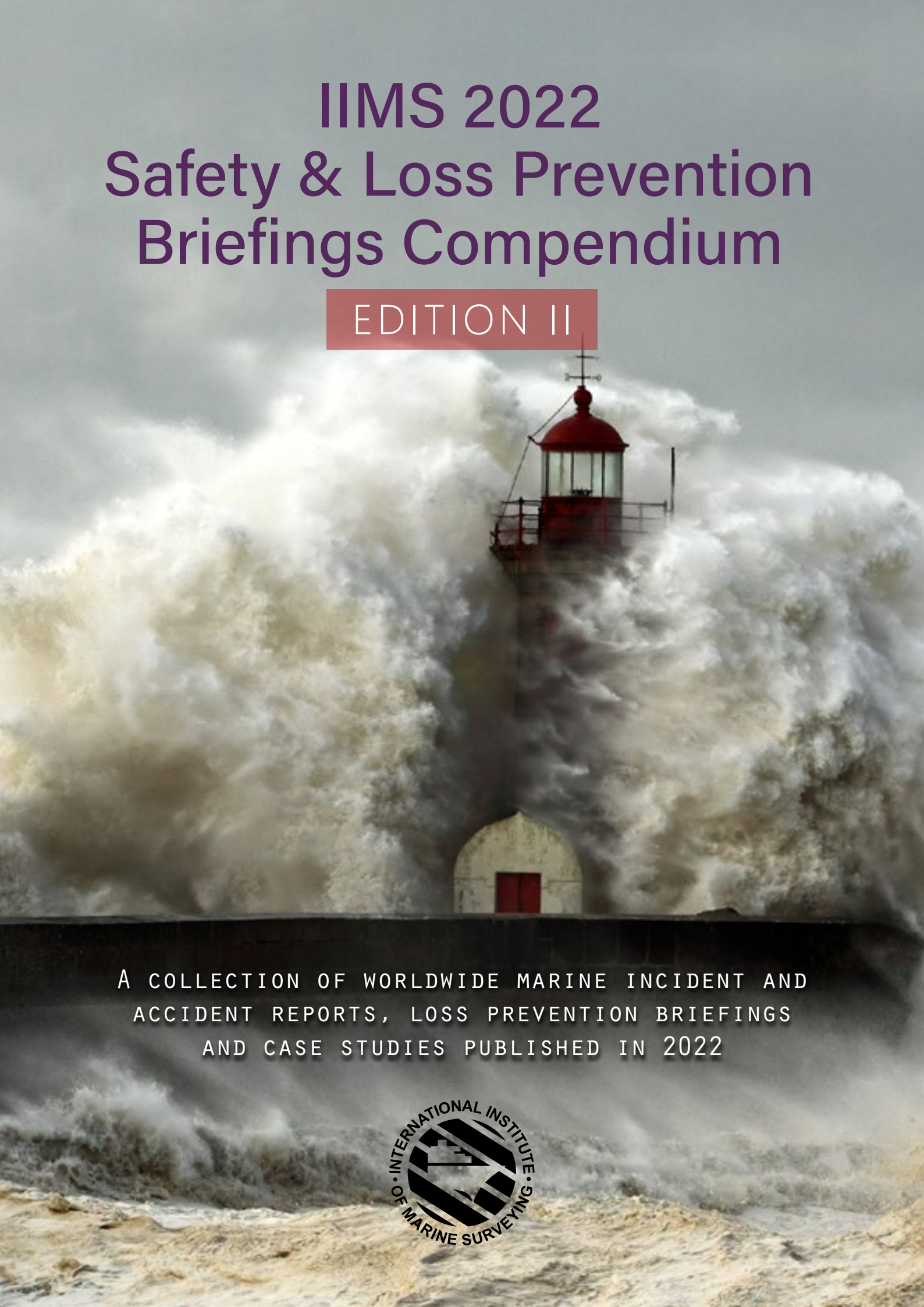
IIMS 2022
Safety & Loss Prevention Briefings Compendium

EDITION II



A COLLECTION OF WORLDWIDE MARINE INCIDENT AND ACCIDENT REPORTS, LOSS PREVENTION BRIEFINGS AND CASE STUDIES PUBLISHED IN 2022

INTERNATIONAL INSTITUTE OF MARINE SURVEYING

UKP&I

Keeping you informed, healthy and safe

UK P&I Club provides one of the maritime industry's most proactive and innovative loss prevention programmes, helping to ensure the crews on our insured ships stay well-informed, healthy and safe.

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Welcome by Mike Schwarz,
Chief Executive Officer,
International Institute of Marine Surveying

Welcome to Edition II of the ***Safety & Loss Prevention Briefings Compendium*** published by the International Institute of Marine Surveying.

I had no inkling when the first edition was launched just how well received it would prove to be. That publication has been downloaded many thousands of times. I am most grateful to those who have told me what a valuable publication it is. That has motivated me to compile Edition II and, sadly, there has been no shortage of content to fill the following pages. Of course, as we all know, working and playing at sea is fraught with danger, but do we learn? One wonders. Sea blindness is a phrase new to me. It refers to the public who, in most cases, have little idea about what happens at sea. Much of what you will read in this publication has not made international news headlines let alone national ones. Yet those of us in the business who are not sea blind are rather too accustomed, even hardened to things that go wrong.

This year the content is laid out differently with some new features. For example, I have included a calendar of incidents and accidents that reached my desk on a month-by-month basis. Be warned, it is a shocking catalogue of disasters. Another new feature is the addition of QR codes meaning you can use your device to scan and access the content directly.

On the face of it there have been fewer major accidents hitting the media headlines resulting in excessive loss of life compared to previous years - on the face of it! Last year saw the high-profile incident when the EverGiven made an unscheduled, extended stay in the Suez Canal! This brought home the fragility of supply chains and its over reliance on one key shipping channel. Fortunately, there was no loss of life, but the seismic disruption to international trade caused by the blockage was serious. I have no doubt the insurers are still counting the cost.

Having said there were no major accidents involving loss of life making the headlines, there have still been far too many unfortunate deaths at sea, many of which were avoidable. Twenty-five plus perished when a ferry capsized in Bangladesh and a further twenty plus more lost their lives in the sea around China when a barge sheared in two. Just two examples. Worryingly too many fires at sea continue to claim lives as well as valuable marine assets. And emerging Lithium-ion battery technology remains a cause for concern and is now appearing in investigation reports as the cause of catastrophic fires.

Inevitably the death toll has mounted up over the year. I would ask you to pause a moment and think about those who have lost their lives at sea and their loved ones, family and friends for whom life will never return to normal.

I am grateful to Andrew Moll OBE, Chief Inspector of Accidents, MAIB and the IMCA Secretariat for allowing me to repurpose their material. Also, thanks to Stuart Edmonston, Loss Prevention Director, UK P&I Club and Peter Broad FIIMS, IIMS President, who have both authored excellent introductions.

So, what's the purpose of this publication? Over the nine years I have been in my role, I have learnt that one individual cannot make a difference. It must be a collective effort across the maritime sector from top to bottom to improve the safety culture and prevent accidents repeating themselves. We have a joint responsibility. My hope is that this Compendium provides an effective communications medium to alert people to the things that can and do go wrong.

The IIMS proudly presents a brand new standalone **Professional Qualification in Marine Corrosion**, a new standard by which those who inspect corrosion can be judged against

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Introduction by Stuart Edmonston, Loss Prevention Director, UK P&I Club

As loss prevention director at one of the world's leading P&I clubs, it's always tough to read maritime accident reports – particularly when people have tragically lost their lives or suffered life-changing injuries. It's even tougher when, as in most of cases, the accidents could have been prevented if the ships and people involved had been better prepared. This is why my team continue to get out of the bed in the morning: to do everything we can to prevent the accidents you will read about here.

Of course we can all learn from these accidents, and I urge you to study them at length and implement changes where you can. Please also try to understand fully the physical and mental impact for each person affected by the accident, including the loved ones of those who died or who can no longer work. You can choose to forget what happened the moment you turn the page, but it will stay with survivors for life.

> "At the UK Club we are committed to ensuring the safety of our Members' entered ships and seafarers. Our loss prevention programme has three main strands: making ships safer, keeping crews healthier and providing expert advice – and surveyors play a key role."

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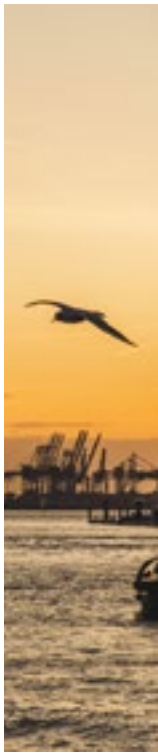

We help our Members ensure their entered ships operate as safely and cleanly as possible through an unrivalled range of news, videos, lessons learnt, checklists, apps, guides and books. We also engage independent surveyors, including many IIMS members, to conduct condition surveys of our older entered ships and other vessels of concern.

In the past two years, some 30% of the defects identified by surveyors related directly to things that could lead to navigation incidents. These account for over half of major claims (over US$10 million) pooled in the International Group. The defects included problems on the bridge, in machinery spaces, with fire safety systems and in overall shipboard management. Another 25% of identified defects could have led to personal injuries and illness, our second biggest source of claims. Thankfully, through the expertise of surveyors, these defects are being continually identified and rectified, each one helping to prevent another needless accident at sea.

Safer ships also need healthier crews. In addition to regular updates and articles relating to the health, safety and welfare of seafarers, we provide our Members with a comprehensive pre-employment medical examination programme and 24/7 telemedicine service for all entered ships.

And to complete the picture, we give our Members access to world-class expertise and support. This includes our in-house loss prevention team of former masters, chief officers, chief engineers and security officers as well as health, safety, risk and security specialists. We also collaborate with leading industry experts from around the world – including IIMS members – to ensure our Members get the most authoritative and professional advice.

But, despite everything we do, and as highlighted in this compendium, accidents can and still happen. We must all continue to learn from them, persist in promoting best practice, and never become complacent.

Introduction by Peter Broad FIIMS, IIMS President

Thank you to Mike Schwarz for taking the initiative last year to prepare and publish the first edition of the IIMS Safety & Loss Prevention Briefings Compendium. It has certainly reached and appealed to a very wide audience, way beyond the marine surveying community itself. It makes sobering reading when we see all these 'incidents and accidents' together in one concise document.

I would like to refer to an article I wrote for the Report Magazine earlier this year to start my introduction to this Safety & Loss Prevention Briefings Compendium, as it seems very relevant.

Reading 'Grey Matter' in the IMarEST 'Marine Professional' issue1/2022, Michael Gray's one page article highlighted the '**Time for transparency about accidents**'.

> It makes sobering reading when we see all these 'incidents and accidents' together in one concise document.

Michael is quoting the InterManager's Secretary General, Captain Kuba Symanski, as asking *'the very plain question as to why "sub-standard equipment that kills people" continues to be in production and installed on ships.'*

I would like you to consider this statement for a moment.

I think, in reality, most safety equipment is built to the required standards of SOLAS or the European 'Wheel Mark'. This is irrespective of whether the equipment is built in Europe or built in Asia for installation on board new vessels.

For international trading commercial vessels Classed with an IACS member it is a requirement that the safety equipment is designed fit for purpose, installed on board under survey, and tested by an attending class surveyor before the vessel can receive the 'Cargo Ship Safety Certificate' and the associated 'Record of Equipment for Cargo Ship Safety'. Then the ISM Certificate, 'shall' require the Owner or Technical Managers to provide a meaningful onboard training and familiarization for their crews in all aspects of the ship's operations, especially the Safety Equipment.

So, if this is the procedure for the certification of equipment through the supply chain that is then installed correctly onboard and tested and shown to operate correctly at the time a vessel is delivered (new), then how and why do these accidents keep happening?

Accidents may happen because of equipment failure, but equipment failure happens because of:

- Lack of planned maintenance onboard
- Poor onboard maintenance management
- Lack of maintenance budgets
- Lack of onboard crew training and familiarization with the equipment
- Lack of Crew experience
- Lack of Crew training
- Lack of control and management from the owners or technical managers head office.

All of the above can be summarized as the 'Human Factor'.

As professional marine surveyors we must all observe different aspects of ships' operations, but in the cases of a Hull and Machinery Claim or, Accident Investigation, we should always try to consider 'why' something has happened. The root cause is not often easy to establish, but perhaps there is a common theme - lack of leadership, lack of experience, lack of maintenance, or all of these.

So, in summing up, it is generally not considered fair or reasonable to blame the "sub-standard equipment that kills people". The equipment was probably not sub-standard by design, but became, or has become, sub-standard by external factors that have influenced its deterioration to a point of failure. This is what causes fatalities.

As I pen this introduction, I am attending a vessel (under survey) in Japan. The vessel has just sailed from South Korea with a completely new crew - 100% new crew. It has broken down in Japan. The crew can start the main engine, but they cannot transfer controls to the Bridge. The crew cannot start the bow thruster. The crew cannot start the air-conditioning. This is shocking and nothing more than a complete failing of the ISM. The Technical Managers (a well-known international company) could not get any crew to sail the ship, so they have paid a bounty (bonus) to anyone willing to crew the vessel. It is a product tanker by the way. It was only by luck that they managed to sail the short distance from South Korea to Japan, unladen, without incident. The vessel cannot enter port to load cargo, as the crew physically cannot get the vessel under way.

This I hope is an extreme example of a complete lack of due diligence and a dereliction of duty of care for the safety of the crew and the vessel by the Technical Managers. We are fortunate that 'we' have stopped this vessel and are now addressing these problems, but the owners and operators have been pushed purely by financial gain to get the ship sailing and to fulfil the charter agreement to earn money.

I am sure that we will all enjoy reading this Safety & Loss Prevention Briefings Compendium, Edition II despite the harrowing nature of some of the content; and I am sure will find it hugely beneficial in your work. But please spare a thought for the seafarers who have been at sea through the Covid-19 pandemic and are now required to keep world trade moving under often extremely hazardous conditions both from nature and the pressures put upon them by their operational management ashore.

Peter Broad, CEng, CMarEng, FIIMS, FIMarEST
President IIMS

"I am sure that we will all enjoy reading this Safety & Loss Prevention Briefings Compendium, Edition II despite the harrowing nature of some of the content; and I am sure will find it hugely beneficial in your work."


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THE REPORT

MARCH 2022
ISSUE 99

The Magazine of the International Institute of Marine Surveying

The following Safety Briefings are taken from Edition 99 of The Report Magazine

MARCH 2022

EXTRACTS FROM
ACCIDENT REPORTS

The unauthorised modifcations carried out to the vessel severely compromised its stability.

The stevedores had insufficient safety awareness and did not pay enough attention to foreseeable risks for lifting/lashing operation of heavy cargo, large stacking gaps, and easy-to-loosen cargo.

The location of the aft external staircase, close to the unprotected edge of the aft deck, and the narrow aft deck exposed the vessel's occupants to the risk of falling overboard every time they used them.

Safety Briefings

FUEL OIL TANK VENT PIPES SHOULD BE INSPECTED REGULARLY

A bulk cargo vessel experienced a serious problem when some of the clay cargo entered fuel oil tanks through holes in the fuel oil tank vent pipes located in the cargo holds. The problem was first noticed by the engineers when the fuel oil filters became heavily clogged with what appeared to be cargo. After the engineers shifted to a different fuel oil tank, the problem stopped. After offloading the clay and cleaning the cargo holds, the vent pipes were closely inspected in each cargo hold.

Several fuel oil vent pipes were found to have been holed by severe corrosion while others were so severely corroded and at risk of failure. The holes were found in locations that were not easily accessible. Analysis of fuel oil in the bunker tanks confirmed contamination from the cargo.

The discovery of contaminated fuel and the holes in the fuel oil vent pipes necessitated an unscheduled repair period. The contaminated fuel had to be disposed of properly. The contaminated fuel oil tanks had to be cleaned and made safe for hot work. The corroded vent pipes had to be replaced. The vessel was out of service for over 2 weeks.

While it may have been unlikely that this particular fuel contamination could have damaged machinery, rapid clogging of the filters could have unexpectedly shut down one or more engines. Had the cargo been soluble in fuel oil and of a highly abrasive nature, the fuel oil purifier and associated filters may not have been able to prevent the abrasive cargo from reaching and damaging the engines.

Lessons learned

- Fuel oil tank vent pipes should be inspected regularly and thoroughly to ensure that: the fuel is not contaminated by cargo; cargo is not contaminated by the fuel or fuel vapors; and fuel vapors do not enter spaces not designed for fuel vapors.
- Particular attention should be paid to fuel oil tank vent pipes that are: vulnerable to damage during cargo operations; or partially hidden or less visible, especially if corrosive or abrasive cargos are to be loaded or have been carried.
- A corroded fuel oil tank vent pipe in one cargo hold should immediately raise concerns about similar vent pipe problems in other cargo holds.

Image credit: The American Club

FREQUENT FAILURES OF THERMAL OIL CIRCULATION PUMP LED TO FIRE SAYS REPORT

The Bahamas Maritime Authority has published its report on the ro-ro passenger ferry Pride of Hull, which suffered a fire on 20 October 2020, in the Humber Estuary, UK.

At 20:35 the vessel's fire detection system alarm sounded, with the bridge's fire panel indicating a fire on Deck 1, zone 4: Oil treatment pumps. The AB sent to check the fire panel then relayed this to the engine control room as a fire detected in the "fuel treatment room". The EOOW went directly to the fuel treatment room to identify the cause of the alarm. 21 seconds later, the fire detection system started to identify further alarms in multiple locations in the engine rooms.

Alerted, the chief engineer left the engine control room and opened the watertight door to the aft engine room which was filling with thick black smoke; at approximately the same time, the vessel's Hi-Fog fire suppression system activated at the thermal oil circulation pumps. The engineer's call was activated, the bridge was informed and a "Code Bravo" (restricted incident) was announced on the public address system to direct crew to muster for firefighting and control.

At 20:47 the first firefighting team entered the aft engine room on breathing apparatus (BA) with two objectives: identify the source of the smoke and restore electrical power. Visibility was severely limited and no fire could be seen, the team proceeded with restoring power. In parallel, further teams were shutting down ventilation, isolating electrics and checking for hot spots.

Post-fire scene examination identified that thermal oil circulation pump #1 was the seat of the fire.

Probable cause
Examination of the thermal oil circulation pump identified that progressive bearing failures caused extreme frictional heating, generating temperatures in the order of 1,200°C, far in excess of the auto-ignition temperature of the thermal oil used in the system.

Furthermore, assessment of the fire suppression system identified that the system's effectiveness was compromised by pump output when multiple zones were activated and its dependence on a domestic fresh water pump to maintain supply for longer than two minutes.

Download the report at **https://bit.ly/3fya1Sc**.

THE IMPORTANCE OF VERIFYING WIRE ROPE TERMINATIONS

Wire rope and its associated cable assemblies are an essential part of the marine industry in a variety of load-handling applications. In many instances, maintenance and replacement of these cables involves multiple layers of fabrication and service providers who rely on quality management processes to ensure the correct product is supplied to the end-user.

On January 4, 2021, a Fast Rescue Craft (FRC), while being manually winched to its stowed position onboard a floating offshore installation in the Gulf of Mexico, fell approximately 135 feet into the water when its wire rope end termination failed. Luckily, the crew of the FRC had exited the craft just moments before the incident. The subject wire rope in the casualty had failed within one month of its installation.

As a result of the casualty, the Coast Guard initiated an investigation into the causal factors that contributed to the cause of the incident. While the incident is still open for investigation, the Coast Guard's Office of Investigations and Analysis has issued two Safety Alerts related to the case (Safety Alert 04-21 and Safety Alert 08-21).

EXTRACTS FROM
ACCIDENT REPORTS

Frequent failure of equipment generally indicated a weakness in the system.

The failure of the original fuel transfer pump switch should have been reported, documented, and then properly repaired. It should not have been temporarily repaired by an unqualified crewmember.

Opportunities to identify and diagnose engine problems early, and therefore avoid catastrophic failures, were missed because the condition of the engine lubricating oil and coolant was not closely monitored.

Safety Briefings

CARRIAGE OF RICE: AN OVERVIEW FOR THE MARITIME SECTOR

The carriage of bagged rice cargo is a potentially hazardous undertaking, with claims potentially running to millions of dollars when problems arise, says the Britannia P&I Club. The major issue with cargoes of bagged rice is the formation of mould or caking which can often be attributed to condensation due to inadequate ventilation, water ingress, moisture migration and improper dunnaging.

Cargo holds should be properly cleaned and prepared, ideally to grain standards. The accepted definition of 'grain clean' is provided by the National Cargo Bureau in the United States which states that:

Compartments are to be completely clean, dry, odour-free and gas-free. All loose scale is to be removed. In general, the holds should be clean, dry and free of residues from previous cargo and with no rust scale. In practice, for bagged rice cargoes, the holds should be dunnaged and the rice packed in polypropylene bags which together should provide protection from any limited dirt present in the holds.

Loading
Ship staff should monitor the temperature of the cargo throughout the loading process. The average temperature of the cargo is important for assessing when to ventilate during the voyage. Ship staff should also monitor the cargo being loaded for signs of damage, mould, insects, wetness or staining etc. Any cargo or bags not in sound condition should be rejected. A Letter of Protest should be issued and ship staff should always take photographs and preserve all relevant evidence to help defend any potential claims.

The crew should closely monitor weather conditions and close the holds promptly if rain or poor weather is expected. They should not rely on shippers, agents or surveyors to make such assessments. Rain wetting of part loaded holds is particularly problematic, as the water drips between the bag layers and affects an unknown quantity of bags.

Read the full article at **https://bit.ly/3fsOY3D**.

FIRE ON A MOTOR CRUISER EXPOSES POSSIBLE SHORTCOMINGS IN IRISH PLEASURE CRAFT LEGISLATION

An investigation by the Marine Casualty Investigation Board (MCIB) into a fire onboard a motor cruiser on the River Shannon in Ireland has exposed possible shortcomings in Irish legislation governing the safety of pleasure craft.

On 6 September 2020, four people set out in X4, a Linssen Grand Sturdy 35.0 motor cruiser rented from boat hire service, Carrickcraft. After around 45 minutes a fire broke out in the engine compartment. The passengers, who had been given training in emergency responses, donned lifejackets and telephoned the Carrickcraft base, from which an emergency crew was immediately dispatched. Gardaí and the fire brigade were also alerted, while a passing vessel was able to take the crew on board.No one was hurt in the incident which caused the motor cruiser to sink in around eight metres of water.

The MCIB report found that the seat of the fire was in the engine compartment but the vessel was so badly damaged the exact cause of the fire was impossible to determine and will never be known.

As charter vessels operating on the inland waterways network are not manned by a commercial skipper and crew, they are considered recreational craft and are subject to the requirements of the Code of Practice (CoP) for the Safe Operation of Recreational Craft, rather than the arguably more comprehensive Merchant Shipping Act 1992.

"The CoP does not provide for the mandatory fitting of fire detection systems on recreational craft and hence there was no fire detection system fitted to the Carrickcraft vessel X4," said the report.

Download the full report at **https://bit.ly/3IxTRok**.

THE ADVICE IS KEEP BATTERIES OF ANY KIND AWAY FROM METAL OBJECTS

During a routine inspection on a vessel in cold lay-up, the lifejackets stored underneath a sitting bench in the wheelhouse were found burned and melted. No one was harmed in the incident.

Burned lifejackets

The lamp used in the lifejackets

A Lithium battery (3.6v) had exploded in one of the self-igniting lights. As the bench was in a properly closed position, without any gaps, the fire could not spread due to a lack of oxygen. Therefore the fire was not detected and did not activate a fire alarm, as the smoke was contained inside the storage compartment. Investigation showed that the battery of the "Lalizas 71209" life jacket light had expired five months earlier.

A possible cause could be that this battery was exposed to moisture before the lay-up period and water ingress affected the battery content after the lifejacket was put back in storage.

Lessons learned:

- Store such equipment in a secure, dry and cool place away from flammable materials;
- Keep batteries of any kind away from metal objects to avoid short circuit between the terminals;
- Lithium batteries in your workplace:
- Assess where Lithium batteries are present and check, if possible, the condition of the battery and cover;
- Verify the expiry date of the battery;
- Regularly inspect batteries of lifejacket lights and other devices like radios as per planned maintenance schedule;
- If batteries are expired or damaged, remove them and dispose of them properly;
- For laid-up vessels, it may be appropriate to consider whether or not to remove Lithium batteries and other hazardous materials from vessels before going onto lay-up.

EXTRACTS FROM
ACCIDENT REPORTS

The coverall worn by the AB who escorted the surveyor was not resistant against corrosives.

The flooding went unnoticed because the crew did not see or hear the wheelhouse bilge alarms and were task-focused, dealing with crossed towing wires and a heavy weight in the fishing net.

The steering compartment of the FV Aztec had no bilge alarm fitted and no means of directly pumping out this compartment. A small drain hole allowed water to drain from the steering compartment onto the fish hold.

Safety Briefings

REPORT REVEALS DIESEL GENERATOR ENGINE FAILURE LED TO FIRE ONBOARD OFFSHORE SUPPLY VESSEL

The National Transportation Safety Board (NTSB) has published a Marine Accident Brief on its investigation into a diesel generator engine failure and fire onboard an offshore supply vessel near Honolulu, Hawaii, last year. The incident took place on the Ocean Intervention on December 19, 2020. No pollution or injuries to the 16 crew members were reported in connection with the mechanical failure, which resulted in a fire in the engine room. The crew isolated the fire before it could spread throughout the vessel.

While at an anchorage, the Ocean Intervention crew had been troubleshooting speed variation issues related to the number 1 and number 3 diesel generator engines, which involved replacement and calibration of several electrical components and multiple engine restarts. When later carrying the vessel's electrical load, the number 3 diesel generator suffered catastrophic mechanical failure. The NTSB said this resulted in cylinder number 1's connecting rod being ejected through the engine crankcase while running at rated speed. The ejection of the connecting rod allowed atomized oil to be released from the engine and ignite, starting a fire in the engine room. The crew's quick and effective actions to prevent the spread of the fire resulted in the fire extinguishing itself without putting crewmembers at risk.

The NTSB determined the probable cause of the diesel generator engine failure was a cylinder's connecting rod bearing adhering to the crankshaft, which led to the ejection of the connecting rod and catastrophic damage to the engine.

"Engine rooms contain multiple fuel sources as well as mechanical ventilation, making the spaces especially vulnerable to rapidly spreading fires," the report said. "The crew of the Ocean Intervention effectively contained the spread of a fire by removing fuel and oxygen sources. Vessel crews should familiarize themselves and train frequently on machinery, fuel oil, lube oil, and ventilation shutoff systems to quickly act to contain and suppress engine room fires before they can spread to other spaces and/or cause a loss of propulsion and electrical power."

Download the report at **https://bit.ly/3qyzeSQ**.

Damaged section of the engine (left) from where the connecting rod from the no. 3 DG (right) was ejected. (Credit: Oceaneering International).

CORRECT USE OF HYDROSTATIC RELEASE UNITS SAFETY ALERT ISSUED BY AMSA

The publication by the Australian Marine Safety Authority (AMSA) of Safety Alert: 02/2021 aims to raise awareness of the correct use of hydrostatic release units, for both float-free life rafts and float-free EPIRBS.

The Hydrostatic Release Unit (HRU) is designed and approved to automatically deploy a life raft or EPIRB in the event of a vessel sinking. HRUs operate between 1.5 and 4 metres of water depth, to release the securing mechanism for the life raft or EPIRB.

AMSA inspectors often identify circumstances where HRUs are incorrectly fitted. In 2021, AMSA has issued over 100 deficiencies in relation to deficient HRU arrangements on life-rafts and float-free EPIRBs.

Life raft HRU's
The HRU that is used on life raft securing devices cuts through a cord that fastens the securing straps. The life raft container has enough inherent buoyancy to float free from its cradle and in doing so, pulls out the life raft painter to inflate the raft. The painter is attached to a weak link that is designed to break once the raft has inflated. It is important that the HRU and weak link are correctly installed. If the painter is not attached to the weak link correctly, the raft may not inflate, or may not release from the sinking vessel.

HRUs are designed to operate with specific equipment. The HRU for a life-raft must be suitable for the size of life-raft secured. Multiple life-rafts must not be secured by a single HRU unless approved by the manufacturer.

Over tensioning of the securing straps can lead to failure of the HRU to operate. Similar problems can occur when there is insufficient load on the HRU. Securing straps should be taut but not over tight. Care must be taken to ensure the securing straps on a life-raft canister will release when the HRU activates, and that the life-raft painter is attached to the HRU weak-link.

EPIRB HRU's

The HRU that is used for a float-free EPIRB operates in the same way, but usually cuts through the mechanism securing the EPIRB container. Once the container is opened, the EPIRB will float free and activate.

The HRU on a float-free EBIRB should be checked to ensure it is installed correctly. No additional lashings should be used on the EPIRB housing – this can prevent the housing cover from releasing when the HRU activates, stopping the EPIRB from floating free.

Correctly fitted HRU on a life raft

Servicing and expiry

HRUs can be serviceable or disposable.

Re-useable HRUs must be serviced annually to ensure they will work when required. The HRU must be serviced by the manufacturers authorised service agent. Disposable HRUs have a service life once installed and must be replaced once they reach their expiry date. The service life of the HRU is determined by the manufacturer. Most disposable HRUs have a service life of two years after they have been installed on the vessel. The date of installation or expiry is marked on the HRU.

Reminder

- Check that you have the right HRU for your safety equipment
- Check that hydrostatic release units are correctly installed
- Check that life-raft painters are connected to the HRU weak link
- Ensure HRUs are serviced or replaced by their due date

EXTRACTS FROM
ACCIDENT REPORTS

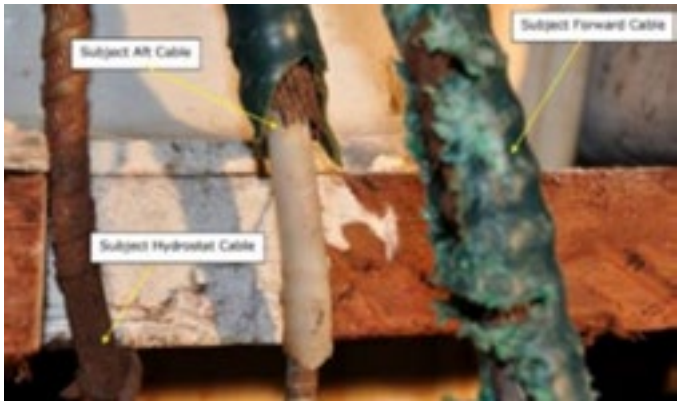
The vessel load exceeded the maximum weight limit as identified in the vessel stability book.

The quality assurance processes of the pilot hose assembly supplier failed to identify that the hose couplings had not been fully bored through.

To allow the survey to be conducted in a safe manner the safety pins had been put in place, while the outside contractors carried out their inspection. When finished these should have been removed, to make the system ready for activation.

Safety Briefings

FATALITY ONBOARD CAUSED BY DAMAGED RELEASE CABLE



The U.S. Coast Guard has issued its report from its investigation into a fatal lifeboat accident on Shell's Auger tension leg platform in the U.S. Gulf of Mexico in 2019.

The incident took place during a routine lifeboat launch and retrieval drill on June 30, 2019. Two people inside the lifeboat were killed when it fell 80 feet, landing upside down in the water. Another person, who was exiting the lifeboat when it released, was seriously injured.

According to the report, the aft hook on the Auger platform's Lifeboat No. 6 inadvertently opened as the lifeboat was being winched into the davit following the drill. "The lifeboat, still hanging from the forward hook, swung in a pendulum motion away from the facility. A few seconds later, the forward hook separated from the lifeboat and opened, and the lifeboat fell approximately 80 feet, landing inverted in the water," investigators said in the executive summary.

"Based on the evidence collected and evaluated, it is probable that on the morning of June 30, 2019, the crew cycled (open to closed position) the hooks two times while in the water. The cable conduit, already compromised, was exposed to additional stresses, including compression and stretching. It is probable that during the second cycling event, the conduit, already weakened and damaged, separated during the closing action. As a result, when the system was reset, the locking shaft on the aft hook did not return to the fully closed position, but rather, came to rest in an "almost open" position. In this position, the hook could support the weight of the lifeboat and its occupants," the report stated.

Lessons learned

- The primary causal factor that directly contributed to the casualty was the complete separation of the aft hook control cable conduit surrounding the inner member.
- The operator and/or OEM's failed to replace the aft hook control cable after it was identified as damaged.
- Contributing factors of the incident include the lack of systems, policies or regulations in existence to ensure that control cables are properly monitored and changed out in accordance with the OEM's recommendations and/or best industry practices.
- The final report calls for instituting regular inspection and replacement schedules for lifeboat hook control cables, along with a requirement for the Coast Guard to review the entire lifeboat/release mechanism system during the design approval phase.

Download the report at **https://bit.ly/3tzpN7z**.

LACK OF RISK ASSESSMENT CONTRIBUTES TO SINKING OF FISHING VESSEL SAYS MCIB REPORT

The Marine Casualty Investigation Board of Ireland (MCIB) has published its report on the sinking of FV Aztec, which took place off Duncannon on 11 January 2021.

At approximately 10.45 hrs the FV Western Dawn hauled its net and the FV Aztec passed back the end of the net to it. It was then decided to pass fish from the FV Western Dawn's net to the "FV Aztec. The crew of the FV Western Dawn passed over the bag rope and this was hauled up on the main winch aft. The bag rope from the FV Western Dawn was heaved across to the FV Aztec using the main winch through the aft starboard towing block.

The Gilsen winch and lifting derrick are situated starboard forward. The Gilsen winch was then secured to the bag rope/lifting strop and the cod end was taken onboard, one lift at a time allowing the fish to enter the fish room via scuppers on the deck. The securing of the bag rope on the aft starboard hanging block and subsequent lifting of the cod end lift caused the vessel to list to starboard and immerse the hole on the aft starboard side of the deck.

As the fish were being taken onboard the FV Aztec the skipper noticed the water was not clearing off the aft deck in the usual manner. At the same time a crewmember noticed water flooding into the steering compartment through a hole in the deck. The crewmember attempted to stem the flow with an oilskin and alerted the skipper.

As the steering compartment flooded, the vessel lost its reserve buoyancy aft and began to settle by the stern. The crew tried to let go the net as the Skipper manoeuvred alongside the FV Western Dawn. Once alongside, with the stern going under water the skipper of the FV Aztec instructed the crew to abandon ship and to transfer across to the other vessel. At this stage the fish hold bilge alarm sounded as it began to flood through deck scuppers and the open hatch.

The crew of the FV Aztec successfully transferred to the FV Western Dawn and watched their boat sink in less than one minute. The vessel settled by the stern as the water filled into the fish hold and into the engine room through the open watertight door.

There were no risk assessments or method statements for pair trawling listed in the FV Aztec's safety statement. Effective risk assessments and procedures would have highlighted dangers associated with pair trawling.

The vessel was heavily laden at the time and dependant on the buoyancy provided by the steering compartment to maintain its longitudinal stability. Although not required, the FV Aztec had stability calculations done in 2017 for ten tonnes of fish in the hold. These stability calculations concentrated on lateral stability and did not address longitudinal aspects of stability. It was stated during recovery operations that the FV Aztec had between ten and 12 tonnes of fish onboard. Although no limits are set for vessels of this size, the loading of the vessel was a contributory factor in the sinking. This must take into account the weight of the catch onboard as well as the positioning of fish in the hold. The effect of the additional catch being taken onboard at the time of the incident will have also caused considerable settling by the stern and listing to starboard. The combination of these forces will have left the longitudinal stability of the vessel dependant on the buoyancy provided by the steering compartment.

Finally, the steering compartment of the FV Aztec had no bilge alarm fitted and no means of directly pumping out this compartment. A small drain hole allowed water to drain from the steering compartment onto the fish hold.

Download the full report at **https://bit.ly/3fxYzWQ**.

EXTRACTS FROM
ACCIDENT REPORTS

Contributing to the casualty was the ineffective communication between the supervisory personnel, marine chemist, and workers.

The crane operator did not halt the operation on receiving indications of crane overload.

The senior engineer who was in the engine room at the time the fire started and the Chief Engineer assumed the junior engineer knew how to operate the semi-portable foam extinguisher since he was an experienced mariner.

TWIST-LOCK FOUNDATIONS SHOULD BE INSPECTED REGULARLY

The American Club has published guidance and some lessons learned following an incident that involved corrosion of the twist-lock foundations and pad eyes.

A general cargo vessel had been modified to carry containers on the cargo hatches. Various twist-lock foundations and pad eyes had been welded to the hatch covers to secure containers. While the vessel was in port preparing to offload and load containers, the newly arrived Chief Officer noticed that many of the twist-lock foundations and pad eyes were significantly corroded. He raised his concern with the Master. They jointly inspected them and found them likely to be unsafe due to the excessive corrosion.

The Master called the vessel management company who made arrangements to offload the remaining containers, find a lay berth and make repairs. The vessel spent 2 days at the lay berth and then resumed its schedule without incident.

The incident was written up as a near miss by the Chief Officer who correctly felt that several of the fittings and pad eyes were on the verge of failing and containers could have subsequently been lost or seriously damaged.

TWO SMALL FIRES ONBOARD CAUSED BY CRANKCASE FAILURE

The Marine Safety Forum has published an alert focusing on a case where a vessel experienced crankcase failure. The vessel suffered a crankcase failure on one of their four diesel generators (DG) which resulted in two small fires and excessive damage to the pistons, con-rods, and the engine block.

Findings
After investigation, it was found that main bearing number 9 had worn out. It had been very hot at some point. When the main bearing cap was dismantled the upper bearing was located in the bearing cap, resulting in the bearing had been turning on the crankshaft. This blocked the lubrication hole on the main bearing, and as the con-rod at cylinder number 16 received its oil supply from main bearing number 9. This meant that the cylinder number 16 con-rod also lost its oil supply. This was probably the main failure from the start.

The investigation also concluded that:
- The DG had recently undergone a major overhaul.
- The maintenance of the DG was in order as per the manufacturer's instructions.
- The running hours were well below the manufacturer's guidance.

Lessons learned
- The vessel had in place "plexi-glass" surrounding the DG's this resulted in less secondary damage than normally results in these types of failures.
- The Chief Engineer's Standing Orders stated that no prolonged work scopes would be carried out alongside a running DG (where possible).
- The Emergency Response Plan was effectively implemented by the well-trained and drilled crew.

THE AMERICAN CLUB
100 YEARS OF SERVICE 1917 2017

UNFAMILIARITY WITH FIRE EXTINGUISHER EQUIPMENT LET FIRE SPREAD TO THE BILGES

The American Club has published some lessons learned from an incident where a general cargo vessel's generator experienced a catastrophic failure while underway resulting in a fire that spread immediately to the bilges under the generator.

After notifying the bridge and the Chief Engineer, the senior engineer expected to see the junior engineer already using the foam extinguisher. When he didn't, he ran from the control room to the semi-portable foam extinguisher and found the junior engineer struggling to determine how to activate it. He was trying the turn the lever on the top of the extinguisher but had not pulled out the safety pin.

The several-minute delay in using the fire extinguisher allowed the fire to spread and smoke was quickly filling the engine room. The smoke forced both engineers to evacuate. The bridge sounded the general alarm and the entire crew responded. When the engineers were accounted for, the engine room was isolated and the fixed CO2 system was triggered to put out the fire.

Probable cause
During the investigation that followed, the junior engineer admitted he was not familiar with how to use that specific semi-portable fire extinguisher and became confused in the tension created by the emergency situation. He indicated the fire extinguisher was different from others that he had been trained to use. The senior engineer who was in the engine room at the time the fire started and the Chief Engineer both indicated that they assumed the junior engineer knew how to operate the semi-portable foam extinguisher since he was an experienced mariner.

The effectiveness of the crew in isolating the engine room by stopping the ventilation and closing all the vents and doors enabled the fixed CO2 system to work as designed and extinguish the fire. Their training, experience and actions prevented further damage that could have significantly exceeded the actual damage and could have jeopardized the vessel itself said the American Club.

REPORT FINDS FAILURE TO PROPERLY DISCONNECT VEHICLE BATTERIES LED TO FIRE

The National Transportation Safety Board (NTSB) published its report on the fire aboard vehicle carrier Höegh Xiamen that resulted in $40 million worth of damage.

On June 4, 2020, about 1530 eastern daylight time, the crew of the 600-foot-long, Norwegian-flagged roll on/roll-off vehicle carrier Höegh Xiamen were preparing to depart the Blount Island Horizon Terminal in Jacksonville, Florida, en route to Baltimore, Maryland, when they saw smoke coming from a ventilation housing for one of the exhaust trunks that ran from deck 12 (the weather deck) to one of the cargo decks.

Crew members discovered a fire on deck 8, which had been loaded with used vehicles. The crew attempted to fight the fire but were repelled by heavy smoke. Shoreside fire department teams from the Jacksonville Fire and Rescue Department arrived at 1603 and relieved the crew. The captain, after consulting with and receiving concurrence from the fire department, had carbon dioxide from the vessel's fixed fire-extinguishing system released into decks 7 and 8, and the crew then evacuated from the Höegh Xiamen.

The fire continued to spread to the higher cargo decks and the accommodation. Shoreside firefighters entered cargo decks with fire hoses, and nine firefighters were subsequently injured, five of them seriously, in an explosion. Responders subsequently adopted a defensive strategy, cooling external exposed surfaces. The fire was extinguished over a week later on June 12.

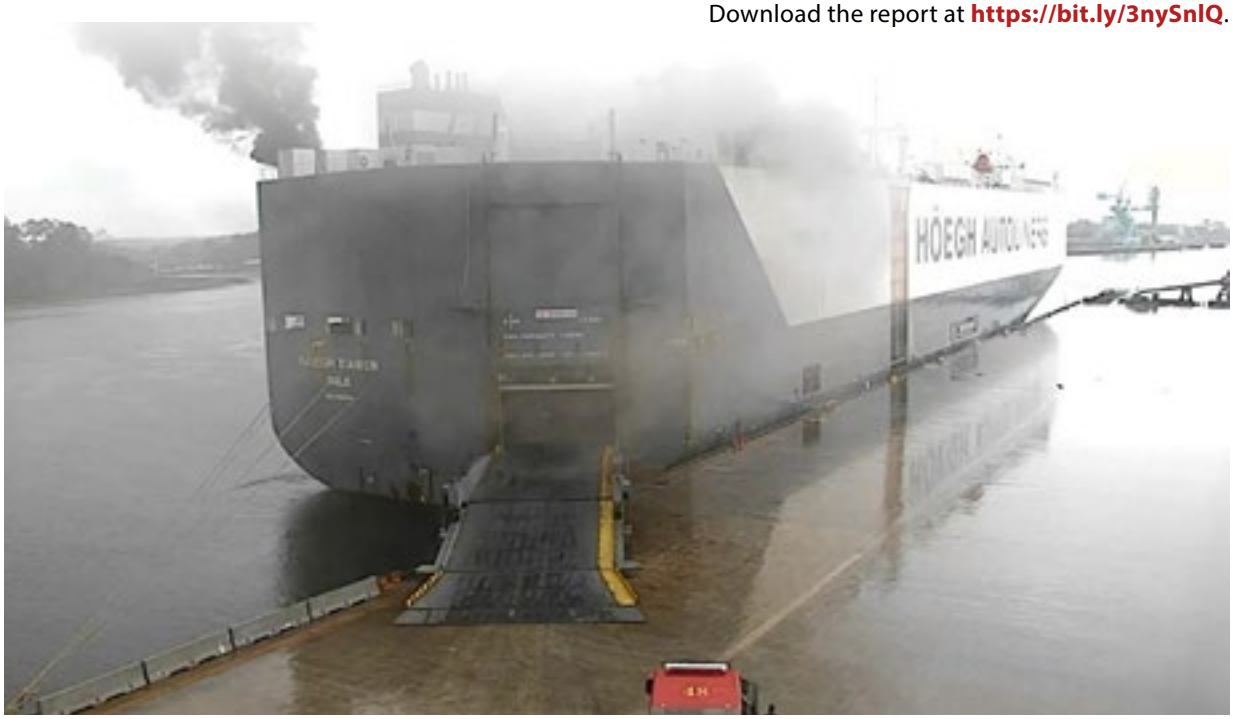
The Höegh Xiamen and its cargo of 2,420 used vehicles were declared a total loss valued at $40 million, and in August 2020, the vessel was towed to Turkey to be recycled.

Probable cause
NTSB has determined that the probable cause of the fire aboard the vehicle carrier Höegh Xiamen was Grimaldi's and SSA Atlantic's ineffective oversight of longshoremen, which did not identify that Grimaldi's vehicle battery securement procedures were not being followed, resulting in an electrical fault from an improperly disconnected battery in a used vehicle on cargo deck 8.

Contributing to the delay in the detection of the fire was the crew not immediately reactivating the vessel's fire detection system after the completion of loading.

Contributing to the extent of the fire was the master's decision to delay the release of the carbon dioxide fixed fire-extinguishing system.

Download the report at **https://bit.ly/3nySnlQ**.



THE REPORT

The Magazine of the International Institute of Marine Surveying

JUNE 2022
ISSUE 100

The following Safety Briefings are taken from Edition 100 of The Report Magazine

JUNE 2021

EXTRACTS FROM
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The vessel's maintenance schedule did not specifically cover inspecting the condition of the slings, according to TSB.

Contributing to the severity of the fire damage was the crew's unfamiliarity with activation procedures for the fixed fire-extinguishing system.

The vessel was not equipped with an Emergency Position Indicating Radio Beacon (EPIRB) nor were the crew wearing personal locator beacons (PLBs). The absence of this mandatory safety equipment meant the alarm was not raised for some 16 hours after the foundering.

Safety Briefings

RISK ALERT FOR CONTAINER CARGO OPERATIONS ISSUED BY STEAMSHIP MUTUAL

The Steamship Mutual has issued a Risk Alert focusing on container cargo operations to highlight that training and reinforcement of safe work practices is of paramount importance not only to ensure an individual's personal safety but also to ensure that the work area remains safe for others.

The Club notes that incidents involving serious injuries and fatalities during container cargo operations on vessels are not uncommon and refers to contributory factors that can led to an incident and lessons learned from previous cases.

All parties involved in cargo container operations should recognise their shared interest in ensuring that cargo operations are carried out in a safe and efficient manner. Tools for supporting a safer working environment should include a near miss reporting system to improve safety awareness and a no blame safety culture that encourages the crew to speak out when they observe or experience unsafe working practices.

Download the guidance at **https://bit.ly/38s8SeM**.

SIGNIFICANT NUMBER OF SHIPS DO NOT COMPLY WITH BASIC NAVIGATION SAFETY REQUIREMENTS IS FINDING FROM THE AMSA FIC

AMSA conducted a Safety of Navigation Focused Inspection Campaign (FIC) over the period 1 August to the 8 September 2021 and, extremely concerning, they found that a significant number of ships failed to comply to basic navigation safety requirements.

