

THE REPORT



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The Magazine of the International Institute of Marine Surveying

RULES WITHOUT ENFORCEMENT ARE NO RULES AT ALL

**LIFEBOATS
INCIDENTS:
OBSERVATIONS
AND LESSONS
LEARNED**

**ENCLOSED
SPACES:
WHEN
SAVING A
LIFE TURNS
FATAL**

**RESPONSIBILITIES OF THE
'DESIGNATED PERSON ASHORE'
UNDER THE ISM CODE**



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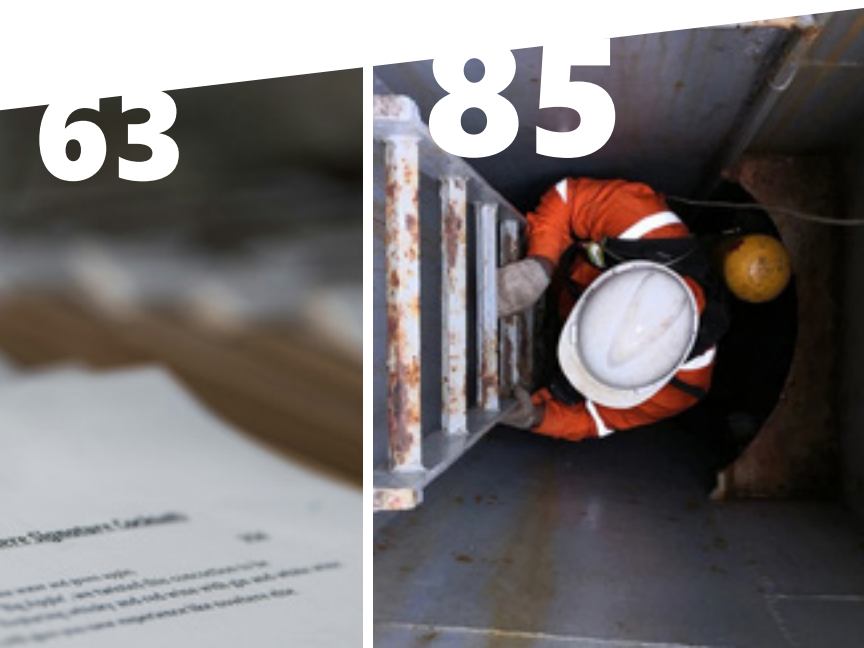
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EDITOR'S LETTER

Dear member and fellow maritime professional

Edition 115 of The Report Magazine is a more eclectic mix of content than usual, proving once more what a diverse, fast paced industry we operate in. I am grateful to all those who have contributed to this edition.

Life at IIMS remains hectic as we currently explore a number of new opportunities and continue to seek ways to innovate for the good of our members and others in the surveying profession. But sometimes it is important to step off the treadmill momentarily to remember where we have come from. IIMS is about to celebrate its 35th birthday. I could not let this milestone pass by without comment from some of our Presidents, past and present. You can read their collective comments on page 19.

I have chosen to dedicate space to two long and in-depth articles, both very different in subject matter, but both deserving to be published and read. Composed by two IIMS stalwarts, past President, Capt Bertrand Apperry HonFIIMS, has authored *Responsibilities of the Designated Person Ashore under the ISM Code* (see page 75). Bertrand

has been involved with the ISM Code for many years going back to its inception, so he is well placed to share his views on this important topic. Geoff Waddington HonFIIMS has written an article entitled *Rules without enforcement are no rules at all* (page 63). I confess to being alarmed when I read Geoff's article for it touches on a shifting culture that seems to be worsening these days which should concern us all.

Regrettably, the subject of deaths in enclosed spaces remains a hot topic and rightly so, perhaps unsurprisingly given that 2025 saw a surge in incidents in this area. Two articles, Enclosed spaces: *When saving a life turns fatal* by Siddharth Mahajan (page 85) and *At least 1,010 fatalities in enclosed spaces aboard vessels between 2000-2024* (page 142), update the situation and keep this vexing subject firmly on the agenda. Nobody should go to work and not come home to their family because they have died in an enclosed space in 2026.

The Metstrade exhibition, held at the RAI facility annually in Amsterdam during November, is a big deal for many in the small boat sector. Indeed, I visited the show last year and was amazed at how huge the event has become. There was plenty of 'new tech' on view and this is reflected in

the article *Metstrade 2025 electric boat highlights* (see page 133), which gives a comprehensive round-up of some of the products on display.

Current IIMS President, Capt Ruchin Dayal FIIMS, who is something of an expert on the subject of iron ore fines and its potential liquefaction as cargo, has written *The Dangerous Erosion of Iron Ore Sampling Standards in India: A Call for Urgent Action* (page 95). In his article, he raises significant safety concerns due to the possibility of liquefaction as cargo exports from Goa are set to resume and increase.

And finally, I am delighted that Australian member, Peter Pope MIIMS, accepted my invitation to be the subject of this edition's *A Day in the Life of* feature (see page 150). Peter is rightly proud having mentored a number of younger surveyors over the years, most of whom are now IIMS members. I'd like to extend my thanks to Peter for the help he has given over the years to new entrants and hope you will enjoy reading his answers to the questions I posed to him and why mentoring is, for him, very rewarding.

Survey well,

Mike Schwarz
Chief Executive Officer



PRESIDENT'S COLUMN

Capt. Ruchin Dayal, President, IIMS

Dear Member and Fellow Maritime Colleagues,

As we move through this phase of the Institute's journey, it is difficult not to pause and reflect on just how far the International Institute of Marine Surveying has come. With IIMS approaching its 35th year, there is a growing sense that we are not merely marking time, but actively and dynamically shaping the future of our profession.

Over the past months, the Institute's global engagement has been particularly encouraging. The recent Baltimore Conference, held under challenging winter

conditions, demonstrated once again the commitment and enthusiasm of our members as well as those non-members who attended. Despite heavy snow and sub-zero temperatures, surveyors gathered - both in person and online - to exchange ideas on subjects ranging from expert witness work and surveyor ethics to lithium-ion battery risks and regulatory inspections. Events like these reaffirm the importance of face-to-face technical dialogue, even as digital learning continues to expand apace.

Speaking of learning, one of the most significant, recent developments for IIMS has been the launch of the On-Demand Training Portal. This platform represents a decisive step forward in

how professional education is delivered - accessible, flexible, and aligned with the realities of modern surveying practice. Training is no longer limited by geography or schedules, and this will play a vital role in developing the next generation of competent surveyors. Already approaching 200 surveyors have signed up to browse the 150 courses and over 100 courses have been purchased for study.

Looking ahead, I am particularly excited by the proposed training collaboration with the Marine Surveyors Association of Bangladesh, with plans for structured modules on draught surveys, ullage surveys, and marine accident investigation.



Initiatives such as these reflect the growing trust placed in IIMS as a provider of credible, technically sound training across regions where formal standards are still evolving.

All of this reinforces a broader truth: in many parts of the world, the title “marine surveyor” remains unregulated, yet the responsibilities carried by surveyors have never been greater. As vessels, cargoes, and technologies become more complex, the need for competence, ethics, and continuous learning becomes paramount. IIMS has an increasingly important role to play in setting

benchmarks - not through regulation, but through professionalism.

In this context, a development closer to home is also worth noting. The proposed yacht marina project in Mumbai signals the early stages of a recreational and small craft sector beginning to take shape in India. At present, there are very few surveyors in the country with experience or formal grounding in small craft and yacht surveying, leaving a clear skills gap as this market develops. As this sector grows, IIMS is well placed to support it through guidance, training, and the development of competent

surveyors who can serve owners, insurers, and operators in this emerging space.

As President, I find great confidence in the direction the Institute is taking. With strong leadership at headquarters, an engaged membership, and a clear commitment to relevance in a rapidly changing maritime landscape, IIMS continues to stand for something that truly matters.

Survey well.

Capt Ruchin Dayal

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Tel: +44 (0) 23 9238 5223 | Email: info@iims.org.uk | IIMS, Murrills House, 48 East Street, Portchester, Hampshire, PO16 9XS, UK | www.iims.org.uk

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Fire damages Haines Hunter Australia factory in Victoria

A serious fire damaged part of the Haines Hunter Australia factory in Derrimut, Victoria, triggering a large emergency response and interrupting operations. Fire crews were called to the factory on East Derrimut Crescent following multiple emergency calls reporting a fire inside the building. Firefighters arrived to find thick smoke issuing from the structure, with fire concentrated at the western end of the site.

Due to structural collapse within the building, crews were forced to fight the fire defensively. The fire was brought under control early in the afternoon, with neighbouring businesses evacuated as a precaution. Four people were treated by Ambulance Victoria for smoke inhalation and transported to the hospital. No serious injuries were reported.



Marine market holds steady, Balearic Islands maintain top spot

The Balearic Islands maintained their leading role as the main market for recreational boat registrations in Spain in 2025, despite registering a year-on-year decrease in their activity, according to the market report prepared by ANEN with data from the directorate general of the Merchant Marine.

The Balearic islands clocked 664 registrations of recreational boats last year, consolidating itself as the province with the highest number of registrations at the national level, ahead of Barcelona (564) and Murcia (491), which occupied the second and third place respectively.

Although these figures confirm the strength of the Balearic nautical sector compared to other regions, the trend reflects a 19.9 per cent drop compared to the same period in 2014, a trend that has been repeated across much of the Spanish market.

Simrad at 80: eight decades of marine electronics innovation

In 2026, Simrad Marine Electronics marks 80 years since its origins in post war Norway, a milestone that places the brand among the longest serving names in marine electronics. From commercial fishing fleets to superyachts and weekend trailer boats, Simrad's story is grounded in practical innovation shaped by life at sea.



The company began in the 1940s with Norwegian scientist Willy Simonsen, whose wartime work developing covert radio technology for the Allied resistance laid the foundations for Simrad's future. After the war, that same engineering mindset shifted to the marine world, producing rugged radio telephones for fishing vessels, followed by echo sounders, fish finders, sonar, radar and navigation systems. By the 1950s, Simrad had earned a reputation for equipment that worked reliably in harsh conditions, a reputation that still defines the brand today.

Looking ahead, Simrad sees integration as the next frontier, bringing navigation, monitoring and vessel control into unified, intuitive systems. As boats become more connected and digitally managed, Simrad's focus remains unchanged: delivering technology that boaters can trust when conditions are demanding and decisions matter.



ABYC announces award recipients at annual meeting

The American Boat & Yacht Council (ABYC) honoured industry leaders and longtime volunteers on the opening day of Standards Week. The meeting brings together industry experts and

boating safety advocates to highlight the year's boating safety advances and recognize volunteers helping move standards forward.

C.T. "Skip" Moyer Leadership Award: Ed Sherman

This year's recipient, Ed Sherman, is a former ABYC education director, an author of books on electrical systems and outboard engines, and a contributor to multiple technical articles.

Bolling Fortson Douglas Award: Kim Horn

Kim Horn, a senior compliance specialist with Boston Whaler, has developed and maintained digital compliance templates, components matrices and test-report

workflows that help manufacturers meet ABYC, U.S. Coast Guard, ISO and NMMA requirements.



The 2026 ABYC award winners and presenters (left to right) include Ed Sherman, Tim Murphy, Bob MacNeill, Kimberly Horn, David Marlow, Sandy MacNeill, John Adey and Christina Paul. Photo Credit: ABYC

Augusto "Kiko" Villalon Lifetime Achievement Award: Bob and Sandy MacNeill

ABYC President John Adey presented the award to Bob and Sandy MacNeill. "Traditionally, this award has been presented to an individual; however, my experience with Bob is that I rarely utter his name without it being followed by Sandy," Adey said.

Bob MacNeill has held executive roles at Chris-Craft, Carver, Viking, Outboard Marine Corporation and other companies. He also served as president and later chair of the board at the Westlawn Institute of Marine Technology and ran two consulting businesses.

Quicksilver Boats celebrate 40th anniversary in 2026



Quicksilver Boats revealed a new special logo to commemorate the company's 40th anniversary at boot Düsseldorf in late January.

"We are thrilled to celebrate four decades of Quicksilver at boot Düsseldorf," said Quicksilver Boat sales director, Alexis Fléchier. "Our history is built on innovation, passion and customer trust. This anniversary is not just a celebration of the past, but a commitment to continuing our tradition of excellence and delivering exceptional boating experiences."

Launched in 1986 when Brunswick Corporation and Mercury Marine began manufacturing inflatable boats in Europe, Quicksilver has grown to become a prominent brand in France, Spain, Denmark, Germany, Austria, Benelux, Switzerland and Italy. The company diversified to offer aluminium and fibreglass boats in 1993, then acquired French fishing boat brand Arvor in 1999.

Winners of the 2026 European Yacht and Powerboat Awards announced

Known as the 'Oscars' of the boating world, The European Yacht of the Year (EYOTY) and European Powerboat of the Year (EPOTY) awards are well established events in the annual boot Düsseldorf calendar.

The annual winners were revealed at a gala event held within Messe Düsseldorf, attended by 450 guests.

The awards were judged based on a comprehensive set of criteria, including design, innovation, build quality, driving performance, functionality, and value for money. A jury of specialised journalists and experts from leading European motorboat magazines was responsible for selecting the winners.

The winners of the EPOTY Awards by category are:

Sport Boats (up to 10m): Sea Ray SDX 270 Surf
Motor Yachts (up to 14m): Windy SR40
Motor Yachts (up to 18m): Sasga Menorquin 48
Motor Yachts (up to 24m): De Antonio Yachts D60
Catamarans: Bluegame BGF45

The EYOTY 2026 winners are:

Best Family Cruising Yacht 2026: Excess 13
Best Bluewater Cruiser 2026: Pure 42
Best Performance Cruiser 2026: Beneteau First 30 (monohull), Dragonfly 36 (multihull)
Best Luxury Cruiser 2026: Wauquiez 55
Special Mention (One to Watch): Woy 26

Dragonfly 36 (multihull), by Quorning Boats



Canada's recreational marine industry applauds removal of the luxury tax on boats

Canada's boating industry has applauded Budget 2025's commitment to remove the devastating luxury tax on boats, a failed tax policy that unfairly punished Canadian manufacturers and workers. When the luxury tax was first implemented in September 2022, Canada's marine industry leaders were quick to point out the impending losses of middle-class jobs, government tax revenues and sales declines. The removal of this failed tax was the direct result of sustained advocacy from the National Marine Manufacturers Association (NMMA) Canada, the Canadian Marine Retailers Association (CMRA), and our grassroots supporters across the country.

This decisive action protects boat manufacturing jobs across Canada, strengthens domestic production, and allows Canadian dealers to rebuild their businesses and restore sales to pre-tax levels. It also provides relief for the thousands of middle-class Canadians whose livelihoods depend on a strong recreational boating sector. By eliminating this tax, the government has recognized that recreational boating is more than a pastime. It is an engine of economic activity and a source of connection for communities from coast to coast to coast.



Singapore boasts record 2025

Singapore posted record port performance in 2025, supported by resilient global trade and fuel offtake. The nation achieved a record of 3.22 billion gross tonnage (GT) of vessel arrivals and 44.66 million TEUs of container throughput in 2025 – a 3.5% and 8.6% increase from 2024, respectively.

Marine fuel sales also hit a new high at 56.77 million tonnes, a 3.4% increase from 2024, with continued growth in the use of alternative marine fuels, which increased to 1.95 million tonnes in 2025 compared to 1.35 million tonnes in 2024.

Washington State Ferries rider numbers rose last year

A wave of close to 1 million more passengers pushed Washington State Ferries' 2025 ridership to 20.1 million. That's a jump of 5% from 19.1 million the previous year.

The return of full domestic service propelled the year-to-year increase in annual ridership. In June, the Seattle/Bremerton route's second boat was restored, and the Fauntleroy/Vashon/Southworth "Triangle" run resumed its daily three-boat schedule. In July, a second boat was added to the Port Townsend/Coupeville route on Fridays through Mondays for the busy travel season.

A decrease in cancelled sailings also helped to boost ridership. Cancellations declined from 2,620 in 2024 to 2,222 in 2025, the lowest since 2020. Cancelled trips due to crew shortages saw the biggest drop. This improvement reflects WSF's recent investment in building and supporting its workforce.





4,000 tons of oil lost due to spills in 2025

According to a recent edition of ITOPF's Oil Tanker Spill Statistics, the total volume of oil lost to the environment from tanker spills in 2025 was approximately 4,000 tons, compared to 10,000 tons in 2024.

Based on ITOPF data, for the year 2025, three large spills (>700 tons) and three medium spills (7-700 tons) were recorded from tanker incidents. The three large spills involved crude and fuel oil and occurred in Asia and Europe. The three medium spills also involved crude and fuel oil; these all occurred in Asia.

This brings the decade average to date to 7 spills per year. This is a slight increase on the average for the 2010s, but a dramatic reduction from the numbers reported in earlier decades.



Photo credit: Incat



Australian builder commences harbour trials of new large electric ferry

Australian shipbuilder Incat has begun conducting harbour trials of what it says is the largest battery-electric vessel ever constructed. The vessel, a catamaran Ro-Pax ferry, has moved under its own battery-electric propulsion, thus indicating the transition from construction to operational testing for the 130-metre ship.

