institute members. He was Chairman of the IIMS Yacht & Small Craft Working Group Scotland. News reached me recently informing me of his death. I am grateful to his wife, Moira, and his friend Cameron Johnstone, for helping me to compile and write his obituary which you can read in this bulletin.

Last month the IIMS Management Board announced and bestowed two Fellowships. My warm congratulations on behalf of the Institute to Sanjay Bhasin, who is awarded Fellowship and to Ken Hickling who has been made an Honorary Fellow. You can read more elsewhere in this bulletin about these awards.

The Management Board has also recently appointed three new members as part of the need for succession planning. All three were invited to join the June and September board meetings remotely in an observational only capacity. The three new members are:

- Elliott Berry FIIMS, who is a small craft surveyor based in the UK.
- Graeme Temple FIIMS works out of Singapore and has a commercial ship surveying background but also has knowledge of small craft.
- John Walker is located in Palma, Mallorca, and is an experienced yacht and small craft surveyor.

Members will be asked to formally vote on the reappointment of the Management Board at the Annual General Meeting in June 2023.

Survey well.

Mike Schwarz
Chief Executive Officer



#### **OBITUARY**

### Tom Elder MIIMS 1963 – 2022 Chairman of the IIMS Yacht & Small Craft Working Group Scotland

By Mike Schwarz with significant contributions from Tom's wife, Moira Elder and friend, Cameron Johnstone, Hon. Secretary, Inchinnan Cruising Club

The sad news reached IIMS HQ recently about the passing of Tom Elder, Principal Surveyor, Teemsurveys Ltd., who was based in the Glasgow area of Scotland. Tom was a long-standing member of the Institute and a coding examiner with the IIMS Certifying Authority. He passed away peacefully at his home on 30th August surrounded by his wife and family aged just 59.

I did not know Tom well but met him perhaps half a dozen times over the years and he struck me as a charming and thoughtful man with a kind heart. He took his role as Chairman of the IIMS Yacht & Small Craft Working Group Scotland seriously and was a regular attendee at training, both in southern England as well as in his native Scotland too. Indeed, he organized the venue for the past couple of IIMS training days at the Inchinnan Cruising Club near Glasgow, where he was a dedicated member. His wife, Moira, was on hand to provide lunch for the delegates. They made a great team.



Tom was born on 9 May 1963 in Glasgow. He graduated from Glasgow College of Nautical Studies with an HND in Marine Electrical and Electronic Engineering (Meritorious) – Radio and Radar Systems.

Tom's first job was with an innovative hi-fi company called Linn Hi-Fi as Test Engineer Team Leader which was a dream job for him due to his love of music. He moved onto a global manufacturing services company called Jabil Circuits where he rose to the rank of IT Manufacturing Business Systems Manager and travelled all over Europe and the US.

In the background, Tom was studying with the IIMS and obtained his Diploma in Yacht & Small Craft Surveying in 2004. Tom and his family always had a keen interest in boats and spent every spare minute sailing the West Coast of Scotland, Ireland, Isle of Man and the Clyde estuary in their Countess 28 'Freedom' and latterly their Moody 35 'Selene of Clyde'. The happiest of days writes Moira.

Shortly after obtaining his IIMS Diploma, Tom decided a career change was needed to de-stress after years of travelling; so Teemsurveys was born. He always said being a Marine Surveyor was the best job in the world and he was well known around the marinas and boatyards all over Scotland and beyond alongside his wife Moira, his wing woman, as he described her. Tom would have his moisture meter and scraper handy whilst Moira would have the clipboard and camera poised. TEEMsurveys stood for Tom Elder/Elder Moira!

Teemsurveys was highly respected, and Tom got involved as much as he could with customers, brokers and the organisations he was associated with. As well as Chairman of the IIMS Yacht & Small Craft Working Group Scotland, he served on the RYA Certifying Authority Committee. He loved the bread and butter of pre purchase, insurance, damage and tonnage type surveys. He also got stuck into the commercial side helping established and start-up charter companies as well as workboat operators.

Tom was taken far too soon after a four-year battle with oesophageal cancer. He continued to work as long as he could before Teemsurveys was wound up in March this year. He leaves behind a much-loved wife of 32 years, Moira and their son Fraser. The Scottish marine industry and beyond has lost a legend, a true gent who would help anyone.

Cameron Johnstone, Hon. Secretary, Inchinnan Cruising Club has written the following words to remember Tom.

"From an Inchinnan Cruising Club perspective, Tom was a member of ICC for over 30 years. In the last 12 years, he served the Club in the posts of Commodore, then Honorary Secretary. Tom epitomised the spirit of Inchinnan Cruising Club in assisting and supporting members to get a boat and get on the water and was always available to share boating advice and experiences. While Tom had a serious straight-talking side to him, he was also a very jovial and highly sociable person. He actively promoted the social side of Club and was frequently found behind the beach BBQ grill at Club cruises, flipping the burgers and garnishing them to ensure everyone was well fed. At social nights in the Club House, Tom wasn't shy at grabbing the microphone and giving a rendition of his karaoke favourites. In recent times, Tom's drive and commitment was demonstrated in the building of the new ICC Club House. Along with other members, Tom project managed the build project, ensuring it was delivered on budget and on time. Considering most of the assembly and build was undertaken by Club members, this was no mean feat. His love for life, personality and willingness to go that extra mile will be sorely missed by the members of Inchinnan Cruising Club."

Tom Elder, may he rest in peace.



#### **IIMS announces two Fellowship awards**

#### Sanjay Bhasin

Sanjay spent 18 years at sea, including 6 years in command of geared bulk carriers and reefers carrying a variety of cargoes worldwide. He has worked with P&I correspondents in South Africa as a marine surveyor/marine manager, investigating a variety of incidents and claims. He also worked as Marine Loss Control Manager for a leading cargo insurer. Sanjay joined the IIMS Management Board a couple of years ago and since then has contributed fully behind the scenes helping the executive to steer and manage the Institute. Additionally, he sits as a member of the Institute's Professional Assessment Committee. It is for this and his contribution to the wider marine surveying world that he has been awarded a Fellowship.