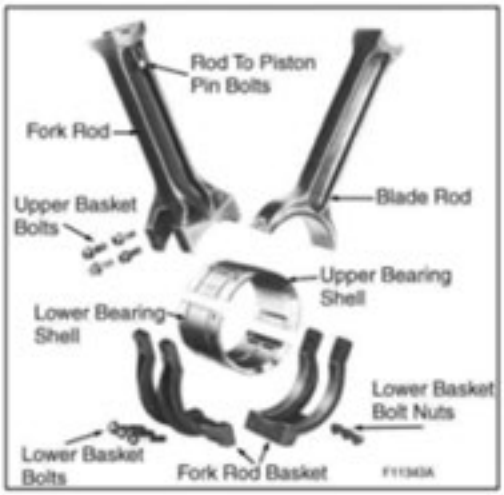
The campaign focused specifically on:
- The level of compliance with the safety of navigation requirements of International Conventions;
- The familiarity of the master and officers with their processes for ensuring safety of navigation.

The campaign took place as a core part of AMSA's Compliance Plan for 2021/22 and was scheduled for two months with a target of 200 inspections. Lockdowns in various states, and restrictions implemented to protect AMSA staff and the Australian public, meant that AMSA ceased the campaign early on 8 September 2021, after exceeding its target of 200 inspections.

The FIC results showed that a significant number of ships failed to comply to basic navigation safety requirements. The outcome and findings were:
- 278 ships were inspected during the FIC.
- AMSA detained 21 ships during the period of the FIC, 7 of which were directly attributed to the safety of navigation FIC. This shows that 33.33% of all detentions during the FIC related to safety of navigation, which is extremely concerning.

Read the full story at **https://bit.ly/3r3ePFw**.

ERROR IN MAINTENANCE LED TO DIESEL ENGINE FAILURE REVEALS NTSB REPORT



Left: EMD 710 cylinder arrangement showing the affected area in red. Center: EMD 710 connecting rod arrangement. (Photo credit: Dynamark Engineering)

An improperly tightened fastener led to a diesel engine failure on a Washington State Ferries passenger and car ferry near Bainbridge Island, Washington are the findings of a National Transportation Safety Board (NTSB) report.

Marine Investigation Report 22/06 details the NTSB's investigation into the April 22, 2021, catastrophic failure of the no. 3 main engine aboard the Wenatchee during a sea trial in Puget Sound. The failure led to the ejection of components from the engine and resulted in a fire in the no. 2 engine room. No injuries or pollution were reported, while damages were estimated at nearly $3.8 million.

The NTSB determined the probable cause of the mechanical failure of the no. 3 main engine was a connecting rod assembly that came loose and separated from the crankshaft due to insufficient tightening (torqueing) of a lower basket bolt during the previous engine overhaul.

"When installing fasteners, personnel should use a calibrated torque wrench, follow the manufacturer's recommended tightening guide and torque values, and verify that all required torque requirements have been completed," the Wenatchee report said. "Undertorqueing a fastener may cause excess vibration or allow the fastener to come loose, while overtorqueing may lead to failure of the fastener or the machinery component being secured."

Download the full report at **https://bit.ly/3DOv5iH**.

MOORING BUOY FAILURE CAUSED GROUNDING CAUSING DAMAGE OF $4.5M REVEALS NTSB REPORT

SM-3 mooring buoy: failed padeye (with three shackles) that separated from buoy (left), damaged top with padeye missing (center), and undamaged bottom padeye (right). (Source: Alaska Marine Surveyors and Northline Seafoods).

The fatigue failure of an unrated mooring buoy led to the grounding of a fishing tender during a storm near Bristol Bay, Alaska in 2020, according to the National Transportation Safety Board (NTSB).

On August 30, 2020, the fishing tender barge SM-3 broke free from its mooring buoy in a storm and went aground. No injuries were reported, but the vessel sustained $4.5 million in damage and left a three-mile-long debris field scattered along the waterfront.

SM-3 was a converted deck barge originally built in 1966. As an uninspected fishing industry vessel, no trained mariners were required on board, and the vessel's USCG safety oversight was limited to a stability test and a survey of her lifesaving equipment.

Download the report in full at **https://bit.ly/3ufDU25**.

EXTRACTS FROM
ACCIDENT REPORTS

Contributing to the flooding of the vessel was the owner's lack of an effective hull inspection and maintenance program.

Contributing to the severity of the fire and damage to the vessel was the inability to effectively secure ventilation to the space and fuel to the affected engine.

NTSB determines that the probable cause of the containership fire in the engine roomr was a crewmember insufficiently swaging a compression fitting ferrule during the installation of fuel oil return tubing for a main engine's cylinder.

Safety Briefings

HOW TO PROPERLY STOW AND SECURE CARGO CONTAINERS GUIDANCE ISSUED BY AMSA

AMSA has recently published stow and secure cargo containers guidance. AMSA aims to remind operators of the importance of stowing and securing cargo containers, and the potential danger to container ships navigating near intense low-pressure systems that occur off the east coast of Australia.

East Coast Lows are intense low-pressure weather systems that occur off the east coast of Australia. These systems are also referred to as complex lows or Tasman lows. Strong southerly winds, when combined with an easterly swell, can create extreme wave conditions where container ships are at risk of losing cargo overboard. In such incidents, swell size and interval may lead to excessive or even parametric rolling resulting in extreme acceleration forces on container stacks.

Guidance for avoidance of parametric rolling states:
One way of reducing excessive accelerations is for the master, as far as possible and practicable, to plan the voyage of the ship carefully so as to avoid areas with severe weather and sea conditions. The master should always consult the latest available weather information.

Download the guidance at **https://bit.ly/3KcpOU3**.

Enclosed Spaces

Guidance for merchant vessel operators

MCA PUBLISHES NEW GUIDANCE ON ENCLOSED SPACE ENTRY

Seafarers will be better protected as new UK rules come into force to tighten up safety for those involved in enclosed space entry onboard vessels.
The updated legislation goes further than that currently required under international maritime law and is part of the ongoing commitment by the UK to seafarer welfare.

Enclosed spaces include chain lockers, cargo holds, duct keels and water tanks – or any area that has been left closed for any length of time without ventilation.

Six people have died over a ten-year period from 2009 to 2019 in UK ports while working in such spaces, which has led to this legislation being introduced. Although carrying out assignments in enclosed spaces is a necessary part of working on ships, the MCA is committed to reducing the risks and will continue to review how best to protect people in those environments.

Download the new guidance at **https://bit.ly/3DOv5iH**.

NTSB REPORT DETERMINES PROBABLE CAUSE IN MISS DOROTHY VESSEL TOWING FIRE

An engine room fire aboard a towing vessel started when diesel fuel spray hit an uninsulated section of the engine's exhaust system, the National Transportation Safety Board (NTSB) report has revealed.

On March 17, 2021, the towing vessel Miss Dorothy was pushing 14 barges upbound on the Lower Mississippi River, north of Baton Rouge, Louisiana, when a fire broke out in the engine room. The eight crewmembers aboard briefly attempted to fight the fire but were unsuccessful and evacuated to the barges. No pollution or injuries were reported and the vessel was declared a total loss at $2.4 million.

According to the NTSB's Marine Investigation Report fire alarms began to sound in the pilot house and throughout the vessel shortly after midnight. The pilot saw smoke that "grew in intensity very quickly" and flames coming from the starboard main engine in the engine room. The crew attempted to use fire hoses and handheld extinguishers to fight the fire. Shortly after, the chief engineer activated the ventilation shutdown and pulled the emergency fuel oil shutoff for the fuel tank that supplied the starboard main engine. However, air continued to be drawn in through open engine room doors and open or broken windows, and the shutoff valve remained open because the shutoff did not function as intended and the fire continued to grow despite the crew's efforts.

The captain ordered the crew to abandon ship, and the crew was rescued by a Good Samaritan vessel, which then secured the tow against the bank. The fire was extinguished several hours later by first responders and crew aboard the Good Samaritan vessel.

Regulations for towing vessels state that "piping and machinery components that exceed 220°C (428°F), including fittings, flanges, valves, exhaust manifolds, and turbochargers, must be insulated." Investigators found that the exhaust header leading from the individual cylinder heads to the exhaust manifold in the Miss Dorothy, which were subject to temperatures greater than 428°F (often higher than 600°F), near the suspected origin of the fire were uninsulated. NTSB investigators concluded it is likely that the uninsulated exhaust header acted as an ignition point for the atomized or spraying diesel fuel.

The NTSB determined the probable cause of the engine room fire was the ignition of spraying diesel fuel from a main engine's fuel system onto an uninsulated section of the engine's exhaust system. Contributing to the severity of the fire and damage to the vessel was the inability to effectively secure ventilation to the space and fuel to the affected engine.

Download the full report at **https://bit.ly/3K6DQqL.**

CONTAINER LOADED WITH DISCARDED LITHIUM BATTERIES CATCHES FIRE

The U.S. Coast Guard has issued a safety alert and is warning about the hazards of transporting discarded lithium batteries after a container illegally loaded with them caught fire while en route to the Port of Virginia, where it was set to be loaded onto a ship.

Thankfully the container was not loaded on a ship at the time. Rather, the container was being transported on a chassis from Raleigh, North Carolina when the discarded lithium batteries caught fire on the highway on August 19, 2021, resulting in loss of the cargo and significant damage to the shipping container.

It seems the shipping industry may have avoided another potential disaster since the container was intended for a maritime voyage to a port in China via a foreign-flagged containership. Upon initial investigation of the container, the responding fire department determined that the heat produced from the fire burned hot enough to create a hole through the metal container's structure.

EXTRACTS FROM
ACCIDENT REPORTS

No technical failure regarding the remote control of the valve was detected before or after the incident.

The tug did not comply with stability requirements, which meant it was prone to excessive heeling during operations and early down-flooding.

The absence of fire proofing materials in the flexible hose components of the vessel's machinery cooling systems connecting to the through hull shipside valves allowed seawater to enter the vessel when the flexible hoses melted in the intense heat of the engine room fire.

The bill of lading listed "computer parts," not discarded lithium batteries, making responding to the fire more challenging. The Coast Guard said the incident could have been potentially catastrophic had the container caught fire after being loaded aboard the container ship.

Further investigation by the Department of Transportation (DOT) and Pipeline and Hazardous Materials Safety Administration (PHMSA) determined that the shipper failed to properly placard, label, mark and package the discarded lithium batteries, and identified the cause of fire to be residual charge/full circuit, which led to a thermal increase.

RNLI FOWEY FINDS OVER 50% OF FLOTATION DEVICES FAULTY OR CONDEMNED AT A RECENT LIFEJACKET CLINIC

This story, alarmingly, is not the first of its kind to reach IIMS. A similar lifejacket clinic at Eastbourne a couple of years ago also revealed a high level of defective flotation devices, some with serious flaws. But is seems the public is not listening and learning.

A recent lifejacket clinic organised by Fowey RNLI found an astonishing 50% were faulty or condemned. The lifejacket clinic invited a team from Ocean Safety Ltd in Plymouth to carry out vital safety checks on a total of 169 lifejackets.

Over 50 per cent needed a critical safety part replacing, Fowey RNLI says, meaning if they had been used in an emergency they may not have worked and could potentially have caused loss of life. Eleven lifejackets were condemned outright as being unfit for use. A further 51 needed new capsules, and 26 required replacement cylinders, both of which are critical elements in a fully functioning lifejacket.

Fowey RNLI Lifeboat station operations manager, Chris Ogg says it is extremely important to have lifejackets or any personal floatation devices regularly checked and serviced.

"Your lifejacket may save your life one day, but only if you maintain it properly," he says. "If a lifejacket is faulty, you are basically wearing a dead weight around your neck. People brought along a variety of lifejackets to be checked and it was eye-opening to see the terrible condition of some of them. One was so badly damaged inside, the material disintegrated when it was unpacked. Quite a few had heavily corroded CO2 bottles, out-of-date parts and damaged areas of material, meaning that they would have failed to inflate in an emergency."

PARAMETRIC ROLLING RESPONSIBLE FOR MAERSK ESSEN LOSS OF CONTAINERS SAYS DMAIB REPORT

The Danish Maritime Accident Investigation Board (DMAIB) has published its report on Maersk Essen, the ship that lost approximately 250 containers on 16 January 2021 while the ship was en route from China to Los Angeles. The number of lost containers was later adjusted to 750.

Parametric rolling is the suspected cause of the loss of containers from Maersk Essen. Photo credit: DMAIB

Analysis

1 Loss of cargo: DMAIB has found that the cargo stowage and securing operations on Maersk Essen were open to uncertainties and variabilities which could influence both the forces acting on the container stacks and the holding capacity of the cargo securing equipment. By themselves, these uncertainties and variabilities did not have the potential to cause the container stack collapses seen on Maersk Essen.
2 Heavy rolling: The investigation of the heavy rolling on the day of the accident concluded that Maersk Essen most likely experienced parametric resonance, possibly in combination with pure loss of stability on a wave crest. This resulted in large roll angles building up during a six-minute period.
3 Weather routing: DMAIB has examined the tools for predicting risk of parametric resonance made available to the company's fleet. Common to them was that they were dependent on forecast data. Forecasts are encumbered by uncertainty and will vary depending on the weather suppliers' data sources and calculation models. The parametric risk calculators were found to be prone to this type of uncertainty, which can result in misleading indications of risk.

Conclusion

[1] Probable cause: The investigation determined that the heavy rolling was most likely a result of parametric resonance. The acceleration forces acting on the container stacks during the heavy rolling exposed the cargo securing equipment to stress loads which they were neither designed nor able to withstand. Maersk Essen's loading condition required the ship to avoid roll angles exceeding 19.18° in order to stay within the stress load limits defined in the ship's loading and stability computer. This limit was exceeded at the time of the container loss.
[2] Lessons learned: Detecting the risk of parametric resonance rolling based on forecast sea conditions can be problematic as they are encumbered by uncertainty. No matter how automatised and detailed the onboard tools for monitoring parametric resonance are, they are prone to the uncertainty of the forecasts which makes them unreliable as tools, unless a broad risk margin is applied.

Download the full report at **https://bit.ly/3JdjmeN**.

USCG SAFETY ALERT ISSUES ABOUT DANGEROUS GAS BUILD-UP IN FISH HOLDS

This story, alarmingly, is not the first of its kind to reach IIMS. A similar lifejacket clinic at Eastbourne a couple of years ago also revealed a high level of defective flotation devices, some with serious flaws. But is seems the public is not listening and learning.

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EXTRACTS FROM
ACCIDENT REPORTS

The operator and/or OEM's failed to replace the aft hook control cable after it was identified as damaged.

Despite the involvement of three agencies: the owner, the regulator and a consultant naval architect, the 2019 inclining experiment was never followed up.

The repeated removal and reinstallation of the burner assembly during ship's engineers' attempts to repair it without consulting the manual or the manufacturer may have damaged the mounting coupling and thereby led to its eventual failure.

Over 50 per cent needed a critical safety part replacing, Fowey RNLI says, meaning if they had been used in an emergency they may not have worked and could potentially have caused loss of life. Eleven lifejackets were condemned outright as being unfit for use. A further 51 needed new capsules, and 26 required replacement cylinders, both of which are critical elements in a fully functioning lifejacket.

Fowey RNLI Lifeboat station operations manager, Chris Ogg says it is extremely important to have lifejackets or any personal floatation devices regularly checked and serviced.

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AMSA LAUNCHES CAMPAIGN TO IMPROVE CONSTRUCTION BARGE SAFETY

Construction barge safety is the focus of a new campaign by AMSA. Photo credit: AMSA

AMSA has launched a new construction barge safety campaign focused on the importance of regularly reviewing risks as part of the safety management system to protect lives on these types of vessels.

All domestic commercial vessels are defined as workplaces in Work Health and Safety (WHS) laws. This includes construction barges which must meet the risk assessment requirements of state and territory WHS regulations, as well as the risk assessment requirements under the National Law administered by AMSA.

"These barges undertake different and high-risk activities daily so owners and operators must always assess changing safety risks," said Dr Michelle Grech, AMSAs Manager of Vessel Operations.

She added, "Regularly reviewing individual risks and reassessing vessel safety management systems to reflect the operation the barge is performing is vital to keeping vessels and people safe."

For this reason, a dedicated campaign website with a range of information and practical advice is available to support owners, operators and individual workers.

MAIB SAFETY DIGEST APRIL 2022 PUBLISHED

The MAIB Safety Digest April 2022 features 25 case studies and draws the attention of the marine community to some of the lessons arising from investigations into recent accidents and incidents. It contains information that has been determined up to the time of issue.

This information is published to inform the merchant and fishing industries, the recreational craft community and the public of the general circumstances of marine accidents and to draw out the lessons to be learned. The sole purpose of the MAIB Safety Digest April 2022 is to prevent similar accidents happening again.

In his introduction, Chief Inspector of Accidents, Andrew Moll, says, "I would like to start by thanking Bob Baker, Pete Dadds and Pip Hare for their introductions to the merchant, fishing and recreational sections of this MAIB Safety Digest April 2022. They each have a wealth of experience in their respective fields, and their introductions are very thought-provoking. If nothing else, please read their articles. That said, I hope you will read much more than that. There is a cautionary tale here for everyone, and when you have finished reading the digest please pass it on so others can benefit too."

Download the Safety Digest at **https://bit.ly/3KI57Wy**.

INTERIM INVESTIGATION REPORT RESULTED IN LOSS OF LIFE REVEALS BSU REPORT

The German Federal Bureau of Maritime Casualty Investigation published its interim investigation report about an accident with subsequent loss of life on board the Containership SEOUL EXPRESS, on 27 March 2021. On 27 March 2021, the container ship SEOUL EXPRESS was about 52 nm off the Mexican coast en route from Manzanillo, Mexico, to Long Beach, USA. The vessel was operating on a liner service between various ports in the Mediterranean, Central America and the west coast of North America.

Factors that contributed to the accident

In the course of the preliminary accident investigation (primarily evaluation of the files) several factors were identified that could have contributed to the accident and its consequences. These were then investigated more closely.

Sling construction for evacuation via the access hatch (simulated on 19/10/2021). Photo credit: BSU

They include:

- general dangers when working at height;
- implementation of the occupational health and safety on board;
- the general ship design framework (ladders in cargo holds with the risk of falling);
- the health condition and the fitness for sea service of the casualty;
- the emergency response management of the crew;
- the safety culture onboard and in the company as well as the implementation of ISM Code.

Download the full report at **https://bit.ly/3jgXrIR.**

EXTRACTS FROM
ACCIDENT REPORTS

The engineers identified a fault with the main engine during pre-departure testing, but they did not confirm it was rectified before departure.

NTSB investigators found that at the time of the sinking, the Emmy Rose likely did not meet existing stability criteria, making it more susceptible to capsizing.

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.

Safety Briefings

CONSORTIUM SET TO ASSESS AND REPORT ON CONTAINERSHIP FIRE SAFETY FOR EMSA

A consortium led by the Danish Institute of Fire and Security Technology (DBI) will deliver a Formal Safety Assessment study on containership fire safety to the European Maritime Safety Agency (EMSA). The project aims to identify cost-effective risk control options for cargo fires on board container vessels.

Considering the constant increase in containership sizes and the frequency of fire originating in containers, the study will quantitatively assess the fire risks on board such vessels and evaluate new containership fire safety measures by comparing the risk reductions and the associated costs.

The project has been awarded to a consortium led by the Danish Institute of Fire and Security Technology (DBI) supported by Research Institutes of Sweden AB (RISE), the University of Southern Denmark (SUD), the Odense Maritime Technology A/S (OMT) and the classification society Bureau Veritas.

CARGO CLAIMS FROM DAMAGE DUE TO WATER ORIGINATING FROM CARGO HOLD BILGE SYSTEMS

The American Club has warned operators to be vigilant in light of a number of recent claims arising from damage caused by water originating from cargo hold bilge systems.

Specifically, the American Club says:

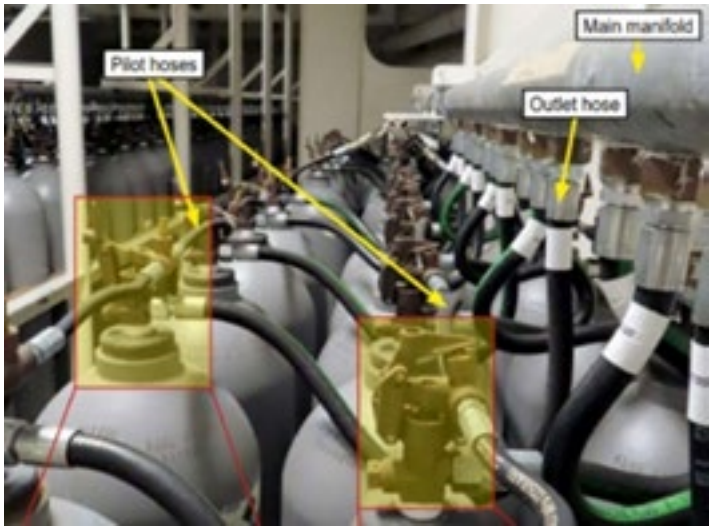
- Debris lodges in the non-return valves fitted in the hold bilge pumping systems, preventing them from operating as designed to ensure that water cannot flow back via the bilge line, into the hold bilge wells and thereafter into the cargo hold;
- Manually operated valves in the interconnected bilge, ballast and fire lines are left open following completion of operations, allowing water to enter the bilge line and into the bilge wells/cargo hold in the event of non-return valve failure.

Taking the above into consideration, vessel crews are urged to adopt the following preventative measures to ensure that cargo hold bilge systems are functioning properly so as to prevent such incidents.

Things to be aware of:

- A significant share of incidents has resulted from a lack of familiarity with the bilge system. The vessel's crew should be familiar with the unique characteristics of the vessel's bilge system. This includes understanding the schematic layout of the bilge system, mimic boards, remote actuators, any cross functionality with such systems as the ballast management system, emergency firefighting system, etc.
- Inspection and testing of cargo hold bilge system non-return valves should be included in routine pre-loading checks of the holds.
- Bilge system valves and pipework require to be periodically checked and maintained as part of the planned maintenance system.
- Rigorous procedures should be in place to prevent valves being left open when not in use.

Read the article in full at **https://bit.ly/3u5uvd0.**



MAIB ISSUES SAFETY WARNING AFTER DISCOVERY OF BLOCKED FIXED CO2 FIRE EXTINGUISHING SYSTEM PILOT HOSES

On 19 September 2021, a fire broke out in the auxiliary engine room on board the Finland registered roll-on/roll-off cargo ship Finnmaster while departing Hull. In an attempt to extinguish the fire, the ship's crew activated the machinery space's carbon dioxide (CO2) fire extinguishing system, but only half of the system's gas cylinders opened. The initial investigation identified that one of the CO2 system pilot hoses was blocked due to a manufacturing defect. Several coupling leaks were also found in the pilot lines.

Safety Issues

- The quality assurance processes of the pilot hose assembly supplier failed to identify that the hose couplings had not been fully bored through
- The onboard installation testing processes did not identify that some of the hose assemblies were blocked and that there were leaks in the CO2 system pilot lines
- Latent defects may exist in the CO2 fire-fighting systems on board ships supplied with potentially affected hose assemblies delivered from the same batch

Download the Safety Bulletin at **https://bit.ly/3LGBm2A**.

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SEPTEMBER 2022

MAIB reports on two fatal accidents on fishing vessels published

A few weeks ago, the UK Marine Accident Investigation Branch (MAIB) published two reports within 24 hours of each other. Both reports related to fishing vessels which had capsized leading to the loss of 5 lives. Both reports seem to bear a remarkable similarity about modifications made to the vessels which ultimately caused the accidents to occur. These cases affecting fishing vessels are certainly not the first by any means to hit the news headlines. This is yet another wake up call for the fishing industry and those involved in inspecting such vessels to heed.

Case 1

Capsize and sinking of whelk potter Nicola Faith with loss of 3 lives

Whelk potter Nicola Faith

On 27 January 2021, the whelk potter Nicola Faith capsized and sank 1.9 miles north of Rhos-on-Sea, North Wales with the loss of its three crew members. The vessel had been extensively modified during its life which had significantly reduced its margin of positive stability. On the day of the accident the Nicola Faith had been loaded with catch and retrieved strings of pots to the point of instability, which resulted in the capsize and subsequently sinking of the vessel. Nicola Faith had not been fitted with a mandatory emergency beacon to alert to the capsize, and it was not reported as overdue until 1000 the next day. Following its salvage by the MAIB, a thorough inspection of the vessel was carried out to determine possible modes of capsize and a full assessment of its stability was undertaken.

Safety issues

- Nicola Faith was operated in an unsafe manner and was loaded with a combination of catch and retrieved fishing gear to the point of instability
- a mandatory Emergency Position Indicating Radio Beacon (EPIRB) was not fitted to the vessel and the crew were not equipped with personal locator beacons
- Nicola Faith was found to have been extensively modified; these modifications had eroded its margin of positive stability
- Maritime and Coastguard Agency surveyors had noted some of the modifications, however, the guidance concerning modifications that would have triggered a stability assessment was not sufficiently clear
- although available on board, the crew did not routinely wear personal flotation devices

Recommendations

Recommendations have been made to the Maritime and Coastguard Agency to (2022/125) amend the Code of Practice for the Safety of Small Fishing Vessels of less than 15m Length Overall, to revise the wording and refer to a load limit rather than a catch limit, and to (2022/126) review and enhance the guidance to surveyors to clarify what level of modification should trigger further investigation into a vessel's stability.

A recommendation (2022/127) has also been made to Nicola Faith's registered owner, The Big Ship Limited, to ensure that a written agreement is in place to clearly identify the organisation or person responsible for the operation of any vessels it may own.

Download the full report at **https://bit.ly/3HMDaX8**.

The ill-fated Joanna C

Case 2
Fatal capsize and sinking of scallop dredger Joanna C

Early in the morning on 21 November 2020, the scallop dredger Joanna C capsized south of Newhaven, England; only one of the three crew survived. Joanna C's crew was hauling the gear when they noticed that the starboard dredge bar had become snagged on a line of whelk pots. The snag caused a heel to starboard from which the vessel could not recover, and it capsized rapidly.

The MAIB's investigation found that through-life modifications, culminating in extensive alterations in 2019, had reduced Joanna C's previously good stability to a state where it had very low reserves of positive stability and increased vulnerability to capsize. The detrimental effect of the modifications was unknown to the crew and regulator alike because, although a stability assessment had begun after the 2019 modifications, the analysis was never completed, and the vessel was free to continue operation.

During the capsize Joanna C's mate was thrown into the water and the skipper later managed to escape as the inverted vessel sank; however, the deckhand remained trapped inside. The vessel's liferaft did not inflate during the accident because the uninflated liferaft had insufficient buoyancy to initiate the inflation mechanism. The absence of a liferaft adversely affected the survivability of the crew in the sea after the vessel sank.

Safety issues

Reserves of stability are critical to allow fishing vessels to operate safely and ensure recovery back to upright from a heel induced by the environmental conditions or a snagging. Joanna C's very low margin of positive stability left the vessel extremely vulnerable to capsize.

Liferafts fitted for 'float-free' operation must have sufficient buoyancy in the uninflated state to activate the inflation mechanism. Although a buoyancy standard existed for larger SOLAS liferafts there was no corresponding requirement for smaller, non-SOLAS liferafts such as those fitted to fishing vessels.

Recommendations

A safety recommendation (2022/124) has been made to the Maritime and Coastguard Agency to ensure that stability requirements for small fishing vessels are applied as intended and that, where stability checks are required, fishing operations should be suspended until a vessel has been satisfactorily assessed.

During the investigation a safety recommendation (2021/116) was made to the British Standards Institution to propose the introduction of a minimum buoyancy requirement for liferafts certified by the International Organization for Standardization. The International Organization for Standardization's technical committee subsequently agreed to include a buoyancy requirement in its revised liferaft standard.

Download the full report at **https://bit.ly/3ygDFWc**.

EXTRACTS FROM
ACCIDENT REPORTS

Hot-work precautions, such as crew supervision and the readiness of firefighting equipment, were not fully implemented.

The investigation has also identified several areas where the risks associated with the use of lithium-ion batteries were not sufficiently identified or addressed in the design.

The Minister for Transport should consider making regulations to govern the safe use of recreational craft being used for commercial purposes, which should include mandatory fire detection on vessels used for charter purposes.

The crew unsuccessfully attempted to extinguish the fire and abandoned along with two passengers using the vessel's tender boat. They were then picked by two U.S. Coast Guard boats without injury. The fire, however, resulted in the total loss of the $3.9 million yacht which sank a day later. An unknown quantity of diesel fuel oil was released, causing a small sheen.

The vessel was chartered for hire four to six times a year, including at the time of the casualty. Under the Cayman Islands Shipping Registry, a vessel certified for commercial use of La Dolce Vita size would have been required to meet the UK Large Commercial Yacht Code (LY2) requirements for commercial use yachts. But investigators found the La Dolce Vita did not meet LY2 requirements, including having a way to remotely stop the engine room's intake and exhaust fans and the capability to close off natural ventilation to the space. Contributing to the severity of the fire and total loss of the vessel was the inability to secure ventilation to the engine room, which reduced the effectiveness of the yacht's fire extinguishing system and allowed the fire to spread beyond the engine room.

Read the full report at **https://bit.ly/3RwSAU7**.

CHECK THAT ALL EQUIPMENT PARTS ARE MOVABLE AND OPERATIONAL AFTER MAINTENANCE PROCESS

International Marine Contractors Association (IMCA) has published details of two incidents in which something went wrong owing to failures in the maintenance process. There were no reported injuries in either incident.

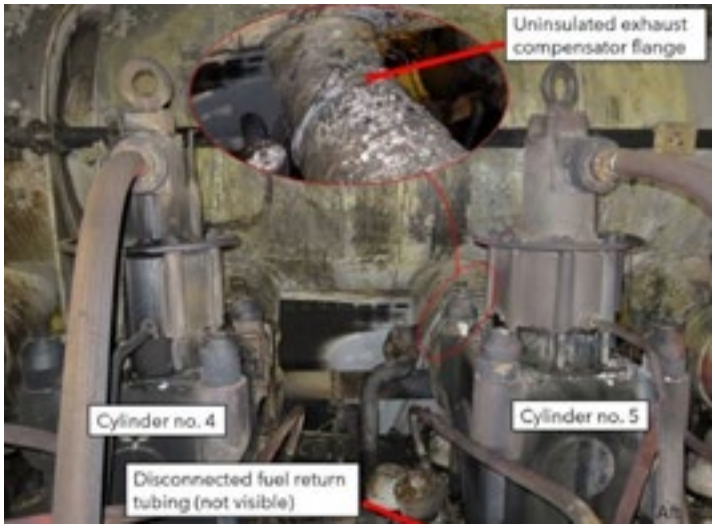
The first incident relates to the lowering of a lifeboat when a small shackle broke. The shackle held the upper sheave guiding the brake release wire, resulting in the sheave falling down on top of the lower sheave. This caused the brake handle not to fall into brake position with the consequence that the lifeboat did not stop lowering but kept on going down.

In the second incident, the main hoist hook block overshot the highest position alarm and ran into the sheaves from the main runner under the jib. The jib was lifted by the force of the main runner and the crane stopped automatically when the slack wire alarm of the topping wire was activated.

Probable cause
Investigation showed that one of the runner sheaves underneath the jib was bent slightly and unable to move freely. During the inspection of the high hook alarm, it was discovered that the flat bar in front of the sensor was not moving. It was stuck in place because of dry paint from maintenance that morning. The crane operator did not pay sufficient attention when working near the limits of the crane, not looking up to the hook.

Lessons learned
In light of these incidents, IMCA has said that the following actions have been in order to ensure that similar situation will not happen in the future:

- The damaged sheave was reshaped. Thorough examination of the sheave surface and inspection by means of dye penetration testing showed that there were no cracks;
- Ensure close monitoring the crane movements after each order given and when working near any of the crane limits;
- Test alarms after maintenance on the crane;
- After maintenance process/painting check that all equipment parts are still movable and fully operational.



CREW INSUFFICIENTLY SWAGING COMPRESSION FITTING FERRULE LED TO CONTAINERSHIP FIRE IS INVESTIGATION FINDING

The National Transportation Safety Board (NTSB) has published its report on the engine room fire aboard the containership President Eisenhower, that took place on April 28, 2021, off California.

The engine room and machinery on board the President Eisenhower were automated, controlled, and monitored such that the machinery spaces could be unattended. The ship's engineers typically worked in and monitored the machinery spaces during the day, and the engine room and machinery spaces were unattended at night. At 0053, the second engineer and first engineer departed the ECR for the accommodation spaces above. The engine room and machinery spaces were put into an "unattended" status with alarms configured to sound on the bridge, in common areas, and in the second engineer's cabin (because the second engineer was the designated duty engineer on watch). Additionally, the President Eisenhower had a closed-circuit television (CCTV) system, with the majority of the system's video cameras located in the machinery spaces. The crew used desktop computer stations to view the spaces but did not continually monitor them.

Additional detectors were triggered within the engine room, and the vessel's general alarm automatically activated. Using the CCTV monitor on the bridge, the captain and third mate confirmed that there was an engine room fire. En route to his emergency muster station in the portside safety storeroom, AB1 verbally alerted crewmembers that were off duty in their cabins of the fire in the engine room.

Lessons Learned...

1 Rapid Oil Leak Detection

Rapid oil leak-detection systems are a valuable tool that can be used to prevent fire in machinery spaces. Video analytic technology is designed to use standard CCTV video to detect fuel mist and spray in real time and alert the crew before any ignition and fire. This technology is supported by class societies as an acceptable method for identifying leaks and can be integrated with existing CCTV systems. Had this technology been in use aboard the President Eisenhower, the spraying fuel oil may have been detected well before the fire developed.

2 Containing Engine Room Fires

The crew of the President Eisenhower effectively contained the spread of a main engine room fire by removing fuel and oxygen sources, cooling boundaries, and communicating effectively. These efforts show the importance of realistic scenario-based training, including engine room emergencies, which involve shutting down machinery, fuel oil, lube oil, and ventilation systems, as well as boundary monitoring, to quickly contain and suppress engine room fires, which can spread to other spaces and/or cause a loss of propulsion and electrical power.

Download the full report at **https://bit.ly/3ySFmd2**.

LUXURY YACHT FIRE MOST LIKELY CAUSED BY ELECTRICAL FAULT SAYS NTSB REPORT

The fire that destroyed a luxury yacht near Key West in March 2021 most likely started from an electric source within the sound enclosure for the vessel's starboard generators, the National Transportation Safety Board (NTSB) report has determined. However, due to the extent of the fire damage, investigators were unable to conclusively determine the source of the fire.

EXTRACTS FROM
ACCIDENT REPORTS

There were no records of any pull-tests or other testing conducted on these lifting points since their installation in the mid 1980s.

In locations where flammable vapours may be present, precautions were not taken to prevent ignition by eliminating or controlling sources of ignition.

Fluid quality was contaminated by the build-up of calcium soap in the well control equipment systems, which caused debris build-up around the valve seal plates.

Safety Briefings

SERIOUS VIOLATIONS LED TO BOATYARD FIRE THAT DESTROYED SUPERYACHT SAYS REPORT

The company operating Hinckley Yacht Services (Portsmouth, US) has been fined by the Occupational Safety and Health Administration (OSHA) after a massive fire in December that destroyed a superyacht and a second boat on the property. The initial fines totalled more than $56,000, but these have since been reduced to around $31,000.

OSHA says employees were exposed to fire hazards while working in an enclosed work area. That enclosed area was under the hull of a boat surrounded by hay bales stacked three-high, and the employees had not been provided with effective information and training on the hazardous chemicals they were using (flammable liquids, which ultimately ignited).

Seventy firefighters fought the blaze after workers, making repairs on the hull of a superyacht, accidentally started the fire. Both vessels were total losses and damages were also incurred to some surrounding equipment, including a 200-ton lift, reports the Newport Daily News.

OSHA lists serious violations, including:
- The employer did not review the emergency action plan with each employee when the employee was assigned initially to a job.
- In locations where flammable vapours may be present, precautions were not taken to prevent ignition by eliminating or controlling sources of ignition.
- Ground areas around buildings and unit operating areas were not kept free of weeds, trash, and/or other unnecessary combustible materials.
- The employer did not provide a medical evaluation to determine the employee's ability to use a respirator, nor were employee(s) using tight-fitting facepiece respirators fit-tested prior to initial use of the respirator.
- Employees were not provided effective information and training on hazardous chemicals in their work area.

VISUALLY INSPECTING LIFEBOAT PRIOR TO TESTING CRUCIAL

The US Coast Guard (USCG) has addressed the importance of visually inspecting lifeboat and davit installations prior to testing with crewmembers onboard, and ensuring crew familiarity with company policy related to lifesaving equipment testing. As USCG said, the remote control wire may be overlooked, yet weaknesses within the linkages or poor spooling of the wire itself can lead to catastrophic failures in the lifeboat launching systems.

In fact, during a recent U.S. deep draft container ship inspection, a vessel's crew was lowering the lifeboat when the remote control wire arrangement caused two separate failures:

- The first occurred when the remote control wire parted as the lifeboat was being lowered to the waterline with crew on board. Causal factors included poor winch spooling potentially hidden under the outer spools, which led to a wire kink and winding on itself, creating enough force to part the wire.

- The second occurred a day later after the replacement remote control wire was hand spooled from extra wire found on board. While testing with crew on board using the remote control wire to lift the brake, an unexpected payout of wire led to the winch brake prematurely engaging, which made the lifeboat stop lowering and swing erratically above the embarkation deck. Seconds later, the movement caused the wire to regain tension, which lifted the winch brake arm and caused the lifeboat to lower again. While lowering in a swinging motion, the skeg of the lifeboat caught on the knife-edge of the ship's deck, causing the lifeboat to list more than 90 degrees. Without the quick action of a crewmember who activated the winch brake lever from the deck, the lifeboat could have inverted further and led to catastrophic outcomes.

USCG strongly recommends that ship's crew are visually inspecting lifeboat launching systems and test lowering thoroughly prior to operation with crew on board, paying special attention to the following inspection points:

- Verify the proper spooling of the remote control wire, expand inspection as necessary.
- Verify the proper position of the remote control wire weight. If the weight is very close to the top of the lifeboat, this may indicate the remote control wire is too long.
- Verify material condition of the shackle that connects the pull cable to the remote control wire within the lifeboat. These steel shackles can corrode in the elements and maybe overlooked during weekly/monthly/annual inspections.

KEEL FAILURE RESULTS IN CAPSIZE

The crew of the first Farr X2 have been rescued after the boat lost its keel on an overnight offshore qualifier. Nexba Racing, a new 30ft grand prix racer aimed at the short-handed market, was sailing in a 100nm qualifier off the coast of New South Wales, Australia in a light to moderate breeze and 1-2m seas when the keel attachment failed resulting in the boat capsizing. The two female crew were rescued after spending 15 hours drifting. The 9.2-metre boat is the latest project from Farr Yacht Design. She was built in Singapore by XSP and launched in May.

"We take the safety of all the crews who sail on boats of our design very seriously and our design team is working with the builders, component suppliers and the composite structural engineers of to identify the root cause and to implement any necessary design, material or build process changes required to insure this cannot happen again," said Farr in a statement.

And the boatbuilder said further information will be provided after a review of all available information has been carried out. At least eight Farr X2s have been sold.

EXTRACTS FROM
ACCIDENT REPORTS

The Focused Inspection Campaign results showed that a high number of ships failed to comply with planned maintenance.

The RIB driver did not have full awareness of other water users before commencing his turn to starboard. With little prior experience of helming a RIB, he did not have the necessary level of skill and knowledge to carry out manoeuvres at high speed within a group of craft.

The slip-joint weight specified in the manifest, and which formed the basis for planning the lift, did not accord with its actual weight.

Safety Briefings

WEST P&I HAS NOTICED AN INCREASE IN FIRE INCIDENTS TO CONTAINERS CONTAINING CHARCOAL AND CARBON

The West P&I Club has noted a number of recent container fire incidents related to containers which were declared as miscellaneous items but actually contained charcoal/carbon. This is a commodity liable to spontaneous combustion. These containers were below deck and when fires broke out there was considerable damage caused to the vessel and other cargo by the fire and the water used to extinguish the fire.

The vessels' CO2 system assisted in putting the fires out. Fire experts have also advised that they are aware of numerous other fires in containers of charcoal tablets in recent months. The fires have been caused by containers said to contain "tablets for water pipe" and "hookah accessories", which are not listed within the IMDG Code, but are actually a form of charcoal/carbon, which is listed in the International Maritime Dangerous Goods (IMDG) Code as hazardous cargo.

Charcoal is also used in tablet form for water-pipes used for smoking, including Nargila, Shisha or Hookah pipes. This type of charcoal may be manufactured with some flammable solid inside, resulting in lower ignition temperature.

If charcoal/carbon is declared as non-hazardous, then a certificate must be provided by the shipper advising that correct sampling has been performed and it has passed a self-heating test from a laboratory approved by the Competent Authority said the West P&I Club, adding that in the cases it has experienced, the cargo has no declaration other than tablets for water pipe, and/or hookah accessories.

There is no indication on the bills of lading and the cargo manifest that the cargo is charcoal/carbon or whether is a hazardous cargo. This may constitute a misdeclaration and attract liability to the shippers and/or charterers of the vessel when liner bills of lading are issued.

Charcoal/carbon is a black residue, consisting of carbon and any remaining ash obtained by removing water and other volatile constituents from animal and vegetation substances. It is a self-heating substance – that is to say, a product which, in contact with air and without an energy supply, is liable to self-heating. Such a self-heating reaction may result in extensive heat development and fire.

SAFE FITTING AND REMOVING OF TEMPORARY LASHING POINTS RECOMMENDATIONS

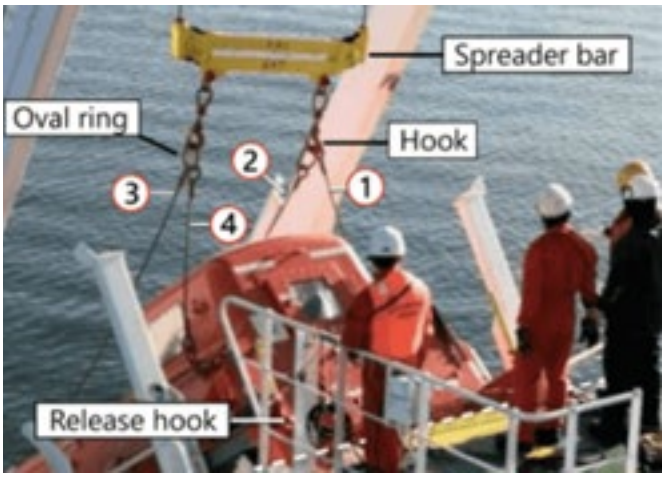
Mark Dunbar, Surveys Manager at West P&I Club, has provided recommendations on fitting and removal of temporary lashing points after the club noticed receiving a number of high value claims arising from such operations.

According to Mr. Dunbar, it is sometimes required in the dry cargo trades for fixed lashing points to be temporarily fitted for securing of cargo and then removed at the end of the voyage.

He said, "From cases we have reviewed, toolbox talks had been conducted and hot work permits issued, yet the Club has still experienced a number of high value claims arising from these operations."

More specifically, in some recent cases, hot slag/sparks have dropped into cargo holds and set fire to packaging or tarpaulins covering the cargo below. In addition to the direct fire damage, further damage to cargo has occurred due to water damage from subsequent firefighting operations."

"In another instance, where there was a mixed stow in one hold, bulk cargo in an adjacent hold decomposed due to heat transfer where temporary lashing points were being fitted to a transverse bulkhead for securing of general cargo. What is more, in some cases, no fire watch had been arranged due to a lack of awareness that heat/sparks/slag can propagate through steel plating separating the point of work and cargo hold."



ANOTHER SERIOUS LIFEBOAT ACCIDENT ILLUSTRATES CONTINUED RISK IN DRILLS

Canada's Transportation Safety Board (TSB) has released a report on yet another serious lifeboat-drill accident, illustrating the continuing hazards of this routine SOLAS safety exercise. A failure of a lifeboat launch system on a merchant vessel can result in a fall from height, ending in injuries or fatalities.

On December 1, 2020, the crew of the bulk carrier Blue Bosporus were carrying out a free-fall lifeboat drill at anchor in English Bay, British Columbia. After the four wire rope slings for lowering away the free-fall lifeboat were attached, the third mate and an AB went aboard the boat to conduct a test launch. The third mate activated the release hook, and the lifeboat slid forward about 25 centimetres. At that point, three slings connecting the boat to the davit failed, along with the bracket connecting to the fourth sling. The boat fell 45 feet into the water.

Both crewmembers aboard were seriously injured – one with leg injuries and one with an injured hand. The boat's hull sustained damage where it struck the water. Most (but not all) of the broken sling components were retrieved for analysis.

A post-accident investigation found that the crimp sleeves on the slings had weakened over time due to stress corrosion cracking – a common problem for stainless steel. In addition, one of the slings was shorter than the others, meaning that it took the full load of the boat when the hook was initially released. This sling failed first, followed by the others in sequence.

The vessel's maintenance schedule did not specifically cover inspecting the condition of the slings, according to TSB. After the casualty, the shipowner installed new load-tested sling assemblies and brackets, and it sent a safety circular to update its requirements for lifeboat inspections and drills.

EXTRACTS FROM
ACCIDENT REPORTS

Contributing to the extent of the fire was the master's decision to delay the release of the carbon dioxide fixed fire-extinguishing system.

Lifejackets remained unused by the group throughout the hire period, indicative of their lack of awareness of the risks associated with falling overboard.

The fire on board most likely arose as a result of seawater entering the ventilation system and coming into contact with the high-voltage components of the battery system, causing shortcircuiting, electric arcs and fire.

Safety Briefings

MARSHALL ISLANDS INVESTIGATION INTO CARGO FUMIGATION INCIDENTS LAUNCHED

The Republic of the Marshall Islands Maritime Administrator is conducting marine safety investigations following two different incidents involving in transit cargo fumigation.

One of these incidents resulted in the death of a crewmember soon after removing fumigant from the cargo holds prior to arrival at the discharge port. The other resulted in the hospitalization of a stevedore after being exposed to fumigant that had been applied by the crew prior to departure from the loading port.

The Administrator's investigations of these two cargo fumigation incidents have identified that crewmembers on board both ships were required to handle fumigant because of COVID-19 related restrictions imposed by the port State's public health authorities.

These restrictions prohibited qualified shore personnel from going aboard the ship to either remove the fumigant residues from the cargo holds following the vessel's arrival or to apply the fumigant after the cargo had been loaded.