The harbour trials will see the vessel undertake a carefully managed series of movements on the Derwent River in Tasmania, allowing crews to test propulsion, manoeuvrability, control systems, and onboard operational performance in real-world conditions.

Incat said the trials represent the first time a ship of this size and passenger-vehicle capacity has operated solely on battery power anywhere in the world.

Canada's new high-endurance search and rescue lifeboat fleet is completed

The Canadian Coast Guard (CCG) is highlighting the use of its 20 new high-endurance search and rescue lifeboats, two of which are stationed on Vancouver Island.

The "new" search and rescue lifeboats, called "Bay Class" vessels, are the culmination of 10 years of domestic ship building. The project kicked off in 2015, with the final of the 20 new vessels being completed in 2025.

While the majority are stationed along the East Coast, four are assigned to the West Coast, with two located in northern Vancouver Island, one in the Prince Rupert area, and a fourth has yet to be assigned a home port.

All of the new search and rescue lifeboats measure 19 metres long and have a cruising speed of 14.5 knots, and a top speed of 25 knots. The vessels can travel 100 nautical miles offshore and were built to self-right if capsized.

Safety alert issued by U.S. Coast Guard on immersion suits

The U.S. Coast Guard (USCG) has issued a safety alert regarding immersion suit defects caused by adhesive failures between the main zipper and the suit body. It is reported that USCG inspectors frequently find immersion suit defects caused by adhesive failures between the main zipper and the suit body. These failures compromise watertight integrity and pose serious survival risks from water ingress.

Contributing factors to the defects include improper maintenance (e.g., the use of non-approved petroleum-based lubricants or scented powders), improper storage, and neglecting to conduct periodic pressure testing. Seam and closure deterioration may not always be detectable during routine visual inspections.

Adhering to USCG regulations, manufacturer instructions, International Maritime Organization (IMO) regulations and guidance, and performing regular inspections and testing are essential to ensuring immersion suit reliability.



Irish fisheries authority issues notice regarding safe access and boarding ladders on vessels

Ireland's Sea-Fisheries Protection Authority (SFPA) has published a new fisheries information notice (FIN) for fishing vessel masters on safe access and boarding ladders. Masters of fishing vessels are required to facilitate the safe embarkation and disembarkation of sea-fisheries protection officers (SFPOs), in port and at sea, for the purpose of carrying out official controls. Where access to a fishing vessel requires a climb of 1.5 metres or more, masters must provide a compliant boarding ladder.

The FIN outlines the responsibilities of vessel masters during boarding and disembarkation and sets out the technical specifications applicable to boarding ladders. All vessel masters should review the FIN and familiarise themselves with their obligations. Masters with boarding ladders should ensure that ladders are properly maintained and comply with the material, spacing, and structural requirements outlined in the FIN.

Download the information notice at <https://bit.ly/4pLGciV>.



Alex Gregg-Smith to become IACS Council Chair from July 2026

The Council of the International Association of Classification Societies (IACS) has announced the election of Alex Gregg-Smith to the position of IACS Chair. Gregg-Smith will assume the role on 1 July and his term of office will run until 31 December 2027.

On being selected unanimously by his peers in the Association, Gregg-Smith commented, "The maritime industry is at a crucial stage in its technical, digital and environmental evolution.

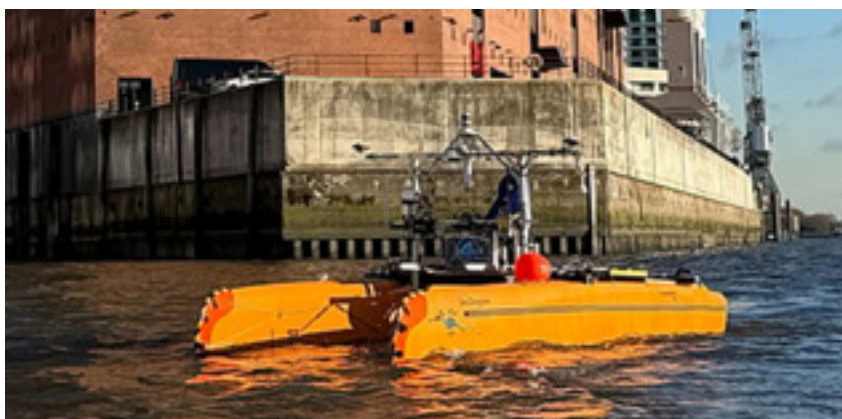
Gregg-Smith has over twenty years' experience with Bureau Veritas, as well as extensive experience in leadership roles in both shipyards and shipowners. He has also recently taken over the position of President, Marine & Offshore, Bureau Veritas, and is a dual UK-French national.

German consortium launches research project on autonomous vessel integration in port operations

Germany's Hamburg Port Authority, together with the Fraunhofer Center for Maritime Logistics and Services (Fraunhofer CML) and Kongsberg Maritime Germany, has launched a project that seeks to safely integrate semi-autonomous and remotely monitored, low-emission waterborne vehicles such as autonomous surface vessels into complex port environments.

The iPORTUS project is funded with approximately €1.7 million (US\$2 million) by the German Federal Ministry for Transport under the IHATEC II funding programme. The project will focus on ensuring nautical safety and cyber security, developing a high degree of autonomy for the deployed systems, and integrating them into a remote operations centre (ROC).

The project seeks to establish regulatory foundations for approval procedures and economic decision-making, thereby enabling the future routine operation of autonomous watercraft in German ports.



Two iconic Flagship Cruises ferries gain national recognition

San Diego's oldest family-owned and operated tour boat and ferry company, Flagship Cruises & Events, founded in 1915, is currently in the process of building two cutting-edge, all-electric, zero-emission ferries. But meantime two of its most cherished working vessels have earned national recognition.

The Silvergate (built in 1940) and the Cabrillo (built in 1960) have been officially listed on the National Register of Historic Places by the U.S. Department of the Interior. This designation acknowledges the cultural, architectural, and maritime significance of the vessels, which are among San Diego's last remaining historic ferries still on the water.

Both ferries have played an integral role in shaping the region's identity—from serving local transportation needs to becoming beloved icons of the waterfront experience.

"These ferries are more than boats; they are living history," said Brad Engel, president of Flagship Cruises & Events, "The Silvergate and Cabrillo have carried millions of passengers across San Diego Bay and have stood as constant witnesses to the city's growth and transformation. We are honoured to see their legacies recognized at the national level."

The National Register of Historic Places is the federal government's official list of historic buildings, districts, objects, and sites deemed worthy of preservation. This designation supports continued preservation efforts and ensures these vessels remain active and accessible for future generations.



Silvergate. Photo credit: Flagship Cruises & Events



EBI adds new members and sets fresh strategy

European Boating Industry (EBI) held its general assembly during boot Düsseldorf in January 2026. During the meeting, EBI confirmed changes to its membership and presented a strategic framework to guide its activities through to 2028.

EBI announced an expansion of its membership, bringing the organisation to 34 members across 24 European countries. British Marine was accepted as a new full member. In a statement, EBI says that this development reflects ongoing trade links and regulatory cooperation between the EU and the UK. The UK is the largest importer of recreational boats into the EU and the second-largest export destination for EU-built boats.

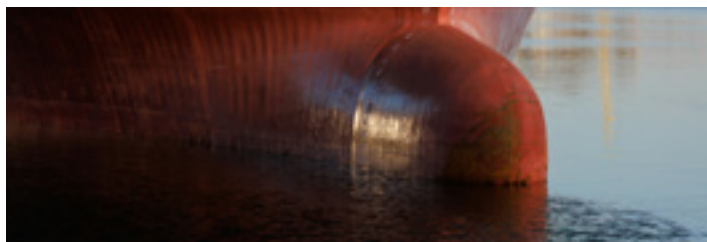
EBI also confirmed the membership of the Nordic Cluster, formalising cooperation between industry associations in the Nordic region. The cluster includes Danboat in Denmark, Sweboat in Sweden, Norboat in Norway, the Association of Estonian Marine Industries in Estonia and Finnboat in Finland. These organisations are now represented collectively within EBI.

Hanse Yachts appoints CFO as CEO steps down

German sailing yacht and motorboat manufacturer Hanse Yachts AG has announced a management realignment, returning to a dual co-CEO leadership structure.

The company's Supervisory Board has appointed Holger Passauer as chief financial officer, effective immediately. A new chief executive officer will be announced soon following the departure of former CEO Hanjo Runde.

Andreas Müller, CEO of S.D.L. Süddeutsche Leasing AG, said the company is "now on the right track." The company also stated that investments in personnel expansion will be made in the near future.



EU simplifies ship recycling compliance with new standard certificate formats

Ship owners preparing vessels for recycling will now be able to meet their legal requirements using a single administrative certificate, following a new decision by the European Commission aimed at cutting paperwork without weakening safety or environmental standards. The European Commission adopted new standard formats for ship recycling certificates on 19 January.

These updated formats allow ship owners to comply with both the EU Ship Recycling Regulation and the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships using a single set of documents.

Under the new system, the certificates will cover the inventory of hazardous materials on board ships, which records substances such as asbestos, as well as confirmation that a vessel is ready for recycling. Until now, ship owners often needed separate documents to meet different regulatory frameworks.



Pilot dies in fall from pilot ladder in Panama City, Florida

A Florida pilot passed away in January after a pilot ladder accident in Panama City, Florida, the latest in a long and tragic line of lives lost due to slips and falls in the boarding process.

The St. Andrew's Bay Pilots have confirmed that Capt. Phillip Brady, 46, suffered a fatal fall while disembarking a bulk carrier. He fell from a pilot ladder while transferring off the 60,000 dwt bulk carrier *Lowlands Luck*, and he dropped 15 feet into the water. The pilot boat operator made every effort to save him and recovered him from the water within two minutes. A Coast Guard crew transferred him to a medical centre for treatment, but Brady succumbed to his injuries, the association said.

The casualty is under investigation, and the association said that the circumstances of Capt. Brady's passing are not yet fully known; for now, the pilots requested patience while the inquiry continues.



India DGS launches Safety Video Series

In a first of its kind, the Directorate General of Shipping (DGS) has developed a comprehensive Safety Video Series to improve safety awareness across the maritime workforce.

The DGS has observed recurring safety lapses and incidents attributable to deficiencies in safety awareness by shipping companies, seafarers and trainees as evidenced by casualty investigations conducted by the Directorate.

The video series aims to address these critical elements and standardize safety indoctrination to help prevent recurrence of similar incidents by learning from past mistakes to institutionalise a safety-culture, embedding continuous learning and vigilance into training and day-to-day operations.

The DGS urged all concerned stakeholders to ensure the Safety Videos are made available to all seafarers, trainees, and new joiners under their supervision. These videos shall be integrated into the organisation's Learning Management System (LMS), pre-sea training, post-sea training, and safety indoctrination curriculum. The videos will also be mandatory viewing for all new joiners at induction or prior to joining a vessel. Further, Maritime Training Institutes and Recruitment and Placement Services License companies will have to incorporate the videos into mandatory training modules.

The Safety Video Series can be found on the DGS YouTube Channel (@DGShipping-India). More videos will be added to the channel at regular intervals.

The following videos are currently available online:

- Tug Alliance – Capsizing
- Proteus Harvonne - Man Overboard
- ITT Puma – Capsizing
- DCI Dredge XVII - Hopper Tank Casualty
- MV Magic Striker - Enclosed space entry incident

International Maritime Bureau Reports increase in piracy and maritime crime

The ICC International Maritime Bureau, an international reporting center for piracy and maritime crimes, analyzed reporting for 2025, highlighting an increase in global maritime incidents. It warns of an increase in piracy and armed robbery, and while much of it was low-level crimes, the group emphasized the need for timely reporting to counter the spike in crimes.

Overall, during 2025, the group received information on 137 incidents against ships, up from 116 in 2024 and 120 in 2023. The reports breakdown with 121 vessels boarded, four hijacked, and two fired upon, with a further 10 failed attempts.

Another concern is the rise in the number of incidents in which the perpetrators were armed. IMB reports there were 42 incidents in which the boarders were carrying guns compared with 26 in the prior year. The use of knives, however, declined slightly with 33 incidents in 2025 versus 39 in 2024.



Three yachts sunk with another badly damaged following fire in Sydney

This year has begun badly with several as yet unexplained fires destroying multiple yachts and superyachts. The most eye-catching occurred when three large yachts were destroyed and sunk, with a fourth sustaining significant damage, following a fire at the Spit Marina in Mosman, on Sydney's north shore in Australia.

Fire and Rescue NSW firefighters were called in the early hours on Friday 9 January 2026 with reports that more than 40 firefighters were called to the scene at 3:21am, alongside the Port Authority of NSW firefighting vessel, Girawaa.

It took Fire and Rescue NSW approximately 2.5 hours to extinguish the fire, with the Environment Protection Authority deploying booms to contain debris and material, including oil and fuel.

The cause of the fire is not known but is under investigation.

Transport Canada now charges \$24 for Recreational Boat Licence

From 31 December 2025, Transport Canada has made several updates to the Pleasure Craft Licence (PCL). Beginning this year pleasure craft licences must be renewed every five years – and current lifetime licences will be gradually replaced with PCLs that must be renewed every five years. Starting in 2028 wind-powered pleasure craft over six metres in length will also be required to hold a PCL.

Boaters will have to pay a \$24 service fee whenever they apply to renew, transfer or replace their pleasure craft licence.

The PCL is a unique identification number for recreational boats that have one or more engines whose combined power is at least 10 horsepower- similar to a car's license plate.



Kevin E. Lunday sworn in as 28th Commandant of the U.S. Coast Guard

During an event at Coast Guard Headquarters, the United States Coast Guard held a formal swearing-in and assumption of command ceremony for Adm. Kevin Lunday as the 28th Commandant of the U.S. Coast Guard.

Upon taking the oath of office, Adm. Lunday formally assumed the responsibilities of Commandant and reaffirmed the Coast Guard's role in controlling, securing, and defending the U.S. border and maritime approaches, facilitating the safe and secure flow of maritime commerce.

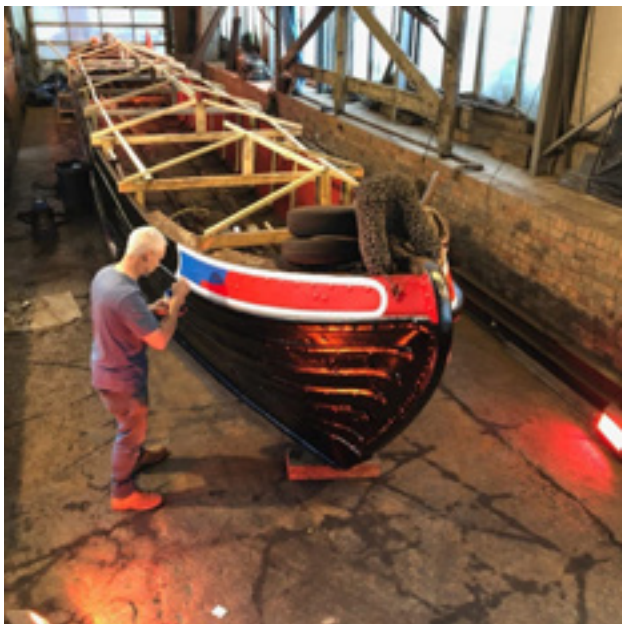
"I am honoured to assume command of the United States Coast Guard," said Adm. Lunday. "Every day, Coast Guard men and women carry out missions that protect our homeland, secure our maritime borders, save lives and protect national security. I am humbled to serve alongside them while ensuring they have what they need to succeed – today and in the future."

British Marine CEO to step down

Lesley Robinson OBE has decided to relinquish her role as Chief Executive of British Marine this summer after eight years in post. A structured transition plan is in place, with Earle Stanner (current Chief Finance and Operations Officer) being appointed as the organisation's next Chief Executive.

Lesley joined British Marine from MDL Marinas in July 2018 and has led the organisation through a period of significant change and challenge. During her tenure, she oversaw the modernisation of governance, the development of a new membership strategy and national agenda, and a series of change programmes focused on strengthening leadership capability and organisational effectiveness to better serve their 1,300 members.

She led British Marine through the unprecedented challenges of the Covid period, including the cancellation of the Southampton International Boat Show in 2020, while continuing to support members through representation, guidance and practical assistance. Lesley has also served on the board of ICOMIA for six years as a non-executive director, most recently as Treasurer, ensuring UK leisure marine interests are represented at an international level. In 2021, in recognition of her services to the leisure marine industry, Lesley was appointed to the Most Excellent Order of the British Empire (OBE).



Historic canal boat set for restoration

The Jericho Living Heritage Trust has secured £210,000 from The National Lottery Heritage Fund to restore Kilsby, a historically significant 1912 canal boat, and relaunch it as an accessible floating community hub on the Oxford canal network.

Kilsby is one of just 24 surviving craft commissioned by Fellows, Morton & Clayton, the famous canal-carrying company that once dominated Britain's waterways transport. The boat served through two world wars before being converted into a residential vessel in central Oxford. It was donated to the Jericho Living Heritage Trust in 2019.

Sir Robin Knox-Johnston receives Pindar Lifetime Achievement Award



Sir Robin Knox-Johnston (left) is presented with his award by Andrew Pindar

The Pindar Lifetime Achievement Award for 2025, presented by the International Association of Cape Horners, was awarded to Sir Robin Knox-Johnston KB CBE RD. Sir Robin, who has been inspiring sailors the world over since becoming the first person to sail solo non-stop around the world aboard his treasured 32ft 6in traditional wooden yacht Suhaili back in 1968/9.