#### **Ken Hickling HonFIIMS**

Ken has over 25 years' experience working in the superyacht industry and spent many years as a senior executive with AkzoNobel. Founder and Director of sherpa 63. Ken became heavily involved in the early development of the Registered Marine Coatings Inspector (RMCI) qualification in 2014. This programme is run by the Marine Surveying Academy Ltd, a subsidiary of IIMS. The Institute presented him with a Blue Water Award in 2016 in recognition of his help. As the RMCI qualification is now set for rebranding and relaunch, Ken has been instrumental in redeveloping and updating the syllabus and visual presentation aids as well as acting as a course tutor. It is in recognition of his work in this area that he has been awarded an Honorary Fellowship.



# MAIB report into the flooding and sinking of survey workboat Bella published

Image courtesy of Geosight Ltd

On 6 July 2021, the UK survey workboat Bella flooded and sank while carrying out hydrographic survey operations in the approaches to Lynmouth, England. Bella's crew abandoned into the life raft and were rescued uninjured by a local boat owner; there was no pollution.



#### Safety Issues

- The survey workboat Bella was vulnerable to swamping, even in moderate sea conditions because its multibeam echo sounder gantry reduced its forward freeboard.
- Despite being issued with the necessary certification, Bella was not compliant with The Workboat Code; shortcomings in construction and means of flotation were missed during the certifying survey due to the surveyor's overreliance on Recreational Craft Directive documentation.
- Bella's crew were inexperienced and underestimated the risk of operating the vessel in the open sea and were guided by an ineffective safety management system the crew's wearing of PFDs and familiarity with lifesaving equipment led to a safe and orderly abandonment.

#### **Conclusions**

- Bella sank because it became swamped with seawater and had insufficient reserves of buoyancy or means of flotation to remain afloat. The vessel was vulnerable to swamping even in moderate sea conditions because the addition of the multibeam echo sounder gantry had significantly reduced its forward freeboard.
- Despite being issued with the necessary certification, Bella was not compliant with The Workboat Code; shortcomings in construction and means of flotation were missed during the certifying survey due to the surveyor's overreliance on RCD documentation.
- The Geosight team at Lynmouth almost certainly underestimated the risk of Bella flooding and swamping as they had no recent experience of operating in the open sea and had become accustomed to operating in sheltered waters with low sea states.
- Geosight's operations manual was not an effective safety management system; shortcomings included underestimation of hazards associated with vessel modifications, operating conditions and crew qualifications.
- Bella's two crew managed the emergency creditably and were fortunate to be rescued by local vessels soon after their boat sank. The wearing of PFDs and their familiarity with lifesaving equipment led to a safe and orderly abandonment.

#### Recommendations

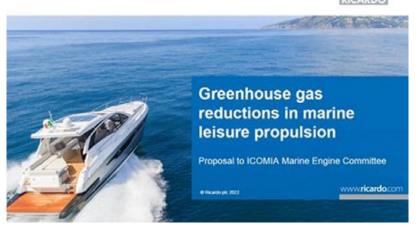
- The Maritime Coastguard Agency has been recommended (2022/131) to Provide guidance to Certifying Authorities regarding the application of the Recreational Craft Directive when certifying vessels for commercial operation.
- Bella's owner has been recommended (2022/132) to implement a safety management system for its vessels that follows the principles of the ISM Code.

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Download the full report at https://bit.ly/3edW12A. or scan the QR code:

#### Marine decarbonisation study

Creating a world fit for the future



A new study seeks to identify the best available energy solutions to achieve decarbonisation in the leisure marine sector.

The International Council of Marine Industry Associations (ICOMIA) and ICOMIA Marine Engine Committee (IMEC) said that its Life Cycle Analysis & Decarbonisation study, will be a key component in tackling greenhouse gas reductions going forward.

"Very few studies exist for marine products, and we'd like to use the data generated in this study to drive meaningful discussions and policy actions specific to the recreational marine sector," said Jeff Wasil, IMEC Chair.

ICOMIA said that solutions for the marine leisure sector need to address various boat and propulsion combination types, operational modes, range considerations, power demands and marine safety aspects. Addressing GHG reductions is likely to require a more diverse mix of energy converters, propulsion systems and energy carriers, understanding that different energy transition pathways will be required. In addition, life-cycle-analysis (LCA) is expected to play a central role in identifying the best available energy solutions to achieve decarbonisation.

ICOMIA has instructed Ricardo UK to carry out a full LCA on nine different craft and propulsion types and to formulate and drive a policy that helps in delivering GHG reductions for the sector. The timeframe of the project is expected to be 19 weeks with the full report available at the beginning of 2023.

### Two new ISOs set to be added to the list of designated standards to the Recreational Craft Regulations

The Department of Business Energy & Industrial Strategy (BEIS) has published an update to the list of designated standards to the RCR (Recreational Craft Regulations). It has stated its intentions to add the following two ISO standards to the list of designated standards to the Recreational Craft Regulations (RCR).

#### They are:

- EN ISO 8666:2020/A11:2021 Small craft Principal data
- EN ISO 11592-2:2021 Small craft Determination of maximum propulsion power rating using manoeuvring speed Part 2: Craft with a length of hull between 8 metres and 24 metres.

This is a proposed update to the list of standards that businesses can use to show their products, services or processes comply with essential requirements of legislation, in this case the recreational craft regulations. This process is the UK equivalent to the EU harmonisation of standards to the RCD (Recreational Craft Directive).

BEIS proposals for new or amended notices to the list of designated standards are actioned 29 days after their publication on the gov.uk webpage, unless they are withdrawn or further modified before that date. Interested parties may object to a publication proposal within the 28-day timeframe by submitting an objection form to the email address: designatedstandards@gov.uk. The objection must outline why the standard does not meet GB essential requirements either fully or partly.