Fumigation of dry bulk cargo requires introducing a toxic gas, or a material that reacts with moisture in the air to produce a toxic gas, into a ship's cargo holds. Exposure to fumigant gases can lead to severe injury or death says Marshall Islands, adding that "it is essential that all appropriate precautions be taken to ensure the safety of the ship's crew and any other persons (e.g., cargo surveyors, customs agents, stevedores, etc.) who might be on board during all stages of cargo fumigation."

In recent years the collection of 'What a marine surveyor needs to know about' handy guides has grown to 26 in total. Covering a wide range of marine surveying topics, the affordable guides have been written by experts in their field and are available in both paperback and eBook formats. You can browse the collection at https://bit.ly/2KlN5WM.

BULK CARRIER CASUALTY REPORT 2012-2021 PUBLISHED BY INTERCARGO

INTERCARGO has published its Bulk Carrier Casualty Report 2012-2021. It reports that 27 bulk carriers of over 10,000 dwt were declared as total losses for the years 2012-2021.

According to INTERCARGO, bulkers losses took place as follows:

10,000-34,999 dwt: Six bulk carriers were lost, representing 22.2% of the total.

35,000 – 49,000 dwt: Five bulk carriers were lost, representing 16.3% of the total, with one loss related to suspected cargo liquefaction.

50,000- 59,000 dwt: Seven vessels were lost, representing 25.9% of the total, with the loss of 55 lives, accounting to 59.8%. Four of the casualties, were related to suspected cargo liquefaction.

The lowest number of casualties was in the 60,000 – 79,000 dwt range, representing 7.4% of the total.

80,000+ dwt: Losses of one Newcastlemax and one VLOC brought attention back to larger bulk carrier safety. The seven losses, or 25.9% of the total 27 casualties reported cost 22 lives, or 23.9% of the total 90 lives lost during the period.

Read the full report at **https://bit.ly/3InJ8xQ**.

KEY TIPS FOR THE SAFE CARRIAGE OF ALTERNATIVE FUEL VEHICLES IN RO-RO SPACES PUBLISHED BY EMSA

The main reasons behind the topic of alternative fuel vehicles becoming a serious safety concern are the enormous growth of the alternative fuel vehicles fleet, the potential fire risks of these vehicles and a high uncertainty on the associated fire characteristics, EMSA notes and issued in response a guide providing recommendations for the safe carriage of alternative fuel vehicles onboard ships.

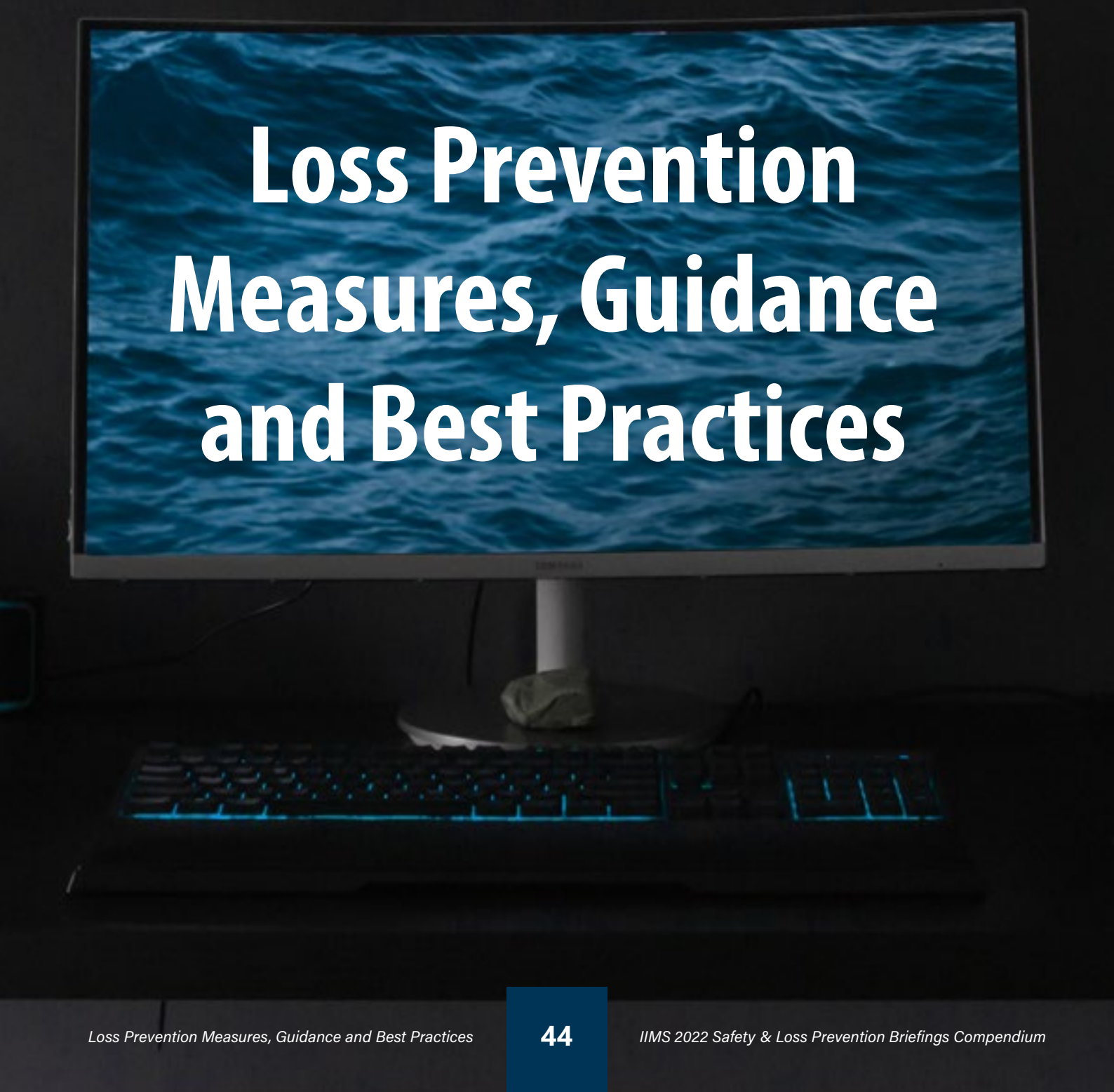
In the guide, EMSA highlights that risk assessment should be conducted for each ship to ensure that risks arising from the carriage of the AFVs that might affect persons onboard, the environment, the safety of the ship are addressed.

These risks should be managed within the framework of existing requirements in the ISM code. Consideration should be given to the hazards arising from transporting alternative fuel vehicles and all related operations should be risk evaluated. The result of the risk assessment should be a ship specific procedure to be carried onboard for the prevention and mitigation of fire incidents involving alternative fuel vehicles.

Alternative fuel vehicles should only be allowed onboard if they comply with the provisions of the IMDG Code. Particular attention should be paid to the following: if there is suspicion that the battery of EVs is damaged or their battery is defective, they should only be allowed if their battery is removed; are free from any leakages of fuel/gases.

Read the guidance in full at **https://bit.ly/3nPPRqU**.

The following pages are devoted to a series of loss prevention bulletins, advice and guidance issued between January and October 2022 that have been published on the IIMS web site. Much of the content has been originated and disseminated by the P&I Clubs and maritime regulators relating to activities they see going wrong and case studies. There are links to the web site allowing you to read the detailed articles. Or scan the QR codes and access the articles and reports instantly on your device.



Loss Prevention Measures, Guidance and Best Practices

Carriage of bagged rice: An overview for the maritime sector

Posted on the IIMS website on 4 January 2022

The carriage of bagged rice cargo is a potentially hazardous undertaking, with claims potentially running to millions of dollars when problems arise, says the Britannia P&I Club. The major issue with cargoes of bagged rice is the formation of mould or caking which can often be attributed to condensation due to inadequate ventilation, water ingress, moisture migration and improper dunnaging.

Read the full article on the IIMS website at **https://bit.ly/3fsOY3D**. Or scan the QR code.

New guidance published to help reduce pilot transfer fatalities

Posted on the IIMS website on 14 January 2022

The International Chamber of Shipping (ICS) along with the International Maritime Pilots' Association (IMPA) published the guide "Shipping Industry Guidance on Pilot Transfer Arrangements", updating maritime pilot transfer safety procedures amid industry concerns about poorly rigged ladders causing severe injuries or fatalities.

Seafarers should always check the condition of the ladder before it is rigged and ensure it is secured to the ship. While this is done, seafarers should always take care of their own safety, wearing all appropriate PPE. If seafarers are uncertain about any of the requirements, they should always ask their supervising officer for advice.

Read the full article and download the guidance on the IIMS website at **https://bit.ly/342IgP6**. Or scan the QR code.

Maritime and Coastguard Agency

MCA releases guidance on Safety Bulletin 24 – Non-SOLAS lifejacket servicing requirements

Posted on the IIMS website on 21 January 2022

The Maritime and Coastguard Agency (MCA) has published guidance on safety bulletin 24 – Non-SOLAS lifejacket servicing requirements. The MCA has published this guidance based on a recent survey of a fishing vessel which highlighted that the vessel's complement of inflatable, non-SOLAS lifejackets had not been serviced in accordance with the requirements of MGN 553: Inflatable Non-SOLAS Liferafts and Life-saving Appliances. The lifejackets had undergone servicing with a service provider that did not hold manufacturer's approval for that particular make and model.

Read the full article on the IIMS website at **https://bit.ly/3xOSjTj**. Or scan the QR code.

The importance of verifying wire rope terminations

Posted on the IIMS website on 21 January 2022

Wire rope and its associated cable assemblies are an essential part of the marine industry in a variety of load-handling applications. In many instances, maintenance and replacement of these cables involves multiple layers of fabrication and service providers who rely on quality management processes to ensure the correct product is supplied to the end-user.

On January 4, 2021, a Fast Rescue Craft (FRC), while being manually winched to its stowed position onboard a floating offshore installation in the Gulf of Mexico, fell approximately 135 feet into the water when its wire rope end termination failed.

Read the full article on the IIMS website at **https://bit.ly/35ilZO6**. Or scan the QR code.

Corrosion of tank containers' inner surface now the main cause of claims says TT Club

Posted on the IIMS website on 31 January 2022

TT Club's analysis of 2020 claims points to an increase in impact related incidents, with corrosion of tank containers' inner surface and contamination caused by cargoes previously carried as significant other causes of loss.

The analysis makes clear that the effects of increased volumes of tank containers used to trade chemicals and other liquids on the primary east-west trades have altered, to a degree, the risk profile of damage to such units. While in previous years there has been a consistent dominance of contamination as the major source of losses for tank container operators, the current figures show impact incidents as the foremost causation.

Read the full article on the IIMS website at **https://bit.ly/3GSPL9c**. Or scan the QR code.

Australian operators with fixed gas LPG systems must be aware of appliances listed on the installation compliance plate

Posted on the IIMS website on 2 February 2022

The Australian Maritime Safety Authority (AMSA) has released details of an investigation into an incident where the owner and their son were seriously injured in an explosion in the galley of their houseboat due to the stove ignitor igniting a gas leak.

On 30 June 2021, a class 4E domestic commercial vessel houseboat used for recreational purposes was at anchor in the backchannel of a Northern NSW river. The owner and their son were onboard and the owner was preparing dinner in the galley at the starboard aft end of the main cabin. The owner attempted to light a gas-powered stove by a piezo ignition switch when a blast explosion took place causing catastrophic damage to the vessel structure and fittings.

Read the full article on the IIMS website at **https://bit.ly/3HUgp2V**. Or scan the QR code.

Recreational Sectoral Group 2022 Guidelines to aid compliance for recreational craft published

Posted on the IIMS website on 9 February 2022

The Recreational Sectoral Group (RSG) has published the new 2022 Guidelines for the general application of the conformity assessment procedures by Notified Bodies and Manufacturers. The aim is to prepare and assist with the conformity assessment procedures undertaken by Notified Bodies for recreational craft, personal watercraft, their components and their engines, in accordance with the Recreational Craft Directive (RCD) 2013/53/EU.

Read the full article and download the guidelines on the IIMS website at **https://bit.ly/3JhWmvE**. Or scan the QR code.

"To be successful at sea we must keep things simple." –R.D. (Pete) Culler

How to properly stow and secure cargo containers guidance issued by AMSA

Posted on the IIMS website on 1 March 2022

AMSA has published stow and secure cargo containers guidance. AMSA aims to remind operators of the importance of stowing and securing cargo containers, and the potential danger to container ships navigating near intense low-pressure systems that occur off the east coast of Australia.

East Coast Lows are intense low-pressure weather systems that occur off the east coast of Australia. These systems are also referred to as complex lows or Tasman lows. Strong southerly winds, when combined with an easterly swell, can create extreme wave conditions where container ships are at risk of losing cargo overboard. In such incidents, swell size and interval may lead to excessive or even parametric rolling resulting in extreme acceleration forces on container stacks.

Read the full article on the IIMS website at **https://bit.ly/35wuO7c**. Or scan the QR code.

MCA publishes new guidance on enclosed space entry

Posted on the IIMS website on 2 March 2022

Seafarers will be better protected as new UK rules come into force to tighten up safety for those involved in enclosed space entry onboard vessels. The updated legislation goes further than that currently required under international maritime law and is part of the ongoing commitment by the UK to seafarer welfare.

Enclosed spaces include chain lockers, cargo holds, duct keels and water tanks – or any area that has been left closed for any length of time without ventilation. Six people have died over a ten-year period from 2009 to 2019 in UK ports while working in such spaces, which has led to this legislation being introduced.

Read the full article on the IIMS website at https://bit.ly/3sYhXUo. Or scan the QR code.

Risk alert for container cargo operations issued by Steamship Mutual

Posted on the IIMS website on 4 March 2022

The Steamship Mutual has issued a Risk Alert focusing on container cargo operations to highlight that training and reinforcement of safe work practices is of paramount importance not only to ensure an individual's personal safety but also to ensure that the work area remains safe for others.

The Club notes that incidents involving serious injuries and fatalities during container cargo operations on vessels are not uncommon and refers to contributory factors that can led to an incident and lessons learned from previous cases.

Read the full article on the IIMS website at **https://bit.ly/3qm3EXY**. Or scan the QR code.

"Until you have the courage to lose sight of the shore, you will not know the terror of being forever lost at sea." – Charles Cook

Photo credit: IMO

Ban of cybutryne in anti-fouling coating systems effective from 1 January 2023

Posted on the IIMS website on 8 March 2022

The International Convention on the Control of Harmful Anti-Fouling Systems on Ships (AFS Convention) currently prohibits the use of harmful Organotins in anti-fouling paints used on ships. The IMO has published amendments to the AFS Convention, which come into force on 1 January 2023.

These amendments introduce new requirements that ban the future installation of anti-fouling systems which contain a toxic substance called cybutryne. The amendments also include requirements for ships that already have installed an anti-fouling system containing cybutryne.

Read the full article on the IIMS website at **https://bit.ly/3paAZnG**. Or scan the QR code.

Cargo claims from damage due to water originating from cargo hold bilge systems

Posted on the IIMS website on 9 March 2022

The American Club has warned operators to be vigilant in light of a number of recent claims arising from damage caused by water originating from cargo hold bilge systems. Specifically, the American Club says:

– Debris lodges in the non-return valves fitted in the hold bilge pumping systems, preventing them from operating as designed to ensure that water cannot flow back via the bilge line, into the hold bilge wells and thereafter into the cargo hold;

– Manually operated valves in the interconnected bilge, ballast and fire lines are left open following completion of operations, allowing water to enter the bilge line and into the bilge wells/cargo hold in the event of non-return valve failure.

Read the full article on the IIMS website at **https://bit.ly/3u5uvd0**. Or scan the QR code.

Consortium set to assess and report on containership fire safety for EMSA

Posted on the IIMS website on 9 March 2022

A consortium led by the Danish Institute of Fire and Security Technology (DBI) will deliver a Formal Safety Assessment study on containership fire safety to the European Maritime Safety Agency (EMSA). The project aims to identify cost-effective risk control options for cargo fires on board container vessels.

Considering the constant increase in containership sizes and the frequency of fire originating in containers, the study will quantitatively assess the fire risks on board such vessels and evaluate new containership fire safety measures by comparing the risk reductions and the associated costs.

Read the full article on the IIMS website at **https://bit.ly/3zOiuKD**. Or scan the QR code.

Significant number of ships do not comply with basic navigation safety requirements is finding from the AMSA FIC

Posted on the IIMS website on 11 March 2022

AMSA conducted a Safety of Navigation Focused Inspection Campaign (FIC) over the period 1 August to the 8 September 2021 and, extremely concerning, they found that a significant number of ships failed to comply to basic navigation safety requirements.

The campaign focused specifically on:

- The level of compliance with the safety of navigation requirements of International Conventions;
- The familiarity of the master and officers with their processes for ensuring safety of navigation.

Read the full article on the IIMS website at **https://bit.ly/3r3ePFw**. Or scan the QR code.

Photo credit: AMSA

AMSA launches campaign to improve construction barge safety

Posted on the IIMS website on 11 March 2022

AMSA has launched a new construction barge safety campaign focused on the importance of regularly reviewing risks as part of the safety management system to protect lives on these types of vessels.

All domestic commercial vessels are defined as workplaces in Work Health and Safety (WHS) laws. This includes construction barges which must meet the risk assessment requirements of state and territory WHS regulations, as well as the risk assessment requirements under the National Law administered by AMSA.

"These barges undertake different and high-risk activities daily so owners and operators must always assess changing safety risks," said Dr Michelle Grech, AMSAs Manager of Vessel Operations.

Read the full article on the IIMS website at **https://bit.ly/3AaNbuW**. Or scan the QR code.

IMO agrees to ban perfluoro-octane sulfonic acid from firefighting systems on board ships

Posted on the IIMS website on 11 March 2022

The IMO's Sub-Committee on Ship Systems and Equipment (SSE) has finalized prohibition of perfluoro-octane sulfonic acid from fire-fighting systems on board ships.

This prohibition will protect the crew against exposure to dangerous substances that are used in fire-fighting systems and will minimize the negative consequences on the environment.

Read the full article on the IIMS website at **https://bit.ly/36fZ4no**. Or scan the QR code.

"The chance for mistakes is about equal to the number of crew squared." – Ted Turner

Photo: RNLI

RNLI Fowey finds over 50% of flotation devices faulty or condemned at a recent lifejacket clinic

Posted on the IIMS website on 21 March 2022

This story, alarmingly, is not the first of its kind to reach IIMS. A similar lifejacket clinic at Eastbourne a couple of years ago also revealed a high level of defective flotation devices, some with serious flaws. But is seems the public is not listening and learning.

A recent lifejacket clinic organised by Fowey RNLI found an astonishing 50% were faulty or condemned. The lifejacket clinic invited a team from Ocean Safety Ltd in Plymouth to carry out vital safety checks on a total of 169 lifejackets.

Read the full article on the IIMS website at **https://bit.ly/3uhR8dc**. Or scan the QR code.

National Cargo Bureau to launch a remote container inspection service

Posted on the IIMS website on 28 March 2022

National Cargo Bureau, a not-for-profit container inspection company, has launched a remote container inspection service based on the Hazcheck Inspections web-based container inspections database and access portal developed with their software division, Exis Technologies.

The new service from the National Cargo Bureau uses mobile devices to connect customers with their team of surveyors, so they can review and inspect container transport units remotely. The data and media files that the customer captures remotely via the device are automatically uploaded to the mobile platform.

The recorded information and media files can be analyzed by the surveyors to determine if the container transport unit is in compliance with applicable regulations and acceptable for ocean transport.

Read the full article on the IIMS website at **https://bit.ly/3JIS8yh**. Or scan the QR code.

USCG safety alert issues about dangerous gas build-up in fish holds

Posted on the IIMS website on 4 April 2022

Following an incident, the US Coast Guard (USCG) had released a Safety Alert which addresses the importance of verifying atmospheric conditions in fish holds on commercial fishing vessels, that can lead to a dangerous build-up of gases.

Four crew members onboard a commercial fishing vessel noticed an unusual odor coming from the fish hold while conducting shrimping operations. While under the assumption that the odor was due to a leaking refrigerant line, the crew hauled in their nets and began transiting back to port to have their system inspected by a service technician.

Read the full article on the IIMS website at **https://bit.ly/3NOKeFu**. Or scan the QR code.

Photo credit: U.S. Coast Guard

US House of Representatives passes new safety regulations for DUKW boats

Posted on the IIMS website on 4 April 2022

The U.S. House of Representatives has passed legislation requiring new safety measures for DUKW boats, the amphibious landing craft commonly repurposed for tourist trips.

DUKW boats, also known as duck boats, were designed and built in WWII for military use. A number were later converted for commercial service, carrying tourists on brief land and water itineraries. DUKW boats have been implicated in several fatal accidents, including two tragic sinkings.

Read the full article on the IIMS website at **https://bit.ly/3jfKeQC**. Or scan the QR code.

Albert Weatherill,
MD of Van Ameyde McAusland

Marine surveyors Van Ameyde McAuslands warn seized yachts must be decommissioned to mitigate safety and environmental risks

Posted on the IIMS website on 4 April 2022

Seized maritime assets could pose a "significant risk" to ports, harbours and marinas if there is no requirement to ensure mega yachts detained under sanction rules are properly maintained, made safe, or deactivated, according to experienced marine surveyor, Albert Weatherill, managing director of Van Ameyde McAuslands and a long-standing IIMS member.

Albert Weatherill commented, "When a vessel is seized, it may no longer be in Class and under Flag, and any insurance, including P&I and H&M, is likely to have already been revoked. From that moment the yacht, by default, becomes a liability of the state."

Read the full article on the IIMS website at **https://bit.ly/3jfjOOU**. Or scan the QR code.

Refrigerated container cargo claims on the rise warns Britannia Club

Posted on the IIMS website on 14 April 2022

In the past two years, the Britannia Club has opened just over 250 claims files for allegedly damaged refrigerated container cargo carried on operators' vessels, with the number of such claims being on the rise recently.

Cargoes carried in refrigerated containers are many and varied, including meat, vegetables, fruit, live plants, flowers and medicines, all requiring their own bespoke temperature and atmosphere management. Where there is the loss of the entire contents of a 40' high cube container, the claim cost can be substantial.

Read the full article on the IIMS website at **https://bit.ly/3K2IEN3**. Or scan the QR code.

"A Smooth Sea NEVER made a Skilled Sailor."
– John George Hermanson English Proverb

Seafarer lives are being risked unnecessarily during lifeboat drills

Posted on the IIMS website on 19 April 2022

Seafarers are dying needlessly in lifeboat accidents when maritime legislation doesn't actually require vessels to be manned during drills.

InterManager, the international trade association for ship and crew managers, is raising awareness of this fact by highlighting a legislative change which means that it is not necessary for crew to be onboard when lifeboats are tested.

Read the full article on the IIMS website at **https://bit.ly/38cI0Py**. Or scan the QR code.

TT CLUB
Mutual Insurance Limited

Time to take charge of lithium battery moves

Posted on the IIMS website on 26 April 2022

The market is exponentially increasing through consumer demand for a wide variety of rechargeable products from handheld devices to power tools and electric vehicles. Recently recorded incidents of container fires caused by, or suspected to involve lithium batteries, as well as conflagrations of significant proportions on car carriers and ro-pax ships mean that safety concerns rightly continue to grow amongst the maritime community. In addition to which revised regulatory restrictions regarding the carriage by air of lithium batteries, which took effect from 1st April, may result in greater volumes being transported by surface modes.

Read the full article on the IIMS website at **https://bit.ly/3PcluXc**. Or scan the QR code.

DW investigation reveals bilge pump dumping at sea is a bigger problem than most realise

Posted on the IIMS website on 27 April 2022

The illegal dumping of oily wastewater into the ocean from ships, by using a bilge pump, is likely much more widespread than previously known and largely goes unpunished, according to an investigation from German media company DW. Despite oily waste dumping being prohibited globally under the International Convention for the Prevention of Pollution from Ships (MARPOL), it continues to be shockingly common as vessels continue to pollute the world's ocean with oil wastewater.

Read the full article on the IIMS website at **https://bit.ly/3A7e9nj**. Or scan the QR code.

Norway inspects vessels with battery installations with low IP rating

Posted on the IIMS website on 3 May 2022

As a consequence of the Brim accident on 11 March 2021 and a preliminary report from the Norwegian Safety Investigation Authority, the Norwegian Maritime Authority is carrying out inspections on vessels with battery installations with a low IP rating of less than IP-44. These inspections are ongoing, with surveyors having detected salt in several battery rooms as a result of humid air or water intrusion.

The Norwegian Maritime Authority has received a report from a battery supplier pointing out that there is a significant risk of incidents involving systems that have a low IP rating and where the barrier system cannot prevent the intrusion of moisture, salt and possibly seawater into the battery room.

Read the full article on the IIMS website at **https://bit.ly/3z7Ceuj**. Or scan the QR code.

Gard recommends vigilance and warns about liquefaction risk of solid bulk cargoes

Posted on the IIMS website on 4 May 2022

Gard P&I Club has recently been notified of new incidents where solid bulk cargoes classified as Group A, liable to liquefy, have been loaded with moisture content in excess of the transportable moisture limit (TML). Gard reminds its members and others to remain vigilant when loading such cargoes.

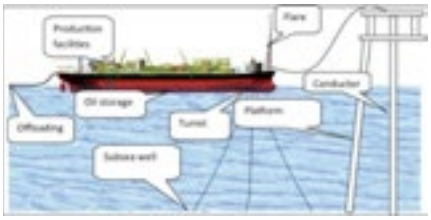
Read the full article on the IIMS website at **https://bit.ly/3p9biUH**. Or scan the QR code.

Certain ship's tanks could be subjected to severe microbial attack

Posted on the IIMS website on 5 May 2022

Lloyd's Register (LR) has said that certain ship's tanks could be subjected to severe microbial attack, causing significant losses in plating thickness. According to LR, this is a result of biological action where the fluid in the tank has been stagnant during an enforced period of reduced operational status. Tanks likely to be affected are those that may have higher biological loads, such as Grey Water and Treated Black Water. Also vulnerable are Distillate (MGO) Tanks, which, if not used, could exhibit this phenomenon due to the presence of condensation.

Read the full article on the IIMS website at **https://bit.ly/3z50QUk**. Or scan the QR code.



Report published to enhance FPSO safety

Posted on the IIMS website on 6 May 2022

ABS has published industry best practices to address the challenges posed by an aging global Floating Production Storage and Offloading (FPSO) fleet.

The FPSO safety guidance focuses on areas such as tank design and arrangement, cleaning and inspection, risk-based inspection of hull structures, composite repair tracking and carrying out repairs while operating. "Operations and maintenance challenges vary widely across the global fleet of FPSOs. With many assets well over 40 years old, hull integrity and maintenance require a large portion of resources," says Matt Tremblay, ABS Vice President, Global Offshore.

Read the full article on the IIMS website at **https://bit.ly/3wXjvyH**. Or can the QR code.

Photo credit: Gard Club

Fire safety onboard ships remains a continuous concern warns Gard Club

Posted on the IIMS website on 10 May 2022

The Gard Club has provided useful information and guidance about fire safety onboard ships, stressing that fire accidents remain a continuous cause for concern. Major fires have arisen because of a failure to recognise potential fire hazards, and above all, the best fire prevention is a well-trained crew. Training and experience transfer between crew should aim to create a mutual understanding of all fire hazards present on board and their potential consequences says Gard Club.

Read the full article on the IIMS website at **https://bit.ly/3PPuov9**. Or scan the QR code.

Check that all equipment parts are movable and operational after maintenance process

Posted on the IIMS website on 12 May 2022

International Marine Contractors Association (IMCA) has published details of two incidents in which something went wrong owing to failures in the maintenance process. There were no reported injuries in either incident.

Read the full article on the IIMS website at **https://bit.ly/3zaYUcX**. Or scan the QR code.

Visually inspecting lifeboat prior to testing crucial

Posted on the IIMS website on 30 May 2022

The US Coast Guard (USCG) has published a safety alert addressing the importance of visually inspecting lifeboat and davit installations prior to testing with crewmembers onboard and ensuring crew familiarity with company policy related to lifesaving equipment testing. As USCG said, the remote-control wire may be overlooked, yet weaknesses within the linkages or poor spooling of the wire itself can lead to catastrophic failures in the lifeboat launching systems.

Read the full article on the IIMS website at **https://bit.ly/38yG9p4**. Or scan the QR code.

Key tips for the safe carriage of alternative fuel vehicles in Ro-Ro spaces published by EMSA

Posted on the IIMS website on 6 June 2022

The main reasons behind the topic of alternative fuel vehicles becoming a serious safety concern are the enormous growth of the alternative fuel vehicles fleet, the potential fire risks of these vehicles and a high uncertainty on the associated fire characteristics, EMSA notes and issued in response a guide providing recommendations for the safe carriage of alternative fuel vehicles onboard ships.

In the guide, EMSA highlights that risk assessment should be conducted for each ship to ensure that risks arising from the carriage of the AFVs that might affect persons onboard, the environment, the safety of the ship are addressed.

Read the full article on the IIMS website at **https://bit.ly/3y9Jghi**. Or scan the QR code.

Safe fitting and removing of temporary lashing points recommendations

Posted on the IIMS website on 14 June 2022

Mark Dunbar, Surveys Manager at West P&I Club, has provided recommendations on fitting and removal of temporary lashing points after the club noticed receiving a number of high value claims arising from such operations.

According to Mr. Dunbar, it is sometimes required in the dry cargo trades for fixed lashing points to be temporarily fitted for securing of cargo and then removed at the end of the voyage.

Read the full article on the IIMS website at **https://bit.ly/3OozxZw**. Or scan the QR code.

Guidelines for transport of hazardous liquid substances on OSVs published by USCG

Posted on the IIMS website on 22 June 2022

The US Coast Guard Office of Design and Engineering Standards has released the Policy Letter "Implementation of IMO Resolution A.673(16), Guidelines for the Transport and Handling of Limited Amounts of Hazardous and Noxious Liquid Substances in Bulk on Offshore Support Vessels, For New and Existing U.S. Offshore Supply Vessels."

Read the full article on the IIMS website at **https://bit.ly/3Qm4yio**. Or scan the QR code.

Reported injuries due to stored energy in slings

Posted on the IIMS website on 4 July 2022

The Bureau of Safety and Environmental Enforcement (BSEE) has issued advice and lessons learnt following injuries sustained by offshore crew working with slings. By issuing this information, BSEE hopes to prevent similar incidents in the future.

There have been multiple instances across the Gulf of Mexico in which offshore personnel have sustained injuries to the face while working with slings. These incidents resulted from stored energy in the slings.

Read the full article on the IIMS website at **https://bit.ly/3wjTABV**. Or scan the QR code.

West P&I has noticed an increase in fire incidents to containers containing charcoal and carbon

Posted on the IIMS website on 12 July 2022

The West P&I Club has noted a number of recent container fire incidents related to containers which were declared as miscellaneous items but actually contained charcoal/carbon. This is a commodity liable to spontaneous combustion. These containers were below deck and when fires broke out there was considerable damage caused to the vessel and other cargo by the fire and the water used to extinguish the fire.

The vessels' CO2 system assisted in putting the fires out. Fire experts have also advised that they are aware of numerous other fires in containers of charcoal tablets in recent months. The fires have been caused by containers said to contain "tablets for water pipe" and "hookah accessories", which are not listed within the IMDG Code, but are actually a form of charcoal/carbon, which is listed in the International Maritime Dangerous Goods (IMDG) Code as hazardous cargo.

Read the full article on the IIMS website at **https://bit.ly/3PHxWP8**. Or scan the QR code.

"When the draught of your vessel exceeds the depth of the water, you are most assuredly, aground." – Ian Walsh

The blast at Chittagong left dozens dead. Photo credit: AFP

TT Club urges IMO Member States to increase container and cargo inspections and submit reports urgently

Posted on the IIMS website on 13 July 2022

Past reporting of inspections carried out has been sparse. In welcoming the IMO's revised guidelines for inspections, the international freight transport insurer TT Club exhorts governments to report findings to IMO on 2021 inspections, as well as to increase the volume of inspections carried out. This would helpfully inform the international maritime regulator and support industry players who are striving to ensure safety and reduce dangerous incidents.

Read the full article on the IIMS website at **https://bit.ly/3IXCI92**. Or scan the QR code.

Office for Product Safety & Standards

Office for Product Safety & Standards issues product recall on some life jacket sold via Amazon

Posted on the IIMS website on 25 July 2022

The UK Office for Product Safety and Standards (OPSS) has issued a product recall for 11 models of life jacket sold via the Amazon online platform. The products are being recalled from end users and the listings will be removed by the Amazon platform.

The products do not meet the requirements of the PPE Regulation 2016/425. The products were not supplied with the required compliance documentation or markings to demonstrate that they have been adequately conformity assessed. Mandatory third-party conformity assessment is required by the relevant regulations for those products, which protect against more serious risks, the absence of such independent assessment for such a product may increase the risk to the consumer that the product may not perform as expected when relied upon to protect them from harm in the water.

Read the full article on the IIMS website at **https://bit.ly/3b9GKyB**. Or scan the QR code.

Cargo screening tool for detection of dangerous goods adopted by PIL

Posted on the IIMS website on 28 July 2022

Pacific International Lines (PIL) has adopted Hazcheck Detect, a smart cargo screening tool that detects misdeclared and undeclared dangerous goods in containerised shipments. Hazcheck Detect specifically screens cargo booking details for keywords and includes an industry library to enable suspicious bookings to be identified that may be misdeclared or undeclared dangerous goods and other compliance cargo.

Booking data is sent to Hazcheck Detect through an API, screening all information against thousands of complex rules, allowing non-compliant cargo to be detected within seconds rather than days. The Hazcheck Detect case management feature also allows cargo to be cancelled or re-booked with the correct declarations.

Read the full article on the IIMS website at **https://bit.ly/3PHAKvq**. Or scan the QR code.

"There is but a plank between a sailor and eternity." – Thomas Gibbons

Common problems associated with hatch covers

Posted on the IIMS website on 3 August 2022

The Japan P&I Club has published an excellent 26 page guide about hatch covers which can be downloaded at the end of this article. The guide highlights a number of key issues that need to be observed to reduce exposure to ingress and wetting damage claims. Hatch cover maintenance and operation requires a thorough understanding of basic principles together with type specific issues and requirements. Experience and claims show hatch cover problems still remain one of the predominant causes for claims and accidents on board vessels.

Read the full article on the IIMS website at **https://bit.ly/3OWyCj5**. Or scan the QR code.

Bunker fuel contamination cases are on the increase

Posted on the IIMS website on 11 August 2022

UK P&I Club has said bunker fuel analysis indicates more cases of contaminated bunker fuel in the Rotterdam and Amsterdam areas (ARA), suggesting that the problem persists. During July, Veritas petroleum services (VPS) issued a bunker alert regarding the same issue. VPS reported that they had investigated samples of very low sulphur fuel oil (VLSFO) taken in the ARA region following reports that vessels using these fuels were experiencing operational problems, such as excessive wear of fuel pump plungers, barrels and injectors.

Read the full article on the IIMS website at **https://bit.ly/3QD21Af**. Or scan the QR code.

ONE launches Marine Safety & Quality Campaign 2022

Posted on the IIMS website on 11 August 2022

Ocean Network Express (ONE) has launched its Marine Safety & Quality Campaign to raise safety awareness and to mitigate marine accidents. The campaign theme is "Safety Consciousness – A step ahead". As the COVID-19 pandemic continues to affect global shipping operations over the long term, ONE continues to face difficulties in conducting ONE's Vessel Quality Standard (ONE-VQS) physical inspections on board operated vessels all around the world. As such, over the past two years, self-inspection campaigns have comprised thorough checks by crew to mitigate risk of accidents in identified critical areas, supplementing the ONE-VQS.

Read the full article on the IIMS website at **https://bit.ly/3AxT4CT**. Or scan the QR code.

CO2 system left non-operational after servicing

Posted on the IIMS website on 19 August 2022

The Marine Safety Forum (MSF) has issued a safety alert and shared some lessons resulting from an incident where the safety pins of the fixed CO2 system flexible hoses had not been removed and were still in place. An MSF member vessel had undergone a firefighting equipment survey. All equipment was fully inspected, and any faults or discrepancies were rectified. The fixed CO2 system flexible hoses were renewed as the system had reached its 10 years of service life. To allow the survey to be conducted in a safe manner the safety pins had been put in place, while the outside contractors carried out their inspection. When finished these should have been removed, to make the system ready for activation.

Read the full article on the IIMS website at **https://bit.ly/3cd20E6**. Or scan the QR code.

AMSA to increase focus on planned maintenance as part of PSC inspections

Posted on the IIMS website on 26 August 2022

The Australian Maritime Safety Authority (AMSA) is highlighting to vessel operators the importance of planned maintenance in ensuring safe operation of ships and says it will increase its focus on planned maintenance during Port State Control (PSC) inspections.

Recent incidents have demonstrated the potentially serious consequences of a lack of effective maintenance of main engines and power generation systems that can pose serious risks to the safe and pollution-free operation of vessels.

Read the full article on the IIMS website at **https://bit.ly/3TM8xqn**. Or scan the QR code.

Advice on safe operation when carrying mineral cargoes

Posted on the IIMS website on 30 August 2022

The advice relates to cargo advice on carrying mineral cargoes, including sodium metabisulphite. According to Swedish Club, a number of serious incidents have occurred in recent months involving mineral compounds (i.e. inorganic chemicals) in bags carried as general cargo. Besides a potentially serious risk of harm to individuals, the incidents have led to damage to vessels and loss of cargo, together with the problems that arise from them, such as the complication of dealing with port authorities, delays and associated claims, as well as contamination of the vessel and other cargoes and finally, the difficulty of arranging disposal of the hazardous residues.

Read the full article on the IIMS website at **https://bit.ly/3eknjEt**. Or scan the QR code.

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

Posted on the IIMS website on 1 September 2022

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."

Read the full article on the IIMS website at **https://bit.ly/3qdWioW**. Or scan the QR code.

"The sea finds out everything you did wrong."
– Francis Stokes

Image credit: SeaWayBoats

Further action required following the Conception fire lessons

Posted on the IIMS website on 2 September 2022

Three years after the fire onboard the Conception dive boat in the US, more progress is needed on the safety recommendations the National Transportation Safety Board (NTSB) issued as a result of the investigation.

Following the investigation, the NTSB issued 10 new safety recommendations:

1. US Coast Guard (USCG): Revise Title 46 Code of Federal Regulations Subchapter T to require that newly constructed vessels with overnight accommodations have smoke detectors in all accommodation spaces.
2. USCG: Revise Title 46 Code of Federal Regulations Subchapter T to require that all vessels with overnight accommodations currently in service, including those constructed prior to 1996, have smoke detectors in all accommodation spaces.
3. USCG: Revise Title 46 Code of Federal Regulations Subchapter T and Subchapter K to require all vessels with overnight accommodations, including vessels constructed prior to 1996, have interconnected smoke detectors, such that when one detector alarms, the remaining detectors also alarm.
4. USCG: Develop and implement an inspection procedure to verify that small passenger vessel owners, operators, and charterers are conducting roving patrols as required by Title 46 Code of Federal Regulations Subchapter T.
5. USCG: Revise Title 46 Code of Federal Regulations Subchapter T to require all small passenger vessels with overnight accommodations, including those constructed prior to 1996, to provide a secondary means of escape into a different space than the primary exit so that a single fire should not affect both escape paths.
6. USCG: Review the suitability of Title 46 Code of Federal Regulations Subchapter T regulations regarding means of escape to ensure there are no obstructions to egress on small passenger vessels constructed prior to 1996 and modify regulations accordingly.
7. USCG: Review the suitability of Title 46 Code of Federal Regulations Subchapter T regulations regarding means of escape to ensure there are no obstructions to egress on small passenger vessels constructed prior to 1996 and modify regulations accordingly.
8. Passenger Vessel Association, Sportfishing Association of California, National Association of Charterboat Operators: Until the US Coast Guard requires all passenger vessels with overnight accommodations, including vessels constructed prior to 1996, to have smoke detectors in all accommodation spaces, share the circumstances of the Conception accident with your members and encourage your members to voluntarily install interconnected smoke and fire detectors in all accommodation spaces such that when one detector alarms, the remaining detectors also alarm.
9. Passenger Vessel Association, Sportfishing Association of California, National Association of Charterboat Operators: Until the US Coast Guard requires small passenger vessels with overnight accommodations to provide a secondary means of escape into a different space than the primary exit, share the circumstances of the Conception accident with your members and encourage your members to voluntarily do so.
10. USCG: Require all operators of U.S. flag passenger vessels to implement safety management systems, taking into account the characteristics, methods of operation, and nature of service of these vessels, and, with respect to ferries, the sizes of the ferry systems within which the vessels operate.

Read the full article on the IIMS website at **https://bit.ly/3Qtc1vi.** Or scan the QR code.

CHIRP FEEDBACK number 68 published

Posted on the IIMS website on 12 September 2022

In his introduction to the CHIRP edition number 68, Adam Parnell, Director (Maritime), 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.

Read the full article on the IIMS website at **https://bit.ly/3eIYMcm**. Or scan the QR code.

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

Posted on the IIMS website on 12 September 2022

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.

Read the full article on the IIMS website at **https://bit.ly/3BIFkpt**. Or scan the QR code.

West of England P&I Club launches video aimed at engine room fire safety

Posted on the IIMS website on 13 September 2022

A new video has been added to the West of England P&I Club's LEARN THE ROPES video series, which deals with engine room fire safety to highlight the potential sources that can result in the development of a fire in the engine room and critical factors that the vessel's crew and superintendent should pay constant attention to for their prevention.

Read the full article and access the video on the IIMS website at **https://bit.ly/3LhYGoj**. Or scan the QR code.

Safe pilot transfer arrangements vital for safe operations is key message in AMSA marine notice

Posted on the IIMS website on 14 September 2022

AMSA has published a marine notice to remind shipowners, operators, masters, crews, recognised organisations, marine pilots and pilotage providers of the obligation to provide safe pilot transfer arrangements. AMSA has noted with concern that since November 2017 several pilots' lives have been placed at risk in six separate incidents where ropes have parted, or securing point have failed. In addition, AMSA regularly receives reports and complaints about non-compliant pilot transfer arrangements.

Shipowners, operators, masters and crews are reminded that pilot transfer arrangements, including pilot ladders, must comply with Marine Order 21 (Safety and emergency arrangements) 2016 (MO21).

Read the full article on the IIMS website at **https://bit.ly/3xqHozX**. Or scan the QR code.

"Whenever your preparations for the sea are poor; the sea worms its way in and finds the problems." – Francis Stokes

Electrical repairs should be done by suitable qualified individuals

Posted on the IIMS website on 14 September 2022

In its most recent series regarding lessons learned from accidents, the American Club has described an incident where an engineer was shocked by electricity. The engineer on a towing vessel was making a routine round in the engine room. He checked the level of fuel in the day tank and saw that he needed to transfer fuel from a storage tank into the day tank. He regularly did this approximately every 2 days depending on the vessel's speed and the number of barges in the tow. He checked the day tank level and lined up the valves to transfer the fuel. As he flipped the switch to turn on the fuel transfer pump, he received an electrical shock to his hand. The fuel transfer pump did not start.

Read the full article on the IIMS website at **https://bit.ly/3deGvmX**. Or scan the QR code.

ICHCA guidance on safe lifting of ISO containers and tanks using hooks and wires issued

Posted on the IIMS website on 15 September 2022

The International Cargo Handling Coordination Association (ICHCA) has published a safety briefing document to offer advice into some of the safety principles associated with safe lifting of ISO containers and tanks using hooks and wires.

According to ICHCA, any lifting operation of this type should be undertaken by competent persons in compliance with applicable regulatory frameworks and is the responsibility of the duty holder.

Read the full article on the IIMS website at **https://bit.ly/3BiF9zF**. Or scan the QR code.

West P&I Club advice on how to conduct a proper gas measurement of coal cargoes

Posted on the IIMS website on 15 September 2022

When carrying coal cargoes, it is vital to obtain accurate gas measurements to determine the correct ventilation requirements. In a short video less than four minutes long, West P&I Club explains the correct way to undertake the gas measurement of coal cargoes.

According to West Club, coal may self-heat or emit significant amounts of methane, and occasionally, it may do both. Incorrect ventilation can also lead to cargo fire or cargo explosion, which makes it crucial to obtain accurate gas measurements to determine the correct ventilation requirements. While this may appear straight forward, West Club's experience is that these measurements are often not taken correctly.

Read the full article on the IIMS website at **https://bit.ly/3QLr3wq**. Or scan the QR code.

"I don't know who named them swells. There's nothing swell about them. They should have named them awfuls." – Hugo Vihlen

Ensuring safe operation when carrying bagged rice cargoes

Posted on the IIMS website on 21 September 2022

In collaboration with CWA International, The Swedish P&I Club has issued cargo advice and guidance to assist operators when carrying bagged rice cargoes.

Loss prevention essentials
- Monitor the placement of dunnage material during loading.
- Hatches should be closed during rain at loading/discharge.
- Measure cargo temperature and moisture content during loading.
- The cargo should be ventilated in accordance with the three degree rule during the voyage.
- Closely monitor the cargo handling at loading/discharge. Keep accurate records of any damage. Clear photographs of all stages of the cargo operations provide good evidence in case of a claim.

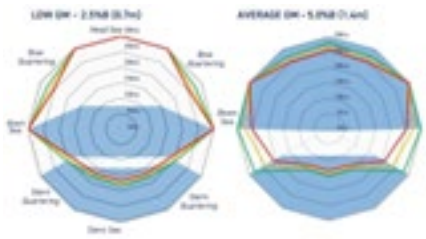
Read the full article on the IIMS website at **https://bit.ly/3BzR63X**. Or scan the QR code.

Corrosion causes holes to ship's hatch covers

Posted on the IIMS website on 22 September 2022

A vessel carrying containers was found to have several holes in its hatch covers as a result of corrosion. When the vessel arrived, it was discovered that one cargo hold had 12-14 inches (30-35 cm) of water at the aft end of the hold. Sixteen containers had water ingress. The cargo was not damaged in 4 of the containers, but in the other 12 containers, the cargo was declared a total loss. Several of those containers were loaded with consumer electronics. Several others had automotive spare parts. One had designer leather shoes.

Read the full article on the IIMS website at **https://bit.ly/3R0Dtk5**. Or scan the QR code.



Reducing container loss guidance published by Britannia P&I Club

Posted on the IIMS website on 22 September 2022

Britannia P&I Club has published guidelines for containerships to deal with parametric roll motions. In the guidance, Britannia explains how ships can successfully identify parametric roll and what is triggering it.

Unfavourable combinations of rolling period, vessel speed, heading and wave conditions can trigger sudden and extremely rapid increases in roll motions, which might lead to excess loading on container securing devices and, in the worst cases, container stack collapses and container losses overboard.

Read the full article on the IIMS website at **https://bit.ly/3R5MjNE**. Or scan the QR code.