The Cruising Association extends its congratulations to their Patron, Sir Robin, who has held the role since 2009 and previously served as President from 2007 to 2009.

Sir Robin is still inspiring newcomers. The Clipper Round the World yacht race has introduced some 20,000 amateur crews to the sport since he co-founded the event in 1996. And last year, at the age of 86, he led old friends on a cruise to Greenland and back.

Andrew Pindar, who presented the Award said, "It would hardly be a stretch to think of Sir Robin as the David Attenborough of sailing. Recognized and respected by a public of all ages who have enjoyed his exploits over a long and incredible nautical career."



New Clipper Ventures fleet now in build

Clipper Ventures, based on the Solent, in southern England, has confirmed a multi-million-pound investment in a new 'Clipper RX' fleet of ocean racing yachts.

The investment will see the development and construction of 12 matched 72ft yachts, intended for use in future editions of the Clipper Round the World Yacht Race.

Clipper Ventures was founded 30 years ago and created the Clipper Round the World Yacht Race in 1996. The new fleet is a fourth-generation design for the fleet, and is intended to support the company's operations over the coming decade.

The Clipper Race trains participants with no prior professional sailing background to take part in ocean racing. Since its launch, more than 7,000 crew members have participated across 14 editions of the biennial event.

Sir Robin Knox-Johnston, founder of Clipper Ventures, says: "The new 'Clipper RX' fleet benefits from everything we've learned from thousands of crew in addition to our own operations team. The new design concept was created in-house and then developed with leading British naval architects.

UK MAIB annual data 2025: 1,521 total incidents

UK Marine Accident Investigation Branch (MAIB) has updated its data, revealing a total number of 1,521 marine occurrences during 2025, compared to 1,510 in 2024 and 1,586 in 2023.

Merchant vessels overview

According to the MAIB overview, of the total 1,521 occurrences, 880 concerned merchant vessels. Of the total 880, 596 marine incidents were reported. In addition, 249 incidents were classified as less serious, 30 were considered serious, and 5 were categorized as very serious, involving significant consequences such as loss of life, vessel loss, or major environmental impact.

Injuries and fatalities

MAIB data indicates a total of 100 injuries and no deaths associated with passenger ships, making this vessel type the most injuries in 2025.

Cargo ships accounted for significantly less injuries (31 injuries) but were the only category in the merchant vessel overview to include fatalities (2 deaths).

Service ships recorded 29 injuries and inland waterway vessels recorded 9 injuries. Finally, recreational craft recorded 2 injuries and no deaths.

UK beachgoers puzzled by produce washing ashore

Eastbourne is not the only place in England dealing with an unexpected wave of chips and onions appearing on its beaches. Further along the coast in Brighton, visitors were left confused as a stream of seemingly "random" items continued to appear on the shoreline.

Brighton beachgoer, Jess Glynn, said, "Your eyes don't deceive you - those are onions you're seeing in Brighton and Hove!" she said in her own video.

She continued, "This is incredibly random, but there are onions washing up in Brighton right now. The cargo ship was completely full of fresh produce... there's carrots, onions, potatoes and full-on bags of coconuts, milk and cans of beer - everything is just washing up."

TikTok users also shared their experiences. One wrote, "My sister also found a case of Thai lager, some plastic gloves and face masks." Another added, "They are all over Seaford and Newhaven too."

Reinforcing the calls for caution and clean-up, Brighton and Hove City Council issued a statement online following the incident. They said, "Council teams have been working to clear the seafront and keep residents safe over the last few days, following shingle and debris washing up as a result of Storm Goretti.

New patron for the Avon Navigation Trust

Former Canal & River Trust chief executive Richard Parry has been appointed a patron of the Avon Navigation Trust (ANT), strengthening the charity's leadership as it continues its work caring for the River Avon.

Based in Solihull, Richard Parry said he was delighted to accept the role and to join a respected group of patrons supporting the trust, which is responsible for the Warwickshire and Worcestershire stretches of the River Avon — a vital part of Britain's inland waterways network.

"It's lovely to be asked to be a patron. I've had a connection with, and a huge respect for, the trust for a long time," he said.



Tritex NDT Multiple Echo Ultrasonic Thickness Gauges



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MultigaUGE 6000



The Underwater Thickness Gauge
MultigaUGE 3000



The ROV Thickness Gauge
MultigaUGE 4000



The Surveyors Thickness Gauge
MultigaUGE 5650

Tritex NDT specialize in the manufacture and supply of Multiple Echo Ultrasonic Metal Thickness Gauges, used for verifying corrosion levels and measuring metal thickness from one side only, without removing any protective coatings. The MultigaUGE 5650 Surveyor Gauge can measure both metal and GRP, in one gauge, and also switch from Multiple Echo to Echo - Echo with the simple press of a button, using the same probe.

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IIMS turns 35 years old

Introduction

by Mike Schwarz, IIMS Chief Executive Officer

In April 2026, the International Institute of Marine Surveying (IIMS) will celebrate its 35th birthday. Consequently, I decided to invite surviving Presidents of the Institute, past and present, to write a few words to recognise and acknowledge this achievement.

I must say how humbled I am to read some of the kind comments that have been made about me personally. It is gratifying. Leading and developing the IIMS team has given me huge pleasure. I am backed by an exceptional team of talented individuals and between us we have made IIMS what it has become today. I could not have been successful without their dedication and commitment.

I have now been in post for 12 years and my passion for the surveying profession and wanting to do what we can to raise the standards of surveying around the world burns ever brighter. I continue to look for new opportunities, incorporating innovation and believe the next period is very positive indeed as IIMS continues to strive to make a difference in the surveying sector.

As I look back over my time with the business, I am proud of what we have achieved.

Happy 35th birthday IIMS and a big thank you to all our members, supporters, suppliers and others who have helped make this possible.



Reflections by Capt William MacDonald HonFIIMS, the first President of IIMS from 1991-1993

In 1991, some twenty likeminded marine surveyors gathered in the Queen's room of the London Baltic Exchange. That meeting was called and organized by myself and my colleague Clive Taylor of Taylor Marine.

We all shared a common belief that the time was right for marine surveyors from around the world to come together and form a respected international institute. The meeting was held over a five-day period and was attended by approximately twenty surveyors, each representing a different country.

At the conclusion of the fifth day, it was unanimously agreed that the time has come to establish the institute and I was honoured to be elected as its first president.

In its early years, the newly formed institute grew very slowly. We had no funds and no formal office address. A single desk in my office served as the institute's headquarters and from this modest beginning progress was made day by day as we worked to sign up surveyors who shared our vision.

From those early beginnings, some 35 years ago, this embryonic institute has grown into what we see today - an organization with over 1,000 members from over 100 countries spanning Europe, India, Pakistan, Middle East, The Far East, Australia and New Zealand, Africa, The United States and Canada.

And now we celebrate our 35th Anniversary. Nowadays, the institute is widely respected by ship owners, charterers, cargo owners, P&I Clubs, insurance companies, yacht owners and international maritime regulators, to name but a few.

I would like to express my sincere thanks to all those forward-thinking surveyors who helped the institute grow over the years, including our current president, Capt Ruchin Dayal, and each of our past presidents as well as the dedicated team at our Head Office, Murrills House, in the United Kingdom.

I would also like to thank Mr. Clive Taylor of Taylor Marine who worked alongside me day after day in my office in 1991 when we were struggling to turn this vision into reality.

Special thanks must also go to our CEO Mr. Mike Schwarz, who for the past 12 years has guided the institute along its growth path, travelling tirelessly to meetings in many countries. Without his dedication, passion and leadership, this institute would not be where it is today.

I am mindful that some of our original founders are no longer with us, but they are not forgotten. Their contribution remains part of the foundation which the institute stands for.

As of myself, although I am well past my sell by date, I hope to be here once again to join you all at our 50th anniversary celebration – when I will be a young 98 years old!

Thank you all for being with us and for being part of this remarkable journey.

Capt Bill MacDonald HonFIIMS



Thoughts from Capt Allen Brink HonFIIMS - President from 2007-2010

As I reflect on the 35-year journey of the International Institute of Marine Surveying (IIMS), I am filled with pride and optimism. I was privileged to play a key role in the founding of IIMS, and have remained committed to its growth and success, serving in various capacities, including as a Past President.

IIMS has been at the forefront of promoting excellence in marine surveying, and its relevance in 2026 is undeniable. The maritime landscape is shifting rapidly, with technological advancements and environmental concerns reshaping the industry. IIMS has adapted, embracing these changes and ensuring its members are equipped to navigate the evolving seas.

I had the privilege of contributing to the early stages of the education programme and to the handy guide library. These efforts have been a testament to the Institute's commitment to promoting professionalism and best practices in marine surveying.

The Institute's commitment to training and developing the next generation of marine surveyors is commendable. Through its education programme, IIMS is fostering a new wave of professionals who will shape the future of the industry.

Over the past 35 years, IIMS has made significant strides in promoting professionalism, ethics, and best practices in marine surveying. The Institute's growth and recognition are a testament to its dedication to the profession and the industry it serves. As the shipping and boating industry continues to evolve, the role of marine surveyors remains vital, ensuring vessels are seaworthy, cargo is safely transported, and the environment is protected.

I am proud to be part of the IIMS community and look forward to its continued success in shaping the future of marine surveying.

*Capt. Allen Brink
Chartered Master Mariner. CMMar. FNI.
FRIN. HonFIIMS. FCMS. HCMM
Past President, and Director, IIMS*



Capt Bertrand Apperry HonFIIMS (President of IIMS 2014 to 2016) and still president of AFEXMAR (France) remembers...

The French Association of Maritime Experts (AFEXMAR) was a founding member of the International Institute of Marine Surveying (IIMS).

The goal of the maritime experts at that time was to unite in order to promote our expertise considering the profession's planned growth and internationalization in parallel with the fast evolution of global maritime trade.

Our primary goal was providing competent and independent marine surveying experts. To achieve this, we needed a membership recruitment policy that included not only experienced ex-seafarers, of course, but also land-based engineers working in the maritime or related sectors. This was fundamental to our credibility in a world where the old "good enough" approach was no longer acceptable.

The knowledge required today must be regularly updated, as regulations closely follow technological progress and changes. Keeping ourselves current was a challenge, and we immediately began offering our marine surveying experts professional continuing education. IIMS and AFEXMAR have done a great deal to keep surveyors up to date, including instruments like the ISM and the ISPS Codes, which have been major turning points in maritime safety and security management.

Remember, the first ISM expert course (The ISM Surveyor & Consultant) was offered as early as 2004 through the IIMS Marine Surveying Professional Qualification and Diploma.

Today, this expertise is recognized as essential within the college of experts, as well as in management audits of our industry, including offshore (for example, the recent Coastal State Control related to the Montego Bay Convention) and the rapidly developing Port State Control.

As a French branch of IIMS, AFEXMAR is still offering these courses and continues to improve them as far as possible.

We wish a long life to the Institute.

Capt Bertrand Apperry HonFIIMS



The IIMS is 35 years old: Geoff Waddington HonFIIMS - President from 2020-2022

I joined the IIMS in 2003. The IIMS was a much smaller organisation in those days; we were based in Gosport, and most functions were held on board HMS Wellington. Nikki and Vicki were pretty much running the show, and an AGM would only fill a small room on board.

I became involved with the Education program, writing modules for the IIMS diploma program. John Lawrence became the CEO and we moved to Murrills House at Portchester.

I was chairman of the Education Committee and an executive board member, but the IIMS was not in a good place, and financially in a very poor state indeed. In January 2014, I was part of the committee to recruit a new CEO along with John Lawrence, John Heath, Paul Homer and Adele representing our HR and recruitment company, who I was sat next to. We had a mixed bag of applicants and although we all knew we required someone to lead the IIMS out of the mire, my take on a solution was to recruit someone who knew nothing about the industry at all, but who had a sound business background. With some help and support from Adele and the other board members, Mike Schwarz was chosen and recruited.

The profile of the IIMS then began to grow noticeably on the world stage. Within the IIMS improvements were made in every sector to streamline the business and improve performance. The education department left the influences of Edexcel and in 2014 the training department Marine Surveying Academy was formed to develop and promote professional courses, but most importantly, the Institute was now financially sound.

It was my privilege to serve as President from 2020 to 2022 during the Covid years. By then, we had established such a good financial situation that we could afford to purchase the freehold and real estate of our headquarters building.

Over the years, the IIMS has become the Institute for Marine Surveyors of all disciplines from all over the world, and I am immensely proud of our collective achievements.

Geoff Waddington HonFIIMS





"Institutions survive because they exist. They thrive because they serve." Capt Zarir Irani HonFIIMS – President 2018-2020

For over three decades, IIMS has grown into a global community connecting surveyors across 100 countries. The Institute's focus on accredited training and ongoing professional development has supported members take steps forward in their careers. This steady growth shows commitment to technical excellence and international standards within the maritime industry.

For me, being an IIMS Honorary Fellow is more than a certificate to hang on the wall. It represents credibility recognised globally. When I work with flag administrations, underwriters, shipowners, yacht and small craft owners, or legal professionals, the IIMS name stands for expertise and value high standards.

What I value beyond the qualifications, is the strong professional community the Institute has built. Through forums, publications and regional events, members stay connected, so no surveyor works in isolation. In a profession where good judgment matters, shared experience is invaluable. When our team at Constellation cannot attend a survey, we turn to fellow IIMS member globally, confident they will uphold the same standards.

As maritime rules and technology change, IIMS stays ahead by updating its training and guidance to match industry needs, ensuring membership remains relevant and valued by those who appoint IIMS surveyors.

My time with IIMS has been truly rewarding. I found my mentors and gained directional guidance from my board seniors and fellow members at IIMS conferences, and I would give back in the blink of an eye.

Institutional value is not created overnight. It is built steadily through standards, education, accountability, and community. That is the legacy I see as we celebrate 35 years, and I look forward to its continued benefits for future members.

May we continue to flourish, self-innovate, and become stronger as a global association in the years to come.

Zarir Irani, Hon.FIIMS
Past President (2018-2020) and Member of Board
(since 2014) International Institute of
Marine Surveying (IIMS)



Peter Broad HonFIIMS, Immediate Past President, (2022-2024) reminisces

The term 'through-life pathway' perfectly encapsulates my journey with IIMS since I joined in 1999 as a junior Lloyd's Register surveyor.

At that time, few Classification Society surveyors were members - a situation that remains largely unchanged. While IACS provides a clear career development framework for classification surveyors, independent marine surveyors had no structured pathway, guidance, or professional standards. IIMS was still a fledgling organisation with admirable ambitions, working to establish credibility within the maritime community.

I became involved in diploma course development and discovered my passion for teaching, whether through formal training, mentoring, technical articles, or books.

IIMS operates as a business, not merely as a membership organisation. While membership is vital - bringing together core professionals who contribute to the maritime industry worldwide - it is not simply granted upon payment. Our rigorous vetting process ensures we thoroughly understand prospective members' genuine competencies and experience. IIMS membership has become the global benchmark for non-IACS surveyors. Many marine insurers now require surveyors to belong to a recognised professional body, and several countries have adopted IIMS membership standards as the minimum requirement for surveyors operating within their jurisdictions.

The breadth of knowledge held by our members spans commercial shipping, the superyacht industry, vessels under 24 metres, inland waterway vessels, offshore installations, wind energy, subsea equipment, marine coatings, and autonomous vessels. We have members involved in cutting-edge technology as well as expert shipwrights who preserve traditional knowledge and skills.

IIMS and its members serve as ambassadors for the highest standards of integrity and professionalism in global maritime operations.

IIMS has become the world's leading professional body for non-IACS marine surveyors, backed up by professional leadership at our head office and a highly motivated team at Murrills House. We have achieved ISO 9001 certification through DNV, one of the premier certifying authorities. We participate in several Non-Governmental Organisations and Advisory Committees in the UK and other countries.

We have come a long way in 35 years, and I am incredibly proud to have been part of this through-life journey, becoming a Fellow and ultimately serving a two-year term as President of the Institute.

Thank you to all our fellow members and staff at HQ. Here's to many more years of continued success and excellence on our pathway.

Peter Broad, CEng, CMarEng, HonFIIMS, FIMarEST



Reflections on 35 Years of IIMS from our current President Capt Ruchin Dayal, FIIMS

When I look back at my journey with the International Institute of Marine Surveying, I realise that it began not with a title or a role, but with a sense of purpose.

In 2014, I presented a paper on cargo liquefaction at a packed lecture hall at the IIMS Conference in London. That moment was formative. The discussion that followed, the engagement from fellow professionals, and the seriousness with which the subject was received gave me a profound sense of meaning. For the first time, I felt truly proud - not just of what I was doing, but of the difference that work could make. In IIMS, I found an organisation that valued integrity, technical rigour, and the courage to speak up when safety was at stake. In many ways, I found my professional inner self.

Over the years, IIMS has evolved dramatically, and in my opinion, one of the most defining moments in its recent history has been Mike Schwarz since he took the helm as CEO. Under his leadership, the Institute has not only grown rapidly but done so with clarity and purpose. The team he has built at Headquarters in Portchester, UK has ensured that IIMS has remained not merely relevant, but ahead of the curve, during what has arguably been the most technically explosive decade our profession has ever experienced.