The two standards mentioned above will be designated after 28 days have elapsed, which means they are scheduled for 22 September 2022.

Full details are available from the Government's website at <a href="https://bit.ly/3CSuqOE">https://bit.ly/3CSuqOE</a>, or scan the QR code.



#### Why cargo owners should be checking for bugs in boxes

Invasive pests transferred between countries in intermodal containers have potentially devastating consequences for agriculture and the natural environment. Global Shippers Forum (GSF) is alerting shippers to the crucial role they play in tightening biosecurity in the container supply chain at the packing point.

Hosted by the UK Government on 19th and 20th September a specialised group of trade bodies, shipping industry representatives and national plant protection and bio-security agencies met at the International Workshop on Reducing the Introduction of Pests Through the Sea Container Pathway.

Inspections of containers arriving at borders carried out by national biosecurity agencies over the past few years suggest that the number of containers and cargoes infested by pests may be greater than feared. National environment and agricultural ministries have been working through the UN's International Plant Protection Convention (IPPC) to tackle this issue and the London workshop has been convened to consider options for regulating the cleanliness of sea containers and an International Standard for Phytosanitary Measure for the cleanliness of intermodal containers could be in prospect.

GSF has been monitoring and influencing these developments since 2018 when it was invited to join an IPPC Task Force set up to examine the threat to plant health posed by pest-contamination of sea containers. The Task

Force's report at the end of 2021 set out a range of regulatory options for its parent body, the Commission for Phytosanitary Measures (CPM) to consider. Crucially, it also warned that implementation of new mandatory requirements could impose significant new costs and risks to the fluidity of the international movement of containers.

Hookham warns, "Shippers should not wait to be confronted with new regulations before responding to this issue. Whether acting as a buyer or a seller of goods, importer or exporter, the standards of care with which they are packed into the containers should be core to their quality checks and specifications to suppliers or contractors. Keeping bugs out of boxes is a responsibility that shippers and packers could become more accountable for in the future."



### ClassNK releases Guidelines for Direct Load and Strength Assessment (2.0)



ClassNK has released its Guidelines for Direct Load Analysis and Strength Assessment (Edition 2.0), which clarifies the requirements for more rational structural

design reflecting the latest structural strength assessment methods based on R&D outcomes.

ClassNK's Rules and Guidance for the Survey and Construction of Steel Ships and IACS CSR stipulate that hull strength assessment based on finite element analysis should be conducted, and the evaluation applying simplified formulae of the loads depending on ship type estimated from existing ships is required. In the case of the size lacking sufficient service record or new structurals configurationor, the method called "direct load and structural analysis", which directly simulates the wave-induced loads acting upon ships may be used for strength assessment that accurately captures the characteristics of each ship. These guidelines (Edition 1.0) published in 2018 specify the classification requirements for these analyses.

Through the joint R&D with National Maritime Research Institute (NMRI) of Japan, it has been revealed that statistical prediction of nonlinear response quantities such as Von-Mises stress, which was previously considered impossible, is now actually possible, and requirements for strength evaluation using the statistical prediction method have been added in the guidelines. Furthermore, the update incorporates the concepts (various standards, technical background, etc.) related to structural strength assessment introduced in the comprehensively revised version of Part C of its Rules and Guidance for the Survey and Construction of Steel Ships (published as of 1 July 2022).

The guidelines are available to download via ClassNK's website at www.classnk.com.

#### New system to warn of parametric rolling danger

Photo for illustrative purposes only.

Photo by Anil Reddy on Unsplash

The shipping industry has long known about dangers of parametric rolling with researchers working to expand the understanding of the phenomenon that has increasingly become linked with damage to containers and car carriers. Now a Danish company reports it has developed and tested a system on containerships that can alert crews to the danger or even automatically adjust a ship's course before it begins the rolling phenomenon.



The hull forms of modern containerships and car carriers are believed to make them especially susceptible to parametric rolling. In the worst cases, during a series of uncontrollable movements, ships have reported that they heel up to 46 degrees in a very short time. Investigators have long believed that these incidents, which often come up quickly and without warning have contributed to container stack collapse and the loss of containers overboard such as the recent incidents with the ONE Apus, APL England, and several Maersk ships.

Danish company, Kjærulf Pedersen, which manufactures and develops sensors for measuring temperature, humidity, CO2, and O2, now reports it has developed a sensor system that can recognize the tendencies that lead to parametric rolling and send a message to the ship's control system so the system and crew have time to change course.

The company's system is based on three sensors, placed at the bow, amidship, and stern. All the ship's movements are monitored in real-time up to 100 times a second. The system compares the observations with data on the ship's speed, acceleration, and direction. The sensors detect if the movements are approaching a state that can become uncontrollable and notifies the ship's control system so that the course can be changed and the uncontrollable tilts are avoided.

Since January, the system has been installed on four large container ships that sail between China and the US, and the company reports its tests with Maersk have shown that the system is successful in recognizing the warning signs for parametric rolling. Kjærulf Pedersen reports that the system is now being implemented on the shipping company's container fleet. The large amount of data from the sensors will also be used for other improvements such as weight distribution and the ship's trim in the water.



# DNV launches new class notation for enhanced tailshaft condition monitoring and performance

With its TMON (Oil lubricated, +) notation, DNV becomes the world's first classification society to provide a qualified notation that adds another dimension to propeller shaft and bearing condition monitoring.

The new notation serves to further minimize propulsion safety risk and prevent costly equipment failure, building on the benefits of the existing TMON class notation. Current DNV class notations TMON(Oil lubricated) and Shaft align are pre-requisites to meet the requirements for assignment of TMON(Oil lubricated, +).