"Only two sailors, in my experience, never ran aground. One never left port and the other was an atrocious liar." – Don Bamford

Excessive container and cargo weight putting stress on containerships

Posted on the IIMS website on 26 September 2022

According to Peter Peltenburg, CEO of Dutch-based Cargo Care Solutions, the weight of extra containers and cargo is placing massive amounts of stress on ships' hatch covers and lashing gear. Containership owners are placing more emphasis on the repair and maintenance of their hatch covers and container lashing equipment as the full loading caused by strong market conditions impacts the condition of their ships.

"With the current strong market conditions, shipowners cannot afford to incur any downtime of their vessels due to a lack of maintenance. And it is the same when it comes to vessel damage impacting on the vessel's cargo carrying capacity."
Mr. Peltenburg said.

He added, "These vessels are currently running at maximum capacity and that will take its toll. A vessel that has not been trading at full capacity going into drydock every five years will have these bits of equipment repaired as a matter of anticipated wear and tear."

Read the full article on the IIMS website at **https://bit.ly/3ULBa7J**. Or scan the QR code.

AMSA: Effective and regular vessel maintenance can prevent machinery failures

Posted on the IIMS website on 26 September 2022

The Australian Maritime Safety Authority (AMSA) has published a Maritime Safety Awareness Bulletin to highlight that a lack of planned maintenance can have a significant impact on the safety of the vessel, the people, and the marine environment.

Maintenance related issues do not always receive the attention they deserve, as these are often difficult to detect and can be regarded as entirely technical matters, unrelated to safety and pollution prevention. As a result, maintenance matters may not be reported or addressed as part of the organisation's safety management system. This increases risks to safety and can result in substantial costs arising from repairs and operational delays.

Download the safety bulletin at **https://bit.ly/3C453HH**. Or scan the QR code.

The importance of inspecting hatch covers to ensure their weathertight condition highlighted

Posted on the IIMS website on 11 October 2022

The Swedish Club has highlighted the importance of securing and inspecting hatch covers and checking that they are in good condition. In presenting a case study, the Club explains how seawater may ingress into cargo holds in bad condition can cause serious damage.

A bulk carrier had been fully loaded with grains. The vessel had side rolling cargo hatch covers. For six days, the vessel encountered heavy weather at Beaufort scale 9 which caused it to pitch and roll heavily. During the voyage the cargo hatch covers were washed over by seawater.

Download the safety bulletin at **https://bit.ly/3fUSwz0**. Or scan the QR code.

Sounding pipes should be clear of debris or cargo

Posted on the IIMS website on 11 October 2022

The Swedish Club has provided lessons learned from an incident where water had entered cargo hold 1 of a bulker, causing wet damage. as part of its ongoing series into hatch cover incidents.

A bulk carrier had a full cargo of zinc concentrate on board and was sailing from the west coast to the east coast of South America. When the vessel passed Cape Horn it experienced heavy weather of Beaufort scale 9 with green sea covering the cargo hold covers 1, 2 and 3. This continued for four days as the vessel battled the waves. The vessel had no weather routeing.

Download the safety bulletin at **https://bit.ly/3EyrqrD**. Or scan the QR code.

Reefer claims increase sharply over the pandemic is key report finding

Posted on the IIMS website on 20 October 2022

A new report by the Swedish Club, called "Container Claims – Refrigerated Containers," has identified a peak in refrigerated (reefer) container claims during the pandemic as a result of disruptions in the supply chain, with a high number of reefer containers being delayed either in port or during transportation to and from port via road or rail.

Between 2021 and 2022 the Club saw an increase in reefer container claims of 270%, with 4.1% of all container vessels having a reefer claim in 2020 compared with 11.4% in 2021. Reefer containers are the main cause of all container claims with 30% of the Club's total container claims being due to refrigerated cargo damage over the last five years.

Download the report at **https://bit.ly/3MZpaMg**. Or scan the QR code.

Effective lube oil analysis crucial for vessels' machinery systems

Posted on the IIMS website on 21 October 2022

The American Club has analysed the importance of regularly performing lube oil analysis for shipboard machinery and has provided measures to prevent potential problems in a useful guidance document.

Oil analysis is important as it can help identify problems in the machinery such as abnormal wear, lube oil degradation, contamination of harmful agents, etc. all of which can lead to the potential failure of the machinery and its components. Failures can lead to a loss of propulsion and/or blackouts that can cause consequential incidents such as groundings, collisions, or damage to third party property. Periodic oil analysis can help maintain a proactive maintenance strategy, thus maintaining component life, mitigation of premature component failure and improved Mean Time Between Overhauls (MTBO).

Download the guidance at **https://bit.ly/3FboyRU**. Or scan the QR code.

"The ocean is an object of no small terror."
– Edmund Burke

High number of ships do not comply with planned maintenance requirements

Posted on the IIMS website on 21 October 2022

Between 15 January and 28 February 2022, the Australian Maritime Safety Authority (AMSA) conducted a focused inspection campaign (FIC) on planned maintenance. The shocking outcome is that the campaign has revealed a high number of ships failed to comply with the planned maintenance requirements.

The Planned Maintenance Focused Inspection Campaign (FIC) focused on:

- The level of compliance with the planned maintenance system (PMS) requirements of the International Conventions. This included statutory requirements under SOLAS and mandatory PMS requirements from the ISM Code;
- The familiarity of the master and officers with their processes for ensuring maintenance of the ship and equipment and, whether the ship has been maintained after survey in accordance with statutory requirements.

Read the full article at **https://bit.ly/3zbrJp0**. Or scan the QR code.

Advice on the safe carriage of hazardous chemical cargoes from the Swedish P&I Club

Posted on the IIMS website on 27 October 2022

Working in partnership with CWA International, the Swedish P&I Club has produced a guidance document to assist operators in the daily operation of their vessels relating specifically to the carriage of hazardous chemical cargoes.

A wide range of more than 5,000 chemical products and grades are carried on board chemical tankers. These chemical products often have a high minimum purity due to their intended end uses. The contamination of chemical cargoes can often affect the suitability for their intended end use, and this can play a significant role in the value of the cargo. As a result, special consideration should be given towards these sensitive cargoes in order to ensure their proper carriage.

Download the guidance at **https://bit.ly/3Dzf4yy**. Or scan the QR code.

Planned maintenance on domestic commercial vessels safety alert from AMSA

Posted on the IIMS website on 27 October 2022

The Australian Maritime Safety Authority (AMSA) has published a safety alert to draw the attention of vessel operators to the importance of planned maintenance in ensuring the safe operation of domestic commercial vessels in Australia.

Planned maintenance is essential on domestic commercial vessels. Good maintenance work in port or at anchor can help avoid breakdowns and getting into hazardous situations at sea. Recent incidents have demonstrated the potentially serious consequences of a lack of effective maintenance that can pose serious risks to the safe operation of vessels. Analysis of 117 incident investigations since 2020 found that maintenance problems were a factor in 28% of incidents, including half of the very serious incidents and 27% of serious incidents.

Read the detailed safety alert at **https://bit.ly/3TIdMH5**. Or scan the QR code.

The next few pages contain a wide variety of incident and accident reports that have been released from a number of sources during 2022 and published on the IIMS web site. In most cases the links will take you to the full articles and reports, which can be downloaded. Or use the neat QR codes to access the information directly on your device.

Lack of risk assessment contributes to sinking of fishing vessel says MCIB report

Posted on the IIMS website on 4 January 2022

The Marine Casualty Investigation Board of Ireland (MCIB) has published its report on the sinking of FV Aztec, which took place off Duncannon on 11 January 2021.

The FV Aztec sailed from Duncannon Pier, Co. Wexford to fish sprat in Waterford Estuary alongside its paired trawler the "FV Western Dawn". There was no risk assessment or method statement for this type of fishing arrangement included in the vessel's safety statement.

Read the full article and download the report on the IIMS website at **https://bit.ly/3OlTpwK**. Or scan the QR code.

Fuel oil tank vent pipes should be inspected regularly

Image credit: The American Club

Posted on the IIMS website on 4 January 2022

The American Club provides lessons learned from corroded or damaged fuel oil vent pipes in cargo holds. A bulk cargo vessel experienced a serious problem when some of the clay cargo entered fuel oil tanks through holes in the fuel oil tank vent pipes located in the cargo holds. The problem was first noticed by the engineers when the fuel oil filters became heavily clogged with what appeared to be cargo. After the engineers shifted to a different fuel oil tank, the problem stopped. After offloading the clay and cleaning the cargo holds, the vent pipes were closely inspected in each cargo hold. Several fuel oil vent pipes were found to have been holed by severe corrosion while others were so severely corroded and at risk of failure.

Read the full article on the IIMS website at **https://bit.ly/3FPnMXu**. Or scan the QR code.

The advice is keep batteries of any kind away from metal objects

Posted on the IIMS website on 14 January 2022

IMCA reported a case which summarised an incident following the explosion of a lithium battery that burnt and damaged the ship's lifejackets. During a routine inspection on a vessel in cold lay-up, the lifejackets stored underneath a sitting bench in the wheelhouse were found burned and melted. A Lithium battery (3.6v) had exploded in one of the self-igniting lights. No one was harmed in the incident.

Read the full article on the IIMS website at **https://bit.ly/3bkosdP**. Or scan the QR code.

Twist-lock foundations should be inspected regularly

Posted on the IIMS website on 21 January 2022

The American Club has published guidance and some lessons learned following an incident that involved corrosion of the twist-lock foundations and pad eyes. A general cargo vessel had been modified to carry containers on the cargo hatches. Various twist-lock foundations and pad eyes had been welded to the hatch covers to secure containers. While the vessel was in port preparing to offload and load containers, the newly arrived Chief Officer noticed that many of the twist-lock foundations and pad eyes were significantly corroded. He raised his concern with the Master. They jointly inspected them and found them likely to be unsafe due to the excessive corrosion.

Read the full article on the IIMS website at **https://bit.ly/3rNlwuG**. Or scan the QR code.

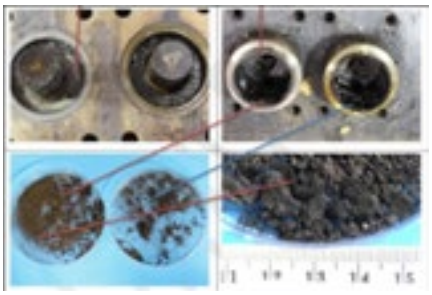
Fire on a motor cruiser exposes possible shortcomings in Irish pleasure craft legislation

Posted on the IIMS website on 21 January 2022

An investigation by the Marine Casualty Investigation Board (MCIB) into a fire onboard a motor cruiser on the River Shannon in Ireland has exposed possible shortcomings in Irish legislation governing the safety of pleasure craft.

The MCIB report found that the seat of the fire was in the engine compartment, but the vessel was so badly damaged the exact cause of the fire was impossible to determine and will never be known.

Read the full article and download the report on the IIMS website at **https://bit.ly/3Au16Lu**. Or scan the QR code.



Engine fault due to effect of low-sulphur fuel on injection control unit says report

Posted on the IIMS website on 8 February 2022

A Transport Accident Investigation Commission (TAIC) report reveals that the Singapore-flagged ship Funing had been unable to generate full power because a fuel injector control unit (ICU) had suffered fuel leakage and become clogged with coking debris from the use of low-viscosity low-sulphur fuel.

Download the report at **https://bit.ly/3bs93lj**. Or scan the QR code.

Report on fatal collision between rigid inflatable boat Rib Tickler and a personal watercraft published

Posted on the IIMS website on 18 February 2022

On 8 August 2020, the rigid inflatable boat Rib Tickler and a personal watercraft collided at high speed in the Menai Strait, Wales. A passenger onboard Rib Tickler was struck by the personal watercraft and fatally injured. The personal watercraft had been jumping across Rib Tickler's wake when the rigid inflatable boat altered course across the personal watercraft's path. The two craft were operating too closely to each other at high speed and neither Rib Tickler's driver nor the personal watercraft rider understood the other's intentions. Furthermore, the knowledge and skill levels of the persons in control or overseeing the two craft were not appropriate to the manoeuvres being undertaken.

Download the report at **https://bit.ly/3OiVbio**. Or scan the QR code.

Unfortunate events led to oil spill on deck

Posted on the IIMS website on 18 February 2022

Britannia P&I Club recently became aware of an incident where a number of unfortunate events, including the fall of the vessel's spare main engine cylinder liner, led to an oil spill on deck.

Read the full article on the IIMS website at **https://bit.ly/3NjVpUX**. Or scan the QR code.

Photo source: Alaska Marine Surveyors and Northline Seafoods

Mooring buoy failure caused grounding causing damage of $4.5M reveals NTSB report

Posted on the IIMS website on 7 March 2022

The fatigue failure of an unrated mooring buoy led to the grounding of a fishing tender during a storm near Bristol Bay, Alaska in 2020, according to the National Transportation Safety Board (NTSB).

On August 30, 2020, the fishing tender barge SM-3 broke free from its mooring buoy in a storm and went aground. No injuries were reported, but the vessel sustained $4.5 million in damage and left a three-mile-long debris field scattered along the waterfront.

Read the full article on the IIMS website at **https://bit.ly/3L00T6K**. Or scan the QR code.

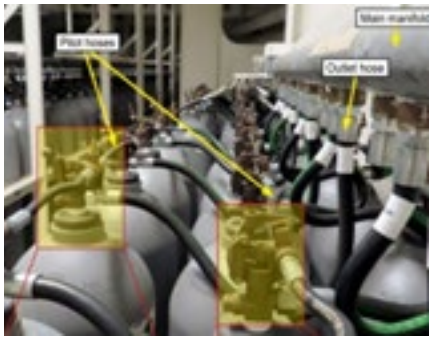
NTSB report determines probable cause in Miss Dorothy vessel towing fire

Posted on the IIMS website on 9 March 2022

An engine room fire aboard a towing vessel started when diesel fuel spray hit an uninsulated section of the engine's exhaust system, the National Transportation Safety Board (NTSB) report has revealed.

On March 17, 2021, the towing vessel Miss Dorothy was pushing 14 barges upbound on the Lower Mississippi River, north of Baton Rouge, Louisiana, when a fire broke out in the engine room. The eight crewmembers aboard briefly attempted to fight the fire but were unsuccessful and evacuated to the barges. No pollution or injuries were reported, and the vessel was declared a total loss at $2.4 million.

Read the full article on the IIMS website at **https://bit.ly/3IrYakK**. Or scan the QR code.



MAIB issues safety warning after discovery of blocked fixed CO2 fire extinguishing system pilot hoses

Posted on the IIMS website on 11 March 2022

On 19 September 2021, a fire broke out in the auxiliary engine room on board the Finland registered roll-on/roll-off cargo ship Finnmaster while departing Hull. In an attempt to extinguish the fire, the ship's crew activated the machinery space's carbon dioxide (CO_2) fire extinguishing system, but only half of the system's gas cylinders opened. The initial investigation identified that one of the CO_2 system pilot hoses was blocked due to a manufacturing defect. Several coupling leaks were also found in the pilot lines.

Safety Issues

- The quality assurance processes of the pilot hose assembly supplier failed to identify that the hose couplings had not been fully bored through.
- The onboard installation testing processes did not identify that some of the hose assemblies were blocked and that there were leaks in the CO_2 system pilot lines.
- Latent defects may exist in the CO_2 fire-fighting systems on board ships supplied with potentially affected hose assemblies delivered from the same batch.

Read the full article on the IIMS website at **https://bit.ly/3t7EJco**. Or scan the QR code.

Photo credit: U.S. Coast Guard

Container loaded with discarded lithium batteries catches fire

Posted on the IIMS website on 14 March 2022

The U.S. Coast Guard has issued a safety alert and is warning about the hazards of transporting discarded lithium batteries after a container illegally loaded with them caught fire while en route to the Port of Virginia, where it was set to be loaded onto a ship.

Thankfully the container was not loaded on a ship at the time. Rather, the container was being transported on a chassis from Raleigh, North Carolina when the discarded lithium batteries caught fire on the highway on August 19, 2021, resulting in loss of the cargo and significant damage to the shipping container.

Read the full article on the IIMS website at **https://bit.ly/3L24y3I**. Or scan the QR code.

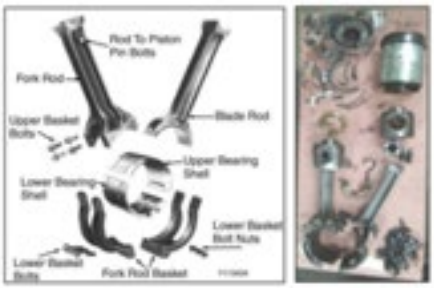


Photo credit: Dynamark Engineering

Error in maintenance led to diesel engine failure reveals NTSB report

Posted on the IIMS website on 16 March 2022

An improperly tightened fastener led to a diesel engine failure on a Washington State Ferries passenger and car ferry near Bainbridge Island, Washington are the findings of a National Transportation Safety Board (NTSB) report.

Marine Investigation Report 22/06 details the NTSB's investigation into the April 22, 2021, catastrophic failure of the no. 3 main engine aboard the Wenatchee during a sea trial in Puget Sound. The failure led to the ejection of components from the engine and resulted in a fire in the no. 2 engine room. No injuries or pollution were reported, while damages were estimated at nearly $3.8 million.

Read the full article on the IIMS website at **https://bit.ly/3wmhLjZ**. Or scan the QR code.

River Canal Rescue reports 171 major incidents in 2021 on UK canals including sunken vessels

Posted on the IIMS website on 21 March 2022

River Canal Rescue has published its 2021 statistics and reports it responded to 171 major incidents during the year with emergency situations either involving submerged, partially sunken or grounded craft, plus salvage work.

The figure is 25 per cent lower than the 231 incidents River Canal Rescue reported in 2020, which the organisation says is primarily due to a reduction in boat use until lockdown restrictions eased in June 2021. Between June and December however, there was a peak in call-outs which continued into January 2022, due to mild weather and boaters wanting to make the most of what was left of their cruising year.

Read the full article on the IIMS website at **https://bit.ly/3D6Py20**. Or scan the QR code.

"If you can't repair it, maybe it shouldn't be on board." – Lin and Larry Pardey

Starter issue aboard tanker led to $7M in property damage

Posted on the IIMS website on 30 March 2022

The National Transportation Safety Board published a report of an incident during which an incorrect solution to address a main engine start issue led to the contact between an oil tanker and a loading dock in the Port of Corpus Christi. Damage to the vessel was estimated at $550,000, while the estimated property damage to the facility was $7M.

Read the full article on the IIMS website at **https://bit.ly/3SH8oEg**. Or scan the QR code.

Interim investigation report resulted in loss of life reveals BSU report

Posted on the IIMS website on 7 April 2022

The German Federal Bureau of Maritime Casualty Investigation published its interim investigation report (BSU report) about an accident with subsequent loss of life on board the Containership SEOUL EXPRESS, on 27 March 2021.

Factors contributing to the fatal accident include:

- general dangers when working at height;
- implementation of the occupational health and safety on board;
- the general ship design framework (ladders in cargo holds with the risk of falling);
- the health condition and the fitness for sea service of the casualty;
- the emergency response management of the crew;
- the safety culture onboard and in the company as well as the implementation of ISM Code.

Read the full article on the IIMS website at **https://bit.ly/3Ac1H5W**. Or scan the QR code.

Parametric rolling responsible for Maersk Essen loss of containers says DMAIB report

Posted on the IIMS website on 7 April 2022

The Danish Maritime Accident Investigation Board (DMAIB) has published its report on Maersk Essen, the ship that lost approximately 250 containers on 16 January 2021 while the ship was en route from China to Los Angeles. The number of lost containers was later adjusted to 750.

DMAIB encourages companies and authorities to explore and test options for predicting resonance effects that are based on real-time conditions rather than forecasts.

Read the full article on the IIMS website at **https://bit.ly/3dkeGtl**. Or scan the QR code.

"Waves are not measured in feet or inches, they are measured in increments of fear."
– Buzzy Trent

Hot work failures led to fire on a commercial fish processor the Aleutian Falcon

Posted on the IIMS website on 8 April 2022

The National Transportation Safety Board (NTSB) has published a report about a fire on the commercial fish processor Aleutian Falcon while the vessel was docked for repairs at the Trident Seafoods shipyard in Tacoma, Washington.

Firefighting crews from the Tacoma Fire Department responded, and the fire was extinguished four days later. No one was on board the vessel at the time of the fire, and there were no injuries reported. An estimated 20–30 gallons of hydraulic oil leaked into the water but were captured by a containment boom. The vessel was declared a constructive total loss with an estimated value of $16,460,850.

Read the full article on the IIMS website at **https://bit.ly/3JKF37V**. Or scan the QR code.

Broken fuel valve caused an engine room fire

Photo credit: Swedish Club

Posted on the IIMS website on 19 April 2022

the Swedish Club has explained an incident where a broken fuel valve above the auxiliary engines started spraying fuel oil over an exhaust pipe, causing a huge explosion and a fire in the engine room. In the ensuing investigation it was discovered that a fuel valve had broken above the auxiliary engines and sprayed fuel oil over an exhaust pipe which caused the fire. It should be mentioned under SOLAS regulations there should be insulation on the exhaust pipe and that the valve should also be protected.

Read the full article on the IIMS website at **https://bit.ly/3K2oGlq**. Or scan the QR code.

Unsecured openings led to sinking of towing vessel Proassist III determines NTSB report

Posted on the IIMS website on 19 April 2022

Unsecured openings in the deck of a towing vessel led to its eventual flooding and sinking off the coast of Puerto Rico are the findings from the National Transportation Safety Board (NTSB).

The towing vessel, Proassist III, suffered flooding in its stern compartments and sank near Puerto Yabucoa, Puerto Rico, on December 24, 2020, while transiting northbound off the coast. The three crewmembers on board were unable to pump out the water and eventually abandoned the vessel. No injuries were reported. The vessel was declared a total loss at $968,000.

Read the full article on the IIMS website at **https://bit.ly/3rNqSa4**. Or scan the QR code.

"The right of way goes to the vessel with the least competent crew." – Mike Baiocchi

Lack of stability book knowledge led to landing barge capsize

Posted on the IIMS website on 3 May 2022

On 21 August 2019, a landing barge (operated as a Class 1E and 2D) capsized while transiting from Great Mackerel Beach to Pittwater north of Sydney. AMSA has provided the lessons learnt from this event.

The investigation identified the following contributory factors:

- The vessel load exceeded the maximum weight limit as identified in the vessel stability book.
- There were inconsistencies between the approved stability book and the physical state of the vessel – due to the down flooding caused by the starboard deck hatch on the main deck not being weathertight.
- The vacuum truck was secured into the landing barge asymmetrically, which generated a list to starboard. This in turn contributed to an initial decrease in the range of positive stability.

Read the full article on the IIMS website at **https://bit.ly/3bEDSKF**. Or scan the QR code.

Loss of lubrication supply to engines crankshaft journal bearings and crankpins leads to Wight Sky engine failures

Posted on the IIMS website on 4 May 2022

The UK Marine & Accident Investigation Branch (MAIB) has published its report on the two catastrophic engine failures on board ro-ro passenger ferry Wight Sky, one of which resulted in a fire.

Wight Sky's ME2 failed catastrophically due to a sudden loss of lubricating oil supply to its number five main journal bearing and number four crankpin. The oilway to the main journal and crankpin was blocked of when the bearing shells turned in their housing. Poor fuel combustion, the presence of silica sand and other abrasive particles embedded in the main bearing shells, engine misalignment, high levels of vibration, and contaminated lubricating oil might all have contributed to the event failure.

Wight Sky's ME4 failed catastrophically because of an assembly error during build at Volvo Penta's factory in Sweden. Two of the engine's matched connecting rod big end bearing caps had been transposed during the engine assembly process.

Read the full article on the IIMS website at **https://bit.ly/3M7bxZC**. Or scan the QR code.

MCIB Investigation: FV Horizon catches fire and sinks

Posted on the IIMS website on 4 May 2022

The Irish Marine Casualty Investigation Board (MCIB) has published its report on the fire and loss of "FV Horizon" off the old head of Kinsale, County Cork, which occurred on May 14th, 2021.

Read the full article on the IIMS website at **https://bit.ly/3t4e0gm**. Or scan the QR code.

Fatal fall accident during a wire change operation

Posted on the IIMS website on 5 May 2022

The Swedish Club has described a fatal fall incident in its monthly safety bulletin about how an AB lost his balance during a wire change operation, resulting in him falling onto the hatch cover from a height of about 8 metres and losing his life.

Read the full article on the IIMS website at **https://bit.ly/3zlAczr**. Or scan the QR code.

Diamond Emblem 1 Report involving loss of life published by MAIB

Posted on the IIMS website on 6 May 2022

On 19 August 2020, a member of a family group on board the motor cruiser Diamond Emblem 1 fell overboard from the aft deck when the boat's stern made hard contact against the embankment wall opposite the Great Yarmouth Yacht Station. She became entangled in rope and the propeller, suffering multiple injuries that resulted in her drowning.

Commenting on this case, Andrew Moll, Chief Inspector of Marine Accidents, said, "Following the investigation into the Diamond Emblem 1 investigation, I have made recommendations to enhance the governance, oversight and safety of hire boat operations.

Read the full article on the IIMS website at **https://bit.ly/38uMlhF**. Or scan the QR code.

Seadogz interim accident investigation report 2021 published by MAIB

Posted on the IIMS website on 10 May 2022

On 22 August 2020 at 1011, the commercially operated high speed passenger craft Seadogz collided with the North-West Netley buoy in Southampton Water at a speed of 38.4kts.

Urgent safety considerations

- the skipper was operating Seadogz single-handedly, at high speed and did not see the navigation buoy, which was directly ahead for 10 seconds before impact
- during the trip the passengers became accustomed to passing close by large navigation buoys at speed and were therefore unconcerned at the crafts approach to the buoy and did not attempt to alert the skipper
- high speed figure of eight turns completed during the trip, increased the risk of hooking or spinning out.

Read the full article on the IIMS website at **https://bit.ly/3z3oznW**. Or scan the QR code.

"The best bilge pump of all is a bucket in the hands of a frightened man." – Butch Dalrymple-Smith

Crew insufficiently swaging compression fitting ferrule led to containership fire is investigation finding

Posted on the IIMS website on 1 June 2022

The National Transportation Safety Board (NTSB) has published its report on the engine room fire aboard the containership President Eisenhower, that took place on April 28, 2021, off California.

Rapid oil leak-detection systems are a valuable tool that can be used to prevent fire in machinery spaces. Video analytic technology is designed to use standard CCTV video to detect fuel mist and spray in real time and alert the crew before any ignition and fire. This technology is supported by class societies as an acceptable method for identifying leaks and can be integrated with existing CCTV systems. Had this technology been in use aboard the President Eisenhower, the spraying fuel oil may have been detected well before the fire developed.

Read the full article on the IIMS website at **https://bit.ly/3PmGXgc**. Or scan the QR code.

Lack of training and inadequate PPE leads to fumigant poisoning reveals MAIB report

Posted on the IIMS website on 2 June 2022

The UK MAIB has published its preliminary report on a fumigant poisoning that took place on the general cargo vessel Thorco Angela, with one person injured as a consequence. A stevedore suffered sickness and disorientation after handling cans containing fumigant while discharging cargo from the general cargo vessel Thorco Angela.

Read the full article on the IIMS website at **https://bit.ly/3dfBEBH**. Or scan the QR code.

Luxury yacht fire most likely caused by electrical fault says NTSB report

Posted on the IIMS website on 2 June 2022

The fire that destroyed a luxury yacht near Key West in March 2021 most likely started from an electric source within the sound enclosure for the vessel's starboard generators, the National Transportation Safety Board (NTSB) report has determined. However, due to the extent of the fire damage, investigators were unable to conclusively determine the source of the fire.

The crew unsuccessfully attempted to extinguish the fire and abandoned along with two passengers using the vessel's tender boat. They were then picked by two U.S. Coast Guard boats without injury. The fire, however, resulted in the total loss of the $3.9 million yacht which sank a day later. An unknown quantity of diesel fuel oil was released, causing a small sheen.

Read the full article on the IIMS website at **https://bit.ly/3zZxKpI**. Or scan the QR code.

"Man marks the earth with ruin – his control stops with the shore." – Byron

Marine Safety Forum alert about corrosion in a fixed CO2 firefighting system

Posted on the IIMS website on 16 June 2022

The Marine Safety Forum has issued a safety alert to highlight an observation involving the CO2 firefighting system onboard a member's vessel. The vessel concerned found that during a routine monthly inspection of the fixed CO2 system, significant corrosion was noted. This resulted in it not being possible to insert the safety pin to isolate the cylinder during any maintenance. Photo A shows the safety lever and pin, unable to be positioned correctly in line with the pinhole.

Read the full article on the IIMS website at **https://bit.ly/3n2tf6n**. Or scan the QR code.

MAIB issues report into fatal capsize and sinking of scallop dredger Joanna C

Posted on the IIMS website on 23 June 2022

Early in the morning on 21 November 2020, the scallop dredger Joanna C capsized south of Newhaven, England; only one of the three crew survived. Joanna C's crew was hauling the gear when they noticed that the starboard dredge bar had become snagged on a line of whelk pots. The snag caused a heel to starboard from which the vessel could not recover, and it capsized rapidly.

The MAIB's investigation found that through-life modifications, culminating in extensive alterations in 2019, had reduced Joanna C's previously good stability to a state where it had very low reserves of positive stability and increased vulnerability to capsize.

Read the full article on the IIMS website at **https://bit.ly/3A92MLJ**. Or scan the QR code.

Capsize and sinking of whelk potter Nicola Faith with loss of 3 lives report published

Posted on the IIMS website on 23 June 2022

On 27 January 2021, the whelk potter Nicola Faith capsized and sank 1.9 miles north of Rhos-on-Sea, North Wales with the loss of its three crew members. The vessel had been extensively modified during its life which had significantly reduced its margin of positive stability. On the day of the accident the Nicola Faith had been loaded with catch and retrieved strings of pots to the point of instability, which resulted in the capsize and subsequently sinking of the vessel. Nicola Faith had not been fitted with a mandatory emergency beacon to alert to the capsize, and it was not reported as overdue until 1000 the next day. Following its salvage by the MAIB, a thorough inspection of the vessel was carried out to determine possible modes of capsize and a full assessment of its stability was undertaken.

Read the full article on the IIMS website at **https://bit.ly/3dn9mFt**. Or scan the QR code.

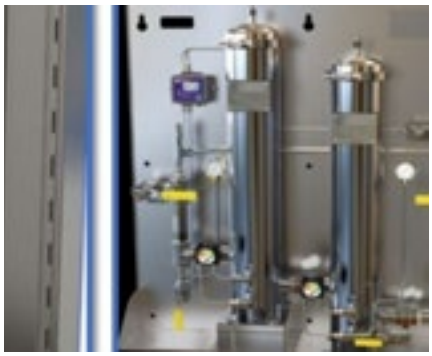
"Only fools and passengers drink at sea."
– Allan Villiers

Another serious lifeboat accident illustrates continued risk in drills

Posted on the IIMS website on 23 June 2022

Canada's Transportation Safety Board (TSB) has released a report on yet another serious lifeboat-drill accident, illustrating the continuing hazards of this routine SOLAS safety exercise. A failure of a lifeboat launch system on a merchant vessel can result in a fall from height, ending in injuries or fatalities.

Read the full article on the IIMS website at **https://bit.ly/3BVWOin**. Or scan the QR code.



Improperly maintained fluids in well control equipment systems

Posted on the IIMS website on 4 July 2022

The Bureau of Safety and Environmental Enforcement (BSEE) has informed the industry about several recent offshore incidences where fluids used in well control equipment systems have been improperly maintained.

According to BSEE, two identified fluid contamination issues include the following:
- Nickel leaching into demineralized water in well control equipment, fluid systems.
- Calcium soap build-up in some control fluid systems, potentially caused by mixing the liquid concentrate with a chemical commonly used to disinfect drinking water on a rig.

Read the full article on the IIMS website at **https://bit.ly/3dPn18C**. Or scan the QR code.

Master unaware of bow thruster's problems due to lack of mitigating measures reveals TSB report

Posted on the IIMS website on 8 July 2022

The Transportation Safety Board of Canada (TSB) has released its investigation report on a March 2019 berthing incident involving the roll-on/roll-off ferry Apollo in Matane, Quebec.

During the entry of the Apollo into the port of Matane, the master pushed the button on the starboard bridge wing console to transfer bow thruster control from the bridge; however, the transfer did not initiate because of a broken electrical wire. The wire was in poor condition and likely broke just prior to the Apollo's departure from Godbout when the console panel was opened as part of verifications to install a status indicator light for the bow thruster.

Read the full article on the IIMS website at **https://bit.ly/3QLsYSi**. Or scan the QR code.

Keel failure results in capsize

Posted on the IIMS website on 12 July 2022

The crew of the first Farr X2 have been rescued after the boat lost its keel on an overnight offshore qualifier. Nexba Racing, a new 30ft grand prix racer aimed at the short-handed market, was sailing in a 100nm qualifier off the coast of New South Wales, Australia in a light to moderate breeze and 1-2m seas when the keel attachment failed resulting in the boat capsizing. The two female crew were rescued after spending 15 hours drifting. The 9.2-metre boat is the latest project from Farr Yacht Design. She was built in Singapore by XSP and launched in May.

Read the full article on the IIMS website at **https://bit.ly/3Oqbx7Z**. Or scan the QR code.

Fire due to seawater entering the ventilation system reveals NSIA investigation

Posted on the IIMS website on 26 July 2022

The Norwegian Safety Investigation Authority (NSIA) has published its report on the fire on board 'MS Brim' in the outer Oslofjord on 11 March 2021.

Immediately before the fire broke out, the battery system was disconnected as a result of a ground fault, which was indicated on the panel on the bridge. Ground faults had been a recurring problem since the vessel was new. The crew therefore perceived the alarm as 'one of many', and did not consider it to be serious. They had no possibility of identifying the point of origin of the ground fault alarm or ascertaining how serious it was.

Read the full article on the IIMS website at **https://bit.ly/3ADtOuX**. Or scan the QR code.

Poorly implemented hot-work precautions led to fire on general cargo ship

Posted on the IIMS website on 8 August 2022

The Transport Accident Investigation Commission (TAIC) of New Zealand has published an investigation report on the general cargo vessel Kota Bahagia, which experienced a fire in the cargo hold forcing the crew to evacuate the ship.

TAIC engaged the services of a specialist fire investigator to complete a report on the origin and cause of the fire. The fire investigator's conclusion was that the most likely ignition sequence was a hot slag bead from the gas-cutting igniting the sawdust from the dunnage that was used between the cargo and the steel deck, resulting in a smouldering fire.

Read the full article on the IIMS website at **https://bit.ly/3AHChxl**. Or scan the QR code.

River cruise ship evacuated after suspected battery explosion

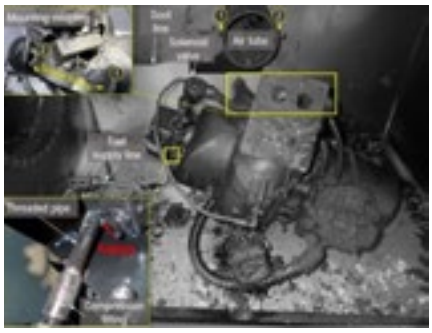
Posted on the IIMS website on 8 August 2022

Dutch officials are investigating an explosion aboard a river cruise ship docked in Amsterdam as a likely malfunction of the vessel's battery power system. The newly launched Viking Gymir, which was introduced by Viking for river cruises on the Rhine in 2022, features a new hybrid propulsion system that was developed in place of solely diesel propulsion on Viking's other Longships.

According to reports from the Amsterdam fire brigade, they were summoned to the vessel Monday, July 25 around 6:30 p.m. after reports of an explosion in the engine room followed by a small fire. Pictures posted on social media show the fire teams venting the ship.

Read the full article on the IIMS website at **https://bit.ly/3pEgEHG**. Or scan the QR code.

"The art of the sailor is to leave nothing to chance." – Annie Van De Wiele



Repeated removal and reinstallation of furnace's burner causes engine room fire

Posted on the IIMS website on 2 September 2022

The National Transportation Safety Board has published its accident report about an engine room fire on the Roger Blough during the dry bulk carrier's winter layup at the Fincantieri Bay Shipbuilding facility at Sturgeon Bay, Wisconsin. The Roger Blough had a fixed carbon dioxide (CO_2) fire-extinguishing system to suppress fires in the engine room; the system was disconnected during winter layup due to the risk of an accidental discharge with workers in the space. Six portable B-II fire extinguishers and one semiportable CO_2 fire extinguisher were also in the engine room.

The NTSB determines that the probable cause of the engine room fire aboard the bulk carrier Roger Blough was likely the repeated removal and reinstallation of the furnace's burner that led to the failure of its mounting coupling, resulting in the operating burner dropping to the bottom of its enclosure and fracturing its fuel supply line, which allowed diesel fuel to ignite.

Read the full article on the IIMS website at **https://bit.ly/3D5GQmv**. Or scan the QR code.

Corroded pipe led to oil spill

Posted on the IIMS website on 5 September 2022

In its latest safety bulletin, The Swedish Club has highlighted and analysed an incident involving a corroded pipe that caused an oil spill.

The 15 year-old bulk carrier was in dry dock completing its third special survey. As usual there were also many other maintenance tasks being carried out at the same time, including the replacement of a section of a de-aeration pipe in the cargo hold. The Chief Officer had discovered during a cargo hold inspection a month earlier that the de-aeration pipe appeared to be corroded. This pipe led from the sea chest, passing through the cargo hold, then through a heavy fuel oil (HFO) tank and finally out through the vessel's shell plate.

Read the full article on the IIMS website at **https://bit.ly/3efvdir**. Or scan the QR code.

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

Image courtesy of Geosight Ltd

Posted on the IIMS website on 5 September 2022

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.

Download the report at **https://bit.ly/3CWhqrv**. Or scan the QR code.

Hidden corrosion can cause dangerous failures

Posted on the IIMS website on 5 September 2022

The US Coast Guard has shared lessons learned from a marine casualty that resulted in a severe injury to a crewmember onboard a cargo vessel. The incident brought to light a dangerous and potentially fatal situation involving hidden corrosion on D-ring lifting points.

While positioning a removable hatch cover on the vessel, three of the four D-ring securing straps failed, causing an uncontrolled snap-back of the lifting sling assembly that struck the crewmember in the head. The three fractured securing straps showed similar failures with a significant amount of corrosion beneath the paint and on the underside of the straps. It is likely that just one D-ring failed initially, which would have instantly doubled the load on the two adjacent corner D-rings, both of which were apparently weakened and subsequently failed. Without proper and periodic inspection and replacement, corrosion and stress can eventually lead to deck fitting failures.

Read the full article on the IIMS website at **https://bit.ly/3x4hxgN**. Or scan the QR code.

Fishing vessel fire investigation highlights importance of PLBs

Posted on the IIMS website on 12 September 2022

The National Transportation Safety Board (NTSB) has published its investigation report for its investigation into the fire aboard the fishing vessel Blue Dragon on the November 10, 2021. No injuries or fatalities were reported, but the fire resulted in more than $500,000 in damages to the vessel.

NTSB concluded that the actions of the observer and deckhand contributed to the survival of the crew by retrieving the EPIRB and life raft before they caught fire. The observer's activation of the vessel's EPIRB and use of his NMFS-issued personal emergency communications equipment also contributed to the crew's timely rescue, since the equipment transmitted the crew's location.

Download the report at **https://bit.ly/3Lo26pJ**. Or scan the QR code.

Sinking of Emmy Rose brings fresh calls for mandatory personal locator beacons

Posted on the IIMS website on 14 September 2022

The National Transportation Safety Board (NTSB) is reiterating calls for personal locator beacons to become mandatory following its investigation the publication of its report into the 2020 sinking of the F/V Emmy Rose that claimed the lives of four crew members off Cape Cod.

The NTSB said the fishing vessel Emmy Rose likely capsized in 2020 after seawater collected on the aft deck and flooded into the vessel through deck hatches that were not watertight. NTSB investigators also found that two freeing ports, designed to drain water, were closed. That caused the vessel to list starboard, further reducing the Emmy Rose's already compromised stability. All four crewmembers were never found and are presumed dead. The vessel was declared a total loss valued at $325,000.

"It shouldn't take three marine tragedies to recognize the vital importance of personal locator beacons," said NTSB Chair Jennifer Homendy. "Given their wide availability and relatively low cost, I urge all fishing vessel operators to provide crewmembers with PLBs today—don't wait for a mandate from the Coast Guard. If the Emmy Rose crew had access to these devices, perhaps some of them would still be with us today."

Download the report at **https://bit.ly/3BkE0Yd**. Or scan the QR code.

ATSB issues report into fire onboard the BBC Rhonetal

Posted on the IIMS website on 21 September 2022

The Australian Transport Safety Bureau (ATSB) has published safety recommendations to the managers and parent company of the cargo ship BBC Rhonetal, following an investigation into a fire in the hold of the vessel at Port Hedland, Western Australia in March 2021.

Origin of the fire
Shortly before smoke was observed rising from the lower hold, the bosun had been cutting fastenings with a plasma torch in an area on the tween deck which was located above a vibrating screen assembly stowed in the lower hold. The screen was later identified by firefighters from the Western Australia Department of Fire and Emergency Services as the origin of the fire.

Download the report at **https://bit.ly/3UrDrVr**. Or scan the QR code.

Lithium-ion batteries contributed to fire on MY Siempre reveals MSIU report

Posted on the IIMS website on 29 September 2022

The release of the Malta's Marine Safety Investigation Unit (MSIU) report into the fire onboard MY Siempre has once again brought the subject of Lithium-ion batteries into sharp focus. The report says that it can't exclude the fact that the Lithium-ion batteries on board were either the cause of the fire, and/or a contributing factor to the intensity and spread of the fire. Neither can it exclude the possibility that the fire may have started due to a short circuit in the electrical power socket of the yacht's water scooter.

Conclusions
1. It was not excluded that the Li-ion batteries on board were either the cause of the fire, and / or a contributing factor to the intensity and spread of the fire.
2. The safety investigation did not exclude the possibility that the fire may have started due to a short circuit in the electrical power socket of the yacht's water scooter.
3. The yacht most probably lost its stability and eventually listed to port side as a result of the water from the fire-fighting activity.
4. The fire continued intermittently for two days after the accident, even with the yacht partially submerged.
5. The retention on board of a dead battery suggested that there was not full awareness of related fire hazards.

Download the full report at **https://bit.ly/3SuDMFC**. Or scan the QR code.

Dutch tall ship accident resulting in three deaths caused by wood rot says investigation

Posted on the IIMS website on 29 September 2022

An investigation into the fatal accident onboard the Amicitia where its mast broke and killed three people has revealed wood rot as the cause. The Dutch Safety Branch report revealed that there was no maintenance plan for the mast in question. The mast certificate issued in 2012, which was valid until 2018, caused the captain to think that this safety critical part of the ship met all safety requirements.

"In order to guarantee the safety of passengers, the historic ships sector must professionalise. With the commercial growth of the past decades, a backlog has been built up in knowledge and expertise about the safe maintenance of these special ships," said the report.

Read the full article at **https://bit.ly/3ytEwm2**.

Insulation panels contaminated with oil caused fire

Photo credit: FEBIMA

Posted on the IIMS website on 12 October 2022

Belgium's Federal Bureau for the Investigation of Maritime Accidents (FEBIMA) has released its investigation report into the fire that broke out on board TSHD UILENSPIEGEL resulting in damage to the engine room.

The fire was caused because insulation panels contaminated with oil were installed during the re-assembly of the main engine. In addition, insufficient control measures were in place to verify the condition of the insulation before installation. According to the report the oil ignited when the temperature in the exhaust line increased during the running in of the engine. In fact, the contamination with oil happened when the insulation was stored unprotected under a thermal oil line.

Download the full report at **https://bit.ly/3Cqjx56**. Or scan the QR code.

Closed main valve of cargo line resulted in serious injury

Posted on the IIMS website on 13 October 2022

Belgium's Federal Bureau for the Investigation of Maritime Accidents (FEBIMA) has issued its report following a serious incident onboard the mts Central Park, when a mist of sulphuric acid came into contact with the AB. The seafarer suffered second degree burns on his back, on the back of his neck, on his arms and his face.

Download the report at **https://bit.ly/3VYpcYM**. Or scan the QR code.

Crew unfamiliarity with fixed fire-extinguishing system contributed to towboat fire

Posted on the IIMS website on 17 October 2022

The National Transportation Safety Board (NTSB) has released an investigation report on the towing vessel Capt. Kirby Dupuis, which experienced an engine fire on November 9, 2021.

The NTSB determined that the probable cause of the engine room fire aboard the towing vessel Capt. Kirby Dupuis was a lube oil tube on the port main engine that vibrated out of a joint due to a missing retaining ring and mounting bracket, spraying pressurized oil that made contact with a hot exhaust surface and ignited.

Download the report at **https://bit.ly/3TQIY6G**. Or scan the QR code.

"I once knew a writer who, after saying beautiful things about the sea, passed through a Pacific hurricane, and he became a changed man." – Joshua Slocum

NTSB concludes high winds and lack of weather data contributed to the Seacor Power tragedy

Posted on the IIMS website on 19 October 2022

Ahead of the soon to be published full National Transportation Safety Board (NTSB) investigation report into the Seacor Power capsizing, the agency has issued a report abstract.

NTSB says it finds no fault in the captain's decision to get underway, but acknowledged gaps in weather data made available to the crew. The NTSB has issued three safety recommendations to the U.S. Coast Guard and reiterated a fourth one about the use of personal locator beacons following the agency's investigation into last year's fatal capsizing of the Seacor Power liftboat in the Gulf of Mexico.

The NTSB is also making one recommendation each to the National Weather Service, Federal Aviation Administration and the US Air Force, two to the Offshore Marine Service Association, and three recommendations to the owner and operator of the vessel.

Download the full report at **https://bit.ly/3VIGrxs**. Or scan the QR code.

Lack of personal flotation device led to skipper's death

Posted on the IIMS website on 28 October 2022

In a tragic accident, the failure by a skipper to wear a personal flotation device, harness and tether, caused his death when he was washed overboard during the 2022 Newport-Bermuda race in June 2022 is the finding from a review by US Sailing. Colin Golder was racing the Centurion 42, Morgan of Marietta, when he went overboard on 19 June 200 miles off the US east coast. Despite the efforts of the crew, which rescued Colin in challenging seas, he died soon after, most likely from drowning.

US Sailing's review and subsequent report of the incident attribute his death primarily to the failure to wear a personal flotation device and tether

Download the report at **https://bit.ly/3WcbuC0**. Or scan the QR code.

The leading worldwide professional body for the marine surveying profession, IIMS celebrated its 30th birthday in June 2021. The organisation has experienced strong membership growth in the past two years and now boasts over 1,000 members. New membership applications are always welcomed from marine surveyors and other interested parties. For more details go to https://bit.ly/3wjRAZ3.