Digitalisation, new cargo types, remote surveys, cybersecurity, and now artificial intelligence have fundamentally altered how surveying is practiced. Through all of this, IIMS has moved, and continues to move, with the times - adapting, learning, and leading. That gives me great confidence that the Institute will continue to remain relevant well into the future.

As the AI revolution begins to take shape, many within IIMS are already embracing it with open minds. And if the profession must evolve again, as it surely will, I have no doubt that the Institute, and its members, will be ready to evolve with it.

At 35 years, IIMS stands not just as an institution, but as a community - one that continues to matter.

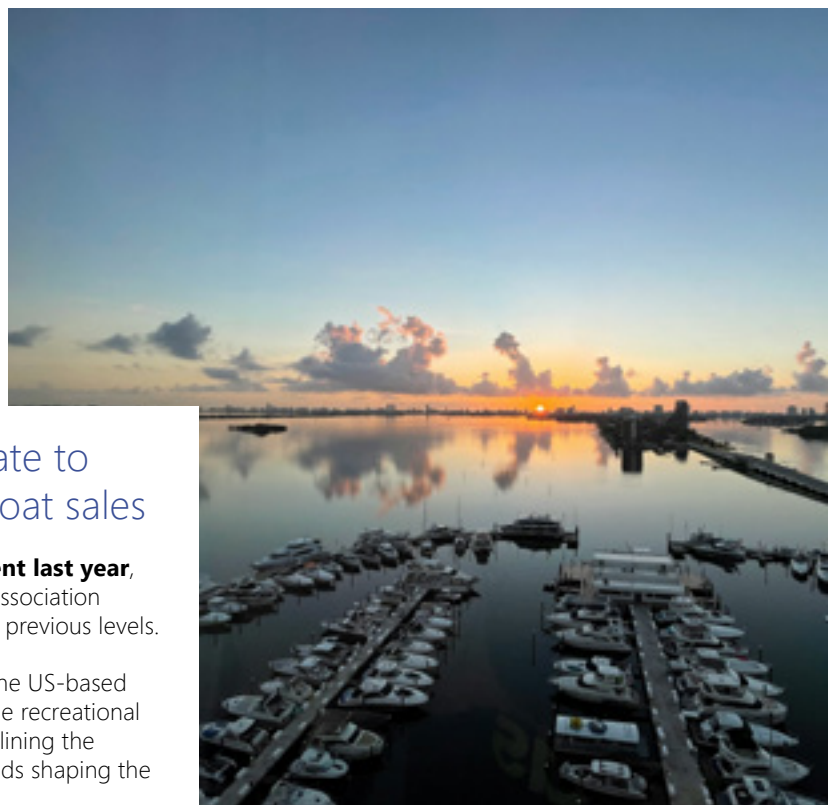
**Capt Ruchin Dayal, Master Mariner (MMI),
President - International Institute of Marine
Surveying, FIIMS | AMS - SAMS (USA) | MAIMS
(Australia) | AFNI (London)**

IIMS through the ages: 1990 - 2026

- 1990 The first International Marine Surveying Conference sponsored by IMarEST and The Nautical Institute was held.
- 1991 April - Institute of Marine Surveyors founded.
Capt Bill McDonald elected as first President.
- 1997 The first issue of The Report magazine published.
- 1998 IIMS appointed as a certifying authority by the MCA.
- 2001 IIMS celebrates its 10th anniversary.
- 2002 Professional qualification distance learning courses launched.
- 2003 April - Change of name from 'Surveyors' to 'Surveying'.
- 2004 January - John Lawrence appointed CEO.
- 2007 March - New Zealand branch established.
- 2008 February - first IIMS Australasian conference held.
- 2010 March - Registered office address changed from Gosport to Portchester.
Indian Branch launched.
- 2013 December - John Lawrence, CEO retires.
- 2014 January - Mike Schwarz appointed as CEO.
- 2015 Registered Marine Coatings Inspector and eCMID Accredited Vessel Inspector programmes launched.
September - first IIMS handy guide published: What a marine surveyor needs to know about enclosed spaces.
IIMS presents Jeffery Casciani-Wood with a Lifetime Achievement Award.
- 2016 IIMS turns 25 years old and holds a Gala Dinner in London and presents Awards for Excellence.
Association of Marine Surveyors of British Columbia merges with IIMS Canada Branch.
May - IIMS Nigeria branch formed.
- 2017 February - CPD App launched.
September - IMC Golden Shield Excellence awarded to IIMS for Leading Maritime Training Institute.
Mike Schwarz appointed Chair of the MCA certifying authority professional standards working group.
- 2019 February - Marine Surveying Search App launched.
November - UAE branch celebrates its 10th anniversary on the QEII in Dubai.
- 2020 IIMS purchases Murrills House.
- 2021 January - IIMS launches first Safety & Loss Prevention Briefings Compendium.
September - IIMS becomes founder member of the Maritime Professional Council of the UK.
- 2023 First Mid Month Marine Communiqué broadcast.
- 2025 IIMS presents Paul Homer with a Lifetime Achievement Award.
- 2026 IIMS is 35 years old... we're looking forward to where we go next.

Shipping and Boating by Number 5

In this regular feature, numbers are widely used to highlight some of the key points of the stories. Numbers are often considered more important than words when conveying precise information, as they provide an objective way to represent data, making it easier to compare, analyse, and understand facts quickly. Words can be subjective and open to interpretation.



Mixed economic signals translate to continued decline in new US boat sales

US powerboat sales **dropped by up to 10 per cent last year**, according to the National Marine Manufacturers' Association although freshwater fishing boats held steady from previous levels.

With the winter boat show concluding, the US-based trade organisation shared a state of the recreational boating industry business report outlining the latest industry data and market trends shaping the national market as it entered 2026.

NMMA estimated total new powerboat retail unit sales in 2025 **declined to approximately 215,000 to 225,000 units**. Looking ahead, mixed economic conditions are expected to result in new powerboat sales in 2026 that are on par to slightly up from last year.

Throughout 2025, volume-leading segments such as personal watercraft, aluminium fishing boats and smaller, trailerable boats drove retail activity, accounting for **more than 90 per cent of total unit sales**. Freshwater fishing boats were a notable bright spot, **holding steady with 2023 sales levels**.

Pre-owned boats, which represent approximately **80 per cent of total annual unit sales**, remain a critical component of the market, offering a wide range of price points and access opportunities for consumers. In 2024, the most recent year of available data, pre-owned **boat sales totalled nearly 860,000 units, down 6.5 per cent from 2023**.

NMMA president and chief executive officer Frank Hugelmeyer said: "The mixed and uncertain economic environment that persisted throughout 2025 brought material impacts to the recreational boating market and a wait-and-see mindset for some boating consumers.

"While last year's economic uncertainty and softness is expected to persist into 2026, manufacturers have adjusted and there is cautious optimism as key consumer segments engage in boating through a range of pathways, from entry-level and pre-owned boats to boat clubs and shared access options that align with their budgets and lifestyles."

Winter boat shows can drive **an estimated 30% to 60% of annual retail sales** and serve as a key barometer for the year ahead, offering consumers the opportunity to compare brands, explore new technologies and, unlike auto shows, purchase boats and accessories directly on the show floor.

European boating industry

The boating industry in Europe is a dynamic and competitive sector and a significant contributor to the European economy. The total industry is made up of boatbuilders, engine manufacturers, equipment manufacturers, trade and service providers and **consists of approximately 32,000 companies, directly employing over 280,000 people.**

The boating industry is mainly made up of small and medium-sized enterprises (**97% of businesses are SMEs**) and a small number of large companies (**over 1 000 employees**). On its own, the boatbuilding sector **consists of 3,600 companies employing over 82,000 people.** The production of recreational craft is very diverse and ranges from series to one-off boats, which are built-to-order.

The boating industry is also a highly internationalised sector. Traditionally, European companies have exported mainly to other countries within the EU and to the US. New markets are emerging, however, and European companies are increasingly exporting to Asia, South America and Russia.

With over **37,000 km of inland waterways and more than 70,000 km of coastline**, Europe offers the perfect environment for the **48 million European citizens** who regularly participate in recreational marine activities (**36 million of whom are boaters**), as well as countless numbers of tourists. Over **6 million boats** are kept in European waters while **10,000 marinas provide over 1 million berths** both inland and in coastal areas.



Registrations of recreational boats in Spain are approaching 5,000

The recreational boating market in Spain closed 2025 with a stable performance compared to 2024 and with positive growth in the last quarter of the year, especially in the shorter length segments, according to the 2025 Recreational Boating Market Report, prepared by ANEN based on data from the Directorate General of the Merchant Marine.

During the year as a whole, **4,992 recreational boats were registered in Spain**, representing a slight **decrease of -0.9% compared to 2024**, while the **rental market registered 1,418 registrations (-19.3%)**, with a more pronounced adjustment after the strong growth experienced in previous years.

Registrations of recreational boats showed weaker performance until May, followed by a strong recovery in the last quarter, which allowed the year to close with a stabilizing trend. **December saw a 14% increase**, confirming the improved market momentum in the final stretch of the year.

ANEN's CEO, Jordi Carrasco, stated that "2025 has been a year of adjustment and consolidation for the nautical sector, following the strong growth experienced in previous years. The positive trend in the last quarter, especially for smaller vessels, confirms that recreational boating maintains a solid demand base and a remarkable capacity to adapt to a more demanding economic environment."





Meanwhile in the UK recreational boating sector

When you strip away anecdotes and gut feeling from 2025, the data points from brokers, builders, production figures and transaction reports all tell the same story: the market didn't fall off a cliff, but it split sharply by size and buyer profile. According to Clarke & Carter's Summer 2025 Market Update, overall enquiry levels and website traffic were up, but actual buyer behaviour became significantly more selective compared to the post-COVID years, with certain segments slowing far more than others.

Starting at the lower end of the market, UK brokers were unusually direct about small boats and dayboats. Clarke & Carter explicitly stated that "the market for day boats is particularly slow at the moment", attributing this to reduced disposable income, higher interest rates, and increasing ownership costs such as storage and maintenance. Even within sailing, which they described as generally active, they noted that the **sub-£10k bracket is "slightly slower"** due to a combination of higher storage costs and an oversupply of boats on the market.

That softness didn't disappear as the year went on. In their December 2025 update, Clarke & Carter doubled down, stating plainly that "day boats are having a tough time" and warning that, going into 2026, "prices may fall further unless something changes" in buyer confidence and affordability. This is one of the clearest public broker statements linking small-boat performance directly to macroeconomic pressure rather than lack of interest.

By contrast, mid-size and larger cruising boats performed noticeably better throughout the year. In the same Summer 2025 report, Clarke & Carter stated that "the bigger and more expensive motor cruisers are faring much better", with the key caveat that boats must be in good condition and priced realistically. By December, their conclusion was even more blunt:

"The bigger the motorboat, the better the market," with sports cruisers and flybridge motor yachts specifically highlighted as categories that continued to sell in reasonable timeframes despite tougher negotiations.

This size-based divergence is reinforced by UK builder data. Marine Industry News quoted Cockwells, a premium British boatbuilder, stating that "for our smaller boats, it's a bit quieter than normal," while adding that "Duchy 35s and up... they're selling, no problem".

Boat show transaction data adds hard numbers to this picture. British Marine reported that Ancasta **achieved over €20 million (£17m+) in new boat sales** from the Cannes Yachting Festival and Southampton International Boat Show combined, representing **a 300% increase** compared to the same period the previous year (British Marine industry news release). Marine Industry News corroborated this figure, confirming combined **show sales exceeding €20m**, demonstrating that committed buyers were still transacting at scale in 2025 despite broader market caution.

Production data provides further context. UK Boat Production Estimates published by British Marine and analysed by Marine Industry News show that production of small **sailboats under 7.49m** fell to less than two-thirds of post-COVID peak levels by 2024, while **mid-size motor yacht production (12.5–23.99m) remained broadly stable at around 300 units per year**. Notably, production of motor yachts **over 24m increased from around 40 units in 2021 to just over 60 units by 2024**, with major UK builders signalling plans to re-enter or expand in the 30m+ segment from late 2026 (Marine Industry News, UK Boat Production Estimates 2021–2024).

At the very top end, the superyacht market mirrors the same pattern. The Monaco Yacht Show Market Report 2025 (by SuperYacht Times) **reported 200 used yachts over 30m sold by the end of July 2025**, almost identical to the prior year, but with **total gross tonnage traded up 8% to 93,500 GT**, indicating that the average yacht sold was larger. The same report noted that while new-build sales under 50m were down year-on-year, larger size segments remained stable, reinforcing the trend that size and buyer resilience are closely linked.

Taken together, these sources point to a consistent conclusion. 2025 was not a weak year for UK boat sales, but it was a highly selective one. Entry-level and dayboat segments were the most exposed to economic pressure and discretionary spend constraints. Mid-size cruising boats, particularly those that were turnkey and realistically priced, remained liquid. Larger and premium boats outperformed smaller craft, supported by more financially resilient buyers and long-term lifestyle demand.

Asia Pacific Boat Sails Market Report (2021-2031)

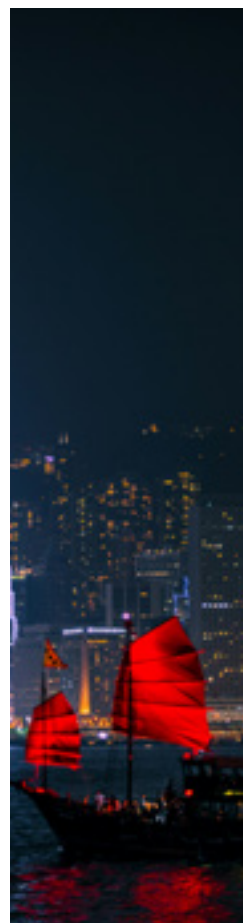
The Asia Pacific Boat Sails Market size is expected to reach **US\$ 265.48 million by 2031 from US\$ 156.95 million in 2023**. The market is estimated to **record a CAGR of 6.8% from 2023 to 2031**.

The Asia Pacific boat sails market is segmented into Australia, India, China, Japan, South Korea, and the Rest of Asia Pacific. The region is emerging as a key player in the global boat sails market. As the region's economies, particularly China and India, continue to grow, there is a rising interest in recreational boating and sailing activities, which is driving the demand for boat sails. Moreover, the rapid economic development and ongoing urbanization are driving economic growth within Asia Pacific.

Asia Pacific Boat Sails Market Outlook

The growing government investment in water tourism is expected to emerge as a significant opportunity for the global boat sails market, fuelling both short-term and long-term growth prospects. As governments worldwide recognize the economic potential of marine and coastal tourism, they are increasing their investments in infrastructure, policy initiatives, and promotional efforts to stimulate growth in the sector.

This heightened focus on water-based tourism is directly driving demand for recreational boats, including sailboats, thus creating a favourable environment for boat sails market expansion. In January 2024, the Government of India announced its plans to **invest US\$ 707.33 million (INR 60,000 crores) by 2047** in river cruise tourism and the development of green vessels. Hence, government investments in water tourism are playing a pivotal role in offering lucrative growth opportunities for the global boat sails market. These efforts help raise the profile of boating activities, increase the number of tourists visiting key coastal and maritime locations, and, consequently, spur the demand for both boat sales and boat rental services.



Australian marine industry shows steady demand and shifting opportunities

Data source: BIA

Australia's marine industry continued to hold steady through 2024 to 2025, with turnover edging higher and participation remaining strong. Beneath that stability, the sector is starting to shift, pointing to an industry that is adapting to new conditions rather than taking a step back.

The latest BIA survey shows a sector finding its balance after several turbulent years. Total **turnover lifted from \$10.12 billion to \$10.2 billion**, a modest increase that reflects steady demand through a more cautious economic period. Rather than sharp growth or contraction, the marine industry is settling into a more predictable rhythm as the surge in post-pandemic spending continues to normalise.

Workforce trends reveal one of the clearer signs of change. Businesses reported fewer direct employees compared with last year, but they **engaged more than 10,000 contractors**, indicating a growing reliance on flexible and specialist labour. Most operators remain small, typically **employing fewer than 10 people**, yet the share of larger companies continues to grow.

Businesses with **more than 50 staff now account for 9 percent of the workforce, up from 7 percent** the year prior. This gradual shift points to ongoing consolidation as certain parts of the industry scale up to meet changing consumer expectations and project demand.

Sector composition also moved in noticeable ways. New boat sales held steady but used boat sales declined as the second-hand surge that defined the past few years began to soften.

Participation continues to underpin industry stability. One in ten Australians holds a boating licence, with **more than 2.5 million licence holders nationally**. Registrations across major states remained steady, confirming that boating continues to be a central part of Australia's recreational landscape.

Helsinki Boat Show 2026 records major increase in visitors

The Helsinki International Boat Show, Vene 26 Båt – often referred to as Europe's second-largest indoor boat show – **recorded attendance of nearly 55,000 visitors**, bringing the show back to its 2024 level.

In 2025, **attendance was down by around 10,000** – organisers claim this was due to the Helsinki Outdoor & Hunting Fair being held during the first weekend of the boat show. The Helsinki Outdoor & Hunting Fair will run in parallel with the boat show again in 2027.