Marit Laumann, Head of Section, Machinery & MARPOL at DNV Maritime, said: "This high-level notation is designed to maximise protection of a vessel's propulsion shafting system. As a forward-leaning organisation and industry leader we are continuously evolving our rules. TMON(Oil lubricated, +) is part and parcel of our holistic focus on long-term proactive damage prevention."

The industry has been through a challenging decade with an increased number of propeller shaft bearing damages and with varying trends. DNV has been simultaneously implementing respective measures to mitigate the challenges. This is one of the latest steps towards enhanced monitoring and control.

"It is an important development, as aft bearing damage carries the risk of diminished or total loss of propulsion, expensive repairs and off-hire time, reputational damage and increased insurance premiums," said Laumann.

In 2018, DNV introduced its Shaft align(1) and Shaft align(2) notations with prescriptive requirements for propeller shaft aft bearing design, installation and monitoring. Shaft align includes alarms for the rate of bearing temperature rise and incomplete propeller immersion and facilitates enhanced aft bearing performance during normal and extreme turning operating conditions.

"Following the positive industry reception of the Shaft align notation, we saw the opportunity to add even more value by combining both Shaft align and TMON notations to offer enhanced monitoring dimensions, design and operating margins through the new notation," said DNV Maritime Senior Principal Engineer, Arun Sethumadhavan.

"The aim of the new notation is to raise the level of monitoring even higher to ensure optimal performance of the stern tube bearing. More influencing factors can be monitored in a proactive approach towards failure detection warning. Picking up early signs of, for example, increasing bearing temperature and undesired operational conditions such as incomplete immersion of the propeller, are crucial."



### Ocean Signal launches AIS-enabled personal locator beacon and new SOLAS EPIRB

Communication and safety at sea specialist, Ocean Signal has launched its latest and most technologically advanced safety beacons to the market at SMM in Hamburg. The new rescueME EPIRB3 and SafeSea EPIRB3 Pro offer full regulatory compliance for vessels operating under SOLAS regulations, meeting the new updated IMO (International Maritime Organization) Maritime Safety Committee EPIRB rules, which came into force on 1 July 2022. Additionally, Ocean Signal is unveiling its new rescueME PLB3, the first AIS-enabled personal locator beacon (PLB).

The new EPIRB3 series and PLB3 both include AIS location signalling, new infrared strobe lights, advanced GNSS positioning, along with Return Link Service (RLS) confirmation messaging back to the beacons. The introduction of near-field communication (NFC)

technology into the beacons enables users to monitor their beacons, review self-test results, view GNSS test locations, and monitor beacon performance and maintenance.

James Hewitt, managing director for Ocean Signal, says: "The technology advances we are introducing at SMM with our new line-up of AIS-equipped EPIRBs and PLBs is unlike anything else available on the market. We took the new EPIRB requirements, fit them inside the form factor of a PLB, and then also added the ability for mobile connectivity to your smartphone. Then we also came out with a new line-up of EPIRBs utilising this new technology platform simultaneously."

### Remote ship operations paving the way for autonomous shipping

In June the unmanned Mayflower Autonomous Ship arrived in Plymouth, Massachusetts, becoming the largest uncrewed vessel to complete the trans-Atlantic crossing. What does the future hold for ship autonomy?

Automation for shipping has been traditionally linked to innovation in a bid to address not only operating costs linked to crew manning, but also human error and maritime incidents linked to human error. But what does the "autonomous ship" entail and to what extent is it integrated into shipping operations?

The IMO has identified four degrees of ship autonomy:

- Degree one: Ship with automated processes and decision support: Seafarers are onboard to operate and control shipboard systems and functions. Some operations may be automated and at times be unsupervised but with seafarers onboard ready to take control.
- Degree two: Remotely controlled ship with seafarers onboard: The ship is controlled and operated from another location. Seafarers are available onboard to take control and to operate the shipboard systems and functions.
- Degree three: Remotely controlled ship without seafarers onboard: The ship is controlled and operated from another location. There are no seafarers onboard.
- Degree four: Fully autonomous ship: The operating system of the ship is able to make decisions and determine actions by itself.

In 2017, the Svitzer Hermod, world's first remotely operated commercial vessel was demonstrated in Copenhagen harbour, Denmark, as part of a cooperation between Rolls-Royce and global towage operator Svitzer. From the quay side in Copenhagen harbour, the vessel's captain, stationed at a Remote Operating Centre (ROC) at Svitzer headquarters, berthed the vessel alongside the quay, undocked, turned 360°, and piloted it to the Svitzer HQ, before docking again. The aim was to create a futureproof standard for the control of



vessels remotely. Continuing this project, Svitzer A/S, Kongsberg Maritime and ABS teamed up last year to jointly develop RECOTUG, the world's first fully operational, and fully remotely controlled tugboat.

The most recent ambitious automation project to date was the fully autonomous Mayflower. The ship is equipped with six Al-powered cameras, 30 onboard sensors and 15 edge devices, sending data from the voyage back to the team onshore via satellite connections. In May, the Mayflower developed an issue with the charging circuit for the generator starter batteries while its voyage across the Atlantic without any humans onboard and had to divert to Halifax, Nova Scotia. The ship eventually completed the voyage on 30 June.

The issue of fully autonomous ships has attracted a long debate across shipping, with several projects implemented recently to integrate them into commercial operations. However, the slow regulatory framework will likely not allow autonomous ships to mature and be integrated into maritime operations for at least another 10 years, experts seem to agree. Even if we are technology-wise there, we won't be sorted regulation-wise, as regulation needs to be harmonized all over the world.

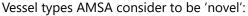
Nevertheless, remote control of ships is becoming a reality. The Mayflower demonstrates how projects involving remote control as a prelude to autonomous ship operation are making headlines worldwide. Remote control technology is increasingly seen as a game changer for moving some crew onshore, rather than developing a completely unmanned ship. Most importantly, remote control is seen as a game changer for increasing safety, with Fleet Operation Centers (FOCs) being on the rise to monitor all aspects of navigational safety.