The International Marine Contractors Association

The International Marine Contractors Association (IMCA) is a leading trade association representing the majority of contractors and the associated supply chain in the offshore marine construction industry worldwide.

Their members play a key role in the offshore oil, gas, and renewable energy industry sectors. Principally, this is through the engineering, procurement, construction, and installation of offshore wind farms and hydrocarbon production facilities, together with the ongoing life of field support and maintenance requirements of these assets. IMCA runs the successful eCMID inspection programme, accredited on their behalf by the Marine Surveying Academy, which encompasses a wide range of specialist vessel types from anchor handling tugs to jack-up barges.

IMCA was formed in 1995 through the merger of the Association of Offshore Diving Contractors (AODC) established in 1972, and the Dynamically Positioned Vessel Owners Association (DPVOA) established in 1989. IMCA uses its strong technical and safety focus to develop comprehensive best practice operating standards for the industry to improve its performance.

IMCA Safety Flashes are released at regular intervals each year. Current and back copies of safety flashes can be found at **https://bit.ly/3nqy9cX**.

The next few pages are dedicated to some of the safety reports issued in 2022 that are of most relevance to marine surveyors and vessel inspectors.

American P&I Club: unfamiliarity with semi-portable fire extinguishers

A generator in a ship underway experienced a catastrophic failure, resulting in a fire in the bilges. The two engineers in the engine room heard a loud bang, investigated and saw the fire. The senior engineer saw the fire was in the bilges and knew that the semi-portable foam fire extinguisher was appropriate to use. He sent the junior engineer to it with instructions to activate it and use it to fight the fire.

The junior engineer was unfamiliar with the operation of the semi-portable foam extinguisher and did not really know how to operate it. The delay of several minutes thus caused, allowed fire and smoke to spread. The engineers were forced to evacuate. The bridge sounded the general alarm and the crew were mustered. Once the engineers were accounted for, the engine room was isolated and the fixed CO_2 system was triggered to put out the fire.

The fire caused damage in excess of US$250,000. Had the fire been quickly extinguished, the damage would have been substantially less.

What are the lessons learned?

- Ensure crew members are properly trained and ensure they are familiar with the specific fire extinguishers and fire extinguishing systems on the vessel;
- Hold frequent training and drills to ensure that the excitement and adrenalin surge that happens during an emergency do not lead to delays or prevent appropriate actions from being taken.

Reprinted from IMCA Safety Flash 01/22 January 2022

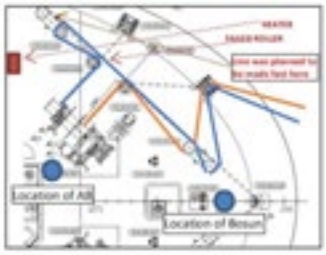
Deteriorated seals on emergency hatch

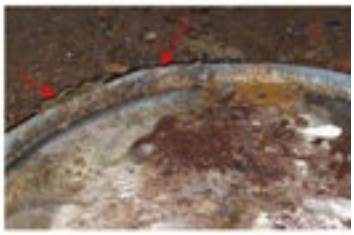
During an inspection of a vessel as a part of the 5-yearly docking, deteriorated seals were found on a number of hatches. Preliminary investigation was conducted and after crew feedback, it was revealed that the crew had observed this unsafe condition some while ago, ordered and received new seals, but had continued to operate with no action, waiting for docking in order to replace deteriorated seals etc.

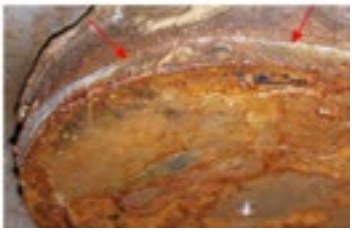
Hatch seals perform a vital role in a wide variety of marine applications. The hatch seal ensures that no liquid or gas is able to enter the vessel. After a period of use seals can deteriorate and become worn which reduces potential sealing properties. In this case, there was the risk of potential seawater leakage to the engine room had no action been taken.

Reprinted from IMCA Safety Flash 06/22 March 2022

Mooring near miss: Guide roller pin suffered material failure







A deck stand guide roller pin suffered material failure at its foundation whilst a vessel was mooring. Weather, wind and tide conditions were gentle at the time of the incident and the vessel was being held in position using thrusters with no appreciable movement or excessive loads which could have contributed to this incident.

During mooring operations at the forward station when the 3rd head line (blue line in diagram below) was being heaved up using the warping head (the plan was to make it fast on a bollard to the aft of the failed roller) the deck stand roller pin parted from it's base and hit a heater located just aft of this position.

There were no injuries. However, it is evident that any crew member standing in the line of fire of the damaged roller would have been seriously injured. The winch pulling force was 12 tonnes, the roller stand SWL was 33 tonnes.

What were the causes?

- The mooring layout on this vessel was complicated and also did not follow accepted and recommended practice, which caused overloading of structures;
- The routing of the mooring line caused an increase of axial forces on the roller;
- On further investigation it was noticed that roller pin was already in the process of degradation and at least some part of the welded structure had already disengaged from the base. The roller had not been inspected thoroughly;
- Multiple turns over various fittings increase the complexity of the mooring systems and introduce additional hazards such as complex snap back zones and overloading of structures.

Reprinted from IMCA Safety Flash 8/22 April 2022

Maintenance and painting – two incidents

An IMCA member reported two incidents in which something went wrong owing to failures in the maintenance process.

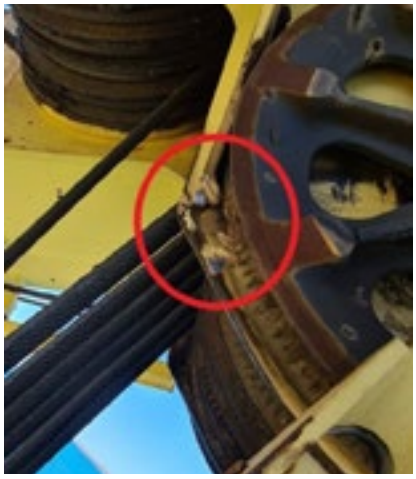
Incident 1: Material failure during lowering of lifeboat

Brake release wire drum overpainted

During lowering of a lifeboat, a small shackle broke. The shackle held the upper sheave guiding the brake release wire, resulting in the sheave falling down on top of the lower sheave. This caused the brake handle not to fall into brake position, with the consequence that the lifeboat did not stop lowering but kept on going down.

What went wrong
Investigation showed that that the brake release wire drum was stuck/ not turning, apparently due to there being an excessive amount of paint (see illustration) applied during the recently done maintenance. Once the paint was removed, the drum could be easily moved by hand.

Incident 2: Damaged sheave due to main hoist high hook failure



Damaged sheave

The main hoist hook block overshot the highest position alarm and ran into the sheaves from the main runner under the jib. The jib was lifted by the force of the main runner and the crane stopped automatically when the slack wire alarm of the topping wire was activated.

What went wrong
Investigation showed that one of the runner sheaves underneath the jib was bent slightly and unable to move freely. During the inspection of the high hook alarm, it was discovered that the flat bar (see illustration) in front of the sensor was not moving. It was stuck in place because of dry paint from maintenance that morning.

Further, the crane operator did not pay sufficient attention when working near the limits of the crane, not looking up to the hook.

Actions
- The damaged sheave was reshaped. Thorough examination of the sheave surface and inspection by means of dye penetration testing showed that there were no cracks;
- Ensure close monitoring the crane movements after each order given and when working near any of the crane limits;
- Test alarms after maintenance on the crane;
- After maintenance/painting check that all equipment parts are still movable and fully operational.

Reprinted from IMCA Safety Flash 11/22 May 2022

Exceeding electrical duty rating can lead to failure

The United States Coastguard (USCG) has published Safety Alert 03-22 relating to the importance of verifying the condition and electrical duty ratings of the motor starter contactors in winch controllers for lifeboat and rescue boat launching appliances.

There was a failure during the routine maintenance and recovery of a rescue boat, where the electrical motor contactor for the winch motor failed in an energized position (i.e. motor in an "on" or "hoist" condition). This failure occurred when the contactors fused together due to exceeded duty rating. Metallurgical/post-event analysis ruled out any other failures with the contactor. The hoist button, emergency stop, and limit switch circuits all failed to stop the winch from hoisting.

What went wrong?
The USCHG noted that analysis found that the contactors were not rated for intermittent cycling (start and stop sequences) of the winch and the contactor manufacturer had issued technical guidance on the issue of welded contacts. Intermittent cycling is a common practice during recovery of a lifeboat or rescue boat into the stowed position. A winch may be cycled after the boat has cleared the water to verify release gear condition prior to continued hoisting, possibly cycled several times during long hoists to reduce pendulum motions of the boat and cycled at approach to davit guides/stops. While commonly employed for a safe recovery process, intermittent cycling may exceed design and duty ratings of the electrical components.

Actions
The Coast Guard "strongly recommends that owners, manufacturers, operators and service providers, do the following:"

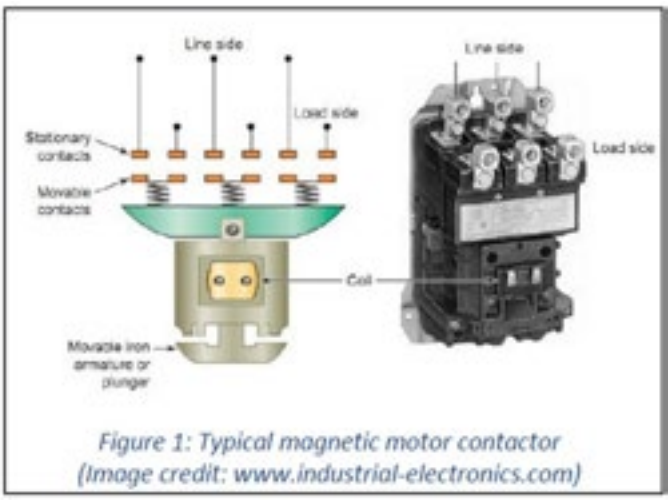


Figure 1: Typical magnetic motor contactor (Image credit: www.industrial-electronics.com)

- Verify condition of winch motor contactors and replace any contactors that show signs of excessive wear, overheating, or welding;
- Verify the duty cycle ratings of lifeboat and rescue boat davit electrical components and compare those ratings to recommended and commonly-practiced boat recovery procedures/processes;
- Verify the design of the davit safety devices (i.e. emergency stop and limit switches) to see if they will secure electrical power to the motor in the event of welded contacts;
- Implement training for all personnel that operate the davits to ensure awareness related to electrical duty cycles and actions to isolate power in the event of a welded winch motor contactor.

Reprinted from IMCA Safety Flash 13/22 May 2022

High potential: electric shock near miss

LO separator – MDO purifier rack

An engineer suffered a minor electrical shock while troubleshooting a faulty 690V electric motor. The engineer checked the drive belt and then proceeded to measure the phases. Measuring the phases was not in his initial plan when he prepared the troubleshooting. The incident occurred when he was measuring the phases.

The electric motor junction box cover was removed, and access to the wiring was good. Measurement was carried out using a multimeter. When he was about to replace the cover of the junction box, it touched one of the three phases and he suffered a minor electrical shock in his fingers. He was uninjured but had himself checked by the medic who confirmed this.

What went wrong?

- The engineer decided on his own, without discussing with anyone else, to proceed and measure the phases on a live electric motor without a Permit to Work nor Lock Out/Tag Out in place;
- He was wearing safety/rubber boots, coverall and safety glasses but not approved gloves.

Reprinted from IMCA Safety Flash 15/22 June 2022

Damage to flexible riser

Showing the flexible running through the flare in the moonpool area

During deployment of a water injection riser from a vessel, damage to the outer coating occurred when it came into contact with the sharp edge of the flare in the moonpool area. A water injection riser was being installed through a project-supplied flare in the moonpool via the vessel's Tiltable Lay System (TLS) at an angle of 6.8°. The flare had been designed to direct and protect the riser at the exit. However, design reviews, subsequent risk assessments and inspections had failed to identify the hazard of the sharp upper lip of the flare with the potential to damage the riser.

What went wrong

During design the sharp edge of the flare had not been identified as a hazard and therefore, was not chamfered for protection of the product;
The project risk assessment did not identify proper controls to prevent and mitigate possible damage to the product or its coating due to seabed topography, tilted TLS etc;
Lessons had not been learned – previous learnings from similar flexible product damage events had not been transferred to the project team prior to design.

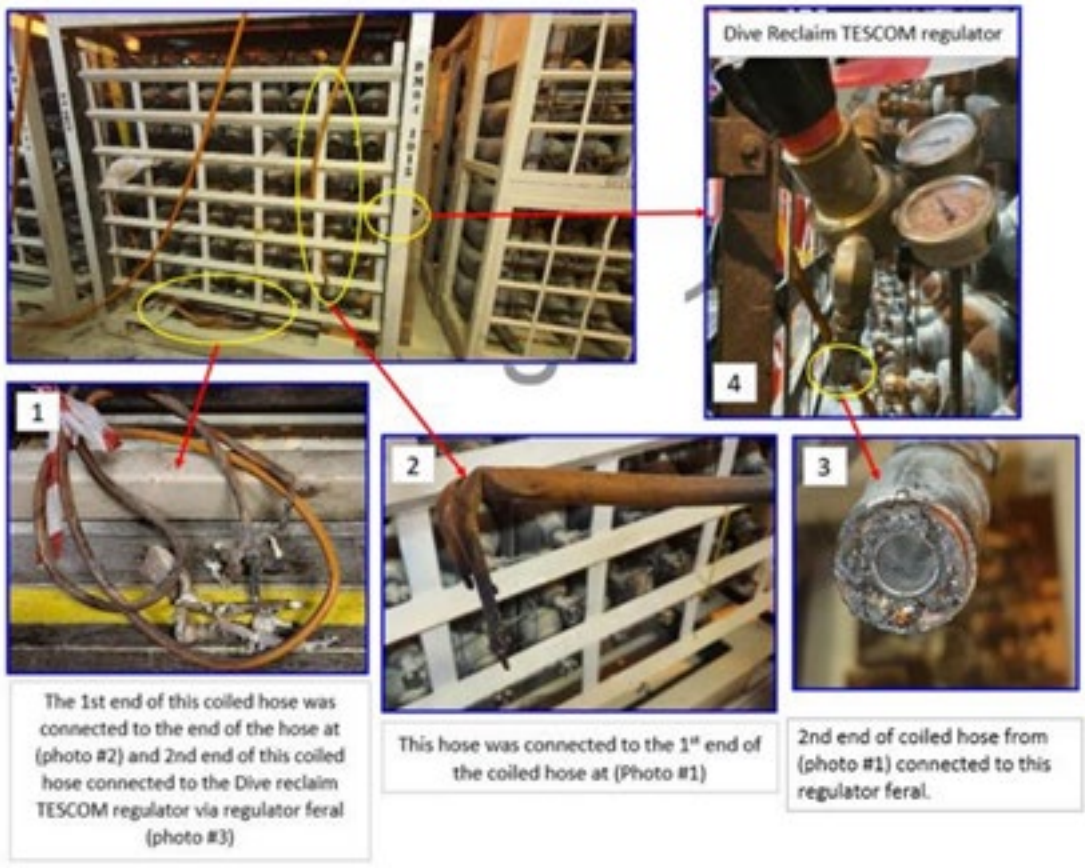
Recommendations

- Learn the lessons! Learnings from previous or similar flexible product damage events to be reviewed and considered during the full life cycle from design to installation;
- During design reviews and risk assessments specific to flexible products, ensure sharp edges and potential hazards that can cause damage are considered and mitigated;
- Project supplied equipment to be integrated into lay systems should be reviewed by vessel team before fabrication and then again at installation.

Reprinted from IMCA Safety Flash 18/22 July 2022

Flash fire on Oxygen gas quad hose

There was a flash fire on an Oxygen hose line onboard a DSV. The incident occurred during routine checks, when an LST (Life Support Technician) reported that the Oxygen supply pressure to dive control was low (25 Bar). SAT control informed Dive Control and agreed that a new Oxygen supply was required. The LST went to the appropriate quad (on the main deck), and started by closing the row of eight bottles of Oxygen before opening a new row. Whilst opening the new row of Oxygen supply bottles the LST heard an unfamiliar noise (a flapping sound from the regulator) and immediately closed the cylinder pillar valve and closed the valve on both regulators (SAT control and reclaim regulator valve) and quickly moved away from the Oxygen quad. The LST immediately returned to SAT control and reported to his supervisor. Shortly afterwards, the Oxygen hose burst followed by an explosion and flash fire at the reclaimed Oxygen hose line.



What went wrong – investigation findings

Investigation showed that the bullnose inlet (connection to the pillar valve) had no filter to stop rust contaminant from the cylinder going into the regulator. Small particles of rust from inside the cylinder accumulated inside the regulator causing high friction after the Oxygen release, resulting in heat and contributing to the spark, explosion and fire.

Reprinted from IMCA Safety Flash 18/22 July 2022

Incorrect operations result in failure of hoist

A chain hoist failure resulted in a chain link breaking which caused an 800kg load to fall to deck from a height of 1 metre. Personnel were working on a wind turbine foundation. A regular shaped load was being moved out of the tower using a chain block suspended from a cantilevered trolley beam on a temporary gantry structure erected on the site. A lifting bag was positioned beneath the gantry structure onto which to lower the winch. When the winch was 1 metre above the lifting bag, one of the chain links on the main chain hoist failed causing the load to fall. No-one was in the line of fire; no-one was injured.

Findings indicated that at some point during the operation, the chain had entered the hoist in a twisted or knotted configuration and excessive force applied resulted in damage to the chain link which subsequently failed.

- Insufficient attention was given to ensuring that the chain between the block and the load was not twisted or in a knotted configuration;
- The headroom between the gantry beam and the tower floor was less than expected which resulted in the chain hook having to be pulled as tightly into the block as possible to keep the load clear of the floor. This put additional load into the chain and block and left nowhere for any residual twist in the chain to go, causing the damage to the chain and its subsequent failure.

Reprinted from IMCA Safety Flash 17/22 July 2022

Links to all IMCA Safety Flashes published during 2022 to date.

January 2022 IMCA SF 01/22

- American P&I Club: unfamiliarity with semi-portable fire extinguishers
- Lifejacket battery caught fire
- Fire door left wedged open
- UK HSE: uncontrolled movement of fabrication caused injury
- LTI: person fell down hatch inside crane pedestal

Download the Safety Flash pdf at **https://bit.ly/3S9kViS** or scan the QR code.

January 2022 IMCA SF 02/22

- Bailout manifold failure
- Master links came free from lifeboat release hooks, releasing the lifeboat
- Three bolts sheared on a lifting trunnion
- Hose management and chemicals: crew person felt ill
- Chemical reaction: person injured during grouting operations

Download the Safety Flash pdf at **https://bit.ly/3fesztI** or scan the QR code.

January 2022 IMCA SF 03/22

- Near miss: divers umbilical drawn beneath a load
- Incorrect as-built drawing configuration
- Engine room fire on a ferry
- Radio interference from damaged equipment affects other vessels
- Life raft lashing parted in rough weather

Download the Safety Flash pdf at **https://bit.ly/3DOrwv4** or scan the QR code.

February 2022 IMCA SF 04/22

- Equipment on quay damaged when vessel started listing
- UK HSE: Offshore crane boom hoist failures
- Cargo shifted during heavy weather
- NTSB: Engine Failure leads to fire aboard offshore supply vessel
- NTSB: Failure to disconnect and secure vehicle batteries led to fire

Download the Safety Flash pdf at **https://bit.ly/3RfGmxO** or scan the QR code.

February 2022 IMCA SF 05/22

- Permit to Work and Isolation procedure not followed
- MSF: LTI – Fall from Height (control of work during SIMOPS)
- UK HSE: Poor control of work - worker suffered serious injuries
- Fractured finger while handling metal plates
- UK HSE: Liquid petroleum gas (LPG) leak

Download the Safety Flash pdf at **https://bit.ly/3UCg4J0** or scan the QR code.

March 2022 IMCA SF 06/22

- Fatal fall from collapsing scaffolding on a merchant vessel
- Non-fatal man overboard incident
- Line of fire: pinched finger between door and frame
- Get it fixed!! Deteriorated seals on emergency hatch
- MSF: Foreign object in eye

Download the Safety Flash pdf at **https://bit.ly/3SbRvB0** or scan the QR code.

March 2022 IMCA SF 07/22

- MAIB: Unexploded ordnance - subsea explosion causes injury and damage
- MAIB: Flooding, capsize and foundering of small vessel after issues with towing wires
- Overcoming Language Barriers
- MSF: Contact between Vessel and Offshore Installation
- Stored energy release: Two fatalities with tyres (IOGP)

Download the Safety Flash pdf at **https://bit.ly/3LCzNnC** or scan the QR code.

April 2022 IMCA SF 08/22

- Mooring near miss: Guide roller pin suffered material failure
- American P&I Club: Fire Started from cutting torch work
- NTSB: Dangerous engine failure – improper torquing
- MSF: Unsafe Cargo Transfer Using Pallets
- UK HSE: worker falls from height during oil platform decommissioning

Download the Safety Flash pdf at **https://bit.ly/3DNMOIX** or scan the QR code.

April 2022 IMCA SF 09/22

- MAIB Safety Digest 1/2022
- USB power bank (Lithium battery) fire
- USCG: Lithium battery fire
- UK HSE: worker died following fall from crane platform
- Riggers struck/trapped by pipe section

Download the Safety Flash pdf at **https://bit.ly/3C331sv** or scan the QR code.

April 2022 IMCA SF 10/22

- Communications: LTI finger injury during lifting operations
- COBRA System - Hose coupling cross threaded
- Diver experienced an air flow restriction
- Subsea transponder wire parted
- MAIB: Blockage of fixed CO2 fire extinguishing system pilot hoses

Download the Safety Flash pdf at **https://bit.ly/3StIRxu** or scan the QR code.

May 2022 IMCA SF 11/22

- Riggers injured while disconnecting rigging
- Near miss: Floor Plate fell from Main Mast during storm
- MAIB: Loss of containers overboard – task seen as routine
- Maintenance and painting – two incidents
- MSF: Manual Handling Injury During Bulk Hose Operations

Download the Safety Flash pdf at **https://bit.ly/3SeUlVW** or scan the QR code.

May 2022 IMCA SF 12/22

- Explosion - hot work in a flammable atmosphere (Transport Malta)
- Process Safety Fundamentals – IOGP / Step Change
- IOGP: Dropped object with potential for injury - riser release
- Safe Use of Ladders and Stepladders
- This is not a drill…an LTI during a drill (MSF)

Download the Safety Flash pdf at **https://bit.ly/3dJDQ4S** or scan the QR code.

June 2022 IMCA SF 13/22

- Surface decompression near-miss
- Near miss: grinder disc rotation set up in the wrong direction
- USCG: Exceeding electrical duty rating can lead to failure
- Searchlight fell from vessel during heavy weather
- MSF: Corrosion in fire-fighting equipment

Download the Safety Flash pdf at **https://bit.ly/3R8Rhcv** or scan the QR code.

June 2022 IMCA SF 14/22

- Crosby: Important safety notice for 7/8" 6.5t Anchor Shackles

Download the Safety Flash pdf at **https://bit.ly/3Rb0tgi** or scan the QR code.

June 2022 IMCA SF 15/22

- Fatal crush incident between platform supply vessel and fast rescue craft (2012)
- High potential: electric shock near miss
- Fire at sea – some timely reminders (Safety4Sea)
- NTSB: watertight doors – vessel sank after flooding
- Infection: a scratched elbow turns into an LTI

Download the Safety Flash pdf at https://bit.ly/3S3IYjk or scan the QR code.

July 2022 IMCA SF 16/22

- BSEE/USCG: Dealing with extreme weather events
- American P&I Club: Extreme bollard pull
- Lost Time Injuries due to a failed mooring line
- LTI: Struck when anchor wire end pulled free of drum clamps
- Damage to bulwarks during overboarding of mattresses

Download the Safety Flash pdf at **https://bit.ly/3fevSkB** or scan the QR code.

July 2022 IMCA SF 17/22

- Broken Chinese Finger
- Incorrect operations result in failure of hoist
- Man overboard from anchor handler tug
- Don't ASSUME – verify and check
- IOGP: Squeezed hand due to unintentional activation of winch

Download the Safety Flash pdf at **https://bit.ly/3Bxiqji** or scan the QR code.

July 2022 IMCA SF 18/22

- Flash fire on Oxygen gas quad hose
- Damage to flexible riser
- USCG: Unexpected Dangers: Lifeboat Remote Control Wires
- A focus on journey management
- Mixing of cleaning chemicals

Download the Safety Flash pdf at **https://bit.ly/3S9Wcey** or scan the QR code.

August 2022 IMCA SF 19/22

- Third-party truck not in appropriate or safe condition
- Machinery breakdown leads to a collision
- Equipment found live: drawings incorrect for Lock-out/Tag-out
- MSF: CO2 system left non-operational after servicing
- Accidental release of free-fall lifeboat

Download the Safety Flash pdf at **https://bit.ly/3r1wpsV** or scan the QR code.

September 2022 IMCA SF 20/22

- LTI: Diver suffered crush injury to finger
- High potential incident - Foot trapped under ram cylinder
- Fall leading to serious personal injury
- Chemical burns to body
- Personal injury – burns from hot engine oil to body and face

Download the Safety Flash pdf at **https://bit.ly/3dJFDqC** or scan the QR code.

September 2022 IMCA SF 21/22

- BSEE - "Green hats" – training and supervision of short service employees
- American P&I Club: Vessel grounding - fatigue was a factor
- MAIB: Capsize and sinking of fishing vessel Joanna C – vessel stability

Download the Safety Flash pdf at **https://bit.ly/3D4p4hO**. Or scan the QR code.

October 2022 IMCA SF 22/22

- Diver Finger Injury – Scrubber Blower Fan
- BSEE: Unsecured Pressurized Hoses Result in Hand Injuries
- Cook's arm scalded while removing food from oven
- LTI: fractured finger during anchor handling
- LTI: person struck by uncontrolled swing in chain

Download the Safety Flash pdf at **https://bit.ly/3TQyW5K**. Or scan the QR code.

October 2022 IMCA SF 23/22

- Serious injury during mooring operations: rope parted
- Failure of slings during loading operations
- BSEE: Stored Energy in Slings Causes Multiple Injuries
- Damage to chain hoist subsea
- Unsafe transportation and packing arrangements

Download the Safety Flash pdf at **https://bit.ly/3FbGhZs**. Or scan the QR code.

Reflections and highlights from UK Maritime Safety Week

This year's Maritime Safety Week commenced on 4 July. Over the course of the week, a series of blogs reiterating safety messages to the industry were published by the MAIB. A few of the highlights are published below.

Andrew Moll OBE

Opening Maritime Safety Week, Chief Inspector of Marine Accidents, Andrew Moll OBE, said:
"Today marks the start of Maritime Safety Week 2022, an important moment when the marine industry comes together to focus on how we can collectively continue to improve safety across the sector. As the MAIB has done in previous years, this week we plan to highlight a number of key areas of ongoing concern and reiterate the safety messages that the industry must note.

"Today I am going to concentrate on fishing vessel safety, which continues to require my close attention. In 2021, ten commercial fishermen lost their lives and nine out of the 22 investigations commenced by MAIB last year involved commercial fishing vessels. However, we will not lose focus on improving safety and will continue to strive to understand the causes of accidents on board fishing vessels so lessons can be learned, and more tragedies can be averted in this most dangerous of professions.

"Stability on board fishing vessels is a significant ongoing safety issue. The recent reports looking into the tragic accidents on board the potting vessels Nicola Faith and Joanna C have highlighted how modifications can compromise a vessel's stability. However, stability can also be compromised during fishing operations by, for example, overloading, which was the case in the accident involving Nicola Faith. The vessel had undergone several unapproved modifications, but our investigation found that the main trigger for the capsize was severe overloading by a combination of catch and fishing gear. The consequence in this accident was that all three crew members lost their lives.

"At the start of Maritime Safety Week, I would encourage all skippers and crews to take a long hard look at their vessel's stability and ask themselves some potentially challenging questions. How much have modifications eroded our vessel's stability since it was built? Do we have a safe procedure for when the fishing gear becomes snagged or picks up a heavy load?

Are we using the fish hold to best effect to minimise the weight on deck? I would urge crews to take a look at the Nicola Faith and Joanna C reports and heed the lessons the investigations identified."

One small step for maritime safety – the issue of unsafe pilot ladders

The MAIB's Annual Report published in June highlighted the issue of unsafe pilot ladders, a concern that has been regularly voiced by the industry. In 2021, the branch received almost 200 reports about substandard pilot ladders. Of those, 87% of the ladders were rigged incorrectly and the remainder were observed by the marine pilot as being materially defective – see image. Fortunately, serious accidents have been rare, but the potential for injury and even loss of life clearly exists.

For more information go to the Code of Safe Working Practices for Merchant Seafarers (COSWP) guidance at: ***https://bit.ly/3r4nGpm***

To mark this year's Maritime Safety Week, MAIB inspector Bill Evans has highlighted the key issues surrounding pilot ladders and his views on why they are so important.

Why is improving pilot ladder safety so important?
Marine pilots play a critical role in the safe operation of any harbour, where they guide almost every vessel in and out of the port. However, while the size and technological complexity of ships has increased, marine pilots still embark and disembark moving vessels by using a rope pilot ladder. The pilot transfer is a hazardous operation, so it is absolutely essential that these ladders are correctly rigged and their use properly supervised by the crew.

What are the things you should look out for when inspecting the safety of a pilot ladder?
The crew must inspect the pilot ladder before and after its use to verify that it is in good condition:

- ensure the ladder is in date by checking the maker's plate, normally found underneath one of the lower spreaders;
- inspect the ladder's side ropes to ensure that they are undamaged and in good condition;
- check the ladder's steps, making sure they are undamaged, clean, evenly spaced and horizontal;
- replace the ladder if there are any signs of damage, no matter how small. Someone's life may depend on it.

How do you rig a pilot ladder so it is safe?
To rig a pilot ladder correctly, it must be secured to strong points on the ship's deck by a rope stopper attached to the ladder's side ropes. Some of the reported incidents of substandard rigging have included the use of shackles or guardrails, which should never be used to secure the ladder. When a combination of accommodation and pilot ladder is being used, the lower platform of the accommodation ladder must be horizontal and secured to the ship's side so that the pilot can safely transition between the two. On some larger container vessels, a trapdoor arrangement is used, in which case the pilot ladder must extend above the platform to ensure that the marine pilot can safely transfer.

Finally, it is imperative that the pilot ladder is supervised by a qualified officer when in use, ready to take action if things go wrong.

Overall, what is the key advice you would give to someone who has a pilot ladder?
The three most important points are:

- inspect the pilot ladder before and after use;
- ensure it is well lit and rigged correctly;
- supervise its use, with a suitably qualified officer at the embarkation point who is in direct communication with the bridge and has lifesaving appliances close at hand, ready to respond if something goes wrong.

A reminder about mooring deck safety

A parted mooring line

MAIB took the opportunity during Maritime Safety Week to raise awareness of essential components for safer mooring operations.

Over the years, MAIB has seen many incidents where seafarers have been struck by mooring lines, unfortunately in some cases resulting in serious injury or death. Our Annual Report recently highlighted that such incidents continue to occur despite well published guidance on the subject. Even though there have been many advances in technology and automation in the shipping industry, mooring decks remain a place where people need to work in proximity to heavy lines under tension and interaction is unavoidable. Therefore, it is important that the safety guidance is followed. Below, we have emphasised three key components for safer mooring operations.

Equipment
Making sure the right equipment is used and then maintained in good condition is essential to keeping safe on mooring decks. Mooring lines need to be regularly inspected to make sure that wear and tear has not degraded the line, there are no hard spots on synthetic lines and no signs of contamination by oils and greases. The lead of each mooring line needs to be considered carefully to avoid placing additional stress on the lines or introducing chafe points. Inappropriate or poorly maintained equipment has previously contributed to incidents where lines have parted or released under tension and struck crew members, therefore meticulously checking equipment for anything untoward is critical for the safety of the crew.

Planning and Briefing
Planning is important when conducting any mooring deck operations. The risk assessment and control measures should be reviewed for each new operation and planning should take account of the expected mooring configuration, paying particular attention to the potential risk of snapback. Areas where mooring deck operations take place need to be kept tidy and mooring lines should be closely monitored on all berths – this is vitally important when there is a large range of tide. Planning effectively also involves making sure that all seafarers are adequately briefed on the mooring configurations, that they know what to do, and that they are positioned on parts of the deck that are less dangerous. Enough crew should be on deck to conduct the job safely, but too many crew should be avoided as it can unnecessarily place others at risk.

Communication
Finally, crew communication is of the utmost importance when working on mooring decks, because it has the potential to be extremely hazardous if people are not able to interact clearly. Everybody involved in an operation needs to communicate effectively, but must also consider the number of circuits in use: too many voices on the same circuit can cause confusion and risk over-talking; however, using separate circuits can leave some crew in the dark. Ultimately, effective communication can be the difference between being safe and putting people at risk, therefore it is important that the mooring plan ensures that good communications can be maintained between all parties involved in the mooring operation.

The Maritime Accident Investigation Branch (MAIB) has issued the following accident reports and safety briefings during 2022.

Subsea explosion resulting in damage to crab potting vessel Galwad-Y-Mor and injuries to crew

Published 20 January 2022

Access and read the report at **https://bit.ly/3R6pmu7** or scan the QR code.

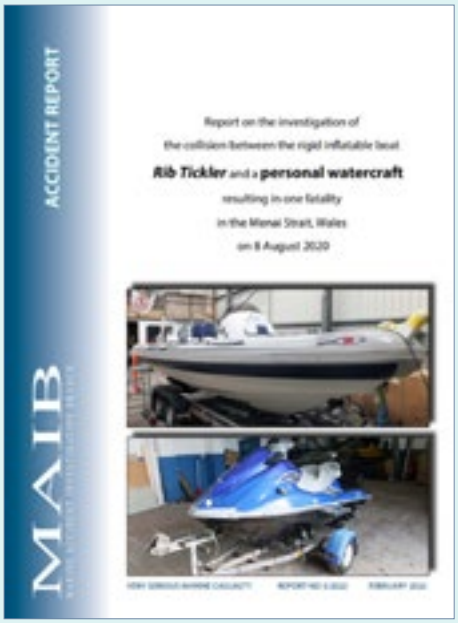
Flooding, capsize and sinking of prawn trawler Diamond D

Published 9 February 2022

Access and read the report at **https://bit.ly/3RrBLcn** or scan the QR code.

Collision between rigid inflatable boat Rib Tickler and a personal watercraft with loss of 1 life

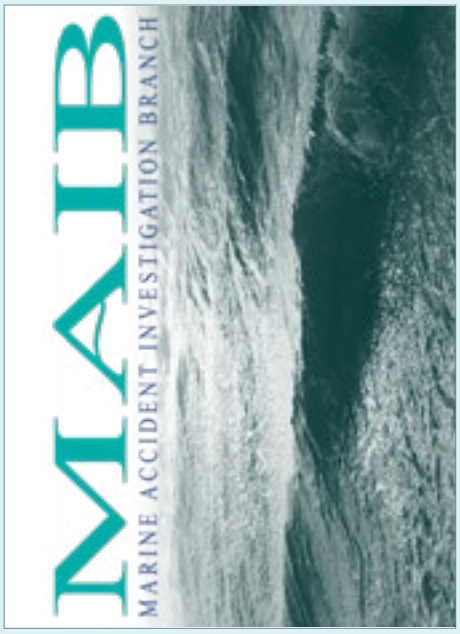
Published 17 February 2022



Access and read the report at **https://bit.ly/3PQUPiX** or scan the QR code.

Close quarters near miss between cruise vessel Maud and ro-ro ferry Gardenia Seaways

Published 25 February 2022



Access and read the completed preliminary assessment at **https://bit.ly/3pHE6nu** or scan the QR code.

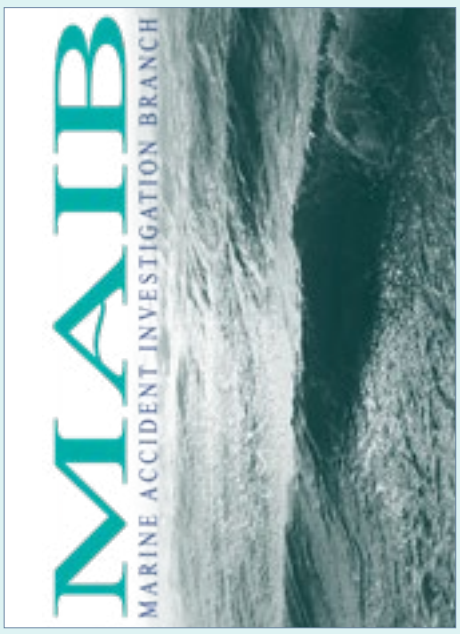
Safety warning issued after discovery of blocked fixed CO2 fire extinguishing system pilot hoses

Published 10 March 2022

Access and read the safety bulletin at **https://bit.ly/3CuGFki** or scan the QR code.

Grounding of chemical tanker Chem Alya

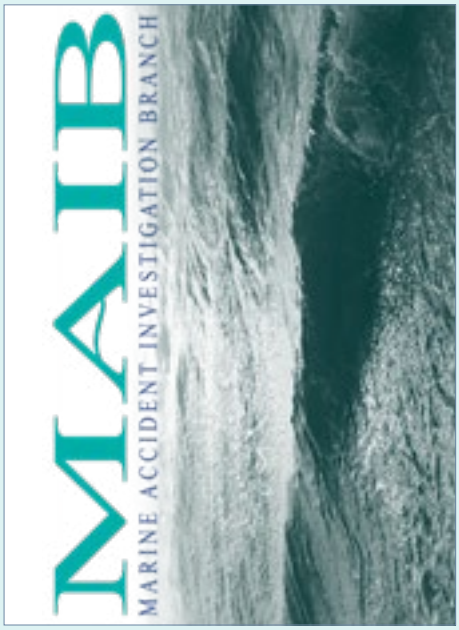
Published 18 March 2022



Access and read the completed preliminary assessment at **https://bit.ly/3wt4e9i** or scan the QR code.

Loss of 34 containers overboard from cargo vessel Francisca

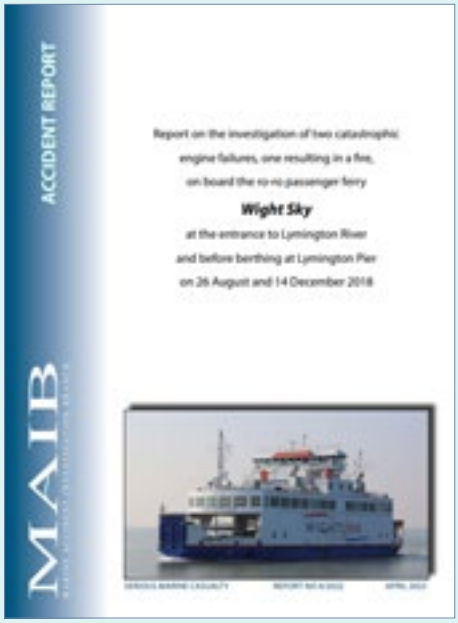
Published 13 April 2022



Access and read the completed preliminary assessment at **https://bit.ly/3dP665P** or scan the QR code.

Two catastrophic engine failures, one resulting in a fire, on board ro-ro passenger ferry Wight Sky

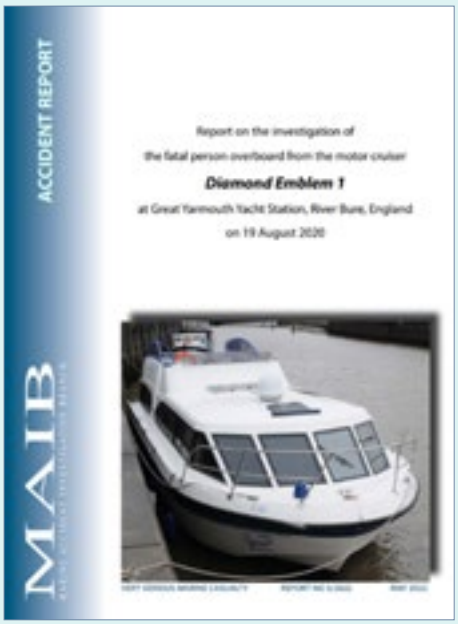
Published 28 April 2022



Access and read the report at **https://bit.ly/3ckI2Yd** or scan the QR code.

Person overboard from motor cruiser Diamond Emblem 1 with loss of 1 life

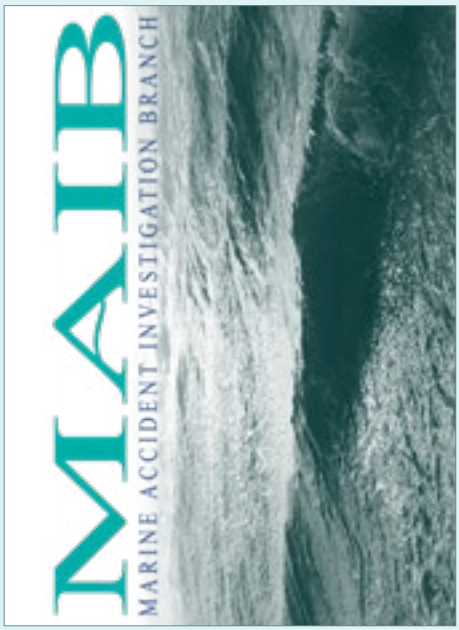
Published 5 May 2022



Access and read the report at **https://bit.ly/3AIBTyp** or scan the QR code.

Fumigant poisoning on general cargo vessel Thorco Angela with 1 person injured

Published 18 May 2022



Access and read the completed preliminary assessment at **https://bit.ly/3Ak6ReV** or scan the QR code.

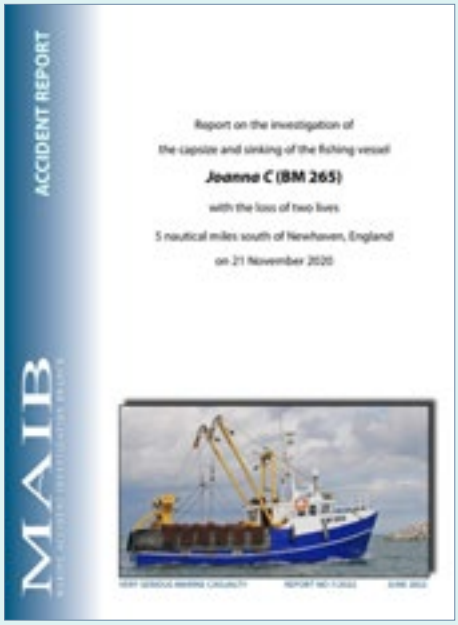
Person overboard from single-handed creel fishing vessel Saint Peter with loss of 1 life

Published 16 June 2022

Access and read the report at **https://bit.ly/3pLgD4K** or scan the QR code.

Capsize and sinking of scallop dredger Joanna C with loss of 2 lives

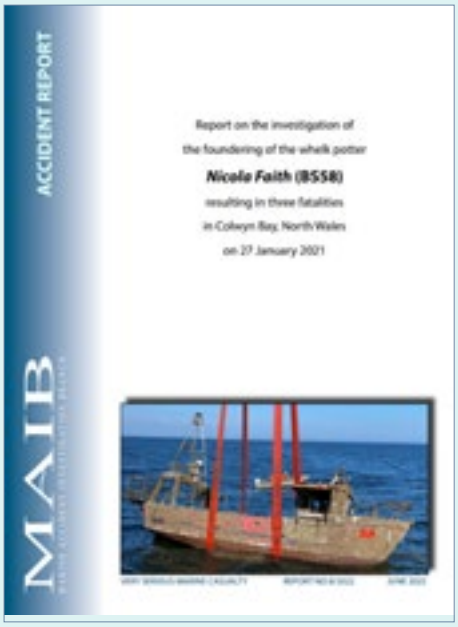
Published 22 June 2022



Access and read the report at **https://bit.ly/3dJZVjt** or scan the QR code.

Capsize and sinking of whelk potter Nicola Faith with loss of 3 lives

Published 23 June 2022



Access and read the report at **https://bit.ly/3QOk1Yw** or scan the QR code.

Mooring deck accident on general cargo vessel Teal Bay with loss of 1 life

Published 14 July 2022

Access and read the report at **https://bit.ly/3Ksc6Oo** or scan the QR code.

Mooring failure of the drill ship Valaris DS-4

Published 2 August 2022

Access and read the report at **https://bit.ly/3TrFUyK** or scan the QR code.

Flooding and sinking of survey workboat Bella

Published 2 September 2022

Access and read the report at **https://bit.ly/3SwyLf1** or scan the QR code.

Person overboard from fishing vessel Hendrika Jacoba with the loss of 1 life

Published 22 September 2022

Access and read the report at **https://bit.ly/3raPvgp** or scan the QR code.

Capsize of single-handed creel fishing vessel Goodway with loss of 1 life

Published 22 September 2022

Access and read the report at **https://bit.ly/3xUmI3g** or scan the QR code.

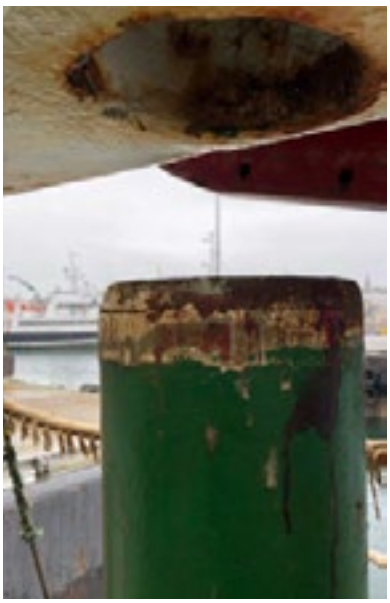
Case studies follow extracted from the MAIB Safety Digest Spring 2022

MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

SAFETY DIGEST

Lessons from Marine Accident Reports

1/2022



Featuring introductions by Bob Baker | Pete Dadds | Pip Hare

Best of intentions, worst of outcomes

cargo vessel | flooding

A small dry cargo vessel was in harbour and its engineers were investigating why ballasting operations were taking longer than normal. Their plan was to clean the ballast system's seawater strainer and then check the ballast pump's condition.

To isolate the strainer, the second engineer (2/E) went to the ballast control panel and shut the automatic butterfly hull valve between the hull inlet and the strainer (Figure 1). The hull valve indicated as shut on the ballast control panel. The 2/E then went to the engine room and manually shut the isolation valve between the strainer and the pump (Figure 1).