Vene 26 Båt was held from 6-15 February 2026 at the Helsinki Expo and Convention Centre, and featured products for boating, fishing and watersports, **with 400 boats on display**. Most of those boats were from Finnish brands. **Overall, 288 companies exhibited at the ten-day event**.

"Helsinki International Boat Show is an impressive event that receives high praise also from international visitors," says Jarkko Pajusalo, CEO of the Finnish Marine Industries Federation Finnboat, which organises the event alongside the Helsinki Expo and Convention Centre (Messukeskus).



Italy's Sanlorenzo reports €943m order intake, up 16% in 2025

Italian shipyard Sanlorenzo has reported steady growth throughout 2025. In preliminary results for the year ended 31 December 2025, the yacht builder posted **net revenue from new yachts of €960.4m, compared with €930.4m in 2024**. The company says 2025 growth resulted from an "acceleration in demand" across the portfolio.

Order intake for 2025 was €943.1m - an increase of 16 per cent year on year, representing a **€130m** uplift compared to the previous year. Sanlorenzo says this was driven by the success of new model launches, brand desirability and strengthened distribution in MED, APAC and the US. **Group net profit rose to €107.4m, up 4.2 per cent year on year**.

The shipyard launched multiple new models, including the flagship 74 Steel superyacht, the 58 Steel, and the hybrid-electric SHE model, all of which generated immediate client interest. Q4 2025 marked the sixth consecutive quarter of year-on-year growth in order intake, with **€253m new orders collected in the quarter (+10.1 per cent YoY)**.

The company reports **a €1.96bn order book**, and confirms **88 per cent of orders are secured** by final clients.





Maritime and
Coastguard Agency

MCA publishes update on new Fixed Aerosol Fire Extinguishing Systems guidance

The UK Maritime and Coastguard Agency (MCA) has released an amendment to MGN 657 (M+F) Amendment 1 requirements for fixed aerosol fire extinguishing systems for use in small vessel machinery spaces.

The update clarifies that the design density should be calculated based on the net volume of the protected space, as well as clarifying the test criteria including the pass/fail criteria and arrangements for the test mock-up.

Background

Approval of Fixed Aerosol Fire Extinguishing Systems for use in small vessel machinery spaces has previously been undertaken by the MCA, with the publication of this notice those approvals will now be undertaken by a UK Approved Body. Small vessels are those vessels as referred to in Section 6 of the appendix. Once a system was approved the manufacturer or supplier of the system was issued with the MCA Certificate of Inspection and Test (MSF 1814 form). The certificate demonstrated the safe and effective operation of the system following various fire-extinguishing tests. These tests included a demonstration of the system's ability to extinguish a selection of representative fire types in an enclosure similar to that of a small vessel's machinery space.

This MGN formalises the process by publishing the test requirements for future approvals and to require that the tests are witnessed and confirmed as successful by a UK Approved Body.

Key changes

In regard to calculating the design density, the machinery space housing the Fixed Aerosol Fire Extinguishing System is referred to in this document as the protected enclosure or protected space. The protected enclosure volume should be calculated by the system supplier or installer and agreed by the vessel owner, equipment supplier and supplied to the surveyor for acceptance, as noted in section 5.2 of the MGN. The required concentration of the aerosol varies between manufacturer / system types, and agreement of the design concentration required for the space should be sought from the manufacturer or their agent and be based on fire extinguishing tests as defined in this document. The methods used for calculating the design concentration shall be included in the vessel's application for certification. The quantity of extinguishing agent for the protected space should be calculated at the minimum expected ambient temperature using the design density based on the net volume of the protected space, including the casing. The net volume of a protected space is that part of the gross volume of the space, which is accessible to the fire-extinguishing agent.

The recently published amendment also clarifies the test criteria including the pass/fail criteria and arrangements for the test mock-up.

Read the MGN online at <https://bit.ly/4jTCliv>.



NTSB report says lithium-ion batteries caused Genius Star XI fires

Heavy weather and an improperly secured cargo of lithium-ion battery energy storage system (BESS) units led to two fires on board the cargo vessel Genius Star XI – causing \$3.8 million in damages, according to the National Transportation Safety Board (NTSB).

Findings

Investigators determined that the probable cause of the two (December 25 and December 28, 2023) fires aboard the Genius Star XI was the breakaway of 41 battery energy storage systems (BESS) units in the cargo holds during heavy weather conditions due to improperly secured lashing belts, which resulted in internal structural deformation of these units and thermal runaway of lithium-ion battery packs in three of the BESS units.

Ensuring Proper Cargo Securing

In addition to following a vessel's cargo securing manual and implementing the approved vessel storage and lashing plan, a vessel's crew must also conduct a thorough inspection of all the cargo-securing arrangements both during and after cargo loading. Such inspections are critical to identifying improper attachments or other concerns with cargo securement that could compromise the assumptions planners make in implementation of the plan. Not ensuring cargo is properly secured can result in cargo breakaway. Special attention should be placed on examining fitment of components, such as lashing belt hooks, wire, or chain falls used to secure the cargo to ensure they are properly seated (fully engaged) on the D-rings or other points of securement.

Proper inspection and verification are critical to preventing cargo movement, structural damage to battery units, and potential thermal runaway events during heavy weather.

Download the full report at <https://bit.ly/3NUvLvT>.

REPORT bites

A new yachting organisation, the China Sanya Yacht Import & Export Trade Association (CSYIETA), has been officially established in Sanya, Hainan, a prominent hub for yachting in China.

The International Federation of Boat Show Organisers (IFBSO) has officially welcomed the Palma International Boat Show as its newest member.

The past 12 months have been worrying for researchers who study the chemistry of the ocean. More and more evidence has been published showing that human activities are fundamentally altering this chemistry in an acidic direction.

As climate change continue to affect the Arctic, long-frozen waters of the Canadian high north have become navigable for the first time.

A National Lottery Heritage Fund grant of £210,000 will restore a 1912-built historic canal boat and transform it into a floating community hub, bringing a little-appreciated chapter of Oxford's waterways history back to life.

Romanian start-up Recycllux is using AI to help communities detect, collect and recycle marine plastic waste.

Kawasaki Heavy Industries, Ltd. and Japan Suiso Energy, Ltd. (JSE) have signed a contract to build a liquefied hydrogen carrier with a capacity of 40,000 m³, the largest of its kind to date.

MCA: MGN 710 (M) safety management systems for small workboats and pilot boats

The UK Maritime and Coastguard Agency (MCA) has published MGN 710 (M) safety management systems for small workboats and pilot boats.

Guidance on how owners and operators of small workboats and pilot boats can meet the Safety Management System (SMS) requirements of the recently launched Workboat Code Edition 3 is now available.

It sets out practical ways to demonstrate that an SMS is implemented and operational on board, primarily through an annual self-assessment or an equivalent method providing comparable assurance.

The MGN clarifies the role of the Certifying Authority (CA), emphasising that their function is limited to sampling evidence of SMS implementation as part of the certification process, rather than auditing or developing the system. It also outlines expectations for periodic SMS reviews, responsibilities for addressing findings internally, and specific considerations for remotely operated unmanned vessels and remote operation centres.

The guidance supports proportionate, practical safety management, encourages continual improvement, and reinforces that responsibility for the SMS remains with the owner or operator.

Read the MGN online at <https://bit.ly/4a53ECX>.

MCA lithium-ion battery update to fire safety MGN 681 (M)

The UK Maritime and Coastguard Agency (MCA) has update to fire safety MGN 681 (M) and storage of small electric powered craft on yachts.

MGN 681 (M) Amendment 1 includes clarification for the functionality of storage and charging cabinets or boxes where these are used as part of the solution for the carriage of li-ion batteries used on personal vehicles.

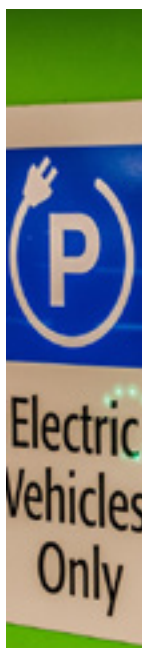
Small electrically powered craft and other vehicles (such as personal watercraft) are becoming more commonly used in place of similar petrol-powered craft or vehicles stowed on yachts. Whilst electric craft do not necessarily represent a greater fire risk than petrol craft, there are considerable differences in best practice for fire prevention, storage, fire detection and fire suppression of such craft, which should be considered when they are stored onboard.

Wherever possible, the specific risks associated with the charging and storage of electric personal watercraft and tenders on large yachts should be considered at an early stage of design and construction. It is recognised however, that such equipment may be supplied at a late stage of construction or during the life of existing vessels.

New designs should make provisions for the safe charging and stowage of such electrical supplies however these safeguards should be subject to continuous review by the Operator who should update their procedures and practices to ensure safe storage and operation of these systems.

The guidance contained in this MGN is intended to outline best practices related to design, equipment and outfit of dedicated spaces onboard, and to increase safety for handling, charging and stowage of li-ion batteries and craft with these in-built.

Read the MGN online at <https://bit.ly/49RYN6X>.



Surge in EV transportation exposes gaps in maritime safety rules procurement

Industry experts have said the rapid rise in EV (electric vehicle) transportation exposes gaps in maritime safety rules, says Steam Marine Technical. High-profile shipboard fires involving EVs, such as those on the *Felicity Ace*, *Morning Midas* and the *Freemantle Highway*, have highlighted the dangers and significant risks. While lithium-ion battery fires and thermal runaway events aren't always the initial cause, they significantly escalate onboard fires when EVs are involved, yet current International Maritime Organization (IMO) regulations don't adequately address this risk. Whilst the IMO develops updated guidelines, comprehensive regulations specific to EV transport aren't expected until at least 2028.

In the meantime, shipping companies are moving ahead on their own. Many are installing specialised fire suppression systems, boosting crew training, and working collaboratively to share best practices.

At a seminar in late 2025 hosted by Stream Marine Technical, John Garner, Managing Director of JG Maritime Solutions and Chairman of the Interferry Regulatory Committee said, "The challenge lies in bridging the gap through proactive compliance, operational readiness, and crew competency. We're seeing companies take the initiative, but it shouldn't take a decade for regulations to catch up."

"Training is absolutely key," said Craig Smith, Expert Consultant and Instructor at Stream Marine Technical. "Crews need to spot early signs of battery fires and use the latest suppression technology. There's no silver bullet, but scenario-based drills and new procedures are already making a real impact."

With regulation lagging behind technology, the message from experts is clear: stay alert, stay prepared, and help shape the future of maritime safety before the next crisis hits.



Photo credit: Walter Pless, Marine Traffic

Gaschem Homer blackout due to generator issue in Port of Brisbane

The gas tanker had just left its berth at the Port of Brisbane when it lost propulsion for two minutes as two of its three electrical generators were not properly configured causing the Gaschem Homer blackout, according to an Australian Transport Safety Bureau (ATSB) final report.

What the ATSB found

The ATSB found that, during departure preparations, the crew had forgotten to switch two of the ship's three generators to automatic mode. As a result, the ship's power management system was unable to automatically distribute electrical load across all generators, restricting generating capacity to only one generator. The increased power demand when the bow thruster was operated during departure manoeuvring could not be supported by the single generator and it tripped on overload, causing the blackout.

The investigation also identified a safety issue relating to the shipboard safety management system, which had not identified operational risks associated with Gaschem Homer's electrical installations and implemented effective controls. Procedures were generic and non-informative and there were no other controls in place to prevent such operational lapses resulting in a power failure.

Safety message

This incident highlights the importance of ensuring all risks associated with shipboard operations and critical equipment are identified, assessed and effectively controlled. The safety management system should encompass up-to-date and useable ship-specific procedures, as well as any additional technical controls if procedural barriers alone are insufficient to mitigate risk.

Download the full report at <https://bit.ly/3Nx2zLo>.

REPORT bites

South Korea has launched its first hydrogen fuel cell-powered boat, Hydro Zenith. The vessel was unveiled at VINSEN's land-based test facility in Yeongam, Jeollanam-do Province.

Trondheim's fjords have welcomed a revolutionary mode of transport: the Candela P-12, the world's fastest electric passenger vessel.

Tunisian boat builder WAMA Yachts, operating from a 5,000m² shipyard in Bizerte, Tunisia, has embarked on a major expansion through the acquisition of Spanish company Odisea Catamarans in late 2025.

Evergreen Marine has announced the fleetwide rollout of Inmarsat Maritime's NexusWave bonded connectivity solution, enhancing digital connectivity onboard.

Griffon Marine has been awarded a contract by Finnish Border Guard (FBG) to build and deliver three new hovercraft.

Two rare relics from one of the Great Lakes' most enduring maritime tragedies sold for a remarkable \$150,000 at an auction in downtown Detroit, one month after the 50th anniversary of the sinking of the iconic SS Edmund Fitzgerald.

Philippine President Ferdinand Marcos Jr. has ordered the Philippine Coast Guard to inspect dredgers being used in reclamation works in Manila Bay to determine whether the vessels are operating in compliance with local laws.

ATSB investigation into serious fall injury in engine room of Spirit of Tasmania I



Photo credit: Gopal Vijayaraghavan (via Wikimedia Commons) CC BY 2.0

Safety management system procedures were not effectively implemented when the Spirit of Tasmania I's second engineer was seriously injured in a fall during engine maintenance, said the final report from the Australian Transport Safety Bureau (ATSB).

The ATSB investigation found that, while access to the top of the engine was regularly required, there was no access ladder or platform nor was a standard safe route defined or used. Consequently, the injured second engineer used an unsafe access route along the engine rocker covers at the time of the accident.

The investigation also identified that although the shipboard safety management system required that the change of work scope necessitated a review of the Job Safety Analysis (JSA) and/or completing a new prestart safety checklist (Take 5), neither was undertaken due to perceived time pressure and a perception that the work was low risk, resulting in the risk of a fall not being properly considered.

In addition, the ATSB found that the JSA procedure was not effectively implemented on board. This resulted in there being no JSA in place for the work being done at the time of the incident. Further, the JSAs covering other work on top of the engine did not address the risks involved in accessing the engine top.

The ATSB has investigated numerous occurrences involving unsafe working practices on board ships. Many of these resulted in serious or fatal injury(s) due to falls from height, machinery or equipment falling, explosions and other hazardous occurrences. A recurring factor in such incidents is the people involved in the work not recognising the hazards involved and/or they considered the work routine and low risk. In addition, risk assessment and mitigation are often not done or ineffective. This investigation highlights the importance of effective risk controls, which requires staff at all levels on board and ashore to contribute towards the effective implementation of the shipboard safety management system.

Download the report at <https://bit.ly/49OzS4a>.



MAIB publishes preliminary report on scrap metal fire on Altay

A report regarding a scrap metal fire in the cargo hold of bulk carrier Altay has highlighted the importance of cargo loading monitoring and cargo pre-loading inspection.

The UK Marine Accident Investigation Branch (MAIB) has released a preliminary assessment of the incident which took place in 2025. Nearby residents and business owners had been advised to keep their doors and windows securely closed while firefighters tackled the blaze.

Findings

- The fire was likely caused by an undischarged battery or other ignition source, causing a spark during loading that ignited combustible material in the scrap cargo.
- The scrap cargo had been collected from several sources and the recipient company, The Griffiths Group Limited, expected its suppliers to screen their product to remove hazardous material such as combustibles and batteries.
- Deliveries of scrap cargo to Hull were visually checked on arrival. There was no additional sorting and screening facility to ensure that contaminants were not present.
- The cargo had been classified as group C scrap metal under the International Maritime Solid Bulk Cargoes (IMSBC) Code, which did not require the shipper to declare hazard identification and cargo composition. However, the scrap cargo contained hazardous impurities, including batteries, oil drums, and oily residues, which posed a fire risk.

Key tips for transferring plastic pellets in containers

Steamship Mutual P&I Club has provided guidance on the risks associated with the carriage of plastic pellets in containers and provides practical measures to prevent spillage and protect the marine environment.

Understanding the risks of plastic pellets

According to the Club, in recent years, several high-profile incidents have occurred, such as the Trans Carrier in 2020 and the XPress Pearl in 2021, where containers have fallen overboard and resulted in the release of plastic pellets into seas and oceans with subsequent harm to the marine environment.

While the carriage of plastic pellets in shipping containers is a secure means of shipment, the environmental concern arises when these containers are lost overboard. Once plastic pellets are released, their physical properties of being small and light allow them to travel extensive distances from the initial release location.

These incidents have given rise to concerns within the shipping industry about not only the risks plastic pellets pose to marine ecosystems, but also about the resulting multi-million-dollar clean-up and recovery operations, which can span many months or even years.

These costs include shoreline recovery, wildlife rehabilitation and long-term monitoring, and achieving complete recovery is often impossible.

The inclusion of plastic nurdles in the IMDG Code is being considered in part due to the escalating cost of recovery, because mandatory packaging, labelling, and stowage requirements are considered essential in reducing the frequency and severity of such incidents.

Read the guidance online at <https://bit.ly/3NtMfLr>.



REPORT bites

ABB has signed contracts with Rotterdam Shore Power to engineer and construct what is expected to be the world's largest shore power system by capacity at the Port of Rotterdam.

At Washington State Ferries, 2026 started with a thud, one ferry each of the first three days of the year were pulled from service for mechanical problems.