New policy for assessment and certification of 'novel'

vessels issued by AMSA

Photo credit: AMSA

The Australian Maritime Safety Authority (AMSA) has set out a new policy statement for the assessment and certification of what it terms 'novel' vessels. If operators are planning to build or buy a vessel within one of the vessel types set out in the policy, they should contact AMSA for advice on whether it is considered novel and the best certification pathway for the vessel.



- Submarines
- Passenger-carrying submersibles
- Dynamically supported vessels (including fully foil-born, and vessels that are partially foil supported)
- Wing-in-ground effect (WIG) vessels
- Autonomous vessels greater than twelve metres in length, or those intending to carry people
- Vessels with alternative fuel technologies including hydrogen, ammonia, and gas-fuelled engines, and
- Vessels with electric propulsion and installed battery power exceeding 30kWh.

AMSA may consider larger battery power installations on application. For example, in circumstances where the system is inherently safe and issued a type approval by a recognised organisation based on applicable and relevant rules and type approval schemes for marine battery systems. Applicants must be able to demonstrate competency in design and installation

AMSA has advised anyone planning to design, buy or build a vessel in one of these categories to email: **nscvfeedback@amsa.gov.au** for advice on classification and certification advises AMSA.

The policy statement provides clarity to the maritime design, construction, engineering and surveying sectors in relation to the assessment and certification of novel vessels. The policy is also relevant to fleet owners and operators thinking about building or buying new vessels that may fall under the novel vessels categories.

## Australia's Spirit of Devonport ferry services ceases operations after 160 years

Photo credit: Merseylink

A ferry service that had transported residents of north-west Tasmania, Australia, for over 160 years has ceased its operations.

The Spirit of Devonport lifeline ferry service that had connected east and west Devonport via the Mersey River since 1855 will be discontinued due to a significant decline in passenger numbers as SPIRIT OF DEVONPORT

commuters increasingly avail of bus services for travelling to and from the city centre.

"The decreasing numbers of ferry passengers 'aren't sustainable' to continue operating the service," said Daniel Head, Tasmanian executive general manager for transport provider Kinetic.

The service's current ferry is the 37-year-old Torquay, which is in need of replacement. Mr Head said the cost to replace the vessel is estimated at more than AU\$250,000 (US\$172,000).



### Lithium-ion batteries: Fire risks and loss prevention measures in shipping



Given the many difficulties in suppressing battery fires, particularly at sea, focusing on loss prevention measures is crucial, whether batteries are transported within EVs or as standalone cargo, according to a new risk bulletin published from marine insurer Allianz Global Corporate & Specialty (AGCS).

Captain Rahul Khanna, Global Head of Marine Risk Consulting at AGCS, said, "Shipping losses may have more than halved over the past decade but

fires on board vessels remain among the biggest safety issues for the industry. The potential dangers that the transportation of lithium-ion batteries pose if they are not stored or handled correctly only add to these concerns, and we have already seen a number of incidents."

As a key component of electric vehicles (EVs) or electronic devices, the transport of highly inflammable lithiumion (Li-ion) batteries is increasingly impacting shipping safety as demonstrated by a number of fires on vessels such as roll-on roll-off (ro-ro) car carriers and container ships. In fact, the pressing issue of fires onboard was prominent at Allianz's latest Safety and Shipping Review. AGCS noted that there have been over 70 reported fires on container ships alone in the past five years.

Fires often start in containers, which can be the result of non-/mis-declaration of hazardous cargo, such as chemicals and batteries – around 5% of containers shipped may consist of undeclared dangerous goods. Fires on large vessels can spread quickly and be difficult to control, often resulting in the crew abandoning ship, which can significantly increase the final cost of an incident.

#### Hazards and causes

The risk bulletin "Lithium-ion batteries: Fire risks and loss prevention measures in shipping": highlights four main hazards:

- Fire (Li-ion batteries contain electrolyte, an ignitable liquid);
- Explosion (resulting from the release of ignitable vapor/gases in a confined space);
- Thermal runaway (a rapid self-heating fire that can cause an explosion);
- Toxic gases that these hazards can produce.

According to Allianz, the most common causes of these hazards are:

- Substandard manufacturing of battery cells/devices;
- over-charging of the battery cells;
- over-temperature by short circuiting;
- damaged battery cells or devices.

"In most shipboard incidents a thermal runaway event can be a significant possibility unless immediate action is taken by the crew, such as suppressing a fire with copious amounts of water over a long period of time. However, this can be extremely challenging due to factors such as early detection being difficult, a shortage of crew members on board, and if the vessel's firefighting capabilities are inadequate," said Captain Khanna.



Read the full article and access the report at https://bit.ly/3qdWioW, or scan the QR code.

Swedish court fines two film makers for disturbing the MV Estonia wreck site

Photo credit: ERR

A Swedish court in Gothenburg has found two individuals guilty of illegally disturbing the wreck site of the MV Estonia, a passenger vessel that sank in the Baltic Sea. Swedish filmmakers Henrik Evertsson and Linus Andersson have been named as defendants in a court case in connection with the sunken Ro-Pax ferry Estonia, which was lost along with over 800 passengers and crew on September 28, 1994.



Swedish law prohibits diving and other underwater activities from being carried out within a defined area around MV Estonia's wreck. The ferry lies at a depth of more than 70 metres in international waters off Uto Island, Finland.

On September 23 to 24, 2019, a film crew conducted dives and filmed the wreck of the sunken Estonia as part of the production of a documentary about the vessel, its sinking, and its later discovery. The Gothenburg District Court said Evertsson was the production manager while Andersson operated some of the equipment that was used to record video footage of the wreck. The filming was conducted from a German-flagged vessel.

The district court found that prosecutors were able to prove that the two men were guilty of violating the law that covered the protection of the MV Estonia wreck site. Presiding judge Göran Lundahl remarked that the wreck site is the final resting place of a large number of people, hence the preservation of the site outweighs interest in protecting freedom of expression and information.