With the chief engineer present, the 2/E loosened the strainer lid's retaining bolts and tried to lever the lid off with a screwdriver, but it would not budge. The engineers then rigged a chain block to the strainer lid, having completely removed all the bolts. As the weight came onto the chain

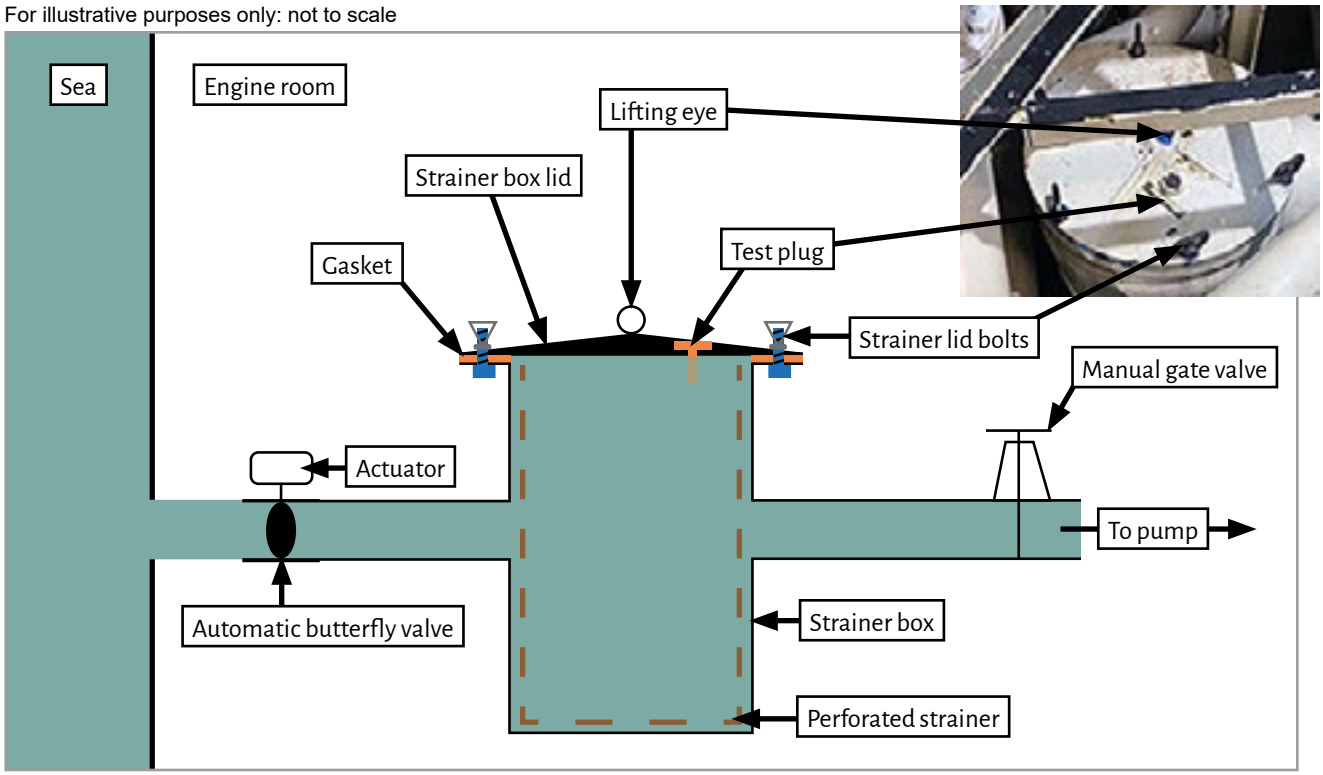


Figure 1: Ballast water valve and strainer arrangements

The Lessons

1. **Procedure →** The strainer lid was fitted with a test plug (Figure 1), provided to make sure the system was not still under pressure before the lid was removed. However, the engineers involved in this accident neither followed an approved procedure for the strainer clean nor opened the test plug and so were unaware of the faulty hull valve that meant the system was still open to sea pressure. Additionally, when they tried to remove the lid with a screwdriver, the absence of any leakage underpinned their assessment that the system was isolated.

block the strainer lid flew off and seawater began flooding into the engine room. The engineers tried unsuccessfully to replace the lid, then decided to evacuate the engine room and raise the alarm.

In the engine room, the water level rose over the bottom plates until the seawater pressure equalised and the vessel settled with the engine room partly flooded (Figure 2). The vessel was made watertight after a diver fitted an external patch over the hull valve. Thereafter, the contaminated water was pumped out to road tankers for disposal and the vessel was dry docked for repairs.

After the accident, a technical investigation identified that the automatic butterfly hull valve was defective, and had remained partially open when indicated as shut on the ballast control panel. This investigation also found that the strainer was clean but that a ballast pump defect had caused the slow ballasting operations. The company has provided a revised safe system of work for strainer cleaning.

Figure 2: The flooded engine room

2. **Check →** Given that the hull valve indicated shut on the ballast control panel, it was reasonable of the engineers to assume this was correct. However, where there is doubt or, for instance, when reducing a system to single valve isolation to sea, it is good practice to visually inspect the valve's mechanical position indicator as well as checking its remote indication. A further precaution is to loosen the nuts, then use wedges to crack the lid open; if water floods out, the retaining nuts can be retightened to seal the strainer lid.

The stress of catastrophic engine failure

cargo vessel | machinery

The main engines of a roll-on/roll-off (ro-ro) cargo vessel were regularly maintained by an engineering contractor. Over the years the contractor had slowly taken over the work from the engine manufacturer to reduce costs. The contractor was approved to work on the large diesel main engines on board the ship and undertook their work in accordance with the ship's planned maintenance system. Although they had access to most of the engine manufacturer's maintenance instructions, they did not have the detailed information to perform the work on the engine connecting rod bearings. Nevertheless, their own instructions were similar.

The engine manufacturer advised that the replacement of a connecting rod bearing should be undertaken at one of their specialist centres due to the difficult machining and reinstallation process; because of its interference fit in the bearing housing, this involved cutting the bearing shell axially to a fine tolerance to enable it to collapse and then using liquid nitrogen to contract the new shell for installation in the housing. The ship's operator was aware of this instruction but had no oversight of how the contractor completed the work.

The contractor, having undertaken similar work on different manufacturers' engines, considered that the other manufacturers had a simpler and easier approach to the connecting rod bearing replacement. The contractor chose to remove the bearing shell with a disc cutter and use a gas cutting torch to heat up the bearing housing to slide the shell into position. In doing so, they introduced notches and heat marks into the bearing housing (Figure 1).

Figure 1: Bearing housing notches from disc cutter

The Lessons

1. **Qualified →** It is not unusual for contractors to undertake major maintenance work on board a ship; however, it is imperative that they can provide assurance that they have the skills and equipment to meet the original equipment manufacturer's expectations of how it should be done. Operators and managers must endeavour to maintain a level of oversight that ensures work is completed to a satisfactory standard.

2. **Maintain →** Whereas components were overengineered and could withstand poor treatment in the past, this is not always the case for modern, technically advanced machinery. Engine components, particularly on modern engines, are designed to maximise the power output while keeping component mass and size to a minimum. The components are thus highly stressed and their correct maintenance is critical. What may seem an innocuous cut or heat mark from using inappropriate tools can have serious consequences when the component is heavily loaded or operating at high revolutions. This type of damage affects the component metallurgy and introduces stress raisers, which can lead to fatigue failure.

Some months later while on passage, a sudden and increasingly loud sound emanated from the main engine. The duty engineer recognised that something serious was occurring and took cover as the main engine catastrophically failed. Major internal engine components were thrown out through the crankcase and a large fire engulfed the engine room (Figure 2). The duty engineer was fortunate to escape through the thick black smoke that enveloped the engine room as he struggled out of the compartment via the secondary escape route, without the use of an emergency escape breathing device (EEBD).

Figure 2: Post-failure engine component debris in sump

Once the vent flaps had been closed and the duty engineer accounted for, the engine room was flooded with carbon dioxide, which extinguished the fire. However, it was some days before the engine room could be re-entered as it was unclear whether all the carbon dioxide bottles assigned to the main engine room had been discharged.

3. **Equipment →** The duty engineer was lucky to escape from the smoke-filled engine room. While the ship had the correct number of emergency escape breathing apparatus as required when the ship was constructed, it did not have to comply with a 2003 International Maritime Organization (IMO) circular that required one EEBD to be positioned on each deck or platform level near the secondary means of escape. Ship managers and operators should consider increasing and improving EEBD distribution to maximise the likelihood of escape from a smoke-filled space.

4. **Signage →** The carbon dioxide fixed firefighting system was activated and successfully extinguished the fire. However, it was unclear in the bottle room which gas bottles discharged to which space and therefore impossible to confirm that all bottles had been discharged. This led to delays in gaining entry to the space, which in some circumstances could be critical. Such a problem can be avoided with clear labelling and a means of checking that the necessary bottles have been discharged, as outlined in MGN 389 (M+F), *Operating Instructions and Signage for Fixed Gas Fire-Extinguishing Systems*.

No going back

passenger transfer vessel | contact

A passenger transfer vessel was approaching a wind farm turbine with three crew and three windfarm technicians on board. It was the first trip of the day and weather conditions were favourable with good visibility, a light breeze and gentle sea. The vessel propulsion system's landing mode gave the skipper precise manoeuvring control when approaching wind turbines to embark or disembark passengers.

As the vessel approached the turbine's landing platform, the skipper reduced speed and selected the landing mode in preparation for the technicians' transfer. The skipper moved the propulsion control lever to astern to further reduce speed. However, the vessel did not respond as expected and so he increased the lever fully astern. This had no effect and the transfer vessel made heavy contact with the landing platform.

The impact caused a bow indentation (Figure 1) and buckling damage to the hull plating (Figure 2). One of the technicians was injured when he was thrown against the table in front of his seat; he was treated by ambulance paramedics when the vessel returned to harbour.

Figure 1: Indentation damage to the passenger transfer vessel's bow area

The Lessons

1. **Risk →** A post-accident technical analysis identified that the loss of propulsion control resulted from a seizure of the mechanical arm controlling propeller pitch. This occurred because the installation arrangement resulted in excessive wear, with a consequent risk of the pitch control arm locking when in use; something that the manufacturer was able to replicate in post-accident trials. Although not the cause of the accident, technical analysis found excessive water ingress in an electrical terminal box (Figure 3) on the propulsion control system. It was further established that the water ingress was caused by previous maintenance to an adjacent seawater cooler, when residual water had been allowed to drain over the electrical control box. Since the accident, the company has taken action to improve the installation arrangements of the propeller pitch control system and relocated the seawater cooler.

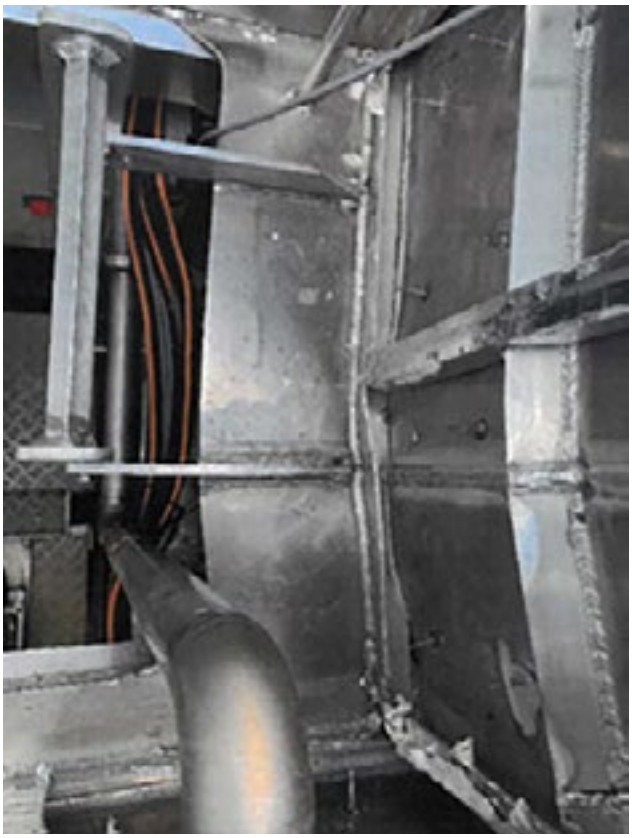


Figure 2: Deformed internal frames

Figure 3: Water ingress damage (unrelated to the propulsion control loss)

2. **Communicate →** It is important to keep passengers informed if things are going wrong. Although this accident was hard to prevent, post-event CCTV analysis indicated that there was about 10 seconds between the skipper realising that control was lost and the impact. This is a very short timeframe in which to deliver an emergency response; however, taking any opportunity to warn passengers and call for them to 'brace' would potentially reduce the risk of injury.

3. **Maintain →** Take care with maintenance and repairs. The residual water that drained away during the seawater cooler maintenance should have been prevented from flowing over electrical components. Taking time to protect other equipment from damage during maintenance tasks will prevent damage and future breakdowns.

4. **Check →** Always check the propulsion manoeuvring control response. The vessel was on its first trip of the day out to the wind farm. At the end of the passage, and before the precise manoeuvring, a full function check of all propulsion modes, including 'testing the brakes' by going astern, may have detected the problem in advance of the heavy contact.

Fretting failure in gearbox

live fish carrier | machinery

It was a poor night with high winds and rough seas when a live fish carrier lost propulsion due to a gearbox failure. Without propulsion, the vessel lay beam on to the sea and began to roll heavily, making life extremely uncomfortable for the four crew on board. The vessel was less than 2 nautical miles (nm) from land and was being blown quickly onshore by the prevailing wind. The master of the stricken vessel raised a VHF distress transmission. Fortunately, another fish carrier heard the distress call and was near enough to get a towline onto the drifting vessel before it grounded on the rocky shoreline. A little later, a lifeboat and emergency towing vessel arrived and accompanied both vessels to a safe harbour.

An inspection the following day found that the main input shaft (see figure) along the top half of the gearbox had failed. The damaged parts were dismantled and dispatched to the gearbox manufacturer who established that the most likely cause of failure was fretting (micro movement) between the gearwheel and shaft, which introduced a crack to the area and resulted in failure. Examination revealed that the failure occurred where the shaft transitioned to the flange for the gearwheel.

The vessel was out of service for nearly a month while a new shaft was fabricated and fitted.

The Lessons

1. **Maintain →** The vessel had a history of propeller fouling and minor groundings. The controllable pitch propeller had developed a malfunction, during which the response was erratic and jerky.

    - Intermittent problems with propulsion should not be left unattended. Defective propulsion could lead to navigational accidents if vessel control is erratic, especially in shallow and busy waterways.

    - Events that stress the propeller can cause significant loading on the driving gear, resulting in relative movement between gearwheel and shaft. Failure is almost inevitable when a crack develops.

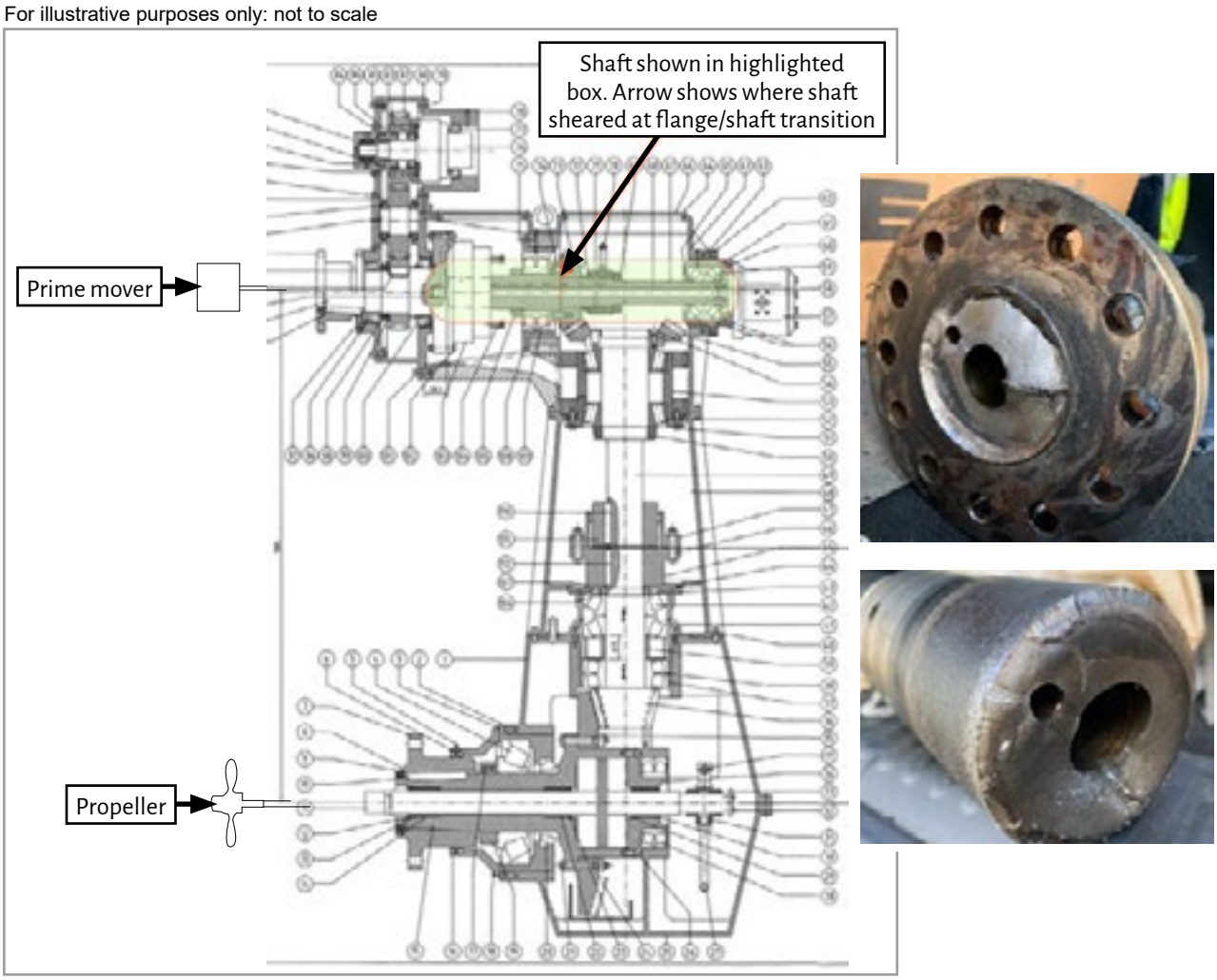


Figure: Gearbox damage and (inset) broken shaft

2. **Check →** Since its delivery in 1996, the manufacturer had not serviced or inspected the vessel's gearbox. Routine inspections and regular gearbox oil analysis were not conducted.

    - The gearbox is a complex item of machinery. It needs routine inspection and frequent monitoring to ensure that incipient failures are detected early and corrective actions taken. Regular gearbox oil analysis can be used to detect particles, and therefore provide an early indication of excessive or uneven wear on the components.

The price of FAME?

beam trawler | machinery

A 15m beam trawler suffered engine failure while fishing and had to be towed back to port by a Royal National Lifeboat Institution (RNLI) lifeboat. Nobody on board was injured and there was no external damage to the vessel.

A service engineer's investigation found that the engine failure was caused by clogged engine fuel filters, serious damage to the engine fuel system and contamination within the fuel tank, which resulted in extensive engine repairs and complete fuel system cleaning.

The trawler's fuel supplier had recently started to provide fuel containing Fatty Acid Methyl Ester (FAME), commonly known as biodiesel. DfT's Renewable Transport Fuel Obligation required that certain non-road mobile machinery vehicles burned FAME fuels; this regulation applied to some inland waterway vessels, but not to seagoing vessels. However, some suppliers mistakenly believed it was mandatory to supply seagoing vessels such as pleasure yachts and fishing boats with a marine gas oil fuel that contained up to 7% FAME.

FAME-based marine fuels present certain challenges to safe engine operation:

- FAME is hygroscopic so tends to attract the moisture often found in marine environments;
- FAME and the associated water provide an ideal culture for microbial biological contamination, more commonly known as diesel bug (see figure);
- Diesel bug can cause expensive fuel system problems, resulting in blocked filters, damaged fuel pumps and injectors, a contaminated fuel tank and, ultimately, engine failure. Modern common fuel rail engines may be especially sensitive to this problem due to high operating fuel pressures and temperatures and large fuel return flow back to tank;
- FAME can be corrosive to rubber and copper and lead to fuel system damage such as leaking seals;
- FAME fuels tend to oxidise quickly and should not be stored for long periods.

Figure: Fuel filter clogged with diesel bugs

The Lessons

1. **Communicate →** Suppliers should inform their customers that their fuel contains FAME.
2. **Maintain →** Fuel suppliers who choose to supply FAME to seagoing vessels should make sure moisture does not accumulate in their shore tanks and that the fuel is regularly tested for bugs.
3. **Check →** Vessel owners should check FAME fuel compatibility with the engine manufacturer.
4. **Procedure →** Vessels choosing to burn FAME fuel may require additional fuel filtration.
5. **Action →** FAME suppliers and users should use fuel stocks quickly to reduce the risk of oxidisation.

Case studies follow extracted from the MAIB Safety Digest Autumn 2022

MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

SAFETY DIGEST

Lessons from Marine Accident Reports

2/2022

Featuring introductions by Julian Hughes | Jim Portus MBE | Rachel Andrews

Practice makes perfect

passenger ferry | machinery

A laden roll-on/roll-off (ro-ro) ferry was nearing the end of its sea passage and preparing to enter harbour. In the engine control room (ECR), the engineering team were preparing the main propulsion plant for entering harbour. The plant consisted of two propeller shafts that were each driven by a main engine via a clutch and gearbox. Each individual power train had a shaft alternator that supplied power to either the main switchboard or a dedicated bow thruster motor. Two additional diesel generators supplied auxiliary power to the main switchboard when the shaft alternators were connected to the bow thruster motors. A power management system automatically maintained the electrical integrity of all supplies.

An engineer in the ECR attempted a remote start of one of the diesel generators but it failed to start. The engineer then went to the machinery space and started the engine in local control. The second diesel generator was also started. At the same time, the senior engineer went to investigate a stabiliser room bilge alarm that had activated.

At the main switchboard in the ECR, the engineer set the power management system to manual to connect the running generators to the switchboard and manually disconnect the shaft alternator (Figure 1). During this operation, the first diesel generator engine tripped on low lubricating oil pressure and the vessel lost electrical power. The main engines continued to run for a few minutes before they stopped due to a lack of fuel pressure.

On the bridge, the officer of the watch (OOW) turned the ferry away from danger and an anchor was prepared for letting go. The vessel's emergency generator automatically started supplying critical systems such as steering and communications when the power failed.

Figure 1: Main switchboard

The Lessons

1. **Equipment →** Let the system do the work. The vessel had a fully operational power management system for maintaining electrical power. When the system was set to manual to connect the incoming diesel alternators to the main switchboard, the power management system was thereafter unable to automatically restore power. This extended the period when the vessel was not under command. The design intent for the power management system was to quickly and efficiently detect and isolate power generation issues when operating in automatic mode.

2. **Check →** Be inquisitive. After a local engine start, it is good practice to check that the engine is running correctly and that pressures, temperatures and fluid levels are correct (Figure 2). The first generator stopped when the oil level in the sump fell, causing a loss of lubrication oil pressure and subsequent power failure; an

The senior engineer returned to the ECR and saw that the second generator was running but not supplying the main switchboard as both the engine and power management system were under manual control. He switched the generator and power management system to automatic control, immediately restoring power. On restarting the main engines, the vessel resumed passage without further incident.

Figure 2: Lubricating oil purifier

Figure 3: Diesel generator

oil level check may have indicated that there was a problem. The failure to start was associated with the low oil level in the sump; it is good practice to check running machinery before standby to ensure that potential critical failures are identified.

3. **Maintain →** Conduct rounds. The low oil level in the generator was caused by a fault with the lubricating oil purifier cleaning the engine's oil. The purifier had started to dump the oil to a waste tank (Figure 3). Regular and comprehensive machinery rounds may have picked this up before the situation became critical.

4. **Qualified →** Check the system. The vessel's monitoring and alarm system had recently been upgraded but, due to incorrect wiring, a generator's low oil pressure alarm was indicated as the stabiliser room bilge alarm. Critical system warnings and alarms must be tested and verified as operating correctly on completion of monitoring and alarm system modification work.

Leave it be

river ferry | fire

A high-speed river ferry was on passage back to the company's pontoons after a period of maintenance. There were no passengers on board, just the master and two crew. During the passage, the fire alarm sounded for the starboard engine compartment; the master monitored the closed-circuit television (CCTV) and after a few moments saw smoke and then flames (Figure 1).

The master and crew followed the emergency procedure for an engine fire: the engine was shutdown, the compartment was sealed off, and the fixed carbon dioxide (CO_2) fire extinguishing system was initiated. The master assessed that the situation was under control and informed the port authority of his intention to continue to the intended berth, with a request for the local fire brigade to meet the ferry on arrival. The master continued on passage with one engine in use and the crew monitored the bulkhead and deckhead temperatures around the compartment; water hoses were prepared for boundary cooling although this was not judged necessary.

Once the ferry was berthed, the local fire and rescue service boarded the vessel to take charge of the situation. Without liaising with the crew, one of the fire officers opened the access hatch to the starboard engine, causing rapid reignition of the fire with significant flames and smoke emanating from the compartment (Figure 2). This forced the fire and rescue team to retreat to gather their firefighting equipment and the fire was eventually extinguished by completely flooding the compartment with water. The reignition of the fire caused severe damage (Figure 3) to the engine and the starboard engine compartment, requiring extensive repairs.

Figure 1: Engine fire seen on the CCTV

Figure 2: Flames emanating from the engine compartment hatch after reignition

The Lessons

1. **Action →** The master and crew took the appropriate actions in this situation. The closing down of the engine compartment and timely use of the fixed firefighting system stopped the fire from spreading further and reduced the flames. Hotspot monitoring of the compartment by the crew ensured that they were prepared to react to any change to the situation. The engine compartment needed to remain sealed until the deckheads achieved an ambient external temperature. The master also made the appropriate calls to the local authorities, ensuring that assistance would be on hand when the ferry arrived alongside.

Figure 3: Fire damage in the engine compartment

2. **Communication →** The local fire brigade inadvertently reignited the fire by opening the access hatch. This was inappropriate as the situation was under control and the correct action would have been to leave the compartment sealed until the deckhead temperature had fallen to ambient level. The master remains responsible for the vessel and communication is vital to build a clear picture of the situation. The fire officer's actions were well meaning; however, the outcome was avoidable damage to the vessel.

Safety equipment saves lives

trawler | man overboard

On a bright, fresh autumn morning, a small trawler left harbour for a day's fishing with a skipper and crewman on board. Once past the breakwater, the skipper handed over the watch to the crewman and went below to rest. The crewman was wearing light clothing and a personal flotation device (PFD) and carried a personal locator beacon (PLB) (see figure).

During the passage to the fishing grounds, with the vessel under autohelm steering, the crewman left the wheelhouse to prepare the fishing gear on deck. As he was leaning over the transom to rig the trawl wires, the crewman lost his balance and fell into the sea; his PFD inflated and he shouted to get the skipper's attention but this was not heard. The crewman then activated his PLB to raise the alarm ashore. The fishing vessel continued its passage with the sleeping skipper unaware that the crewman was overboard.

The coastguard received the PLB's signal and immediately initiated the launch of two local lifeboats and a search and rescue (SAR) helicopter. Other vessels in the area were also alerted. The trawler's skipper awoke during the SAR operation and informed the coastguard that his crewman was missing. At about the same time, the crewman was located and rescued by a lifeboat; he was transferred by helicopter to hospital, where he was found to be unharmed by his experience.

Figure: PFD and PLB used by the crew member

The Lessons

1. **Equipment →** PFDs save lives. The crewman was in the water for about 80 minutes before being rescued, which is a significant period of time to survive in seawater without lifesaving equipment. The PFD was absolutely crucial in keeping the crewman afloat, with his head out of the water; because there was no need for him to tread water to continue breathing, he could save his energy while awaiting rescue.

2. **Communicate →** PLBs also save lives. Because the crewman carried and activated a PLB, the coastguard was alerted to the emergency almost immediately and able to send rescue assets quickly. It is impossible to know the delay that would have been incurred had the alarm not been raised until the skipper realised he was alone; however, it is likely to have been significant. Importantly, a PLB transmits the distressed individual's position to the coastguard, which is vital for both a swift and effective search and the survival of the person in the water. A PLB is smaller than a mobile phone and a relatively inexpensive item of safety equipment that, in this case, undoubtedly contributed to the successful outcome of this rescue.

ocean SIGNAL

PLB1 USER MANUAL

IN CASE OF EMERGENCY

USE ONLY IN CASE OF GRAVE OR IMMINENT DANGER

- **PULL THE ANTENNA OUT FROM THE BODY TO ITS FULL EXTENT USING THE BLACK TAB.**

- **LIFT THE FLAP UP**
- **PRESS THE ON KEY FOR ONE SECOND TO ACTIVATE THE BEACON. THE GREEN LED WILL FLASH TO INDICATE ACTIVATION**
- **RELEASE THE ON KEY.**

- **ENSURE THE ANTENNA IS HELD VERTICALLY WHILE OPERATING THE PLB**
- **THE STROBE LIGHT WILL START FLASHING TO INDICATE IT IS ACTIVATED**

NOTE: Refer to section 3.2 for deactivation instructions

3 Version 01.03 23/10/2017

Beam drop

beam trawler | machinery

A beam trawler was taking fresh water on board from a quayside connection when the skipper decided to even out the vessel's list by topping up the outboard (port) derrick, from which its fishing gear was suspended. The plan was to finish taking on water and then lower the beam and attached trawl gear onto the deck, ready for the next trip. As the harbour was quite busy, another beam trawler had been berthed outboard of the vessel.

All seemed to be progressing well until there was a sudden loud bang. Peering out from the wheelhouse, the skipper saw that his port side derrick, beam and fishing gear had fallen onto the wheelhouse roof of the other vessel (Figure 1). Fortunately, the uncontrolled descent of the derrick and fishing gear had been checked by the outboard vessel's backstay, which meant that this vessel sustained very little physical damage. With noone on the upper deck of the outboard vessel and all of the inboard vessel's crew in the wheelhouse or predesignated safe zones, there were also no injuries.

The company investigation identified that the derrick had been inadvertently over-topped, resulting in too much force being applied to the topping wire. On examination of the fallen gear, it became clear that the force had caused the welds on the port derrick lifting lug to fail (Figures 2 and 3). The lug had been supporting the weight of the derrick and the suspended gear so, when the weld gave way, the block, derrick, beam and fishing gear had come crashing down.

Figure 1: The fallen fishing gear on the outboard fishing vessel

Figure 2: The failed weld on the gooseneck joint

The Lessons

1. **Plan →** Every lifting operation, no matter how routine, can be hazardous. By having, and sticking to, a lifting plan, it can be relatively simple to make sure that no-one gets hurt when things go wrong. By making safety a routine matter, injuries can be avoided. This includes thinking about the possible impact, literally in this case, on adjacent vessels and warning them of your intended operations. The crew's use of predesignated safe zones during the lifting operation was positive and helped prevent potential serious injuries.

1 https://www.legislation.gov.uk/uksi/2006/2184/contents
2 https://www.gov.uk/government/publications/mgn-619-loler-and-puwer-regulations-2006

2. **Check →** Most fishing vessels rely on lifting points. Regular inspection, at least annually, of these lifting points by a competent person in accordance with the requirements of the Lifting Operations and Lifting Equipment Regulations 2006 (LOLER)[1] and Marine Guidance Note 619 (F)[2] can save lives. Lifting points are subject to intense loads and their failure can have significant consequences.

3. **Revise →** In this case, it would have been easy to just weld the lug back on and think nothing more of the accident. By more thoroughly examining what happened, the owner has produced a new lug arrangement that includes a preventer, fitted strain gauges and refined the lifting plan. Clear markings on the topping lift wire also indicate the safe working range. There is a lot to learn from every accident and near miss – taking the time and effort to do so pays dividends.

A bit of a blinder

commercial rigid inflatable boat | collision

In calm, clear, sunny conditions, a commercially operated RIB with a skipper and seven passengers on board was conducting a high-speed adventure ride close to the shore in an estuary, with moored boats nearby.

During the trip, one of the passengers near the bow stood up, pointed ahead, and tried to get the skipper's attention. Unable to see from the driving position at the rear of the RIB, but appreciating that there may be trouble ahead, the skipper put the outboard engines into neutral. However, this action came too late to prevent a collision with a small, unmanned tender tied to a nearby mooring (Figure 1). The tender was badly damaged (Figure 2) but there were no injuries to anyone on board the RIB.

Figure 1: CCTV image just prior to the collision

The Lessons

1. **Margin of safety →** Every vessel must proceed at a safe speed so that proper and effective action can be taken to avoid collision. This collision was a close call and it was extremely fortunate that nobody was in the tender. In a busy estuary with moored boats, dinghies, canoes, or even swimmers, a safe speed will almost certainly mean a non-planing slow speed whereby immediate action can avoid an accident.

Figure 2: Damage to the unmanned moored tender

For illustrative purposes only: not to scale

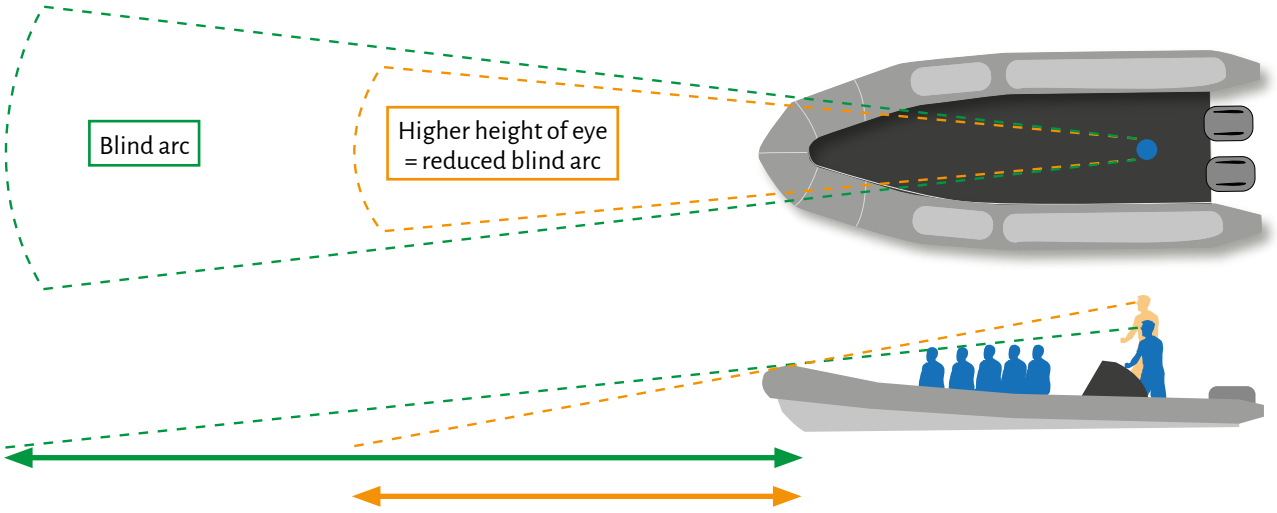


Figure 3: The effect on blind arc by raising the driver's height of eye

2. **Observe →** Integral to operating at a safe speed is keeping an effective lookout. RIBs, particularly those with the driving pedestal aft, may have a blind arc immediately ahead whose size will depend on several factors, including the boat's bow up attitude and the skipper's height of eye. Figure 3 illustrates the potential impact of raising and lowering the driver's height of eye, which RIB skippers should understand and manage. The company modified the RIB after this accident, raising the deck at the driver's position to improve visibility immediately ahead.

Cocktail capsize

rigid inflatable boat | capsize

It was a bright, sunny day and six friends were enjoying an outing on a RIB in a large, sheltered estuary in light winds. The group were dressed in swimwear but no one was wearing a PFD. The RIB's driver was familiar with the estuary, having undertaken rescue duties at a local sailing club.

The group began their trip by heading to a waterside restaurant for lunch and cocktails; the convivial atmosphere continued into the afternoon with more alcoholic drinks being consumed from a cool box on board. After an unsuccessful attempt at finding seals, the group decided to head out of the estuary to the open sea to use an inflatable ringo towed behind the RIB.

The Lessons

1. **Risk →** Do not mix alcohol with powerboating. Alcohol dulls reaction times and can lead to impaired judgment. In this case, the RIB driver had consumed at least four units of alcohol during the afternoon. Although he did not feel impaired as a result, the alcohol may have contributed to the decision to head into the surf conditions and the subsequent loss of control and capsize. This case ended with all participants safe and well and with the vessel recovered; however, the MAIB has investigated many cases where the outcome has been less fortunate. The lure of a refreshing drink on a sunny afternoon can be compelling, but alcohol and boating do not mix well and the non-alcoholic option is a safer choice.

2. **Plan →** Local knowledge is of little value without planning. The group had no fixed plan for their afternoon and the trip outside the estuary into the hazardous surf was undertaken on a whim. The RIB driver was unaware of the state of the tide and depth of the water and was therefore unprepared for the dangerous conditions, despite which he headed straight for the surf. These actions demonstrated a lack of risk appreciation.

A strong ebb tide was running and there were shallows outside the estuary's entrance that were notorious for creating dangerous, rough seas. The RIB's driver headed out towards the choppy surf. After jumping over a few waves, the driver decided to try and get out of the surf and turned sharply to starboard. As the RIB turned it was hit by a wave and capsized, flinging the group into the water. The engine stopped because the driver was correctly attached to the boat's kill cord.

The skipper of a nearby yacht witnessed the capsize and called "Mayday" on VHF channel 16. The yacht stood by until rescue craft arrived but could not make an approach because of the shallow water and hazardous seas around the RIB. All members of the RIB group were recovered by a local rescue craft and taken ashore by the lifeboat for medical observation (see figure). Fortunately, although shocked, none of them were injured. The upturned RIB was towed back into the harbour and recovered.

Figure: The capsized RIB and rescue vessels on scene

3. **Procedure →** Wearing a kill cord can save your life and those of your passengers. Many accidents, including those resulting in serious injury and death, have been caused by kill cords not being worn. Thankfully, the RIB's driver was wearing the kill cord correctly and the engine stopped when he was thrown from the helm during the capsize.

4. **Equipment →** PFDs are crucial safety equipment. This group were fortunate that the capsize was witnessed and rescuers arrived quickly. Even at the height of summer, the sea temperature around the UK coastline is cool enough that tiredness and cold can rapidly set in. Without a means of keeping your head above the water, the survival time between entering it and being rescued becomes critical.

SAFETY REPORTS

Maritime Safety Report 2012-2021

Shipping has seen a significant improvement in safety over the past decade as higher standards of ship construction and operation have cut the number of casualties, but emerging risks from new fuels and digital technologies must be mitigated to maintain progress, according to DNV.

Download the pdf report at **https://bit.ly/33HKN16**.
Or scan the QR code.

MAIB Safety Digest April 2022

The MAIB Safety Digest April 2022 features 25 case studies and draws the attention of the marine community to some of the lessons arising from investigations into recent accidents and incidents. It contains information that has been determined up to the time of issue.

This information is published to inform the merchant and fishing industries, the recreational craft community and the public of the general circumstances of marine accidents and to draw out the lessons to be learned.
The sole purpose of the MAIB Safety Digest April 2022 is to prevent similar accidents happening again.

Download the pdf report at **https://bit.ly/3PfMKUB**. Or scan the QR code.

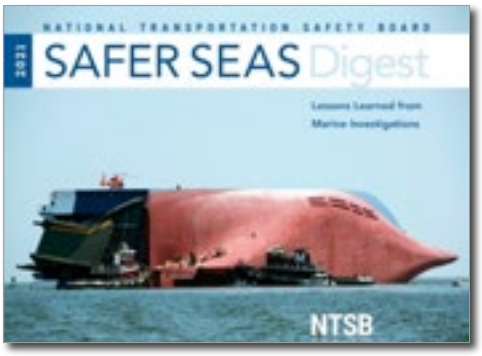
MAIB Safety Digest October 2022

Andrew Moll OBE, Chief Inspector of Marine Accidents at the Marine Accident Investigation Branch writes, "Welcome to MAIB's second Safety Digest of 2022. I will start in the usual manner by thanking Julian Hughes, Jim Portus and Rachel Andrews for their respective introductions to the merchant, fishing and recreational sections of this edition. Each is an expert in their own field, and their industry insights to safety help bring contemporary context to the cautionary tales in the following pages.

We tend to think of the news as something fairly transient. Our media quickly moves on to the next sensational story and, to use an old saying from the days when chip shops wrapped food in newspaper to keep it warm, "Today's headlines are tomorrow's chip wrappers". But the real world is not like that. Accidents have consequences, and Julian Hughes's description of how passing through a powered watertight door affected him is a fantastic example of how an accident can resonate and impact on people's behaviour long after the event itself.

Download the pdf report at **https://bit.ly/3fIIReS**. Or scan the QR code.

SAFETY REPORTS



Safer Seas Digest 2021 published by NTSB

The National Transportation Safety Board (NTSB) published its 96 page Safer Seas Digest 2021 in mid October, highlighting the most important lessons learned from 31 maritime tragedies that took place over the course of last year including capsizes, contact, collisions, fires, flooding and groundings.

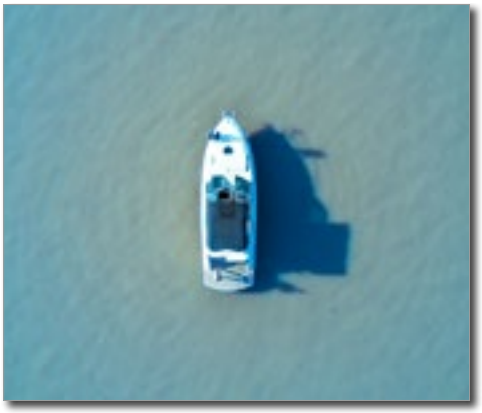
Among the key investigations included in the report are the sinking of Scandies Rose, where five lives were lost, and the capsizing of Golden Ray, one of the most expensive marine accidents in history.

Download the pdf report at **https://bit.ly/3fz6BCn**. Or scan the QR code.

ABS Port State Control Quarterly Report Q4 2021

The ABS Port State Control Quarterly Report (PSC) provides information with photos of deficiencies identified on ABS vessels during inspections carried out by the various PSC regimes globally during the 4th Quarter of 2021. This report is being made available to assist owners and surveyors by providing awareness of potential areas of concern that have been identified on ABS classed vessels.

Download the pdf report at **https://bit.ly/3nfoNkE**. Or scan the QR code.



Coast Guard releases 2021 boating safety statistics

With the pandemic putting more people than ever on the water and consequent rise in boating accidents and fatalities, there's some better news in the newly released 2021 U.S. Coast Guard Recreational Boating Safety Statistics.

The latest Coast Guard report shows double-digit declines year-over-year across the board in the main boating safety indicators: Boating accidents dropped 15.7%, injuries decreased 17.2%, and fatalities dropped 14.2%. The 2021 fatality rate decreased to 5.5 deaths per 100,000 registered recreational vessels, a 15.4% reduction from 6.5 deaths per 100,000 in 2020.

"The new report shows a dramatic decrease in injuries and fatalities, more than I can recall in recent memory," said BoatUS Foundation for Boating Safety and Clean Water president Chris Edmonston. "However, even with Covid restrictions lifted and boating no longer one of the few ways to recreate with the family, operator inexperience remains one of the top risk factors contributing to accidents." Operator inattention, improper lookout, machinery failure and excessive speed round out the list.

"The need to focus on these five basics and the continued need for boating safety education has not changed," added Edmonston.

What's influencing these latest boating safety numbers? "We're unsure if this latest data is an anomaly or a trend, but we believe the increasing number of states requiring mandatory boating safety education, as well as states requiring education for a greater portion of their boating citizens, is having a positive effect," said Edmonston. He also notes, however, that paddlecraft operators remain a concern, as they typically don't have any requirements for education before hitting the water. Where the data was known, 2021 statistics show that 15% of deaths were attributed to kayaks — unchanged from the year prior.

Download the pdf report at **https://bit.ly/3BdUtiu**. Or scan the QR code.

The German Bureau of Maritime Casualty Investigation annual report published

The German Bureau of Maritime Casualty Investigation (BSU) has published its 67 page annual report and it doing so it has noted that the total number of notifications is significantly higher than in 2020.

There were 659 incidents reported in 2021 in comparison with 602 the previous year – an increase of almost 20%. The number of reports outside the statutory responsibility of the BSU is almost identical in terms of actual figures (249 in 2020 versus 247 today) but has fallen in percentage terms from 42% to 38%.

In particular, marine casualties according to the IMO Code have increased from 109 to 132, representing an increase of more than 20%. The number of incidents has also increased by almost 15% from 244 to 280. BSU is encouraged that the number of fatalities and injuries in merchant shipping remains at a very low level compared to previous years.

The distribution of marine casualties according to the IMO Code within German sea areas is similar to the previous year. The port of Hamburg and the River Elbe, as well as the Kiel Canal and its locks, continue to be the most dangerous places for commercial shipping due to the traffic and the confined fairways.

The Baltic Sea leads in terms of figures because of the large number of commercially used (chartered) recreational boats that are involved in an accident, i.e. that usually run aground and have to be towed free. Although minor, these are marine casualties within the meaning of the regulations because they are used commercially.

General cargo ships once more lead the way when it comes to distribution by type of ship. They are followed by the other vessels, the commercially used recreational craft and container ships. 'Others' include seagoing ships covered by the SUG that have yet to be mentioned, such as tugs, pilot boats, offshore supply vessels or others.

The most common technical cause is damage to the main engine. Damage to the main engine or also to the rudder is often the cause of a SMC for purely statutory reasons and although they usually go unnoticed and are without consequences, they are anything but harmless. By way of example, a breakdown of the main engine causes a ship to run aground, a tug tows the ship back into the fairway and after repairs her voyage continues.

Causes attributable to human error have been supplemented by a number of items to produce a better analysis. For example, the typical simple navigational error (putting the rudder to an incorrect angle) is new in order to enable a differentiation from the incorrect assessment of the situation (such as underestimating wind or current, etc.).

The operating error is also new. As the name suggests, this involves the occurrence of corresponding consequences (e.g. breakdown of the main engine) after equipment is not operated in the manner intended.

Standing at 32 cases, 'error in judgement' is still a dominant factor. However, 'simple navigational error', which was not explicitly reported in 2020, also takes up a large share (18 cases) and even led to an SMC in four cases.

At first glance, the comparatively high figure for navigational errors is alarming, i.e. incorrect route planning or selection, which led to serious marine casualties in half the cases (7 out of 14).

Read the full report at **https://bit.ly/3uM0U8E**. Or scan the QR code.

Port State Control Australia 2021 Report published

The Australian Maritime Safety Authority (AMSA) has released its Port State Control (PSC) Annual Report for 2021, which shows that detention and deficiency rates per inspection have continued to remain low. AMSA Executive Director of Operations, Michael Drake, said the authority's reputation for having a zero-tolerance approach to non-compliance with internationally agreed standards, continued to have a positive influence on the quality of ships being brought to Australia.