History was made in the 80th Rolex Sydney Hobart Yacht Race when it was won for the first time by a woman. The winning vessel, the 10.4m Chinese-owned Min River, was crewed by its owner, 60-year-old Jiang Lin, and co-skipper Alexis Loison.

Marine Rescue's Lake Macquarie unit performed more than 594 search and rescue missions, coming in ahead of the Marine Rescue Sydney, State Communications Centre on 493 during a busy year for the volunteer rescue organisation.

With current president and CEO Michael Hansen set to step down in June, Hempel board of directors launches new leadership search.

US naval shipbuilder General Dynamics Electric Boat (GDEB) has begun operating its newest floating dry dock. The 618 by 140foot (188 by 43metre) Atlas was built by Bollinger Shipyards of Louisiana.

Aquila Catamarans has launched its first sailboat, the 50 Sail, at the Miami International Boat Show 2026.



Safety recall of flares issued due to spontaneous combustion

The United States Coast Guard (USCG) has sent out a warning following a manufacturer recall of nearly 50,000 affected signal flares. The USCG Office of Design and Engineering Standards was notified of a manufacturer recall of the Orion Skyblazer II Red XLT Aerial Signal (also called Orion XLT Skyblazer self-contained red meteor flare) due to three incidents of spontaneous combustion. There were no reported injuries.

Affected flares were manufactured between March 1, 2025, and November 24, 2025, and have expiration dates of August 2028 through April 2029.

As shown in Figures 1-3, the Skyblazer II Red XLT was sold in a retail Kayak/Paddle kit of two signals (Item #769), a retail set of four signals (Item #859), and a commercial bulk pack of 36 signals (Item #855) to liferaft manufacturers and servicing stations.

The company has contacted their retail and commercial customers of the 49,304 affected signals, as well as provided flyers to notify customers entering retail locations. Orion is working with the USCG, the Federal Aviation Administration, and IMANNA Laboratory, Inc. to develop design changes and stricter testing procedures. Orion will contact customers to provide more information on collection/destruction of quarantined products and replacement products.

The USCG Certificate of Approval (COA) 160.066/8/4, dated October 27, 2025, has been withdrawn and is now in a "Former-Do Not Use" status. Once the new design and additional testing have been approved by the USCG, this modified signal will be approved under a new USCG approval number.

Signals manufactured before March 1, 2025, are unaffected and remain safe for use.

The U.S. Coast Guard strongly recommends customers and end users of Orion Skyblazer II Red XLT Aerial Signals:

- Check the item numbers and expiration dates of your Skyblazer II Red XLT Aerial Signals. If the signals are sealed inside liferaft containers, check with your point of purchase for this information.
- Immediately remove from service Skyblazer II Red XLT Aerial Signals (Item # 769/859/855) with expiration dates of August 2028 through April 2029.
- Quarantine all impacted signals and store them in a safe and secure location away from combustible products until further direction is provided by Orion.

Report on deckhand killed by chain failure on Honeybourne III issued

Owners and operators of beam and scallop trawlers have been urged to inspect their vessels' quick-release arrangements after a deckhand was fatally injured by chain failure on the Honeybourne III in 2023.

The Marine Accident Investigation Branch (MAIB) added that any necessary changes should be made to the equipment or its operation to ensure the safety of crew working on deck.

What happened

On 6 October 2023, a deckhand on Honeybourne III was fatally injured when he was struck by a towing block that had fallen from the head of the port derrick. A section of chain supporting the fishing gear failed, allowing the suspended gear to fall to the deck, striking and fatally injuring the deckhand who was working below as it fell.

Safety issues

- The combination of high loading and bending moments in the outer chain links of the quick-release assembly led over a static pin increased stress in the chain links.
- It is likely that the chain link strength on the port quick-release gear was reduced by its material hardness.
- The programme of on board inspection of lifting equipment did not identify patent defects in Honeybourne III's lifting equipment.

Download the report at <https://bit.ly/4jTFoqX>.



Photo credit: Fishing News



Prawn trawler Odyssey sank after crew left wash pumps running

Six crewmembers were forced to abandon ship after prawn trawler Odyssey capsized and sank in the North Sea on 29 October 2024. Its crew were rescued from a liferaft uninjured.

According to the UK Marine Accident Investigation Branch (MAIB), the accident occurred after high-capacity deck wash pumps were left running unattended, while the crew recovered the fishing gear, discharging water onto the vessel's weathertight shelter deck. It is likely that a blocked tonnage valve prevented the water from escaping, resulting in rapid flooding and a catastrophic loss of stability.

Safety issues

- there was a risk of flooding as the deck wash pumps were left running and unattended.
- the shelter deck had limited drainage by design, leaving it vulnerable to water build-up when the drainage became compromised.
- the crew initially mistook the developing list to be normal movement associated with recovering the fishing gear.
- there was a lack of guidance in relation to flooding risk from deck wash pumps and the danger had not been addressed in the vessel's risk assessments.
- emergency preparedness helped the crew successfully abandon the vessel.

Download the full report at <https://bit.ly/4bbPAsw>.



REPORT bites

Rivers, lakes and beaches across England are set to become cleaner, with wildlife better protected, after the Government signed into law a ban on the sale of plastic wet wipes.

The Panama Canal Authority has commemorated 26 years of Panamanian administration, marking a new anniversary since its transfer at noon on December 31, 1999.

International trade and maritime law specialist Susan Hawker has been appointed as the Maritime Volunteer Service's new chair.

Recent regulatory changes have made the Andaman Islands significantly easier and more attractive for visiting yachts, with simplified visa procedures, clearer cruising rules, and improved fuel availability all part of a raft of recent updates.

Lürssen has marked another milestone with the launch of the 117-metre (383-foot) Boardwalk. The superyacht entered the water at the German builder's facilities, taking a significant step towards its scheduled 2026 delivery.

The massive port complex in China's central region is reporting a new record, claiming to be the first port worldwide to have handled a record 1.4 billion tons of cargo ranging from containers to dry bulk.

Japanese engine manufacturer Tohatsu Corporation celebrates 70 years of outboard engine production in 2026.



Report released on fatal mooring incident aboard motor tanker

The HM Government of Gibraltar has published an accident report into the death of a pumpman on board a motor tanker at the Port of Gibraltar due to a fatal mooring incident.

As no one witnessed the accident it is difficult to reach a firm conclusion as to what exactly happened. However, the Mooring System Management Manual stipulates that there should always be a minimum of two experienced persons at each mooring station throughout the operation, apart from the Officer in charge of the mooring station. The role of the officer is to supervise and keep an overview of the mooring operation. On this occasion there was not an officer undertaking this role. In effect the only person on the fo'c'sle was the pumpman who was operating the Port forward mooring winch by himself, at the same time as possibly ensuring that the mooring rope was correctly feeding and winding onto the winch's drum.

The investigation concluded that:

- The composition of the forward mooring party was not in compliance with the requirements of the mooring manual.
- Page 8 of the owner's preliminary assessment of the incident states that, no officer was assigned to the mooring station forward in order to maintain compliance with hours of work and rest.
- The pumpman was operating the winch at the same time as ensuring that the mooring rope was possibly correctly feeding and winding on to the mooring winch's drum.
- Due to repetitive nature of the work undertaken, the crew may have become complacent.
- It is possible that the mooring winch actuator lever had been incorrectly secured in the running position by using the safety clip or external device.
- At this time, he may have become entangled in the slack rope, in all likelihood by standing too close to the winch's drum subsequently resulting in being dragged in feet first under the rotating drum.

This report makes safety recommendations aimed at increasing crew awareness of the guidance on mooring operations, as set out in Section 26.3 of COSWP and in OCIMF Effective Mooring, and also emphasising the importance of adherence to the vessel's operating procedures.

The Marine Accident Investigation Compliance Officer, Neil Atkinson MNM, said: "This tragic accident could have been avoided had the correct number of seafarers been stationed at the forward mooring station and that the correct procedures for mooring operations been followed. Furthermore, it is imperative that safety devices are not disabled or tampered with."

Read the full report at <https://bit.ly/4sNZzug>.

ABS shares guidance on revised recommendations for entering enclosed spaces aboard ships

The American Bureau of Shipping (ABS) has provided an overview of IMO Resolution MSC 581 (110) – Revised Recommendations for Entering Enclosed Spaces Aboard Ships.

These new recommendations supersede and revoke Resolution A.1050(27), replacing them with updated safety measures, definitions, and procedural requirements aimed at reducing fatalities during enclosed space entry.

The IMO recognizes that many enclosed space accidents stem from a failure to systematically identify hazards, assess risks, and implement appropriate entry procedures. Investigations further highlight that the complex structural arrangements of certain spaces can hinder ventilation, illumination, and safe movement.

Key points to consider

The hazards from lack of Oxygen (O₂) and the build-up of gases such as carbon dioxide (CO₂) and carbon monoxide (CO) are well known, but their relationships are not always fully understood. More recent studies show that, as well as oxygen levels, the levels of carbon dioxide and carbon monoxide should be checked before entry is made to any enclosed space or adjacent connected space. To emphasize this, CO₂ is now explicitly included in the revised recommendation.

CO₂ is a potent asphyxiant and can cause rapid loss of consciousness and death. Its behaviour in cargo spaces justifies CO₂ monitoring before and during enclosed space entry, in addition to CO and other toxic gases.

The following points provide additional clarification on specific elements of the revised Recommendations and address common questions regarding atmospheric monitoring, cargo-related hazards and gas detection equipment.

- Risk Assessment. A risk assessment should be conducted by the competent person prior to opening an enclosed space. The competent person should be appropriately trained. The risk assessment should assess the likelihood of a dangerous atmosphere being present or subsequently developing within the space along with any other potential hazards in the space as identified in the vessel's Enclosed Space Register, and the need to ventilate adjacent spaces.
- Cargo-related gas emission risks. There is no general published list of cargoes that may produce flammable, toxic, corrosive or asphyxiant gases (such as CO₂). Instead, hazard information should be derived from: the shipper's declaration; Safety Data Sheets (SDS); the IMDG Code; the IMSBC Code (including individual cargo schedules); the IBC Code; the IGC Code. The revised Recommendations highlight several cargoes that have caused fatalities due to fire, explosion or asphyxiation.
- Number of portable gas detectors. MSC.581(110) does not change existing SOLAS or IGC Code requirements regarding the quantity of portable gas detectors. However, Paragraph 7.3 reinforces that all ships must carry at least two sets of gas detection equipment as per SOLAS XI-1/7. Ships carrying cargoes capable of generating hazardous vapor and requiring regular entry must carry two additional sets. Moreover, detectors must be supplied with sufficient spares and calibration means and may use flexible hoses or fixed sampling lines to test remote areas safely.
- Gas detection capabilities of portable gas detectors. The requirements remain consistent with previous minimum requirements as detailed in MSC.1/Circ.1477. Paragraph 8.2 details that personal detectors should measure: oxygen (O₂); any other gases identified in the risk assessment.

Download the full document at <https://bit.ly/45gLYBK>.



Dewatering system valves found in closed position

This notice, issued by ABS, summarizes recent observations on bulk carriers where non-compliance with the requirements of SOLAS Chapter XII, Regulation 13.1 was identified in the forecastle space dewatering system manually operated suction valves.

On bulk carriers and in accordance with SOLAS Regulation XII/13.1, MSC/Circ.1069 and IACS UI SC179, the arrangements for draining and pumping ballast tanks located forward of the collision bulkhead and the bilges of any dry space extending forward of the foremost cargo hold, shall be capable of being brought into operation from a readily accessible enclosed space. This enclosed space shall be accessible from the navigation bridge or the propulsion machinery control position without the need to walk across open-deck areas (i.e. exposed free board or superstructure decks).

During recent inspections on two different bulk carriers from different owners/managers, the following cases in forecastle dewatering systems manually operated suction valves were observed:

First case: The suction valve was found in the closed position with a warning sign instructing the crew to keep it closed while in port to avoid accidental discharges.

Second case: A label above the dewatering valve stated: DO NOT OPEN WITHOUT CHIEF OFFICERS PERMISSION.

ABS commented that both cases violate the intent of SOLAS XII/13.1 as they restrict immediate operation of the dewatering system when needed. The valves must remain open at all times.

ABS recommends that the manually operated suction valve of the forecastle space dewatering system must remain in the open position at all times. A clearly visible and appropriately worded warning notice should be posted in the vicinity of the valve.



REPORT bites

Capital Clean Energy Carriers Corp. announced the delivery of the world's first 22,000 cubic meter low-pressure LCO2 carrier, the Active, from Hyundai Mipo Dockyard Co., Ltd.

Singapore posted record port performance in 2025, supported by resilient global trade and fuel offtake.

Under Saudi Arabia's 'Vision 2030', expanding tourism along the Red Sea coast and the Gulf of Aqaba is a key strategy to diversify the economy away from fossil fuels. By 2030, these tourism hubs are expected to attract 19 million visitors annually.

South Korea has formally made Arctic shipping a national policy priority and will conduct its first container ship trial via the Northern Sea Route in September.

The Shipbuilders Council of America (SCA) has announced the new leadership of its board of directors. David Carver, president of General Dynamics NASSCO, has moved up from vice chairman to chairman of the SCA board.

Mike Hall, previously Deputy CEO of the Britannia Group, has been promoted to CEO following the departure of Andrew Cutler.

The Canal & River Trust, the national charity caring for 2,000 miles of waterways in England and Wales, has announced that Tim Hunter has joined as the charity's interim fundraising director in February 2026.



Investigation into fishing vessel Ben Thomas capsize and fatality

A crewmember died after the fishing vessel, Ben Thomas, capsized and sank off the Irish coast. A report into the incident, which took place two years ago, has been released by the Irish Marine Casualty Investigation Board (MCIB), concluding the investigation.

The vessel was fitted with an EPIRB attached with another HRU. The type and operational limits of this HRU could not be confirmed as it remains attached to the vessel, but a typical HRU intended for use with an EPIRB is designed to operate within a water depth of 1.5 to 4m, similar to the liferaft's HRU. A distress signal from this EPIRB was not received by the emergency services promptly after the vessel's sinking; the EPIRB was recovered on the day after this vessel's sinking, and it was transmitting then.

The nature of this fishing vessel's operations in relatively shallow water within 1 NM of the shore, increased the likelihood of either its liferaft or EPIRB, or both, not deploying promptly in the event of the vessel sinking.

Neither crewmember was carrying a PLB when this capsize occurred. There is no record that a PLB had been issued to any crewmember. The loss of life of one crewmember, and the threat to the life of another crewmember, occurred because of a combination of the following factors:

- Inadequate safety systems for the operation of this vessel.
- The failure to wear PFDs.
- The failure of the liferaft to inflate.
- The failure of the Emergency Position Indicating Radio Beacon (EPIRB) to operate promptly.
- The omission of Personal Locator Beacons (PLBs).
- Cold water immersion.

The cause of the capsize and sinking of the FV Ben Thomas is likely to have been the overturning effects of a heavily laden dredge cage as it was being recovered onboard. A contributory factor is likely to have been the vessel's low level of residual stability at this stage of the fishing operations.

The stability of the FV Ben Thomas was last evaluated by means of a rolling period test, carried out on the 25 June 2021 during the CoP survey. The CoP survey's DoC indicates that the vessel complied with the CoP's stability requirements. However:

- The details of any vessel modifications undertaken following the 2021 CoP survey could not be confirmed.
- The data recorded for the rolling test does not include details to show positive evidence of compliance with the CoP. The vessel was outside the dimensional parameters intended for the CoP's stability formula, thereby requiring that "special care" should be applied in the circumstances. Despite this, the formula was used to determine this vessel's stability parameters apparently without question, without evidence recorded in the test report of what special care was applied.
- The approach taken in the CoP to determining a vessel's stability does not recognise that landing the catch is a condition that will produce the lowest values for a vessel's stability parameters.

Download the report at <https://bit.ly/4sQJe8b>.

Benzene vapour death following unauthorised tank entry

Britannia P&I Club has cautioned its members on the dangers of entering an enclosed space after a benzene vapour death in the cargo hold of a tanker.

The final part of the cleaning process required physical tank entry to conduct manual wiping or "mopping", of any residual wash water. As is standard, tank entry required an enclosed space entry permit to be issued by the master. This company's policy was to mark the hatch cover of the space to show that a permit had been issued, and it was now safe for entry.

Some of the cargo tanks had previously carried benzene. Although the tanks had been rinsed and ventilated for gas freeing, residue benzene vapours remained a serious hazard. Benzene is highly volatile and toxic; in a confined or poorly ventilated environment, inhalation can rapidly cause dizziness, incapacitation, collapse, respiratory failure or fatal exposure.

This event developed rapidly and at a point where the tank had not yet been formally cleared for entry. Until an enclosed space permit is issued, a cargo tank must be treated as hazardous, regardless of whether the hatch is open, a fan is running, or the tank has been recently washed.

The purpose of the permit process is to confirm, through measured data and recorded gas testing, that it is safe to proceed. Tanks may look harmless from above yet can still harbour atmospheres that can quickly incapacitate or kill without warning. Therefore, visual appearance from the deck level cannot be relied upon; the atmosphere within a tank can remain dangerous even when it seems inactive or benign.

Download full details of the incident case study at <https://bit.ly/4pNBAZu>.