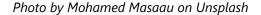
### Water Revolution Foundation urges superyacht sector to prioritise sustainability

Water Revolution Foundation (WRF) is developing a Yacht Environment Transparency Index to compare and rate yachts based on their eco-friendly credentials. It particularly appeals to yacht management and operations companies to help make superyachts more sustainable. Founded in 2018, the non-profit WRF encouraged sustainable yacht building across the global industry. In only three years, the WRF has assembled 32 partners, such as premier builders, designers, architects and suppliers.

According to the WRF, maintaining momentum is key to the success of its eco-friendly goals in the period to 2025. Those goals are based on the resources and support the WRF has had in the past three years.

A spokesperson from WRF said, "More yachting community involvement is desired, in particular from the field of yacht management and operations, to fine-tune our tools and ensure maximum uptake."

Alongside the newly developed Yacht Environment Transparency Index, WRF has also crafted a code of conduct, already signed by 54 companies and professionals, prioritising sustainable yacht building. The WRF also curates a sustainable solutions database. A recent entry includes Hempaguard X7 implementing an antifouling suitable for vessels operating with service intervals of up to 90 months or that lie idle for up to 120 days.







#### **Rolls-Royce and** Sanlorenzo team up for methanol propulsion in **luxury yachts**

Rolls-Royce and Italian yacht builder Sanlorenzo plan to develop and build a large motor yacht with a methanol engine propulsion system able to run carbon-neutrally on 'green' methanol. The two companies announced an exclusive memorandum of understanding to

this effect for yachts between 40 and 70 meters on the eve of the opening of the 2022 Cannes Yachting Festival. Powered by two mtu methanol engines based on the Series 4000, the Sanlorenzo yacht is expected to undertake her maiden voyage in 2026.

"We're making shipping more environmentally friendly and easier on the climate, and this agreement is a big step forward in the right direction," said Denise Kurtulus, Vice President of Global Marine at Rolls-Royce Power Systems: "Synthetic methanol, produced using electricity generated from renewable sources, is the obvious fuel of the future for many maritime applications - not least yacht propulsion." This is because methanol is a liquid which is easy to manage, and people are already used to handling it because it is already available in ports today. "Sanlorenzo is one of the most innovative yacht builders, making it our partner of choice for this project," she added.

Massimo Perotti, Executive Chairman and CEO of Sanlorenzo, said: "The introduction of innovations and technologies to reduce the environmental impact of yachts has long been the focus of the Group's research and development department. The subscription of the agreement with Rolls-Royce and its brand mtu for the integration of methanol propulsion systems on our superyachts represents for our Group a memorable moment, because it gives an extraordinary acceleration to our responsible path and widens our horizons: thanks to the marine use of methanol as a fuel for combustion engines, which allows carbon-neutral powerful propulsion, Sanlorenzo will be able to give the true answer to the demand for sustainability in the yachting sector. I thank Rolls-Royce for choosing Sanlorenzo as a partner for the joint development of a technology that is going to change the paradigm of the yachting industry."

① CH!RP

#### **CHIRP Maritime Feedback** edition 68 is available

Adam Parnell, Director (Maritime), in his introduction writes:

Sadly, this edition of FEEDBACK contains several reports involving loss of life. They remind us that we cannot relax our vigilance, even for a moment, because the consequences can be fatal. Every death or serious injury at sea has repercussions far beyond the ship itself, not least for the family and friends whose lives are also irrevocably affected.

There are a number of themes running through this edition, and many of them will be depressingly familiar to our regular readers. The dangers of SUBMIT A REPORT Reports can be submitted easily through our encrupted online form

An independent and confidential reporting system for the Maritime industry

working at height are well known, yet accidents and fatalities still occur frequently. Similarly, the importance

of ensuring watertight integrity during towing may seem obvious, yet we have received two reports where the danger was overlooked, and evidence from a regulatory body that the problem is quite widespread.

Tugs are becoming more powerful and sophisticated but there is ample evidence that training in the towage sector is not keeping up with the advances in technology. Is it time for national maritime authorities to take a closer look at tug training and associated topics, including the requirements for shipmasters with pilotage exemptions to be familiar with modern tug capabilities and limitations?

Poor design is another feature which appears in several of our reports, but all too often we accept what we are given and try to make the best of it, rather than pointing out the deficiencies and demanding that something be done about them.

Good companies will always welcome feedback from the fleet, although some of our reports suggest there are still companies which are reluctant to listen to their crews or spend any money on safety. This is disappointing because many other industries recognise that safety and efficiency go hand-in-hand. A safe company is a more efficient and profitable company, and it is high time more shipping operators realised this.



Download the CHIRP bulletin at https://bit.ly/3elYMcm. Or scan the QR code.

### International Group of P&I Clubs publishes its first Sustainability report

The International Group of P&I Clubs has published its first Sustainability report, exploring how the Group's role and current activities align with and support the United Nation's Sustainable Development Goals as well as helping to facilitate global trade.



Shipping underpins global trade in a world that is more connected than ever and our industry has a responsibility to make a positive contribution to sustainability objectives. The spotlight on the sustainability of the shipping industry and the increasing expectations of all of our stakeholders have only reinforced the importance of understanding our impact and our potential.

The maritime industry's move to meet ambitious targets concerning the reduction of greenhouse gas emissions from shipping is vital. Of course, sustainability is a much broader concept.

It incorporates our wider impact on the environment (environmental), our relationship with people (social) and the resilience of our systems (governance) (ESG). This report explains how the Group understands ESG in the context of its activities and where it contributes to a more sustainable shipping industry.

"We bring together the knowledge and expertise of our 13 Group Clubs with the goal of reducing risk and making the maritime industry safer. We also act as a single voice for shipowners to engage with governments, legislators and maritime regulators around the world on matters relating to shipowners' liabilities. In doing so,

we assist in the development and promotion of international regulatory frameworks that ensure an appropriate practical response to marine casualties and pollution, as well as certainty in the legal liabilities that follow," explained Paul Jennings, Chairman of the Group and Nick Shaw, Chief Executive Officer of the Group.