Key highlights

26,400 ship arrivals by 6,170 foreign-flagged ships

2,820 PSC inspections

159 ship detentions.

Bulk carriers accounted for 56.1 per cent of ship arrivals and 60.7 per cent of PSC inspections.

Port State Control inspections were carried out at 53 Australian ports.

The average gross tonnage per visit was 54,015 GT compared to 54,318 GT in 2020.

The average age of ships calling Australian ports remained at 11 years, the same as 2020.

The 2021 detention rate sat at just 5.6%, down slightly from the 2020 detention rate of 5.9%. The 2021 deficiency rate per inspection was just 2.2, almost on par with the 2020 rate of 2.1.

Despite a full year of COVID-19 restrictions, AMSA inspectors undertook 2,820 PSC inspections during 2021, a 6.65 per cent drop in the inspection rate from 2020 (3,021 PSC inspections). This was due to the continuation of procedures put in place in 2020 to protect both inspectors and crew from possible transmission of COVID-19 infection during inspections.

The PSC inspection results for 2021 saw a slight decrease in the detention rate of ships from 5.9 per cent in 2020 to 5.6 per cent (the peak in 2011 was 9.2 per cent).

The average deficiency rate remained relatively constant, increasing slightly from 2.1 deficiencies per inspection in 2020 to 2.2 deficiencies per inspection in 2021.

Inspections by ship type

In 2021, AMSA inspectors carried out 2,820 initial PSC inspections and 1,455 follow up inspections. AMSA inspectors are now able to conduct remote follow up inspections in accordance with Tokyo Memorandum of Understanding guidelines, 35 of the follow up inspections in 2021 were conducted remotely.

The most inspections took place onboard bulk carriers, with 1,712, followed by container ships and chemical tankers. A total of 6242 deficiencies were issued in 2021 with the average deficiencies per inspection being 2.21. The majority of deficiencies were issued to bulk carriers. However, this is not surprising given bulk carriers accounted for 56 per cent of ship arrivals and 61 per cent of all inspections.

Detainable deficiencies relating to the category of ISM remained the highest, though decreasing in share in 2021 (24 per cent of detainable deficiencies) as compared to 2020 (28.1 per cent of detainable deficiencies). The relatively high proportion of detainable deficiencies attributed in the ISM category suggests that safety management systems (SMS) are not properly and effectively implemented onboard.

Along with ISM, the categories of fire safety, emergency systems, lifesaving appliances and water/weather-tight conditions were the top five categories of detainable deficiencies. The proportion of MLC-related detentions remained the 7th highest category.

Download the report at **https://bit.ly/3SzQinr**. Or scan the QR code.

SAFETY REPORTS

Annual Summary of Casualties, Accidents and Incidents on Isle of Man Registered Vessels 2021

The Isle of Man Ship Registry's 2021 Casualty Summary report provides statistics and analyses the trends identified from the Accident Report Forms (ARF) submitted to the registry over the course of 2021. The Registry hopes providing this data will help to reduce similar accidents in the future. All identifying information has been removed to respect the confidentiality of the clients.

This report does not include statistics relating to fatalities or injuries from natural causes unless they are directly related to an 'occurrence' on board.

An 'occurrence' is either a casualty, accident or an incident as defined in the Merchant Shipping Accident Reporting and Investigation Regulations (SD815/01), with casualty being the most severe type of occurrence.

In some areas of this report, the classification 'Fatality' is used where a casualty occurrence has resulted in death. These occurrences are still casualties under SD815/01 but the distinction is made to highlight the severity of the occurrence.

In the report, a "serious injury" means an injury sustained by a person resulting in incapacitation where the person is unable to function normally for more than 72 hours, commencing within seven days from the date when the injury was suffered. A "minor injury" means any lesser injury that is not a serious injury.

Death or injury from natural causes or suicide are not counted in the report unless directly related to an occurrence.

Download the pdf report at **https://bit.ly/3SnPUbj**. Or scan the QR code.

Analysis of Navigation Accidents by EMSA

The European Maritime Safety Agency (EMSA) has published its safety analysis of EMCIP data, offering a high-level overview of the safety issues reported in the system over a decade between 2011 and 2021.

The analysis identified nine safety issues. Each of them has been further examined into 45 sub-categories named "areas of concern".

Following a further assessment based on frequency of reported contributing factors, the 5 most common safety issues related to navigation accidents are linked to:

Work operation methods | Organisational factors | Risk assessment | Environment | Individual factors

The analysis also considered the remedial actions suggested to prevent similar occurrences in future, either safety recommendations proposed by an Accident Investigative Body (AIB), or autonomously taken by the relevant parties.

AIBs issued most of their safety recommendations to the shipowners and companies (51.5%), mainly addressing operational procedures within the Safety Management System (SMS).

Other safety recommendations, addressed to the national authorities (around 22%), aimed at improving horizontal safety issues which appear common to the whole industry, thus requiring further discussions within international and EU frameworks.

The outcome of the analysis also puts other important topics in the limelight which, given their significance and complexity, could be the starting point to a process of a more formal and detailed approach on each of the areas of concern in the appropriate instances, particularly addressing the following topics:

- Triggers of "human element" in navigation accidents
- Coordination of the bridge team, workload and resource availability
- Conflicts of shipborne technology
- Bridge ergonomics and equipment design
- Complexity of "procedures" in safety

Key causes
573 accident events have been directly associated to navigation accidents. Human action is, by far, the most reported category (447 events). Although "human action" scores around 78% of the overall reported accident event, its distribution is slightly different depending on the casualty event at stake.

"Human action" counts 83.5% of the accident events reported for "collisions", around 75% for "grounding" and around 71% for "contacts".

Safety and risk assessment, and reviews of tasks and procedures based on such assessment, are essential components of the safety culture and contribute to an effective decision-making process. Conversely, critical actions not preceded by at least a basic safety assessment may result in unexpected and unwanted events.

Download the pdf report at **https://bit.ly/3y0H234**. Or scan the QR code.

ITIC Claims Review number 47 published

This edition of the Claims Review provides a selection of marine cases recently handled by ITIC. The case stories are likely to be of interest and will help others to identify potential problems in order to avoid these types of situations occurring in the future.

Download the report at **https://bit.ly/3TnZvPs**. Or scan the QR code.

Lithium-ion battery whitepaper

The publishing of a whitepaper by insurance providers TT Club along with its fellow Thomas Miller managed business, UK P&I Club, and technical and scientific consultancy, Brookes Bell, brings greater awareness of the dangers inherent in the transport of lithium-ion batteries, particularly by sea. The increased demand for 'green power' for a wide range of portable devices such as mobile phones, mobility aids and recreation, manufacturing and power storage, through to larger products, such as electric vehicles will undoubtedly result in the production and transport of these batteries rising exponentially in the coming years.

Download the report at **https://bit.ly/3WqlHeb**. Or scan the QR code.

Catalogue of accidents and incidents - from January to October 2022 -

Over the course of 2022, IIMS has kept a diary of incidents and accidents as reports of them reached head office from various media sources and news streaming services.

The 26.7-metre yacht Pesa ablaze in April 2022 in the Port of Valencia, Spain.

The following pages are a collation of events presented month by month with a short description of each that have occurred at sea, in ports and marinas worldwide. It is by no means a comprehensive list of everything that has happened since the start of the year, just those that have come to the attention of the media and made the marine news headlines. It is clear the industry still has a long way to go to reduce the number of incidents and accidents.

You will understand and appreciate that some of the published images are lacking in quality, because in most cases they were being filmed on a device as the events were unfolding in live situations.

And who knows, in next year's Compendium, you may well be reading some of the ensuing reports that will be issued by the various investigating authorities into the causes of these distressing events, coupled with recommendations.

Reported in January 2022

Five missing after cargo ship collision off China

A crew of five seamen from the city of Wenzhou were reported missing following a collision in the East China Sea, according to maritime authorities in China's Zhejiang province.

Panamanian-flagged bulk carrier Ocean Loong

Fire breaks out at Ferretti factory

A fire broke out at the Ferretti shipyard in Cattolica. The shocking video footage showed flames engulfing one boat and firefighters on the scene.

Image courtesy of Corriere Romagna

Out of control ferry causes destruction in Barbados

An investigation will take place into why ro-ro vessel Admiral Bay III crashed into several yachts in the port of Bridgetown, Barbados.

39 missing after suspected smuggling boat capsizes off Florida

The US Coast Guard were reported to be searching for 39 people following a capsizing off the coast of Florida. Rescue crews were alerted after a man was spotted clinging to the hull of an upturned vessel around 72km east of Fort Pierce Inlet.

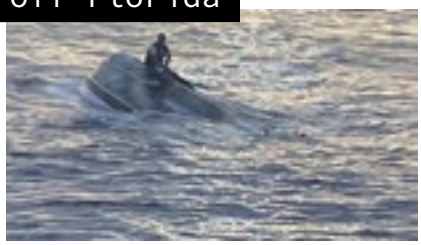


Image courtesy of Miami Coast Guard

Billionaire's superyacht sinks tanker in Bahamas

A US billionaire's superyacht struck a gas tanker off the coast of the Bahamas causing the tanker to sink.

Cement carrier sinks two tug boats

The collision between commercial cement carrier Goliath and two berthed and stationary TasPorts tugs, Campbell Cove and York Cove, took place at the Port of Devonport, Tasmania.

Yacht gutted by fire at Thai marina

A luxury catamaran went up in flames at a marina in Pattaya, Thailand, causing an estimated US$539,000 of damage, according to media reports.

Image courtesy of DailyNews.co.th

Reported in February 2022

Tanker grounded off Reunion breaking up

A Chinese company was charged with carrying out urgent work on a tanker that was breaking on the French territory of Reunion. However, failure to pay bills by the owner led the Chinese company to end its salvage operation. As a result, the stricken tanker Tresta Star broke up.

Tragedy in Santa Cruz as tugboat capsizes

The operator of a tugboat that was assisting a Chinese-flagged ship died after the vessel capsized in Puerto Deseado, in the province of Santa Cruz. Conflicting reports said one or two other people onboard survived.

Porsches among 4,000 cars on fire on ship

Firefighters continue to struggle to put out a fire that broke out on Wednesday on a vessel carrying thousands of luxury cars, which is adrift off the coast of Portugal's Azores islands. The vessel finally sank.

Hundreds rescued after major fire on ferry in Greece

Hundreds of people have been rescued after a blaze erupted on a ferry sailing from Greece to Italy, according to the Greek coast guard. A total of 288 people were reported to have been on board Euroferry Olympia.

Reported in March 2022

Horrifying moment oil tanker explodes in Bangkok

An oil tanker exploded as it was preparing to depart a port in Bangkok, killing one man and injuring another three personnel.

Cruise ship runs aground in Dominican Republic

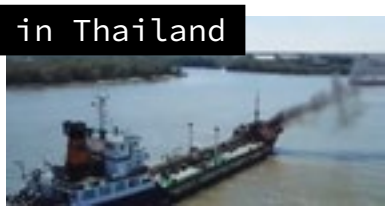
A Norwegian Cruise Line ship, carrying over a thousand passengers, ran aground as it was departing the Dominican Republic. It took several hours for the 165,000 gross ton cruise ship to be refloated.

Image courtesy of Periódico El Atlántico

Germany's Kiel canal remained closed for hours following a head-on collision

A head-on collision of two general cargo ships resulted in closing Germany's Kiel Canal to traffic for several hours.

Crude oil to be unloaded from tanker after explosion in Thailand



Officials were planning to unload a cargo of crude oil from the Ampar 8 ship after the product tanker exploded while mooring at the Bangchak depot the Chao Praya river.

Man dies after Scottish Trawler capsizes off Norway

One man died and seven crew members were rescued after a fishing trawler got into difficulty and capsized in the North Sea. The crew were found by rescuers on the keel of the boat, 100 miles west of Stavanger, Norway.

Image courtesy of Richard Potter

Stolen yacht destroys multiple boats during joyride

A man was arrested after an alleged stolen yacht hit multiple vessels docked near the Lido Island Bridge on Newport Bay in Orange County, California.

Tragedy in Dhaka as containership sinks passenger ferry

At least five people were reported dead and dozens more were missing after a bulk carrier crashed into a small ferry in a river near Bangladesh's capital.

Reported in April 2022

Cargo ships collide head-on in Kiel Canal

Two cargo ships collided on the Kiel Canal in Germany, causing the busy waterway to close to traffic for several hours.

Image courtesy of Feuerwehr Kiel

Cargo hold fire in a CMA CGM containership off Malaysia

A fire broke out in the cargo hold of a CMA CGM containership off Malaysia while the 9,452-teu vessel was en route from Jeddah in Saudi Arabia to Port Klang.

Photo credit: ShipSpotting

Bunker tanker sinks off Tunisia

A bunker tanker that was sailing from Egypt to Malta sank off the Gulf of Gabes, Tunisia. The tanker was carrying around 750-1000 mt of diesel during the incident and was threatening to release up to 1,000 tonnes of fuel oil into the water.

Surf charter boat sinks in the Maldives

The Maldivian surf charter boat, Blue Star sunk in the Maldives with a group of French surfers aboard. No casualties were reported. While the cause of the incident is to be confirmed, a post circulating on social media indicates the boat hit a coral reef.

Photo courtesy of Instagram/Boris Romann

Floating dock sinking

A floating dock has sunk at Saka Port, Hiroshima, Japan. According to the Hiroshima Maritime Security Department, the dock sank after developing a heavy list. It's now on the seabed but the top remains partially above the waterline.

Divers escape liveaboard boat that was gutted by fire

Liveaboard dive boat Scuba Scene was reportedly gutted by a fire, which broke out on board off the coast of Egypt. All guests and crew were safely evacuated.

Image courtesy of Maggie Russell/Scubaverse

Fire severely damages 27m Sanlorenzo yacht Pesa in Valencia, Spain

The 26.7-metre yacht Pesa, launched in 2020, caught fire in the Port of Valencia, Spain. According to witnesses, the flames went out and reignited in a few seconds without the firefighters being able to control the fire.

Eleven tourists dead as tour boat sinks in rough weather

Rescuers found the body of an eleventh victim as the search continues for the 26 people onboard Kazu I which sank off far north-eastern Japan. The crew said water was flooding into the stern of the vessel.

Reported in May 2022

Freighter hits piers in residential area, Netherlands

A freighter, Ilse-Marie, caused destruction in the Leeuwarden residential area of Suderbuorren, Netherlands. The owner of the ship says that the captain became unwell.

Fire rips through large motor yacht in Torquay Marina

A large motor yacht caught fire and sank in a Torquay Marina with about nine tonnes of diesel on board. The cause of the fire on the 85ft (26m) boat at Princess Pier in Torquay, Devon is being treated as unexplained.

7 rescued as $8.5m superyacht suffers malfunction in large waves

Seven people were rescued after the 43-metre Benetti superyacht Domani suffered a malfunction off the coast of Grays Harbor, Washington.

Container barge loses 12 containers overboard

A container barge on tow of tug Mega Daya 43 suffered a shift of containers in the Singapore Strait off Karimun, Riau Archipelago, Indonesia. The barge developed a heavy list and consequently lost 12 containers overboard.

Boat fire in Singapore

A fire broke out onboard a vessel berthed at Keppel Bay, Singapore with Singapore Civil Defence Force (SCDF) firefighters trying to extinguish the blaze.

Fire breaks out on barge in Delaware Bay

Fire agencies fought a barge fire on the Delaware Bay.

Image credit: Memorial Fire Company sta 89

Seven dead, 120 rescued as fire rips through ferry

Seven people have been reported dead and a further 120 rescued, after a fire ripped through a passenger ferry in the Philippines.

Photo courtesy of M/V Calucin RoRo

Italian tug sinks in Adriatic leaving 5 dead

An Italian tugboat with six people onboard capsized and sank in the Adriatic Sea, leaving five crew members missing, Italian authorities said.

Photo credit: Shipspotting

Galapagos tourists evacuated in major catamaran blaze

A tourist catamaran carrying 25 people in the Galapagos has burned out and sunk, after a huge blaze broke out on board. The Ecuadorian navy confirmed that all 15 tourists and 10 crew members were safely evacuated.

Fire shoots from Carnival cruise ship funnel

A fire broke out in the funnel of the Carnival Freedom cruise ship, which was docked at Grand Turk Island in the Turks and Caicos Islands.

Image courtesy of Twitter/@lkweeks97

Superyacht blaze in Puglia leads to sinking

The 27m superyacht Naseem caught ablaze and sank in Puglia last week, five miles off the Santa Maria di Leuca coast.

Reported in June 2022

Fire erupts in bulk carrier's cargo hold in Florida

Two fire departments in Nassau County, US came together after a fire broke out inside the cargo hold of a large ship docked at the Port of Fernandina's north terminal pier.

Photo credit: Fernandina Beach Fire Department

People who drowned in boat capsize were 'strapped in wheelchairs' says source

The Marine Accident Investigation Branch has opened an investigation into a tragic accident that occurred at Roadford Lake near Okehampton, Devon. Two bodies were found following a large-scale search for missing boaters who were reportedly 'strapped into wheelchairs', according to a Metro source, when their vessel capsized.

Car carrier grounded off Russia with hull breach

A Cameroon-flagged car carrier called "Lider Bulut" was grounded in the Black Sea, off Tuapse, Russia, after having developed heavy starboard list because of a hull breach.

Fire breaks out onboard bulk carrier in Ghent

Fire broke out in the cargo hold of the bulk carrier Lowlands Mimosa at Ghent, Belgium.

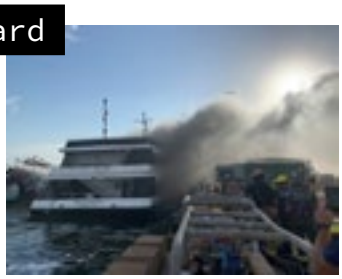
Photo credit: Shipspotting

Four dead after motorboat collides with barge tow on Volga river

The transport prosecutor's office in Chuvash, Russia initiated an investigation into the cause of a deadly tug collision on the Volga River that killed four.

Photo credit: Chuvash Transport Prosecutor's Office

Cruise boat catches fire with 89 school children on board



A fire broke out aboard a luxury cruise boat. The incident happened on the stern of the Spirit of Norfolk cruise boat on the Elizabeth River near Naval Station Norfolk, sparking the evacuation of 108 crew and passengers, many of whom were school children.

Explosion onboard containership

Three crewmembers sustained injuries after an explosion in the engine room onboard the containership MSC Rachele off the coast of France

15,000 sheep drown after ship sinks in Sudan

A livestock vessel carrying thousands of sheep sank in Sudan's Red Sea port of Suakin drowning most of the animals onboard, but with all crew surviving.

Superyacht sinks off Turkish coast

A superyacht was involved in an incident and began taking on water near Doganbey Island off Seferihisar in western Turkey.

Second marina fire in just three days in Chesapeake Bay

Three days after a fire at Podickory Point marina on Chesapeake Bay's western shore destroyed two boats and damaged three more, a large fire broke out at Great Oak Landing marina on the eastern shore on board a motorboat.

Deadly chlorine gas explosion in port of Aqaba

A poisonous chlorine gas explosion at the port of Aqaba in Jordan is said to have killed at least 13 people and injured 250. It happened after a tank filled with 25 tonnes of chlorine being exported to Djibouti fell while being transported.

Fire engulfs vessel in Solent

Dramatic footage has been released by Gosport and Fareham Inshore Rescue Service of a boat fire in the Solent which took place just outside Portsmouth Harbour.

£5.9m schooner sinks after being hit by supply vessel in Spain

A yacht, Eleonora E, has sunk after being hit by a supply vessel in a Spanish port. The 49m yacht was moored at Port Tárraco, Tarragona, Spain, when the 60m offshore supply vessel Punta Mayor reportedly crashed into its starboard side.

Image courtesy of Port Tarragona/Twitter

Norwegian cruise collides with iceberg near Alaska

A Norwegian cruise ship cancelled its nine-night trip through Alaska after the vessel crashed into an iceberg off the Alaskan coast.

Image courtesy of Norwegian Cruise Line

Reported in July 2022

Fire onboard 27m superyacht in Italy

A 27 metre Pershing 88 superyacht caught fire off the coast of Positano, Italy.

Ferry in Canada suffers fire onboard

An engine room fire broke out on the Canadian ferry Holiday Island with the crew safely evacuating all passengers, while also keeping the fire contained.

Image credit: Canadian Coast Guard

22 rescued after abandoning tanker taking on water

The Indian Coast Guard saved 22 crew members of a product tanker that was taking on water in the Arabian Sea off the Indian state of Gujarat.

Dramatic rescue as ship sinks in South China Sea

More than two dozen crew members were unaccounted for after their ship broke in two during a typhoon in the South China Sea.

Cargo ship catches fire in Dubai

Fire broke out onboard a vessel that was docked in Dubai loading cars. The vessel and its cargo are reported to be a total loss.

Crew forced to jump into sea as huge coaster crushes fishing vessel

A total of 15 sailors were rescued after a cargo ship struck the fishing vessel KMN Harapan Baru causing it to sink off the coast of Tanakeke Island in the Indonesian province of South Sulawesi.

Oil spill in the Bahamas: ship spills 30,000 gallons into the ocean

An oil spill in the Bahamas occurred off the coast of Great Exuma. Around 30,000 gallons of oil were reportedly spilled into the waters off Exuma from a ship delivering fuel.

Reported in August 2022

Cargo ship's wheelhouse ripped apart by bridge

A skipper is counting the cost of a decision to try and pass under a bridge on the Scheldt-Rhine Canal near Rilland after its wheelhouse was destroyed.

27m Canados yacht catches fire in Tallinn

A Canados motor yacht caught fire and sank in the Gulf of Tallinn, Estonia. According to local reports, the 27-metre Canados yacht had ten people on board when the fire broke out.

Ferry runs aground in the Philippines after helmsman 'falls asleep'

A ferry carrying 261 passengers and crew ran around in Iloilo, the Philippines after the helmsman fell asleep, according to the Philippine Coastguard.

Image courtesy of Philippine Coast Guard

New 44m superyacht destroyed by fire off Spanish coast

The brand new ISA superyacht Aria SF was engulfed by fire while cruising off the coast of Formentera in Spain.

Motor yacht sinks in Italy

An Italian crew has been rescued after their yacht, 39m Saga, sank about nine nautical miles from Catanzaro Marina.

Photo credit: Italian Coastguard

Zim declares general average after hold fire damaged containers

Two weeks after a container fire affecting 300 boxes broke out in the hold of the Zim Charleston, reports indicate the charterer has now declared a General Average situation for the vessel. The full extent of the casualty remains unclear as neither Zim nor the vessel's owner Seaspan, has released details.

Containership hits crane at Vietnam

The containership Tiger Maanshan collided with a gantry crane while mooring at Hai An Port, Vietnam

One dead after fishing vessel collides with USCG cutter

A fisherman died after a U.S. Coast Guard cutter and a fishing boat crashed outside of Puerto Rico.

Image used for illustrative purposes only. Photo credit: USCG

Two bulkers collide at Istanbul

Bulk carrier Philipp Oldendorff drifted onto the anchored bulk carrier SSI Providence at Ahirkapi Anchorage, Istanbul.

Photo by vovoshap

One dead and seventeen missing after fire at Cuban petroleum terminal

A massive fire broke out at a tank at the Matanzas petroleum complex, Cuba, killing at least one person and leaving 17 missing. The fire broke out when lightning hit a tank at the Matanzas Supertanker Base, a fuel import terminal some 50 miles to the east of Havana.

Fire erupts on trawler in Russia

A fire broke out onboard the newly-built factory trawler at a shipyard in St. Petersburg.

Hard landing causes significant damage to Washington ferry

Washington State Ferries has said that one of its vessels suffered "significant damage" due to a "hard landing" at the Fauntleroy terminal in Seattle.

hoto credit: Washington State Ferries

Container ships capsizes at pier in Japan

A container feeder capsized at the pier at a terminal in Shunan City, Japan during cargo operations.

Containership and Fishing Boat Collide in Busy French Sea Lane

French authorities confirmed reports that a large containership and an ocean-going fishing boat collided in the southbound lane of the Ouessant Traffic Separation Scheme near Brest, France. No one was injured in the collision, but both vessels sustained damages that will require shipyard stops for repairs.

Reports in the French media suggested that the crew member at the helm of the 115-foot fishing boat Corail was attempting to steer the boat away from another freighter in the traffic late when they collided with the containership. The fishing boat had been outbound from France beginning a 24-day trip to the west of Scotland.

Photo credit: Mohd Nazri Bin Ismail/Twitter

Cargo ship and bulker damaged in Sabine Pass collision

A cargo ship and bulk carrier sustained damage following a collision in Sabine Pass ship channel after one of the vessels suffered a loss of steering.

Image credit: US Coast Guard

One dead after pier collapses at Keppel Shipyard

The body of a worker has been recovered from the water after a pier collapsed underneath a crane at the Keppel Shipyard in the Tuas area of Singapore.

Photo credit: Raja Sivasamy/Facebook

Five rescued from fire on 36m experimental yacht MS Porrima

A crew of five were rescued in Mandwa, India from the 36-metre experimental MS Porrima yacht after a fire broke out in the battery compartment. The unique Swiss ship is run solely on renewable energy from solar, wind and hydrogen power.

11 missing after cargo ship capsizes in Makassar Strait

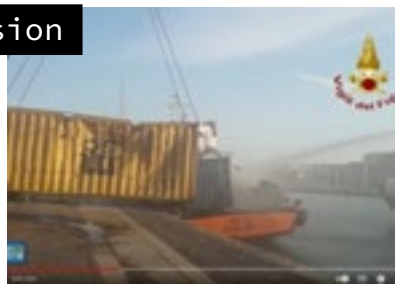
A cargo ship with 15 people on board sank in the Makassar Strait of central Indonesia, leaving 11 people missing, an official said on August 27. The cargo ship loaded with cement departed from a seaport in South Kalimantan province and was heading to a seaport in South Sulawesi province, according to the official.

Gibraltar spillage fears after bulk carrier and cargo ship collide

A bulk carrier was beached off the coast of Gibraltar, after it collided with an LNG tanker. Authorities in the British overseas territory said the port closed for four hours after the collision. "The Gibraltar Port Authority remains at the scene and is continuously reviewing all aspects of the situation," the Gibraltar government said in a statement.

Image courtesy of Gibraltar Broadcasting Corporation

Three seafarers dead in Italy after container explosion



A container explosion killed three seafarers and injured one at the Port of Crotone, Italy. The accident occurred on working deck of offshore supply ship ASSO, reportedly inside a container during welding operations. The vessel was about to set sail for Malta. Immediately local land fire teams and tug were deployed, and the fire was extinguished in two hours.

Suez Canal blocked again after tanker becomes stuck

A tanker has been freed after running aground in the Suez Canal, near to the spot where the Ever Given container ship became wedged in March 2021. The 250-metre-long Aframax tanker Affinity V was bound for Saudi Arabia when it lost control and became stuck diagonally in the Suez Canal.

Photo credit: Suez Canal Authority

Reported in September 2022

Bulker grounded in Bosporus

A bulker carrying Ukrainian grain on the safe passage corridor ran aground in the Bosporus, according to Turkish maritime authorities, temporarily closing the channel. The bulker Lady Zehma sustained a rudder failure and attempted to drop anchor to regain control. How, the ship continued to drift, running aground off Bebek Beach.

Superyacht 007 sinks in Greece

A 49m superyacht, named 007, capsized and is now semi-submerged in Greece, 15 metres off shore, awaiting recovery. According to the Hellenic Coast Guard, five passengers were rescued and no one was hurt. The incident took place at Kolona Bay, Kythnos. Media reports suggest that the superyacht ran aground, causing an inflow of water that gradually tilted the vessel.

Photo credit: Cyclades24

Large yacht Black Diamond destroyed by fire

The 28 metre Sunseeker, Black Diamond, was destroyed in a fire at the IMS Shipyard in Saint-Mandrier, France. According to local reports, a fire broke out in the early hours of 2 September. Media reports suggested that an unexplained explosion occurred onboard around 1am. Forty firefighters battled the blaze as the yacht was engulfed in flames.

Dutch Coast Guard responds to product tanker fire offshore

The Dutch Coast Guard responded to an engine room fire on a tanker offshore near Amsterdam. They reported that the fire was quickly brought under control and extinguished avoiding a serious incident and no individuals were harmed. There was no pollution, but the vessel is disabled.

Five dead after boat capsizes

Five people died in New Zealand after a boat capsized off Goose Bay in Kaikōura. They were on a charter boat carrying bird enthusiasts. The local mayor says he suspects a whale caused the boat to capsize. Eleven people were aboard the 8.5 metre boat when it capsized. Six people were rescued and five bodies were recovered from inside the vessel by police divers.

29m classic yacht catches fire in Corfu

A 29 metre (95ft) classic yacht known as Halcyon caught fire in Marina Gouvia, Corfu. No injuries were reported. According to local reports, the fire broke out on a 20m (65ft) sailing yacht and continued to spread to several other yachts in the vicinity. Other yachts involved in the fire included a sailing catamaran and a speedboat.

Danish sail training ship strikes a U.S. Navy LCS at Baltimore Pier

Photo credit: USN

A Danish sail training ship sustained minor damage in an allision with the littoral combat ship USS Minneapolis-Saint Paul at a pier in Baltimore, Maryland. According to local media, the Danish training ship Danmark was under tow by two tugs when she struck some pilings alongside the pier. The Danmark then carried on and made contact with the hull of the Minneapolis-Saint Paul.

Cargo ship capsizes at Port of Iskenderun

The small general cargo ship Sea Eagle lost stability while unloading containers at the Port of Iskenderun in Turkey. The vessel initially tilted starboard to rest on the pier before taking on water and then capsized to starboard with many containers falling into the water.

One dead after fire onboard ferry

A fire took place in a passenger deck aboard an Indonesian ferry killing one and injuring three more. According to local media reports, the ferry Nusuntara 91 arrived at the island of Masalembu. Before the ship could depart, smoke began to billow from Deck 1, a passenger berthing deck. The ship was evacuated and three people were taken to a hospital for treatment, but one did not survive. Authorities believe that the fire was caused by a smouldering cigarette butt in the passenger compartment.

Fire at Venezuelan terminal after tanker hose breaks

A Venezuelan oil terminal experienced fire after a loading hose broke while a tanker was being loaded. The incident took place at the Guaraguao facility in Puerto La Cruz. According to press agency Reuters, the product carrier Larko was being supplied with oil at the time, and it was also affected by the incident.

Cargo ship in North Sea collision towed to Danish port

Photo credit: Hjemmevärnskommandoen

Denmark's Marine Home Guard was able to salvage the general cargo ship that was involved in a North Sea collision and tow the vessel to port. The 5,000-dwt general cargo ship Helge had initially been feared lost after the collision with its crew abandoning ship to be rescued by the Danish Navy. When the Marine Home Guard reached the Helge they found the vessel had remained afloat despite the original expectations that it was sinking. They reported that weather conditions had improved dramatically since the morning when the vessel collided. The Danish tug Sigyn arrived and together they completed a survey of the vessel and were joined by a salvage team airlifted out to board the vessel.

19 crew rescued after tanker sinks off India

Indian Coast Guard emblem

The Indian Coast Guard rescued 19 crew members from a bitumen tanker that sank off the Ratnagiri coast. Crew of the ship first contacted rescue authorities in Mumbai, after which a helicopter winched 18 Indians and the Ethiopian master from lifeboats 41 nautical miles offshore. The Gabon-flag tanker later sank.

Crew puts out fire that broke out onboard tanker

Finnish and Estonian rescue officials have confirmed that a crude oil tanker caught fire in the Gulf of Finland, but the crew was able to extinguish the flames. The incident involved the 250-meter-long vessel Alexia, about 18 kilometres (11 miles) south of the Finnish peninsula of Porkkala, the Helsinki Sea Rescue Command Centre said.

Fire Breaks Out Aboard Ro/Ro Midnight Sun at Tacoma

A fire broke out on the upper deck of the TOTE ro/ro Midnight Sun at her homeport of Tacoma, Washington. At about 1920 hours, local authorities received notice of a fire aboard the vessel. By the time fireboats and fire engines arrived on scene, the ship's crew had extinguished the fire using the fixed firefighting system. No injuries or pollution were reported.

Large number dead after ferry sinks in Bangladesh

At least 25 people were killed and dozens more missing after a boat sank in Bangladesh, marking the worst waterways disaster to hit the country in over a year.

The exact number of people missing was not known, but passengers said more than 70 people had been on the boat. Local police said about 20 people were still missing while some of the passengers managed to swim ashore or were rescued from the water.

Four injured as tanker hits fishing vessel off Cochin

Four fishermen were injured after the Panama-registered tanker ship "Global Peak" hit a fishing vessel off the Cochin coast. The fishing vessel was carrying 13 crew members when it was hit by the ship in the rear. There were no casualties, but some sustained minor injuries.

The fishermen informed the authorities that the foreign ship's crew members offered no assistance following the incident and other local fishermen, who witnessed the accident from another vessel, rescued them and gathered details of the foreign tanker.

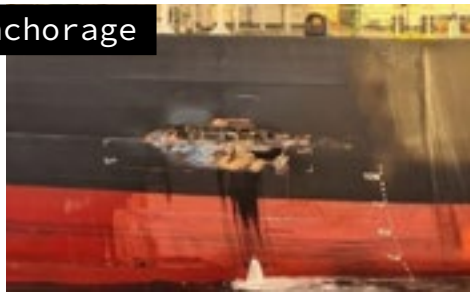
Photo credit: Island Echo

Six injured as 30ft boat ploughs into Isle of Wight cliffside

Police said enquires are ongoing to determine the exact circumstances surrounding a boat ploughing into the cliffs at Totland Bay, Isle of Wight. According to Yarmouth RNLI, the 30ft motorboat had hit the rocks west of Totland bay with casualties sustaining multiple injuries. The RNLI's casualty care crew landed on the beach where the crew assessed the injured casualties onboard. There were found to be four walking wounded and two more serious injuries within the group.

The four-walking wounded were transferred to the ALB and taken to safety. The Coastguard Rescue helicopter flew the other two to the mainland for treatment. On return, the ALB crew secured the casualty boat as the boat had sustained considerable damage and checked for any pollution/debris in the surrounding area of the beach and water.

Product tanker holed by fishing boat in Dutch anchorage



The Netherlands Coastguard and the Maritime Police attended at the scene of an allision that took place in the busy Ijumuiden anchorage off the coast of the Netherlands. The authorities reported that a small oil leak from the tanker has been stopped while they continued to investigate. The product tanker Golden Daisy, which was at anchor, reported that it had been struck by a vessel which was later identified as a fishing vessel the ARM 18 Joris Senior. No casualties were reported.

Photo credit: Netherlands Coastguard

Tanker collides with containership in Malacca Strait

Photo credit: MMEA

Two ships, a tanker and a containership, collided along the Malacca Strait with reports of serious damage to both vessels. The Zephyr 1 Aframax tanker rammed into the rear of the 7,455 teu GSL Grania boxship between Malaysia and Singapore. According to local reports both ships require extensive repairs.

Master died after explosion onboard general cargo ship

A captain lost his life after an explosion hit a general cargo ship in South Korea. Part of the hull was damaged in the incident. The vessel, Ocean Harmony, was moored at Incheon when the accident occurred, killing the Chinese master.

Initial assessments suggested a gas cylinder inside the ship had exploded, and the coast guard and fire department have started investigating the exact cause of the accident.

Reported in October 2022

12 dead onboard bulker due to food poisoning

A bulk carrier requested emergency medical assistance after suspected food poisoning on board left 12 of its 21 crew dead and the remaining nine in a severely critical condition. The COSCO owned Wu Zhou 8 sent out distress calls from the ship's captain. However, by the time the helicopter reached the ship, 10 crew members had lost their lives, while two more died in transit to the hospital and at the hospital respectively.

Boaters lose homes in Thames weir incident

A couple have been left homeless after an incident on the River Thames in which a weir was emptied, causing their boat to sink. Two other boats on residential moorings also sank after the weir gate was opened at the Sandford weir structure, causing the water level to plummet rapidly.

Fire breaks out onboard container ship off Saudi Arabia

A Saudi Arabian Border Guard ship, in cooperation with a foreign vessel, managed to rescue the crew of the container ship TSS Pearl, that suffered a fire while sailing in the Red Sea waters 123 nautical miles northwest of Jizan port.

The 25 strong crew was evacuated to the port of Jizan, and they were received by a number of medical teams including the border guard, health affairs, the Red Crescent and civil defence. All were reported to be in good health.

It was reported some days later that the vessel had sunk.

Photo credit: FleetMon

Coastal vessel sinks close to the Maldives

A coastal sailing vessel that had set sail for the Maldives with its cargo loaded in the old harbour sank off the island nation's coast. One of the eight members of the crew has since been missing, while the others could be rescued. The vessel, MSV Esther Rajathi, was on its way to Male, Maldives' capital, with the cargo and was reportedly caught in the poor weather when it was 60 nm off the islands' coast. With the gale lashing the area, the vessel ended up sinking.

Oman vessel rescues 19 crew members from a sinking vessel

The ill-fated merchant vessel that measured 102 meters in length and carried approximately 3,911 tonnes of bitumen was in transit from Mangalore in Karnataka to the port of Khor Fakkan on the Sea of Oman. MT Barth reportedly sank 41 nm west of the Ratnagiri coast. When the Wadi Bani Khalid vessel got the distress call, it immediately responded and rushed to rescue the crew members of the sinking boat, facing difficult navigational conditions such as strong winds and sea turbulence. All crew were reported safe.

Photo credit: Demerara Harbor Bridge Corporation

Product tanker damages harbour bridge in Georgetown, Guyana

The bridge across the Demerara River near Georgetown, Guyana has been damaged in an allision, the bridge operator said. The product tanker Tradewind Passion was transiting the river when it collided with the open bridge. AIS data suggest that the vessel passed the bridge at about 0200 local time, then continued upriver. She reversed course and returned to a fuel pier near the bridge.

Multiple spans of the floating bridge were pushed about three feet out of position when the tanker struck, and an engineering team was working 24 hours a day to bring them back into the proper position. Nicholas Henry, a structural engineer with the Demerara Harbour Bridge Corporation, told Guyana's public information bureau that his team hoped to have the bridge reopened for light traffic within three days.

Photo courtesy of Inter-Island Ships of the Philippines

Eight tug crew members rescued off Mindoro

Local good Samaritans rescued the eight-man crew of the tug Betheva 2 after it sank of Golo Island, about 70 nm to the southwest of Manila. As the Betheva 2 was transiting past Golo on a trip from Manila to Palawan, the tug took a large wave over the stern. The water flooded the engine room, according to her captain, and the vessel quickly sank. All crewmembers managed to abandon ship.

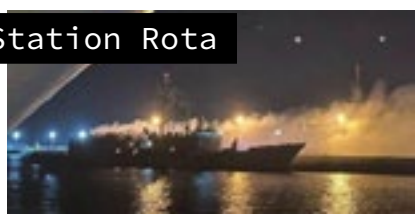
Trawler sunk after collision with sister ship off Shetland Islands

The UK's HM Coastguard worked with good Samaritan vessels to rescue the crew of a sinking fishing vessel off the Shetland Islands. HM Coastguard had received a mayday from the Peterhead-based fishing vessel Guiding Star, which was located about 45 nm to the southeast of the Shetlands. The crew reported that they had collided with another vessel, the sister ship Guiding Light. The Star was taking on water, and her crew was preparing to abandon ship into a liferaft.

An HM Coastguard helicopter based out of the Shetland Islands was dispatched to the scene, and it helped pick up some of the survivors. The standby ship Grampian Freedom and the Guiding Light also responded and provided assistance. All eight crewmembers were rescued and transferred safely to the Guiding Light, which brought them back to shore at Lerwick, the main port in the Shetlands.

Guiding Star - photo credit Parkon

Spanish frigate catches fire at the Pier at Naval Station Rota



A Spanish Navy frigate caught fire at the port of Rota, Spain, prompting a large-scale response. The vessel was identified as the guided-missile frigate Santa Maria. She was due to sail in support of the Operation Atalanta counterpiracy mission, according to local media. Rota is a joint Spanish/American base, and personnel from both navies joined in the response, La Voz del Sur reported. The fire was brought under control swiftly, but a reflash reportedly occurred, prompting a renewed and successful effort to extinguish the flames. Over 20 crew members were evacuated from the berthed vessel, and no injuries were reported.

Five crew evacuated from tanker due to gas poisoning

Five seafarers had to be evacuated after experiencing gas poisoning onboard a Turkish tanker. According to reports, the tanker SEALION 1 requested medical assistance for 5 poisoned crew. The tanker was anchored at Bakirkoy, Istanbul, Marmara sea, and it is believed the crew were poisoned by fumes in empty cargo tanks while cleaning, or checking them. The welfare of the crew could not be ascertained.

Photo credit: General Directorate of Coastal Safety

Death toll reaches 76 as overloaded boat capsized in Anambra, Nigeria

About 85 individuals were on an overloaded boat on 7 October when the flooding of the Niger River made it tip over. Almost everyone on the ship lost their lives when it reportedly capsized in a flood-swollen river flowing through the Anambra state of Nigeria, Muhammadu Buhari, the President, mentioned.

President Buhari's office reiterated that emergency services confirmed a death toll of 76.

The news continued to shock the government and people of Anambra State. However, boat accidents are a common occurrence in Nigeria due to overloading, poor maintenance, speeding, and disregarding the navigation rules.

Containership stranded in Turkey due to engine failure

MSC containership Malena experienced an engine failure in front of Canakkale in the Turkish Dardanelles Strait. The incident took place while the 2,503 TEU vessel was heading to Italy from Tekirdağ, Turkey. Upon being notified of the incident, the Canakkale Ship Traffic Services Centre launched rescue efforts with two tugboats. The ship was safely anchored in Dark Harbor, Gulf of Erenköy's midpoint in southern Dardanelles.

Photo credit: KEGM

Norwegian authorities detain tanker after finding 19 serious deficiencies

Norway detained a Vietnam-registered ship after issuing the vessel with 19 deficiencies to rectify that were identified during a Port State Control (PSC) inspection. The ship had a crew of 22 on board.

"The inspectors revealed some of the worst conditions we have ever seen," said Alf Tore Sørheim, Head of Department of Operative Supervision at the Norwegian Maritime Authority (NMA).

Data show that other authorities were on board the vessel in November 2021. Also at that time, the captain and crew were ordered to rectify a number of deficiencies. Since a number of recurring issues have been identified, the ship will be detained until all deficiencies have been rectified stated Mr. Sørheim, adding that "this illustrates why it is essential that we, as an authority, carry out PSC inspections on board. Fortunately, such serious deficiencies have only been detected on rare occasions."

Chemical and oil products tanker sinks in Taiwan

One seaman died on a South Korean Flag vessel KELSEY 2 after it sank in Taiwan. 10 others were rescued. The ship was en route from Hong Kong to the port of Gunsan, Korea, sailing at a speed of 7.1 knots. Tanker with GT of 5,328 was considered to be in loaded condition, carrying a cargo of oil and chemicals. According to preliminary reports, the crew reported water ingress in the aft section area in the engine room the evening before the ship sank.

Amphibious Combat Vehicle flips off the Californian coast

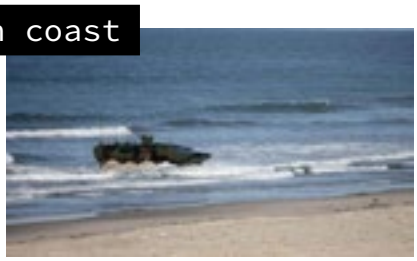


Photo credit: USMC

A new U.S. Marine Corps Amphibious Combat Vehicle (ACV) flipped over in surf during an exercise at Camp Pendleton, California, adding to the list of recent incidents with the service's amphibious vehicles. Due to a "reported mechanical malfunction," the ACV tipped over in the surf zone during a beach landing. The three crewmembers inside were not harmed, but to prevent further incidents, the service has temporarily suspended ocean beach landing and launch operations. Training will continue on land and on sheltered waters.

Atlantic sailor rescued after yacht loses mast

A sailor was rescued from the Atlantic Ocean, two days after his yacht lost its mast in stormy conditions. HM Coastguard's Joint Rescue Coordination Centre received two distress beacon alerts from the yacht, which was drifting 700 miles west of Ireland. The vessel had extensive damage and was drifting in very poor weather conditions. Thanks to the two beacons onboard however, the coastguard was swiftly able to locate the yacht and begin the search and rescue mission.

One missing after four crew members fall from a cargo vessel

The Taiwanese coast guard was conducting an end-to-end sea and air search for a Vietnamese citizen who reportedly went missing after four members of a crew that was onboard a 31,236-ton cargo ship fell into the sea off the Yunlin County coast on 17 October. The Central Taiwan Maritime Affair Center of the Maritime and Port Bureau said it got a notification from the National Coast Guard Administration. It said four crew members from the bulk carrier, VIMC SUNRISE, had reportedly fallen into the sea waters while attempting to anchor at around 5:30 pm toward the west of Mailiao Township.

Collision with cargo vessel sinks fishing vessel

A general cargo vessel named MIKA collided with a local fishing vessel off Ravenna, Italy. According to information, the accident took place about 11 nm off Ravenna. while the cargo vessel was sailing to Ravenna from Rasa, Croatia. MIKA collided with the fishing vessel, which eventually sank. however, the cargo vessel managed to rescue five fishermen who were on board their ship and resumed sailing.

Three rescued after boat collides with cargo ship

Three individuals had to be pulled from the waters of Vancouver Harbour, while the rented runabout capsized after a reported collision with the Saga Beiga Flor cargo vessel. According to Const. David Kokesch, the rescued individuals suffered no significant injuries, while it is unclear yet how the incident happened.

Geared bulker strikes an STS crane at Puerto Moin, Costa Rica

A geared bulker struck an STS gantry crane at Puerto Moin, Costa Rica. The bulker Irma arrived at Puerto Moin and berthed at a breakbulk terminal on the port's small commercial quay. AIS data provided by Pole Star shows that she remained there until 1100 hours when she got under way to the south as though planning to shift berths.

One dead in harbour tug sinking at Port of Patmos

A small ship assist tug went down while working a midsize cruise ship at the island port of Patmos, Greece. Two crewmembers were aboard the tug at the time of the incident. The deckhand, aged 26, abandoned ship and was rescued by a launch from the Azamara Journey, and he was returned safely to shore at the port. The skipper, 45, was recovered unresponsive from inside the wreck by a team of private divers. He was transported to a nearby health centre, where his death was confirmed.