RMI investigation into enclosed space death in tanker

The Republic of the Marshall Islands Maritime Administrator has released an investigation report into the death of a crewmember from tanker TRF Kashima after the sailor and two other crewmembers had entered an enclosed space and fell unconscious.

The marine safety investigation conducted by the Republic of the Marshall Islands Maritime Administrator determined the C/O had entered the No. 6 S CT to take pictures required by the Charterer and that the OS2 and Pumpman entered the cargo tank to aid the C/O after they saw him lying on the upper platform. The entry into the cargo tank by the three crewmembers was not conducted in accordance with the ship's enclosed space entry procedures and without taking any required precautions. It was also determined that the C/O had previously made multiple entries into the ship's cargo tanks, also to take pictures required by the Charterer, while cargo tank cleaning operations were conducted on 9–11 and 13–14 July 2024. Evidence of a lack of oversight by the Master, crewmember fatigue, and that records of work and rest hours were not being accurately maintained were also identified.

The following lessons learned were identified:

- Enclosed spaces should never be entered for any reason, including to assist a fellow crewmember, without implementing established shipboard procedures.
- Masters and other senior officers must place safety above all else, and through both their words and actions, provide a positive example for junior officers and ratings.
- Deviations from established procedures increase the risk of accidents.

Conclusion

Causal factors that contributed to this very serious marine casualty included:

- The C/O's entry of No. 6 S CT and subsequent entry by the OS2 and Pumpman without implementing the Company's enclosed space entry procedures or otherwise taking necessary precautions;
- The lack of oversight by the Master and Company of the cargo tank cleaning operations that were conducted on the ship on 9–11 and 13–14 July 2024;
- Onboard normalization of deviation from established procedures and requirements during the cargo tank cleaning operations that were conducted on board on 9–11 and 13–14 July 2024 as evidenced by:
- The C/O making multiple entries into the ship's cargo tanks to take pictures without implementing the Company's enclosed space entry procedures;
- Opening cargo tank access hatches without cargo tanks being gas freed, using cargo tank access to add the citric acid solution to the cargo tanks, and the cargo tank tagging system which was not implemented; and
- The deviation from the Company-approved plan for cleaning the cargo tanks.

Download the full report at <https://bit.ly/49zY6jS>.





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The sun sets on a progressive IIMS Baltimore Conference 2026

Despite one of the most severe winter storms for many years and heavy snowfall blanketing the Baltimore area, it did little to dampen the spirits of the delegates who managed to get to the venue, nor those who joined virtually from the warmth of their own accommodation, of course.

The annual IIMS Baltimore Conference, co-hosted by James 'Randy' Renn HonFIIMS, Ray Bracken MIIMS and Mike Schwarz, took place on 30/31 January at the MITAGS facility on the outskirts of Baltimore and drew an audience of around 50 delegates, including a number of non-members.



James 'Randy' Renn (left), Mike Schwarz and Ray Bracken (right)

Bill Weyant tackled the thorny subject of surveyor ethics, delivering a reminder of the values and high standards to be met by all professional marine surveyors at all times. Craig Norton, Inspect X, gave delegates a deep dive into the world of AI and some of the GPTs that are available – their strengths and weaknesses, and how surveyors can take advantage of them in a controlled fashion to aid their work. Cat Pat Durham displayed his extensive knowledge to highlight and bring to the attention of those present, the dangers and challenges of lithium-ion batteries. John Malool gave an in-depth update on health and safety issues affecting all surveyors with a sharp reminder that things can and do go wrong. Chase Eshelman spoke eloquently about giving expert witness and mentioned an increasing shortage of those coming forward to do this work. Andrew Kinsey presented on the relationship between surveyor and underwriter and explained what is expected. The organisers are most grateful to those who gave up their time for the benefit of the delegates.

Other topics that featured over the two days included dealing with mould and termite attack on boats, and water sampling.

The event was brought to a close by Lloyd Griffin with his ever popular, *'you can't make this up'* review with photographs of some of the crazy things he has seen on survey in recent weeks.

It is pleasing to hear that some of the non-members who attended have subsequently expressed an interest in joining IIMS and we look forward to welcoming them into the Institute.

The idea of relocating the 2027 Conference to a Florida venue next January was mooted and all agreed this was a good plan worthy of further exploration.

Could you represent IIMS on the BSI SME/32 committee?

IIMS is seeking a member to represent the Institute on the British Standards Institute (BSI) SME/32 committee on a voluntary basis.

Under the direction of the Standards Policy and Strategy Committee, SME/32 is responsible for formulating policy and providing guidance to committees concerned with shipbuilding and marine technology. Preparing and maintaining standards concerned with shipbuilding and marine technology and assisting in the preparation of standards in the same field emanating from ISO/TC8 and CEN/TC15 and implementing them as British Standards.

SME/32 mirrors most of the ISO/TC 8 work, and so most committee members are involved with working groups over at ISO/TC 8. The ISO/TC 8 - Ships and marine technology scope is engaged with standardization of design, construction, training, structural elements, outfitting parts, equipment, methods and technology, and marine environmental matters, used in shipbuilding, comprising sea-going ships, vessels for inland navigation, offshore structures, ship-to-shore interface, the operation of ships, marine structures subject to IMO requirements, and the observation and exploration of the sea.

The SME/32 committee also covers some European work in CEN/TC 15 Inland Navigation Vessels. CEN/TC 15 is a Technical Committee within the European Committee for Standardization (CEN). It is named "Inland navigation vessels" and is responsible for: Standardization in the field of shipbuilding for inland waterway vessels and of inland waterway navigation. This committee has published 79 standards.

If you are interested in becoming involved in BSI committee work, please complete the online contact form and we will send you more information. Go to <https://bit.ly/4adBmX6> or email your interest to info@iims.org.uk for more details.

IIMS 5 Day Practical Boat Building Residential course December 2026



Photo credit: Boat Building Academy

Having rested this programme for a couple years, IIMS is bringing back its Practical Boat Building Course by popular demand later in 2026.

Numbers for this exceptional learning opportunity are strictly limited to just 8 students, so please act promptly to reserve your place.

Who should attend?

- Students who are studying to be a marine surveyor
- Marine surveyors who are new into the profession

This 5 day residential event is being held at the Boat Building Academy facility in Lyme Regis, Dorset, UK from 7-11 December 2026.

Students who are enrolled in the IIMS Yacht & Small Craft Professional Qualification may claim attendance at the course as one module.

The Boat Building Academy tutors are highly experienced and will host the event on behalf of IIMS. The content is based on two days of wooden boat theory, to include discussions on faults in wooden boats and typical issues, followed by three days of FRP/GRP with some practical work, including hand lay-ups and repairs, and will cover faults in FRP/GRP, including osmosis. Faults in wooden boats and osmosis were both mentioned after the last course in 2022 as areas where the students would like more information, so the Boat Building Academy will focus time on these subjects.

In brief, here's what we have on each day:

Day 1 Monday 7 December 2026

- Introductions and wooden hulls

Day 2 Tuesday 8 December 2026

- Wooden hulls and faults and issues

Day 3 Wednesday 9 December 2026

- Fibre reinforced plastics

Day 4 Thursday 10 December 2026

- Fibre reinforced plastics and practical activities

Day 5 Friday 11 December 2026

- Fibre reinforced plastics practical

An online test will be made available to students to complete after the event.

The cost of the 5-day course is just £1,200 (no VAT and payable upon booking). Accommodation and subsistence are at your own cost. IIMS is happy to help with accommodation arrangements. If you have any questions, please email Vicki Lozidies at education@iims.org.uk or call on +44 23 9238 5223 during normal working hours.

For more information and to book your place go to <https://bit.ly/3MiW9PV>.

Upcoming Events

eCMID AVI (Accredited Vessel Inspector) course – Full Day - 02/03/2026 - 9:00 am - 4:30 pm

YCTI – Yacht Coatings Technical Insight course (2-day, in-person course) - 30/03/2026 - 31/03/2026

eCMID AVI Five Year Revalidation Part Two Mandatory Refresher course - 13/04/2026
9:00 am - 12:00 pm

eCMID AVI (Accredited Vessel Inspector) course – Full Day - 15/04/2026 - 9:00 am - 4:30 pm

YCTI – Yacht Coatings Technical Insight course (2-day, in-person course) - 16/04/2026 - 17/04/2026
8:30 am - 4:00 pm

Registered Marine Coatings Inspector (RMCI) Mandatory Webinars - 05/05/2026 - 06/05/2026
12:00 am

Registered Marine Coatings Inspector (RMCI) Practical Week - 11/05/2026 - 14/05/2026
9:00 am - 5:30 pm

Report Writing Seminar - 12/05/2026 10:00 am - 1:00 pm

eCMID AVI Festival of Knowledge XII - 13/05/2026 - 9:30 am - 2:00 pm

eCMID Five Year Revalidation Part Two Mandatory Refresher course online 01/06/2026 - 11:00 am - 2:00 pm

IIMS AGM 2026 02/06/2026 - 2:00 pm - 4:00 pm

YCTI – Yacht Coatings Technical Insight course (2-day, in-person course) - 03/06/2026 - 04/06/2026
- 9:00 am - 5:30 pm

eCMID AVI (Accredited Vessel Inspector) course – Full Day - 17/06/2026 - 9:00 am - 4:30 pm

YCTI – Yacht Coatings Technical Insight course (2-day, in-person course) - 23/06/2026 - 24/06/2026

See details on the IIMS website: [IIMS Events and Meetings](#)

NEW HANDY GUIDE FROM IIMS

What a marine surveyor needs to know about Marine Classification Society and Statutory Surveys - an introduction

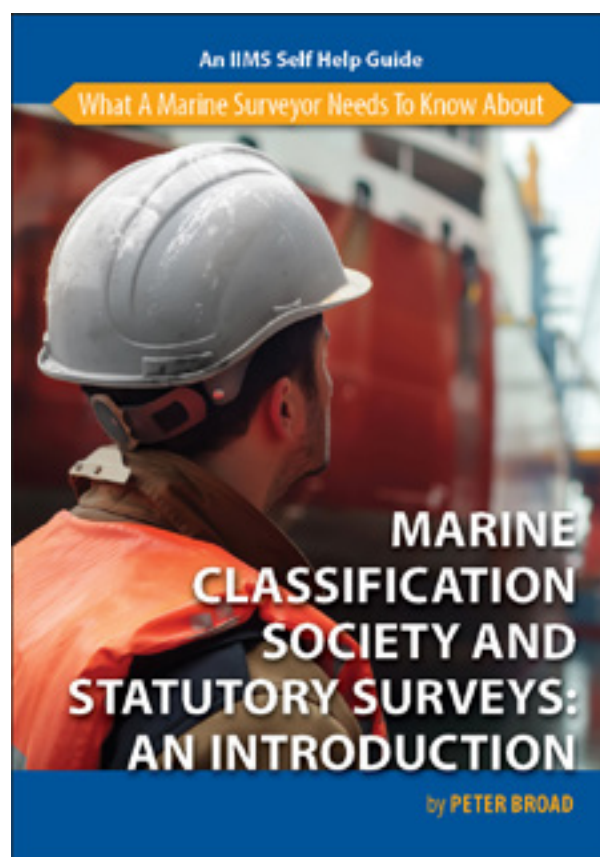
IIMS is pleased to announce the publication of its latest handy guide in its ever-growing collection of essential guides, which has now reached 30 publications.

Available in both traditional paperback (£30 + p&p) or electronic format (£27), 'What a marine surveyor needs to know about Marine Classification Society and Statutory Surveys - an introduction', has been authored by Peter Broad, Immediate Past President of the Institute.

The aim of this handy guide is to give readers an introduction to and provide them with insight and knowledge about:

1. What are Marine Classification Societies?
2. Who carries out Marine Classification Society Surveys?
3. Where and when are Marine Classification Society Surveys carried out?
4. What are Statutory Surveys?
5. Who carries out Marine Statutory Surveys?
6. Where and when are Marine Statutory Surveys carried out?

For more information and to order your copy go to <https://bit.ly/3ZOsjFS>.



Recent new IIMS members, upgrades and graduates

Full members

Chris Jackson	MIIMS	UK
Marco Ravetto	MIIMS (Upgrade)	Italy

Technician member

Carlos Trevino	TechIIMS	Mexico
Georgios Michail	TechIIMS	Greece
Jacob Thomsen	TechIIMS	Denmark

Graduate members

Abderraouf Chraiti	GradIIMS	Morocco
Alain Gilbert	GradIIMS	Canada
Andrey Kravtsov	GradIIMS	Russia
Chris Bartlett	GradIIMS	New Zealand
Gerry Murray	GradIIMS	Ireland
Gideon Winful	GradIIMS	Ghana
Tobias Derrick	GradIIMS	Spain

IIMS congratulates Alain, Chris and Gerry for completing the IIMS Professional Qualification in Yacht and Small Craft Marine Surveying.

Associate member

Emiliano Michelotti	AssocIIMS	Italy
Fin Evans	AssocIIMS	UK
Robert Peever	AssocIIMS (Upgrade)	Canada
Steven Hutchinson	AssocIIMS	UK
Yusuf Caglar	AssocIIMS	Turkey

Affiliate member

Giovanny Martinez	AffilIIMS	Mexico
Guido Morlachetti	AffilIIMS	Argentina
Mark Terry	AffilIIMS	Guernsey
Peter Hooper	AffilIIMS (Upgrade)	UK
Shahbaz Haider	AffilIIMS	UK
Ugur Pehlivanoglu	AffilIIMS (Upgrade)	Turkey
Yegor Kandybo	AffilIIMS	France

IIMS congratulates Abderraouf, Andrey, Gideon and Tobias for completing the IIMS Professional Qualification in Cargo and Commercial Ship Marine Surveying.



IIMS On-Demand Training Portal gathers momentum

Launched late last year, the new training portal is open to everyone and not just IIMS members. Nearly 200 people have now registered and signed up to browse the extensive content. And over 100 training modules have now been studied. More content is being added regularly.

A few unsolicited reviews have been left by learners who have used the training portal:

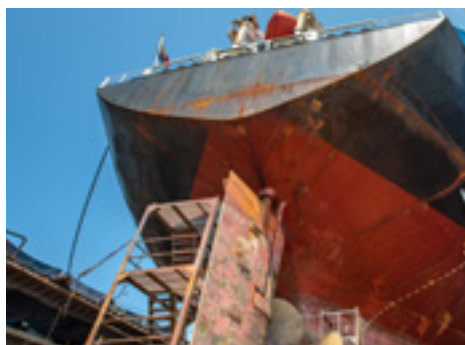
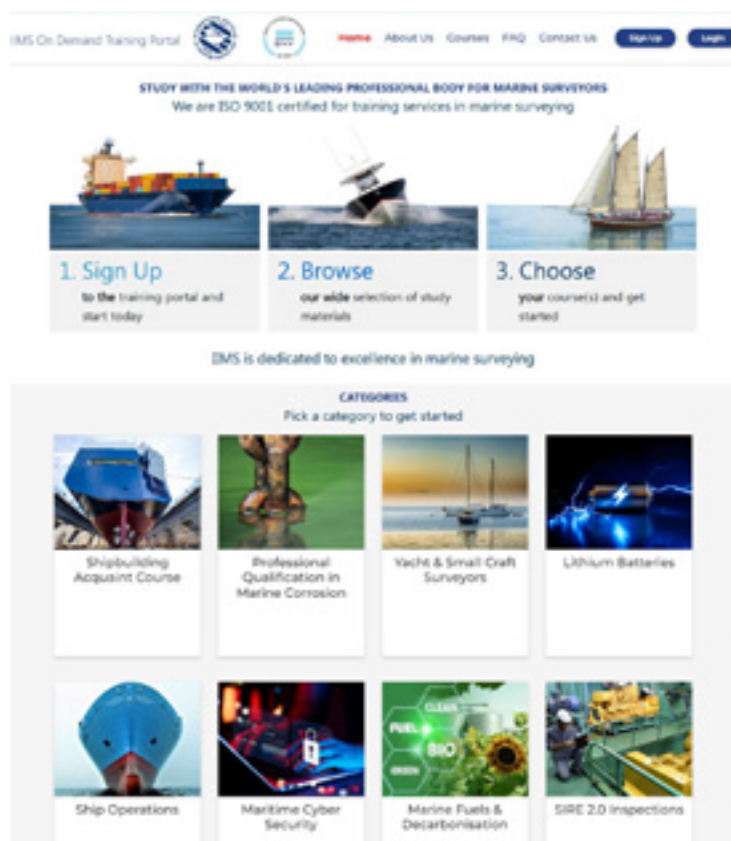
'Thank you. Very informative'. PM

'Really enjoyable course. Very informative'. SH

*'Absolute fantastic course.
Thank you for sharing your knowledge'. PR*

'Excellent informative course'. SH

There is no cost and there are no obligations to sign up for an account and to browse the content. The training portal is organised into sections for ease of reference. Let's signpost you to some of the available content.



Ship Building Acquist Course

Learn what it takes to build a ship from start to finish in 17 hours of study time with 10 modules to study. To explore more go to: <https://bit.ly/3ZCet9L>.

Professional Qualification in Marine Corrosion

10 modules available to study for those wanting to take a technical deep dive into this essential subject. For more details go to <https://bit.ly/46V79tD>.

Yacht & Small Craft Surveyors

16 courses currently available and growing.