**6** 

Download the report at https://bit.ly/3Diqszo or scan the QR code.

Wärtsilä and Maersk develop a solution to stop scrubber discharge pipe corrosion

Wärtsilä and A.P. Moller – Maersk have developed a means for preventing corrosion in exhaust-gas scrubber discharge pipes. The permanent in-pipe solution is designed to solve corrosion problems associated with open-loop scrubber washwater discharge. The majority of the estimated 5,000 scrubber systems installed across the world fleet are of open-loop configuration. With this system, seawater is used to scrub SOx from the exhaust gas, with the used water then being discharged back to the sea after cleaning. Under IMO Guidelines, the washwater from exhaust gas cleaning systems, or scrubbers, should have a pH of no less than 6.5. However, in reality the pH of scrubber washwater is typically acidic, prior to



being diluted by seawater. This creates the risk of structural corrosion to the discharge pipes.

The risk of scrubber discharge pipe corrosion is particularly high for pipes made of mild steel. In some cases, if the discharge pipes are inadequately protected, severe corrosion can damage the surrounding mild steel hull plates, resulting in water ingress.

The new "pipe-in-pipe" solution allows for the original overboard pipe to remain in situ while a new glass reinforced epoxy (GRE) pipe is inserted into it. No metal cutting or welding is necessary. An SMO stainless steel sleeve is inserted between the new GRE pipe and the existing steel pipe. An adhesive permanently secures the GRE pipe in place. Since this "pipe-in-pipe" solution has a small impact on the internal diameter of the pipe, it is best suited for overboard pipes with a diameter greater than 300 mm.

"This is a long-term solution that can be planned for at any time, even if corrosion has not yet occurred," says William Winters, managing director of Wärtsilä Underwater Services. "The component pipes can be prepared and stored either on board or at an engineering facility ready for fitting either during a scheduled drydocking or port-call or, if necessary, while afloat and in operation using a cofferdam at a convenient time and location."

### Transport Malta issues safety alert over fire hazard caused by Lithium-ion batteries

Download the safety alert at <a href="https://bit.ly/3BwnplM">https://bit.ly/3BwnplM</a>. Or scan the QR code.



Transport Malta has issued guidance to Maltese-registered vessels regarding the potential fire hazards associated with Lithium-ion (Li-ion) cells and batteries. The Marine Safety Investigation Unit (MSIU) has issued a safety alert after being notified of several fires on board yachts and cargo vessels associated with Li-ion batteries.

The statement highlights the 'fierce intensity' of Li-ion battery fires, and also the potential challenges to control and extinguish them with the use of conventional fire-extinguishing systems.

Owners and managers of Maltese-registered vessels must ensure that the procurement

of Li-ion batteries intended for a vessel's use includes safety and technical data on:

- protection, handling, safe use, safe storage, and safe disposal;
- fault/failure detection and required actions;
- and suppressing, extinguishing and post-fire management.

All concerned are strongly recommended to bring this Notice from Transport Malta to the attention of all crew serving on board Maltese-registered vessels and follow the recommendations contained therein.



Transport Malta

### Recent update issued by the UK Maritime & Coastguard Agency



#### **Issued 15 August 2022**

Safety Bulletin 030 - EPIRBs Coded with the Maritime User Protocol: the Vessel MMSI must Start with a Valid Country Code (232-235)

To download the document, go to https://bit.ly/3wkdaOb. Or scan the QR code.



#### **Issued 16 August 2022**

MGN 470 (M) - Maritime Labour Convention, 2006: List of Merchant Shipping Notices, Marine Guidance Notes and Marine Information Notes (Amendment 2)

To download the document, go to <a href="https://bit.ly/3QsxKDi">https://bit.ly/3QsxKDi</a>. Or scan the OR code.



#### **Issued 17 August 2022**

MGN 629 - CONSTRUCTION STANDARDS for fishing vessels 15 metres length overall to 24 metres registered length - Introduction (Rev. 08/22)

To download the document, go to <a href="https://bit.ly/3enadGz">https://bit.ly/3enadGz</a>. Or scan the QR code.



MSN 1841 (M) - Maritime Labour Convention, 2006: Medical Care Ship's Doctors (Amendment 1)

To download the document, go to https://bit.ly/3D9Dlf1. Or scan the QR code.





#### **Issued 18 August 2022**

MGN 562 (M+F) - Radio: Radio Regulations Amendments and GMDSS Radio Equipment Updates (Amendment 3)

To download the document, go to <a href="https://bit.ly/3RKimmW">https://bit.ly/3RKimmW</a>. Or scan the QR code.



MGN 628 - Fishing Vessel Construction and Outfit Standards Less than 15m LOA - Introduction (Rev. 08/22)

To download the document, go to <a href="https://bit.ly/3enetpx">https://bit.ly/3enetpx</a>. Or scan the QR code.



#### **Issued 19 August 2022**

MGN 592 (M+F) - Mooring, Towing or Hauling Equipment on All Vessels: Safe Installation and Safe Operation (Amendment 1)

To download the document, go to https://bit.ly/3DaBnuK. Or scan the QR code.



Survey & Inspection of Fishing Vessels – updates to Annexes 1, Chapters 2, 3a, 3b 3c, 6 and 7

To download the document, go to <a href="https://bit.ly/3r85IYQ">https://bit.ly/3r85IYQ</a>. Or scan the QR code.



#### **Issued 31 August 2022**

MGN 656 (M+F) Annex 1 -The United Kingdom List of Approved Ship Recycling Facilities (Amendment 3)

To download the document, go to <a href="https://bit.ly/3AzJImB">https://bit.ly/3AzJImB</a>. Or scan the QR code.