Sunseeker yacht bursts into flames in Queensland marina

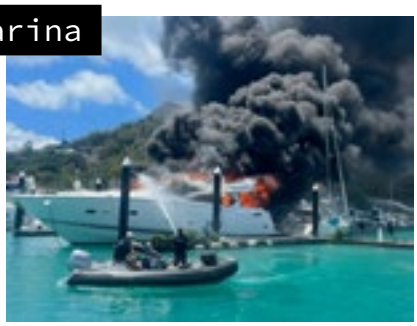


Photo credit: OceanX/Facebook

Dramatic images show a Sunseeker 82 yacht engulfed in plumes of thick black smoke at Hamilton Island marina in Queensland, Australia. The 25-metre luxury yacht was understood to be named Time Out.

Queensland Ambulance reports that paramedics rushed to the scene shortly after. Police say that nobody was on board at the time the fire broke out. A man in his 40s and a man in his 60s have been assessed for smoke inhalation, according to broadcaster ABC, with no other injuries reported.

Containership drifts for two days off Australia

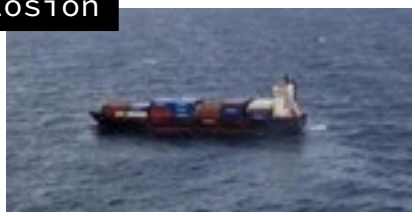
The Singapore-flagged containership Rio Madeira experienced an electrical power outage on route to Sydney, Australia. As a result, the ship drifted along New South Wales coast, some 30 nautical miles offshore. After drifting for two days off on the Australian coast, tug Svitzer Glenrock was assigned for repairs. Eventually, the Rio Madeira berthed at Sydney Hutchison terminal for repairs.

Photo credit: Basarnas

Ferry caught fire with 177 people onboard

The ferry "Express Cantika 77" caught fire in the waters off southwest Timor, near Batek island, Indonesia. The ferry was carrying 177 people on board while en route from Kupang to Kalabahi, Indonesia. The ship was quickly engulfed in flames, while the search and rescue agency of East Nusa Tenggara deployed inflatable boats and more than 50 rescuers to evacuate 167 passengers and 10 crew. A total of 17 people have been confirmed as dead.

Photo credit: Icelandic Coast Guard



Icelandic Coast Guard responds to report of an explosion

The Icelandic Coast Guard responded to reports of an explosion and fire aboard a Portuguese-registered containership inbound to Iceland. According to the Coast Guard, it received a call from the EF Ava, an 8,168 dwt vessel operating under charter to Eimskip. The Coast Guard reports it always provides a full-scale response when there are reports of a fire aboard a vessel. They dispatched two helicopters, one with the Coast Guard's rescue team, and a second carrying five firefighters from the onshore fire brigade. The captain told the Coast Guard that there had been an explosion followed by smoke coming from the engine room of the EF Ava. No crew members were injured but the vessel had lost power.

Skandi Singapore. Photo credit: DOF Subsea

Fines issued for health and safety breaches

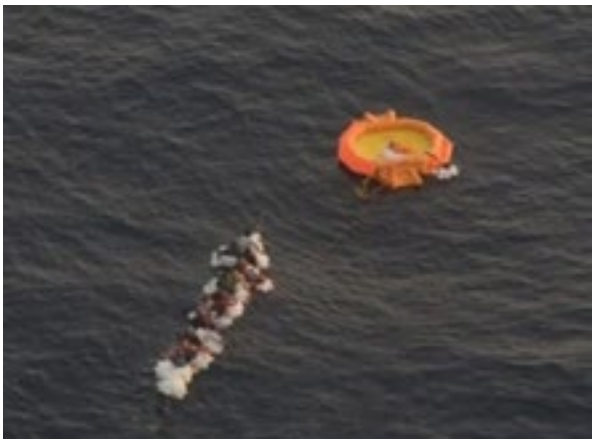
Offshore contractor DOF Subsea's Australian subsidiary has been convicted of three counts of "negligently breaching health and safety duties" during work off Australia's north-western coast. The penalties stem from worker reports filed after a saturation diving job at the Ichthys field, conducted aboard the DSV Skandi Singapore. The divers were working on the repair of infrastructure on the seabed at a depth of roughly 800-900 feet - reportedly the deepest dive ever conducted in Australia's offshore sector.
In the months after the dive work was finished, NOPSEMA received complaints from seven of the vessel's saturation divers, who said that they had sustained neurological injuries during the diving operations.

Longshoreman killed in accident at Port Everglades

Officials in Broward County, Florida have identified the longshoreman who was killed in a container handling accident at Port Everglades. The victim was named as Odely Joseph, 51, a resident of Fort Lauderdale. The Broward medical examiner's office has concluded that Joseph died from blunt head trauma, and the local sheriff's office believes that he was struck and killed by a container.

Indian Coast Guard rescues 20 fishermen after storm in Bay of Bengal

An ICG patrol aircraft dropped an inflatable life raft to 20 survivors



When a powerful storm swept through the Bay of Bengal the Indian Coast Guard (ICG) came to the aid of a group of 20 Bangladeshi fishermen whose boats were capsized by the wind and waves. As the storm's intensification became likely, the Indian Coast Guard took steps to warn fishermen and mariners at sea, including overflights to inform rustic vessels of the impending danger.

During a flight off Sagar Island, an ICG aircraft spotted capsized fishing boats and men clinging to debris in the water. The aircrew dropped a life raft for the survivors, then asked the nearby container feeder Nanta Bhum to divert and rescue them from the water. The fishermen managed to get aboard the life raft safely, and the Nanta Bhum met up with and rescued them.

Another group of Bangladeshi mariners may not have been so lucky, according to local media report. Regional fire department chief Abdullah Pasha said that eight crewmembers of a dredger were missing after the vessel capsized in the storm.

Drunk master arrested after container ship grounds off Denmark

A 33-year-old German captain has been charged with being drunk in control of a container ship that grounded off Denmark. The 508-teu Ragna got stuck on sand having just left Fredericia. Police in Funen received a report about the boxship from the Maritime Assistance Service, which suspected drunk sailing. "The sailing pattern from harbour to sandy bottom was apparently so unusual that the Funen police were alerted and called," said duty police officer Kenneth Taanquist, according to the Fyens Stiftstidende newspaper. "It turns out that the captain of the ship was under the influence of spirits. He was arrested and charged with suspicion of drunken sailing, after which he sailed ashore in the company of the officers," Taanquist told broadcaster TV2.

Multiple groundings and capsizings in Philippines tropical storm

The Philippine Coast Guard (PCG) responded to multiple marine casualties in the wake of Tropical Storm Paeng. The Panama-flagged fishing vessel Kunimatsu 3 capsized off Manila Bay, prompting a swift rescue effort. The PCG and the PCG Auxiliary rescued five Ecuadorian crewmembers safely and without injury.

Fishermen reported that they were anchored in the Manila Bay anchorage area and that their vessel had been dragged by strong winds and waves, causing it to take on water and capsize.

The PCG also responded to the grounding of a small domestic merchant vessel, the Ecuador, which was pushed into shallow water by the force of the storm. The five Filipino crewmembers on board were unharmed and there was no substantial damage to the vessel or the environment reported.

Trawler sinks after collision with containership MSC Rita

Photo credit: USCG

The US Coast Guard and two good samaritan vessels rescued 13 people from a fishing vessel after it collided with a boxship about 60 miles southeast of Chincoteague, Virginia. bystanders with Coast Guard Sector Virginia received a mayday call from the 115-foot trawler Tremont, stating they were involved in a collision with the 8,000 TEU boxship MSC Rita. The Tremont reported that it was sinking with 13 people aboard and the crew was in the process of abandoning ship. All crew were recovered safely and no injuries were reported. An investigation has been launched.

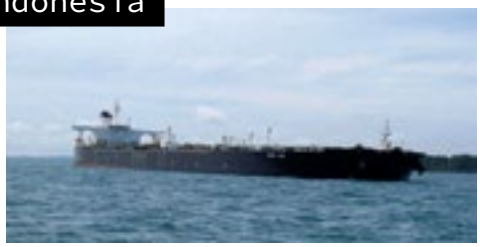
Fire onboard bulker at Indonesian port

The fire started in the engine room of the urea carrier Abusamah at Cilegon, according to the ministry of transport's directorate general. According to local media reports, the vessel burned while loading fertiliser at jetty 3B at Krakatau International Port. The fire was first seen from the ship's engine room. The bulker had already loaded about 1,300 tonnes when the incident began. The rescue and salvage operation took place with national search and rescue agency Basarnas and the country's navy. The vessel was loading ammonium phosphate at the time of the fire. All crew were rescued and evacuated safely.

Scottish vessel capsized and sank after hitting a known 'black spot'

A Scottish vessel started to sink below the waves as it ran aground and flipped on its side at a notorious "black spot" in the North Sea. RNLI Fraserburgh Lifeboat Station based in Aberdeenshire was reportedly alerted that The Ocean Maid BA55 had got into difficulties at Cairnbulg Point and immediately rushed to the scene. It is understood that The Ocean Maid BA55 ran aground at a 'black spot' that has left several ships wrecked in recent years, one of which was the Sovereign that ran aground in 2005 just meteres away from where this incident happened. Rescuers managed to get four crew members to safety after quickly abandoning their boat on a life raft as they realised they were in trouble.

Laden VLCC runs aground near gas pipeline off Indonesia



A laden Hong Kong-owned VLCC has run aground off Indonesia near to a Singapore gas pipeline. The Indonesia transport ministry's Sea and Coast Guard said the 306,000-dwt Young Yong got stuck near Takong Kecil Island off Batam City on Friday. An operation had been planned to evacuate the 25-strong crew on board the Djibouti-flagged ship. The evacuation operation needed to be conducted carefully as the tanker is within the Singaporean gas pipeline area.

12 missing as cement carrier sinks off Taiwan

The cement carrier "Xing Shun No 1" has sunk on the east side of the Changhua channel in the Taiwan Strait, and 12 crew members are missing. A search and rescue operation was taking place off Taiwan to find the 12 of the total 17 crew members. After the vessel sank, five seafarers abandoned it and were successfully rescued having made it to lifeboats. They were later rescued by a passing container ship. Taiwanese authorities said that two empty lifeboats had been spotted. Originally, the cement carrier was carrying 20 crew, but three had to disembark earlier for medical treatment after being injured.

Lithium-ion batteries... should we be concerned?

An opinion article by Mike Schwarz, IIMS Chief Executive Officer.

I have written this short article following the publication of a report into a lithium-ion battery-related fire onboard the 'MS Brim' which generated the investigation by the Norwegian Safety Investigation Authority. The vessel in question is the 'MS Brim', a 2019-built all-electric catamaran offering excursion tours in the Norwegian fjords. Although not a technical man, I am troubled by some of the report findings, and forgive me as I have cherry-picked the bits that concern me most from a lengthy report.

So, I pen this article in my simplistic way as a) just a concerned and interested member of the general public and b) in my role as Chief Executive Officer of the International Institute of Marine Surveying on behalf of the surveying community.

Lithium-ion batteries are not brand new, but the technology is becoming far more widely used in vessels as the world looks to decarbonize and cut emissions. The purpose of this article is not to be negative and closed to new technology, but rather to express my concerns based on what I have read with regards to this incident in particular and the safety culture around this means of propulsion. At 81 pages, the report is detailed, but I would encourage you to download it at **https://bit.ly/3bdy5vi**.

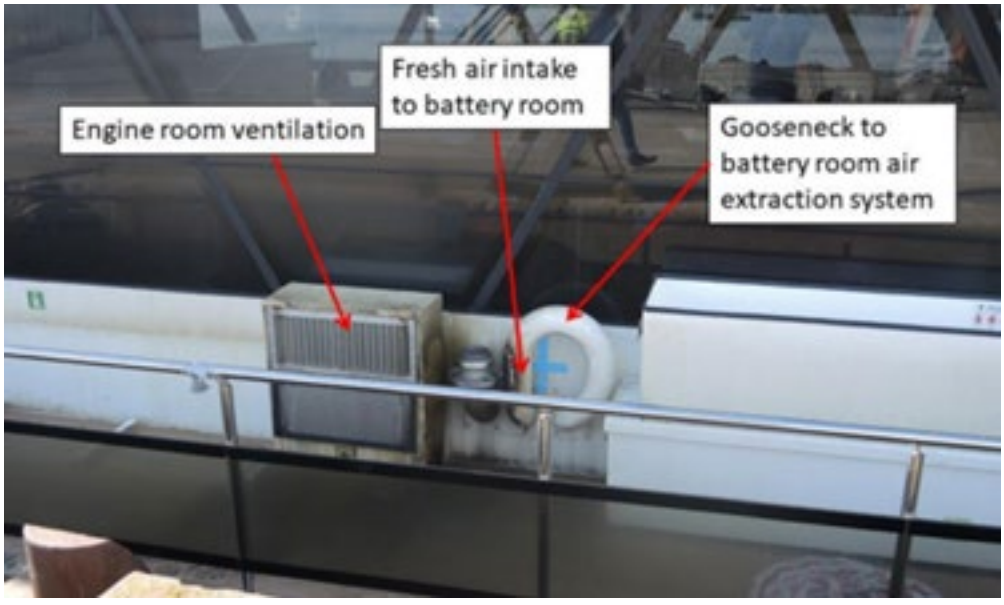
Let me take some words directly from the report itself: 'Immediately before the fire broke out, the battery system was disconnected as a result of a ground fault, which was indicated on the panel on the bridge. Ground faults had been a recurring problem since the vessel was new. The crew, therefore, perceived the alarm as 'one of many'.

In the interests of public and crew safety, I ask why this was thought to be acceptable and why no-one reported or did anything about a recurring problem?

BACK TO THE REPORT:

'There was no camera surveillance of the battery room. The presence of a camera might have helped the crew to dispel the incorrect perception that it was the engine room that was on fire. The DNV's updated classification rules from 2021 recommend camera surveillance of battery rooms to improve the crew's situational awareness, in addition to gas monitoring for early detection of gases before they develop into smoke'.

I leave you to draw your own conclusions on this paragraph.



Ventilation for engine room and battery room on starboard side of 'Brim'. Photo: NSIA

And here is another statement from the report that caused me to raise my eyebrows:

'The investigation has also identified several areas where the risks associated with the use of lithium-ion batteries were not sufficiently identified or addressed in the design. At present, DNV's classification rules for battery safety do not sufficiently address the risks associated with the use of lithium-ion batteries on board vessels'.

Clearly there is the suggestion that the vessel design is at fault. Will appropriate modifications be made to ensure this issue is addressed? As a potential traveller to the Norwegian fjords sometime soon, I do hope so! Mention in the report that a classification society's rules have yet to catch up with the technology does nothing to boost my waning confidence either. As so often seems to be the case in the marine world, it appears that technology is running faster than the rule makers or maritime regulators can keep up with. I wonder how differently things might work in the aircraft business. It seems incongruous that it would be acceptable for a few of the new breed of lithium-ion powered aircraft that will surely be in the skies soon should catch fire and crash. So, what is the aircraft industry doing differently and what could the maritime sector learn?

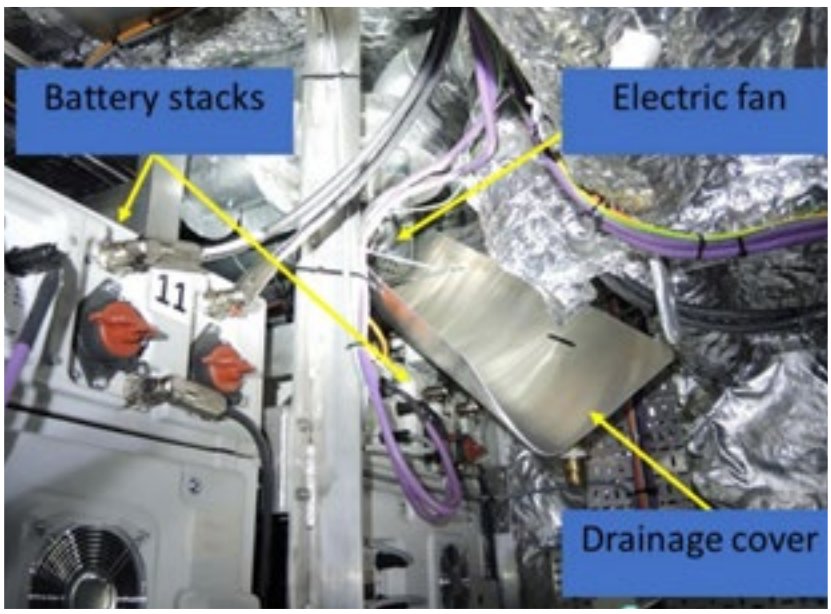
And now, to conclude, here are the safety recommendations extracted from the report: The Norwegian Safety Investigation Authority recommends...

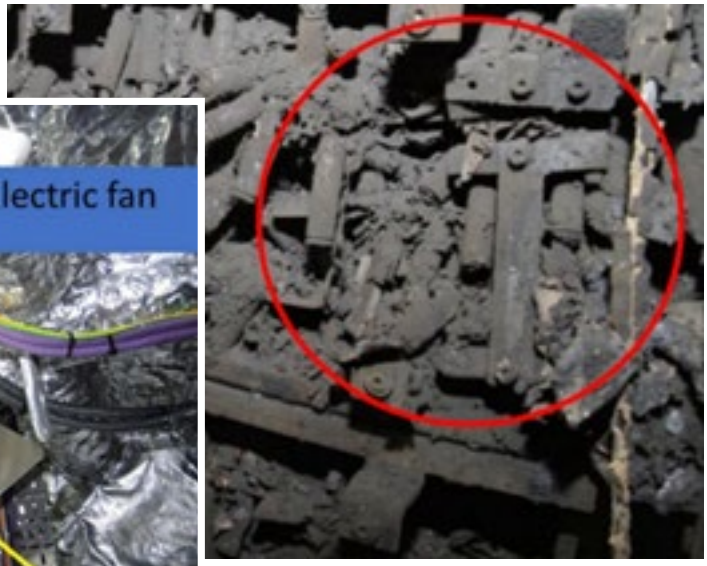
- *that the Norwegian Maritime Authority issues requirements for appropriate test methods that reflect the risks associated with the design of different battery types to be chosen for conducting propagation tests.*
- *that the Norwegian Maritime Authority ensures that battery safety regulations be developed so that ventilation arrangements do not contribute to batteries and high-voltage components being exposed to humid sea air or seawater.*
- *that the Norwegian Maritime Authority introduces additional measures to verify that installations are smokeproof and ensure fire integrity.*
- *that the Norwegian Maritime Authority issues requirements for risk assessments relating to the use of lithium-ion batteries, and that they should contain all relevant risks identified by different disciplines, the sum of which represents the vessel's fire risk.*
- *that the Norwegian Maritime Authority, as the administrative authority, cooperates with the Directorate for Civil Protection on stipulating a requirement that all Norwegian vessels, regardless of classification, must be built to a defined standard that ensures battery safety.*
- *that the Norwegian Maritime Authority introduces compensatory measures to address the safety of passengers and crew in the event of a lithium-ion battery fire.*
- *that the Directorate for Civil Protection strengthens the knowledge and expertise of the parties involved in the first-line response to accidents involving a fire on board a vessel carrying lithium-ion batteries.*

Gosh, that's a lot of safety recommendations, but read them carefully and re-read them to understand exactly what is being recommended. There is a huge onus being placed on the Norwegian Maritime Authority to react and presumably, this same pressure applies to other maritime regulators around the world.

So, there you have it. All I want to know is that when I get onboard such a vessel as a paying passenger, I am reasonably safe! And in my professional role, I want marine surveyors to be aware of some of the new challenges that await them today and in the near future surrounding lithium-ion battery technology and vessel design. I would like to encourage a debate around this topic, but if nothing else, I wanted to alert people to the situation.

Electric fan above battery stack 12 with temporary drainage cover installed in port battery room to lead water away from the battery system. Photo: NSIA





Remnants of battery module 2 in battery stack 6, with the copper strip encircled in red. Photo: Kripos

Mike Schwarz

Statsraad Lehmkuhl – the wind and the sails

The Statsraad Lehmkuhl. Image by Bruno Girin.

By Kunal Pathak, Loss Prevention Manager, Gard, Singapore

Sometimes the glimpses of our future may lie in the past, if only we are willing to pause and look. Sometimes we need to go back to see the future. Statsraad Lehmkuhl's One Ocean Expedition exemplifies a perfect resonance between the master and the crew, the ship and the sea, wind and the sails; all coming together as one unit, one team, One Ocean.

During a voyage from Ishigaki to Manila aboard the tall ship Statsraad Lehmkuhl, the author glimpsed what it means to have wind in our sails. He takes you on that voyage and explains what we can learn from the master and the crew, the ship and the sea; and the wind and the sails as well as some lessons that will inform decisions toward upcoming carbon emission reduction targets.

The master and his crew

Statsraad Lehmkuhl is a 108-year-old tall ship (Barque) registered under the Norwegian Flag and has been an icon in her home port of Bergen since 1923. While the vessel is old, it is fitted with state-of-the-art technology for navigation and ocean research. The vessel can run at 11 knots on a 750 rpm,827 kW Diesel generator and 18.5 knots using her 22 sails. It is manned by about 20 permanent crew, 10 trainees and is designed to carry some 150 apprentices. There were 77 ap-

prentices onboard for the voyage from Ishigaki to Manila. We were a diverse group of trainees, ranging from 16 to 66 years of age, a close to even spilt between men and women from sixteen countries, and an even more diverse personality distribution. I was fortunate to be an apprentice on board, together with a few Gard colleagues. Our participation was organized by various Norwegian Shipping Associations.

The six-day voyage included lessons on safety, the weather and the winds, leadership and stewardship, and how it all comes together to form the essence of the "One Ocean Expedition". Let's start with the master, Capt. Jens Joachim Hiorth. I chatted with him about his views on safety on board a tall ship where the crew and the trainees are expected to carry out a lot of work aloft in the rigging. "The rigging" means all parts of the ship that make up her sails. In simple terms, it is a 45-metre vertical climb up the masts using shrouds (the vertical steel ropes) and planting your feet firmly on the ratlines (horizontal ropes). To my question the master's response was that "if you remove all distractions, I trust in every individual's will to live and self-preserve". Statsraad Lehmkuhl has comprehensive written procedures for working aloft which are ingrained in every crew member's psyche as was evident in our safety briefing on board the vessel. In addition to the procedures, the crew members were skilled in rope work when working aloft and were able to guide the rest of us to make the climb safely.

According to the master, his job is to ensure that the weather conditions are conducive for the climb and then he relies on an individual's willingness to make the climb following all safety protocols for working aloft. Here lies an important aspect of safety given that Statsraad Lehmkuhl has had zero "fall from height" accidents in its history. Procedures alone may not guarantee safety unless they become a way of working for the crew. The captain believes that the most important safety equipment is the human brain and its ability to focus and protect itself when it counts. If the procedures are practical and not burdensome for those involved in the work activity, the people involved in the work will instinctively follow the procedures.

Capt. Jens Joachim is a man of aesthetics. He says, "I may never have an office job because if I don't like the colour of my office walls, I may end up painting it". So, my follow up question was, "what is the most beautiful part of your life on board this ship? "The crew", he said, without skipping a beat. The captain believes that his crew is his second family, and they are the most essential and the most beautiful part of his life on board the ship. He believes in his crew and trusts their judgement. Trust is a two-way street and we observed how the crew reciprocated the master's trust with loyalty towards him and the ship. For a captain to trust his crew is to accept the consequences of their decisions as he believes that the crew are well trained and competent in performing the job. Trust is a starting point of safety as distrust creates distractions. With distractions we lose our ability to focus and perform as a team. Amongst many things, Statsraad Lehmkuhl is a demonstration of the close relationship between trust, safety, and human instinct.

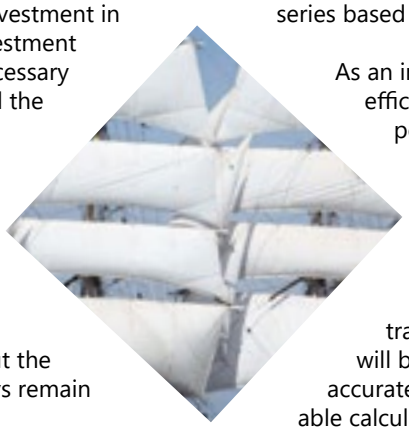
Capt. Jens Joachim Hiorth briefing the trainees. Photo credit: André Martin Pedersen

The ship and the sea – lessons for the coming GHG regulations

It takes special competence to operate a sailing vessel with 22 canvas sails with a total surface sail area just over 2000 m2. The crew needs to undergo rigorous training to obtain their certificate of competency to maximise the use of the wind energy and minimize the use of diesel for propulsion. Statsraad Lehmkuhl is a square rigger, which makes the vessel more of a downwind vessel. That said, with efficient seamanship, the vessel can sail at 60 degrees up-wind. For anyone who has sailed on a sailing vessel or even a power-driven vessel, it is not exactly "straightforward" to sail up-wind.

According to the captain, efficiency means the ship's ability to harness the full potential of the wind. While they have all the hardware in the form of sails and riggings, they rely on two factors that complement the hardware to operate efficiently. It is essential to understand how the vessel works as we can draw some parallels here given that owners will be investing significantly in the next few years in order to comply with the upcoming EEXI (Efficiency eXisting ship Index) and CII (Carbon Intensity Indicator) regulations.

The first factor is the crew competence in handling all the sails in conditions that may not always be conducive and that is when their investment in training and development starts to show results. To optimize a vessel's design index and efficiency ratio, several owners are contemplating alternative fuels, hull designs, wind turbines, solar panels and a plethora of other energy saving devices (ESD). While the investment in these new technologies is a no brainer, the investment in the crew training and competence is also necessary and perhaps the need of the hour. Not only will the owners need to get the crew "up-skilled" in the use of the new technology, but they will also need to invest in retaining their crew for the long term. These investments are likely to pay dividends in the years to come as IMO GHG regulations are going to be progressive to the point of net zero emissions. Managing a vessel's carbon emissions is going to be as much about the human factor as it will be about the technology. The two are and perhaps will always remain inseparable and interdependent.



The CII regulations will very likely increase the pressure on owners and charterers alike to reduce their carbon footprint voyage-on-voyage and year-on-year. A bottom-up approach where the seafarers are involved in the decision making involving a new technology or fuel type and maximising efficiency will yield long term gains in terms of commercial viability, crew loyalty and most importantly, safety on board the vessel. The seafarers must remain central to such decisions as they will be expected to operate the vessel under conditions which may be difficult to imagine sitting behind a desk. January 2023 is the beginning of our race towards zero emissions, and it is not a race between one shipowner against another. The race is against time to cut our emissions enough to keep in line with the 1.5-degree limit as set out in the Paris accord and IMO's ambitions to get to net zero by 2050.

The second important factor is the weather data. According to the captain, trade winds are reliable to estimate ETA's and consumption. Accurate, real time weather data is crucial for voyage planning and execution. Before the start of the expedition, Capt. Jens Joachim was asked by the project managers to give an estimate of fuel consumption for the One Ocean Expedition. Estimated fuel consumption for an expedition is a rather complex mathematical calculation based on several variables. According to the master, the weather data we currently receive is reliable enough for only 5 days, at best. This is because our main source of data is shore based meteorological stations. If we were able to install weather observation stations on global tramping vessels, we will benefit significantly from being able to gather more accurate real time data to plan voyages in the most efficient way and at the same time to better harness the power of the wind.

Going back to the IMO's EEXI and CII regulations, the significance of vessel's "design speed" is limited when it comes to CII calculations. This is an important point for vessel operators as the vessel's design speed may not be its most efficient speed. The calculations are based on carbon emissions per ton-nautical mile (AER) or transport work (EEOI). This means a vessel's design speed will be secondary to its emissions. Vessels may not run at full speed all the time as long as its emissions are in line with the required CII rating (A to E), which will be progressively reduced every 2 years to reduce GHG emissions. In other words, the target is not high speed, it is reduced emissions with efficient speed. We know that over the years, charterers have required vessel to run at "eco speed" to ensure that the vessel arrives at the destination port "just in time" for its operations. As an example, if we take the voyage average speeds for the last 10 years, a handy size bulk carrier has done 11.33 knots, a neo-panamax container ship has done 16.05 knots and the VLCC segment has performed just over 12 knots (Calculations are based on Clarkson's monthly average time series based on vessel movement data).

As an industry, we have always been driven more by efficiency than speed over the past 10 years and perhaps even before then. Efficiency requires vessels to optimize their speed to make certain arrival schedules and do its part to fit in the "derived demand" from the global trade. After all, in the words of Mr. Martin Stopford in Maritime Economics, "the product in demand is not a ship, but transport". With better weather data, masters will be able to maximize efficiency and calculate accurate consumption and time of arrival. These reliable calculations would allow owners and their masters to prepare more reliable arrival schedules and at the same time optimise their consumption.

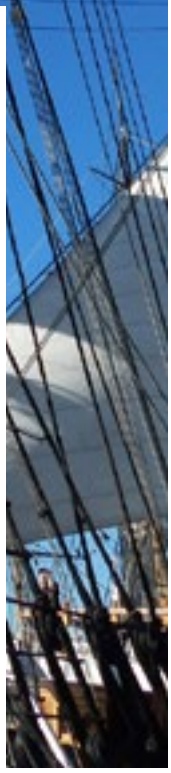
The Statsraad Lehmkuhl's One Ocean Expedition is 14 months and 10 days old as of the day of this writing. The master's initial estimated fuel consumption (MGO) is about 2% off from the actual fuel consumption. The vessel had a draft of about 5.2 meters and has made good an average speed of 4.6 knots over a period of 436 days, including the port stays. Through all her voyages across the seven oceans the vessel has covered a total distance of 37,492. nautical miles with total fuel (MGO) consumed to be about 515 kilo litres on arrival Manila. The total expected distance that the vessel will likely cover is about 55,000 NM by the end of this expedition. The fuel consumed was primarily to run the accommodation and galley and some for the main propulsions, when necessary. While the Statsraad Lehmkuhl is below the tonnage threshold for CII regulations (GT 1516), if we calculate the CII rating using the distance travelled and MGO consumption, its AER would be 24.82 gCo2 per GT nautical mile. With an AER at this level the vessel would be rated "A". This is a 108-year-old vessel!

The wind in our sails

So what is so special about Statsraad Lehmkuhl? Is it the vessel, the state-of-the-art navigation systems, the crew competence and training, or is it the leadership of the master? Statsraad Lehmkuhl is of an iconic relevance for Bergen and has had many captains over the years. Several thousand seafarers have manned the vessel during her life and have maintained her in a state so that the vessel can still sail the seas. So how has this vessel lasted over a century and why is it still relevant?

The maritime industry is at a juncture where we as an industry will need to challenge the status quo and perhaps make significant investments in the fuels, vessels and seafarers of the future. This is no small feat and owners will remain under regulatory pressure for years to come. When owners invest in their crew, their crew invests themselves in the vessel and the owners. This is what makes vessels' trade and stay commercially viable in the long run. The crew operates the vessel with a sense of purpose rather than an obligation to complete their sea-time.

In the case of Statsraad Lehmkuhl, my question to the master was: what makes this vessel a home away from home for not just the master, but also the crew? According to the captain, it is their passion for sailing, the social cohesion and support they get from each other, and knowing that they matter to their captain, to the owners and a sense of association with a purpose. For the rest of the 77 trainees, it did not matter where we came from, how old we were, what gender we were, what race or religion we followed or what titles or designations we had in our jobs. We all mopped the floors, scrubbed the decks, climbed the rigging, jumped into the sea and sang shanties like children. It didn't matter what we were, all that mattered was who we were.



We thank the master and crew of Statsraad Lehmkuhl, Maritime Bergen, Norwegian Shipowner's Association, Bergen Shipowners' Association and Edwin Pang who assisted with the CII calculations.

This article first appeared on the Gard web site and is publisher here with our thanks.

BACK IN TIME

The tale and fate of MV Darlwyne

Just exactly what does, and should history teach us?

By **Mike Schwarz**

MV Darlwyne. Photo credit: Mirrorpix

Earlier this year back, I was sitting at my kitchen table one hot summer's Sunday morning about to tuck into bacon and eggs for breakfast. The television was whirring away quietly in the background. I was taking no notice of it, that is until an obscure programme popped up on the BBC about a marine tragedy in 1966 involving the MV Darlwyne, resulting in the deaths of 31 people.

Suddenly the programme had grabbed my fullest attention and I was gripped by what I was hearing and seeing. Over the years we have learnt a great deal following maritime disasters; yet as the documentary unfolded this particular story made me question just what we have learnt for such incidents still occur. Like so many marine tragedies before and after this one, it was an accident that should never have happened.

I cannot claim much of this article as my own work, but I have mined the internet and pulled together as much relevant information about the incident as possible. The extract about the Board of Trade enquiry makes sobering reading. So, my first motivation was to tell this story for today's generation to pay respects to the 31 souls who perished on 31 July 1966, but secondly to invite you to draw your own conclusions about what happened that day and why this was surely unacceptable back then as it would be today.

Back in 1966, I was just a young lad and have no recollection of this story making the news headlines, although for sure it will have done. Like the rest of the country, I was revelling in the England football team winning the World Cup the day before.

The following text is taken from Wikipedia and edited.

The history of MV Darlwyne

Picket boat no. 41768, the future Darlwyne, was built for the Royal Navy in 1941 in the Sussex Yacht Works yard at Shoreham-by-Sea. The hull, carvel built from African mahogany and rock elm, was 45 feet long, approximately 11 feet wide, with a draught at the stern of 3 feet. Bulkheads divided the hull into fully watertight compartments, each equipped with a bilge pump. The vessel's original engine power was provided by twin Gardner 6LW diesel engines, each developing 95 horsepower. It was built to operate in harbours and estuaries, mainly in transferring personnel between ship and shore, rather than for the open sea.

The vessel remained with the Royal Navy until 1957, when it was sold to the Belsize Boatyard in Southampton. Here, it was converted to a cabin cruiser, during which most of the original bulkheads were removed; the replacements were not watertight. In September 1959 the boatyard sold the boat to joint owners Messrs Lowe and Gray, who replaced the engines

with less powerful twin Perkins P6 units each generating 65 hp. They then moved the boat to Teddington on the River Thames, where on 22 April 1960 it was registered as a river cruiser under the name Darlwyne. At this time its gross register tonnage was recorded as 12.35.

In October 1962 the owners transferred Darlwyne to St Mawes, in Falmouth, Cornwall. It was taken there by a crew of six; although the sea trip was accomplished without any serious incident, the crew were critical of the boat's performance in certain weather conditions. They found it top-heavy, difficult to steer, and with a tendency to list. Darlwyne remained at St Mawes until September 1963, when the owners decided to sell it as a potential commercial passenger boat. At Mylor, in the Carrick Roads estuary of the River Fal, it was inspected by a local marine surveyor, George Corke. He noted the poor steering. It was impossible, he said, to navigate a straight course and thought that much work would be necessary before it was fit for passenger carrying operations. On 30 May 1964 Corke acted as agent for Lowe and Gray in the sale of Darlwyne to John Barratt, whose main objective was to renovate the vessel with a view to a profitable sale.

Leading up to the incident

After extensive work and repainting, in September 1965 Barratt agreed to sell Darlwyne to Steven Gifford, who took possession and began further adaptations. The sale ultimately fell through, and by the end of the year the vessel had been returned to Barratt. In the spring and early summer of 1966, under the supervision of Barratt's daughter, further substantial alterations were carried out, including the removal of the aft cabin to create an open cockpit area. This work, undertaken without professional advice, was never fully completed. During this period the boat was in regular use for trips by members of the Barratt family, including a Whitsuntide voyage across Falmouth Bay to the Helford River, where it apparently performed well in strong winds.

At the beginning of July 1966, Darlwyne made several commercial sightseeing trips around Falmouth Harbour during the Tall Ships regatta. A passenger on one of these sorties was Brian Michael Bown, a former member of the RAF Marine Rescue Section. Although not formally qualified as a ship's master, Bown had sailing experience and had skippered boats on seagoing trips to Fowey and the Isles of Scilly. Subsequently, Bown suggested to Barratt a business venture in which Darlwyne would be used as a day-trip boat. Bown's letters indicate that he was proposing to work as the boat's skipper, and to take a third share of the profits. Barratt's daughter advised Bown that they were preparing Darlwyne as "a twelve-passenger charter boat"; any number in excess of 12 would mean conforming with tougher Board of Trade regulations, and licensing might prove difficult. According to Barratt, Bown was to assume responsibility for obtaining whatever licences were necessary.

On 20 July 1966, at the request of Barratt's daughter, Darlwyne was again examined by marine surveyor George Corke, who found the boat in generally poor condition. Among the faults he listed were dry rot, a weakening of the hull caused by the removal of various supporting frames, and signs that the hull had been "pushed in" below the waterline. Corke's report reiterated his earlier view that Darlwyne was presently unfit for work in the open sea. This report was sent not to Barratt but to the family's solicitors, where in the days that followed it lay unread; there is no indication that Barratt was aware of its contents before 31 July.

Robert Rainbird, proprietor of the Greatwood guest house at Mylor Creek, near Falmouth, was familiar with Darlwyne, having cruised with Bown in one of the earlier Tall Ships sailings. According to his later account, when two of his guests asked him about the possibility of organising a sea excursion, he put them in touch with Bown. On the evening of Saturday 30 July, amid celebrations following England's victory in the 1966 FIFA World Cup Final, Bown and his friend Jeffrey Stock, a qualified engineer, visited Greatwood. They found that enthusiasm for a sea trip had spread to many of the guests, and an agreement was made to take a large party to Fowey the following day.

The voyage

BBC weather forecasts for the Cornwall area, broadcast the previous evening and earlier that morning, were discouraging; all promised increasing winds, up to Force 7, with the probability of rain from midday. Such weather conditions could produce heavy seas and poor visibility. Nevertheless, Darlwyne set out from Mylor shortly after 10:00 am in pleasant sunshine, expecting to return before 7:00 pm. By 1:00 pm on arrival at Fowey the weather had deteriorated, and it was raining heavily. Bown did not tie up to the main town quay – he was heard saying that the vessel was "a bitch to handle" – and anchored mid-harbour. After three hours in the town, the group reassembled at the quay to be ferried back to Darlwyne. The wind was rising; a bystander heard a local fisherman advise Bown not to leave the harbour until the weather improved, but the warning was brushed aside. Darlwyne sailed at approximately 4:10 pm and headed westward into the worsening weather. For the first few miles the large headland known as Dodman Point would provide some shelter; thereafter the vessel would be fully exposed to the force of the winds. Although subsequently there were reported possible sightings of Darlwyne, that was effectively the last anyone saw of her, and she vanished. When notice of her non return to harbour became evident, an extensive sea and air search lasting for many hours and days was launched, but nothing was found.

Photo credit: BBC.
The coffin of one of the victims is hauled on to the quayside

The victims

On 4 August, the first victims from Darlwyne were discovered in the sea about four miles east of Dodman Point. The bodies were of Albert Russell, his wife Margaret, and two teenage girls: Susan Tassell and Amanda Hicks. On 5 August, the body of Jean Brock was found, wearing a lifebelt, six miles west of the Eddystone lighthouse. That same day, light wreckage -planking from the on-board dinghy, an engine cover, a plastic ball and some suntan lotion - was found on a beach near Polperro.

Over the coming days, further bodies were discovered at sea and washed up on nearby beaches. Twelve bodies and a few artefacts were later recovered, but the rest of the victims and the main body of the wreck were never found.

The lost

The victims, with their ages, are listed by Martin Banks in his 2014 history of the event.

Crew

Brian Michael Bown (age 31) - skipper
Jeffery Claude Stock (age unknown) - engineer

Passengers

Lawrence Arthur Bent (74), Kathleen Bent (60), George Lawrence Bent (20)
Roger Duncan Brock (26), Jean Brock (24)
James Cowan (52), Dora Cowan (48), Susan Cowan (14)
Mary Rose Dearden (19)
George Edmonds (45)
Amanda Jane Hicks (17), Joel Hicks (9)
Arthur Raymond Mills (42), Jonathan David Mills (11), Janice Beverley Mills (9)
Kenneth Arthur Robinson (19)
Patricia Roome (48)
Albert Russell (50), Margaret May Russell (50), John David Russell (21), Patricia Ann Russell (19)
Peter Lyon Tassell (41), Eileen Sybil De Burgh Tassell (41), Susan Gail Tassell (14), Nicola Sara Tassell (12), Frances Harriet Tassell (8)
Lorraine Sandra Thomas (20)
Malcolm Raymond Wright (26), Margaret Wright (22)

Board of Trade enquiry

The Board of Trade court of enquiry into the loss of the Darlwyne began at the Old County Hall, Truro, on 13 December 1966. It sat until 6 January 1967 and published its findings in March of that year. It was unable to determine who was responsible for organising the fatal trip, as most of those involved had lost their lives in the disaster. Barratt claimed ignorance, and Rainbird denied any role in the matter beyond introducing Bown to the guests who had asked about a sea trip. In the absence of direct evidence to the contrary, the court assumed that details had probably been finalised in the Greatwood bar, between Bown and the two guests who had initiated the request.

The court established that at the time of the disaster, neither Darlwyne nor Bown were licensed in terms of either Board of Trade or local regulations for passenger carrying vessels. The court believed that both Barratt and Bown were broadly aware of licensing requirements but had taken few or no practical steps towards compliance by 31 July.

Evidence of Darlwyne's history confirmed Barratt as its legal owner. The court noted the general state of the vessel and the various alterations that had been carried out, affecting its seaworthiness. In particular, the cockpit floor was not watertight and had inadequate scuppers, so that water entering the cockpit drained into the lower hull rather than back into the sea. Lacking watertight bulkheads, the hull would easily flood with any rapid ingress of water. The hull itself showed evidence of dry rot and other external damage. Poor communication between the various parties concerned with the vessel in the preceding months meant that these various shortcomings had been overlooked or ignored. Furthermore, the overloading of the vessel with 31 people meant that it lay low in the water, so that a modest heel of 30 degrees would allow water into the open cockpit.

The court heard details of Darlwyne's departure from Fowey, the prevailing weather conditions on 31 July, and the subsequent possible sightings. It thought it likely that sometime after 6:00 pm the engines failed, leaving the vessel to drift helplessly. Without radio or flares, Bown would have been unable to signal its distress. From the evidence of stopped watches and the pathologist's reports of death by drowning in deep water, the court decided that it was likely that, around 9:00 pm, Darlwyne had been overwhelmed by heavy seas. Because of its structural faults it had filled with water and sunk rapidly, taking the entire complement down.

In determining responsibility for Darlwyne's loss, the court was "satisfied that the major cause of the disaster was the Darlwyne going on a voyage to sea when she was physically unfit to withstand the normal perils which she might expect to meet". Culpability was shared between Bown and Barratt, the former for taking passengers to sea in an unfit boat, the latter for failing to warn his "agent or servant" of the vessel's unfit state. Barratt was severely censured by the court and ordered to pay £500 towards the cost of the enquiry. Barratt considered the court's findings as related to him were "rather unfair", while Bown's widow defended her late husband as a competent and experienced skipper.

Memorial

On 9 April 1967, at the parish church of St Mylor, the Bishop of Truro led a service of dedication for a memorial screen, erected in the church to commemorate the victims of the Darlwyne disaster. The screen, designed by John Phillips and fashioned from oak by local craftsmen, contains the names of all the lost 31.

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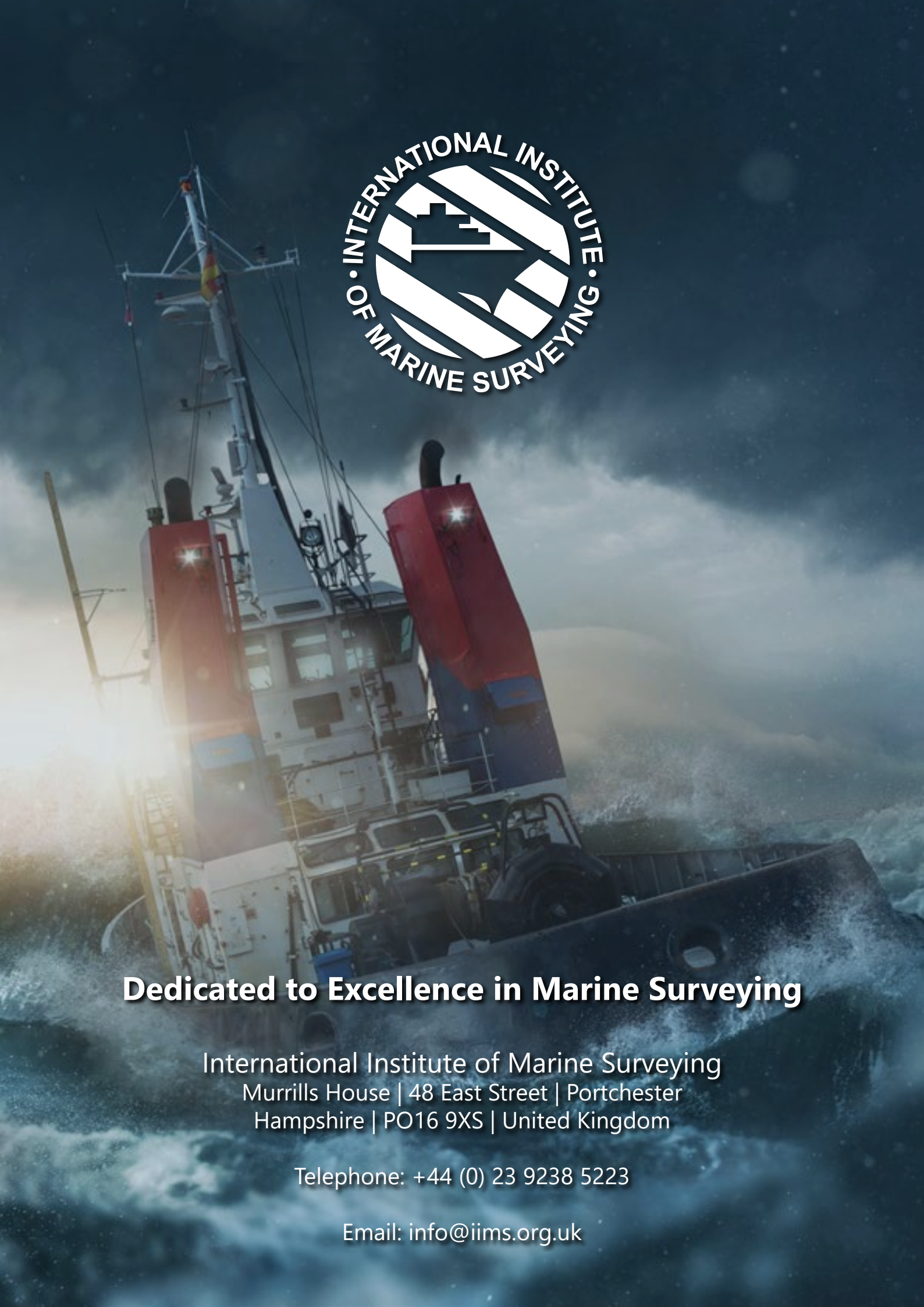

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