### The perfect gift for the person who has everything ...

Photo credit: Dom Pérignon

I read that earlier this year Dom Pérignon had raised the bar on yacht charters out New York City way. They arranged for people to charter the brand's custom-designed, 88foot Sanlorenzo luxury yacht and to be treated to dinner prepared by



Masa Takayama, chef of the three Michelin starred sushi restaurant Masa in New York City.

Guests who reserved the cruise (if any did) will have enjoyed four hours aboard the yacht. A chauffeur, glasses of Dom Pérignon, an onboard butler and DJ, and a unique omakase menu created by the Masa mastermind were all included. The cost? A cool \$30,000 for the experience – and that makes this the perfect gift for the person who already has everything!

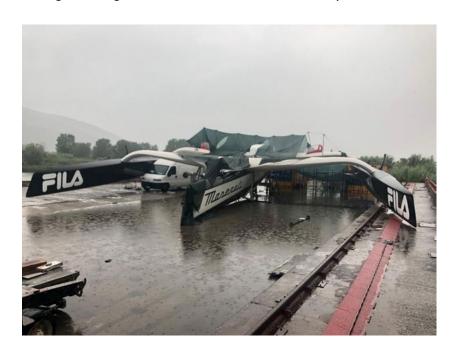
#### Ouch - more violent storms take their toll

Let's face it, the weather in Europe has been odd this summer to say the least. Record temperatures well past the 40 degree mark have become common. A drought leading to the lowest recorded river levels anyone can recall in

Germany has caused major concerns. And then a violent storm in northern Italy caused considerable damage to the boating community. Just look what happened at the Maserati Multi70 Sailing Team boatyard near Marina di Carrara.

Photos shared on social media by renowned Italian sailor Giovanni Soldini show damage caused to the 21.2-metre trimaran, which was undergoing work in the yard. Strong winds lifted the vessel out of its supports and threw it several metres in the air, sending it crashing to the ground.

Of course, extremes of weather are nothing new, but they do seem to be occurring rather more regularly and with devastating consequences.





#### An obsession with speed

Just what is it about speed on the water that some are obsessed with? I am old enough (just) to remember the death of Donald Malcolm Campbell, CBE who was a British water speed record breaker. He broke numerous world speed records on water in the 1950s and 1960s. Sadly his endeavours ultimately cost him his life in 1967 aged just 45 during a record attempt at Coniston Water in the Lake District, England.

However, it seems, that the thirst for water speed records is still not quenched. By the time you read this article, Vision Marine Technologies will have attempted to break their own production electric boat speed record at the Lake of the Ozarks Shootout in Canada. Their goal? To pass the 100 mile per hour mark.

At last year's Shootout, Vision Marine Technologies co-founder, Patrick Bobby, piloted the company's all-electric Bruce 22 powered by an 180E electric outboard and powertrain system to a speed of 49mph, shattering its previous record of 31mph set at the 2019 Shootout.

And I can reveal that their goal was successfully achieved when the electric watercraft reached 109mph.

#### The river Danube reveals a stark reminder of the past

The mighty Danube has been reduced to its lowest level in almost a century by the drought earlier in the year. One of the only bonuses is for wartime historians. The result is that dozens of rusting hulks have been exposed that were sunk near Serbia's river port town of Prahovo. The vessels were among hundreds scuttled along the Danube by Nazi Germany's Black Sea fleet in 1944 as they retreated from advancing Soviet forces.



This year's drought has vividly exposed more than 20 wrecks on a stretch of the Danube in eastern Serbia. It is thought many of them still contain tonnes of ammunition and explosives and pose something of a risk to shipping.

This unexpected look back into history from actions taken nearly 80 years ago is remarkable and humbling.

Wreckage of a WWII German warship is seen in the Danube. Photo: Reuters/Fedja Grulovic

### What does £1 buy you in modern Britain? A wrecked tug for restoration it seems

Capt Dan Cross with the SS Daniel Adamson behind

This story brought a smile to my face. I salute anyone who has the skills, foresight and determination to take an old relic and restore her to her former glory. But that is exactly what Capt Dan Cross has managed to achieve and his efforts have earned him a Merchant Navy Medal for his troubles.

The harbour tug in question is the SS Daniel Adamson. Capt Cross bought her in 2004 for the princely sum of £1 which might give you some insight into the task that lay ahead. Not content with restoring the tug, the restoration has supported young people from all backgrounds and abilities to learn, participate and eventually volunteer as part of the ship's crew.



Top man Capt Dan Cross and your award is well deserved.

### Latest Titanic expedition reveals unseen images of the famous wreck Image credit: OceanGate

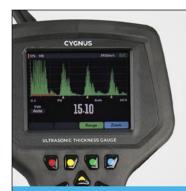


What is it about the tragic sinking of the Titanic that even 110 years on it continues to fascinate and intrigue so many people, myself amongst them? The tragedy resulting in huge loss of life rightly changed the maritime safety landscape for ever.

I read that almost 37 years to the day after a team from Woods Hole Oceanographic Institution first located and photographed the wreck of the Titanic, a new expedition has returned from the deep, icy waters with the most detailed images captured of the vessel, including unseen footage. Seattle-based OceanGate Expeditions released the amazing 8K video footage of the ship that famously sank on her maiden voyage in April 1912.

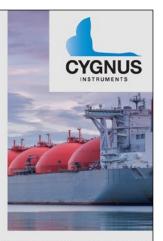
In the new high-quality video, OceanGate has been able to capture remarkable new details of the ship including the name of the anchor maker, Noah Hingley & Sons Ltd., on the portside anchor. Other details that they have documented include the crane used for deploying the enormous 15-ton anchor, still located on the deck, and the shackle that was originally attached to the forward mast that collapsed after the 1985 expedition first photographed the ship.

Until next month... *Mike Schwarz* 



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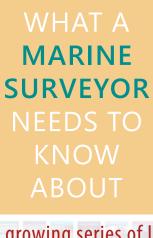








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