- HMPE Dyneema Synthetic Rigging (3 module course)
- Report writing: What and how a surveyor writes after the survey
- MCA Approved Tonnage Measurement Training (Part 1 theory)
- Blige Pump Installations
- Virtual Reality, Augmented Reality & Mixed/Merged Reality
- Surveying Engine Installations in Small Craft
- Yacht Rigs
- Yacht Spars
- Yacht Appendages
- Yacht Rudders

Explore more at <https://bit.ly/4qEHLzq>.

Lithium-ion Batteries

(4 module course)

An essential technical course for those who are surveying and inspecting lithium-ion battery installations.

- Part1. Lithium battery chemistry and structure.
- Part 2. Safety and installation of lithium batteries.
- Part 3. Maintenance and electrical installation.
- Part 4. Surveying and inspections.

For further information go to <https://bit.ly/3ZIZpHn>.

Ship Operations

17 courses available to study.
Here is a selection:

- LNG Bunkering
- Liquefaction
- Enclosed Space Entry
- Hazardous Materials
- Risk Assessment
- Port State Control (3 modules)
- Draft Survey Calculations

For more details go to <https://bit.ly/4aUeRGR>.



Cyber security

(7 courses) including:

- Introduction to maritime cyber security
- Ship security awareness
- Maritime cyber security awareness and vulnerabilities

For more information go to <https://bit.ly/4tHn5cG>.

Marine fuels and decarbonisation

(4 courses)

- Dual fuel (part 1)
- Introduction to IMO's GHG Reduction Strategy & EEXI.
- Methanol as a marine fuel
- Ammonia as a marine fuel

Further information is available at <https://bit.ly/3MLnlqE>.

Sire 2.0 Inspections

For more details on course content go to <https://bit.ly/40fe3pW>.

Human factors and behavioural competency

(35 courses) Here's a small selection:

- Seafarer mental health awareness
- Human factors and maritime safety
- Situational awareness
- Behavioural competency and safety culture

For more details go to <https://bit.ly/3ZJ1piR>.

Case studies: Learnings and best practices

(20 courses)

- Crane wire snapping incident
- Incident whilst handling steel plates
- Fire in the engine room
- Chemical hazards and injuries
- Safe rigging and use of pilot ladders

More information is available at <https://bit.ly/3ZJTemn>.

Challenge yourself through a Sailors' Society fundraiser

'Maritime events, for maritime people, for a maritime charity'

The Sailors' Society – IIMS President Captain Ruchin Dayal's chosen charity – has a range of exciting fundraising challenges to take part in 2026. Created for maritime professionals, these events offer unique opportunities to make new connections and build on existing ones. Which one will you take on?

TCS London Marathon MyWay 2026

26/04/2026 | Anywhere in the world
£250 fundraising target + £50 registration fee
TCS London Marathon MyWay 2026 - Sailors' Society

This is the only one of the three events that is not our own bespoke event. What it offers is the chance to run the iconic London Marathon – the world's largest one-day fundraising event – anywhere in the world. Which we think is particularly relevant for a global industry like maritime.

Entrants have to run or walk the full 26.2 mile (42.1 km) distance on the day of the London Marathon- but they have a full 24 hours to do it. They can do it anywhere in the world, on land or at sea, with the only limitations being they have to do it outside and record their run/walk (e.g. on a Garmin or other device). They get the official finishers medal and t-shirt as well as a certificate from Sailors' Society. We also put finishers in our shortlist for the 2027 London Marathon- which is a hugely oversubscribed event. Last year, participants undertook the distance in locations as wide ranging as Panama, Devon and Singapore. It's an individual event but inherently flexible and inclusive- a lower fundraising target, no need for expensive flights or accommodation in London, and can be undertaken alongside colleagues, family or friends.

Miles for Mariners

13/06/2026 | Isle of Wight, UK
£1,200 fundraising target (cyclist)/£250 (hiker)
Miles for Mariners 2026 - Sailors' Society

This is a brand new one-day event, taking place on the Isle of Wight on a (hopefully) sunny Saturday and organised in partnership with OCIMF and a professional cycling events company. Participants will have the option of 100km and 75km routes on the Isle of Wight, either self-navigated or with a cycle guide. All cyclists will be grouped – both for safety but also to encourage networking and making new industry connections. This will be a worthwhile physical challenge, but also involving fun and friendship- with a pitstop lunch and informal buffet-style evening refuelling. There is also the option of a circa half marathon distance scenic hike, with a local hiking guide. The routes have all been chosen for their low traffic and scenic beauty, showing off the best of the island and- of course- with plenty of sea views. This is a ride, not a race- the focus is on participation, connection and challenge – as with all our events we will spotlight and celebrate companies who enter a number of colleagues into the event- we will give all due credit. As a one-day Saturday event, no time off work required and it is commutable from London- however if participants want to make a weekend of it, the island has lots to discover.

Summit for Seafarers

27-30/11/2026 | Vietnam
£1,700 fundraising target + £299 registration fee
Summit for Seafarers 2026 – Fansipan Challenge - Sailors' Society

Another new, bespoke event. The aim is the summit of Fansipan- at 3,147m, the highest mountain in Vietnam, and the famed 'Roof of Indochina'. This is a challenging trek, accompanied by a qualified trek leader, and open to maritime professionals to encourage the fostering of new industry friendships on the mountain. Stunning scenery and real physical challenge, this event is designed to inspire participants to reach new heights and make memories to last a lifetime. Taking place over a weekend, only two days out of office are required, and the starting point of Hanoi has been chosen due to its easy connections with regional maritime hubs like Singapore, Hong Kong and Manila. Accommodation and meals on the trek are included, with a celebratory dinner at the end of the adventure. Again, companies who get behind the event will be duly recognised – we think this is a great way to combine both teambuilding and making new industry connections while raising funds for a maritime cause.



Support our cause: sailors-society.org

Read the IIMS News Bulletin

A monthly publication by the International Institute of Marine Surveying



Back issues can be read at:
iims.org.uk/news-bulletins

The IIMS publishes a regular monthly electronic News Bulletin that carries up to date information about Head Office activities and initiatives as well as news, details about forthcoming and recent events and current affairs from around the international IIMS family.

All monthly News Bulletins can be viewed in either pdf or eReader formats.

New vessels review



Grand Boats unveil new 10 metre RIB

Grand Inflatable Boats, a Ukrainian RIB manufacturer of 25 years and one of Europe's leading RIB brands, have released renders of the newest model in their range. A step-up from the much-loved Grand G850, the new G980 is just over 10 metres in length and features a sharp-entry twin-stepped hull, designed in partnership with Swedish race boat designers, Mannerfelt Design Team.

Fitted with twin 350HPs and complete with a twin-stepped hull with a deep vee 22° deadrise, the G980 will comfortably handle speeds far exceeding 50+ knots. The front-raising console door reveals a spacious below deck cabin, complete with either two singles or a spacious double bed, as well as a toilet, storage, lighting, USB ports and natural lighting.

Ocean Infinity takes delivery of final 86-metre optionally crewed vessel in series

Marine survey and exploration specialist Ocean Infinity has taken delivery of the final unit in a series of 86-metre optionally crewed vessels designed to serve as motherships for the company's fleet of unmanned vehicles.



Like her earlier sister Armada 86 01, Armada 86 06 has a steel hull, a length of 85 metres, a beam of 16.4 metres, a minimum draught of five metres, and an open aft deck with a total area of 750 square metres and a payload capacity of 1,050 tons.

The hybrid propulsion setup has a total installed power of 7,000 kW and includes two 565kWh lithium-ion batteries and can deliver cruising speeds of between eight and 10 knots. The propulsion will also enable the vessel to stay out at sea for 21 to 35 days depending on the payload and operation.

Alaska salmon fishing company to deploy new compact seiner in Prince William Sound

A new seine fishing vessel was recently delivered to Routli Meadow, a family-owned salmon fishing company that operates primarily in Alaska's Prince William Sound.

The all-aluminium Freeberd was built by Bay Weld Boats of Homer, Alaska, as a fully custom limit seiner built for nearshore fishing. Design work was undertaken in close collaboration with the Durtschi family, the owners of Routli Meadow.



The 58 by 24-foot (18 by 7.3-metre) purpose-built vessel boasts a draught of only four feet (1.2 metres) at full load, a depth of 8.8 feet (2.7 metres), a maximum displacement of 118 tons, waterjet propulsion for more precise manoeuvring, and a hold capacity of 140,000 pounds (64,000 kg). The aluminium construction provides a balance between durability and low weight essential for shallow-water operations.

Two John Deere 6135SFM85 diesel engines that each produce 750 hp (560 kW) drive two Hi Jet 600 waterjets via ZF 400 gearboxes to deliver a cruising speed of 10 knots and a top speed of 12 knots in calm conditions. A hydraulic bow thruster is also fitted to provide additional lateral manoeuvrability during low-speed transits in port.

Busan Port Authority unveils new electric ferry

The Busan Port Authority (BPA) in South Korea has introduced a new electric ferry for operation in the Port of Busan. E-Green will be operated by the BPA as a "port guide vessel," which will embark passengers on guided tours where they will witness some of the operations at the Port of Busan first-hand.

The BPA-operated port guide vessels have been a part of the port authority's public engagement efforts since 2005. Approximately 70 per cent of passengers have been

members of the general public or students, contributing significantly to improving public understanding of port activities.

As part of a fleet renewal process, BPA chose to adopt a battery-electric vessel, rather than a conventional fossil-fuel-powered replacement. The vessel was constructed by a local shipbuilder in Busan and underwent four months of sea trials to rigorously verify operational safety prior to entering service.

Powered entirely by batteries rather than by internal combustion engines, E-Green produces only minimal noise and vibration during operation. The electric propulsion system was supplied by ABB.



New vessels review

Meet the world's largest private 92-foot hydrofoil

UAE-based company Foiler has revealed the world's first 92-foot (28 m) private hydrofoiling yacht. The groundbreaking concept, dubbed Ghost thanks to its silent design and dark aesthetic, was developed in collaboration with Bozca Design and shipbuilder ENATA. The hull and frame are made from advanced carbon fibre and titanium, making the vessel ultra lightweight yet extraordinarily strong. ENATA supplied their proprietary foiling system to the project, which is a refined version of the technology first developed on Foiler's earlier model, the Spirit.

While foiling, Ghost is designed to cruise comfortably at 30–35 knots (34–40 mph), with a projected top speed of over 40 knots (46 mph). Inside, Ghost offers more than 1990 square feet (185 sq m) of living space, with 1430 sq ft (133 sq m) of interior social area (not including the cabins), plus another 560 sq ft (52 sq m) outdoor deck which includes an aft beach club with direct access to the water.



New Ro-Ro to support LNG transport across Italy's Gulf of La Spezia

GNL Italia, the LNG regasification subsidiary of Italian energy infrastructure company Snam, recently placed a new Ro-Ro vessel into service. The purpose-built, fully electric Greenwave will be operated primarily on the stretch of the Gulf of La Spezia between the Panigaglia LNG terminal and the Italian hinterland. She is outfitted for the secure transport of cryogenic tanks or up to four tanker trucks carrying LNG as an alternative to having these move on their own across roads, thus minimising congestion.

The vessel has an LOA of 50.2 metres (165 feet), a beam of 13.89 metres (45.57 feet), a gross tonnage of 456, and space for 12 passengers and four crewmembers. Aluminium was used for the hull to ensure lightweight construction, which will in turn improve operating efficiency.

Automated stability controls will help mitigate the effect of swells during transits to keep the vessel as stable as possible and to minimise passenger and crew fatigue.

New vessels review



Jeanneau launches new power catamaran range

Jeanneau has announced the launch of a new range of power catamarans, named TH, as part of its strategy to strengthen its position as a multi-segment leader in the market. The TH33 and TH38 twin-hull models are designed to deliver superior functionality and exceptional stability, offering a seamless on-the-water experience.

Jeanneau emphasised that its strong brand recognition, technical expertise, and the passion of its teams are critical assets in driving the success of the new power catamaran range. The company views the TH series as a demonstration of its ability to innovate and adapt to evolving market demands.

Destin Fire Control District takes delivery of new fireboat

US boatbuilder Silver Ships has delivered a new 52-foot (16-metre) fireboat to the Destin Fire Control District in Florida.

Identified as M-19, the vessel is equipped with four 425 hp (317 kW) Yamaha outboard engines and two 1,500-gallon (5,700-litre) Darley fire pumps capable of pushing a combined 3,000 gallons (11,000 litres) per minute.

The M-19 is designed to operate as a floating ambulance and respond to structure fires on or near the water. It features an enclosed, climate-controlled cabin with space for patient care, including monitors for vitals and IV equipment. The vessel also includes shock-mitigating decking and seating, a thermal camera for search and rescue, and a full electronics suite.



New vessels review

New locally-built pilot boat to serve India's Navlakhi Port

The Gujarat Maritime Board (GMB) of India recently welcomed a new pilot boat into service. Classed by the Indian Register of Shipping, GMB Pilot-1 was built by A.H. Wadia Boat Builders (AHWB) based in Bilimora in Gujarat.

The all-steel newbuild has an LOA of 18 metres (59 feet), a beam of 5.08 metres (16.7 feet), a maximum draught of only 1.3 metres (4.3 feet), a moulded depth of 2.85 metres (9.35 feet), a displacement of 46 tonnes, and seating for up to eight pilots and four crewmembers.

"The vessel and equipment are designed to function reliably in extreme climatic conditions, with propulsion, power generation, life-saving appliances and all engineering systems built for safe and dependable performance," said AHWB.



Westerberg Marine's new amphibious rescue craft impresses

Westerberg Marine has successfully completed sea and land testing of its first amphibious rescue vessel — a purpose-built craft for the Broome Volunteer Sea Rescue Group in Western Australia. Early operator feedback has been exceptional, signalling a strong step forward in amphibious capability for emergency response teams working in Western Australia's demanding coastal environments.

Built on Westerberg's proven 9.5-metre alloy RIB platform and powered by twin Mercury SeaPro V8 300hp outboards, the IBIS III is equipped with Anura's S45 Electric Over Hydraulic (EOH) amphibious system. The S45 system provides high traction, excellent ground clearance, and robust load capacity — critical attributes for rapid deployment across Broome's tidal zones, where dependable amphibious access is essential around the clock.

The vessel also features a comprehensive suite of specialised rescue technology, including advanced communications equipment, SIMRAD navigation systems, and integrated emergency lighting. Combined, these capabilities provide rescue teams with a responsive, ready-to-launch craft engineered specifically for both emergency situations and routine coastal operations.





Royal Huisman unveils the world's tallest yacht

The Dutch shipyard Royal Huisman has introduced SKY, a 265-foot (81-metre) sloop that aims to claim the title of the world's tallest yacht — at least when it comes to its mast. At 305 feet (93 m) from waterline to mast top, SKY's carbon rig is described as the tallest ever built on a sloop, matching the height of the Statue of Liberty from ground to torch.

With weight being a central feature in all sailing yachts, the hull will be made from full aluminium, optimized for weight distribution, and combined with a lifting keel — a configuration meant to give SKY excellent sailing performance relative to its size. She is also specifically sized to carry a 45-foot (14 m) tender to allow coastal exploration and to transport guests and provisions without having to reposition the yacht closer to a harbour. According to the designers, the yacht will be capable of outpacing motor yachts of comparable length. Steering is handled via twin carbon composite rudders and an integrated sailing system, giving SKY a level of manoeuvrability akin to yachts half its size.

Bourbon welcomes six new crewboats to fleet

French offshore vessel operator Bourbon recently took delivery of six new crewboats in a series built by Piriou at its Vietnam facilities.

Two of the vessels will support Bourbon's activities off West Africa while the other four will be operated by Bourbon InterOil Nigeria. The crewboats were designed by French naval architecture firm Mauric. Each one measures 27 metres long, offers 60 square metres of total open deck space forward and aft, and can reach a top speed of 30 knots. The vessels come in different configurations and can carry between 50 and 70 technicians.



Recent and future regulation changes

A number of safety, environmental, training, fuel, construction and reporting requirements have recently entered into force, or are becoming become available for voluntary application. Here's an overview.

January 2026 proved to be a major regulatory milestone.

1 January was the single most significant date on the 2026 calendar, with a large number of IMO, SOLAS, MARPOL amendments entering into force simultaneously.

Safety, equipment and ship design

- Mandatory carriage of electronic inclinometers
New container ships and bulk carriers $\geq 3,000$ GT must be fitted with electronic inclinometers under SOLAS Chapter V, with data potentially linked to the VDR.
- Amendments to the LSA Code
New requirements for single fall and hook systems on lifeboats and rescue boats to prevent accidental release during recovery.
- Launching appliances using falls and winches (LSA Code)
Limits introduced on maximum and minimum lowering speeds for survival craft and rescue boats.
- Enhanced performance standards for SOLAS adult lifejackets
Lifejackets on ships constructed on or after 1 January 2026 must meet new in-water performance standards, including reliable face-up turning of unconscious persons.
- Ventilation of totally enclosed lifeboats
New design standards require a minimum ventilation rate of $5 \text{ m}^3/\text{h}$ per person for at least 24 hours (noting phased installation dates extending to 2029).
- Amendments to SOLAS Chapter II-1 – lifting appliances and anchor handling winches
New requirements for design, testing, inspection, maintenance and provisions for inoperative equipment.

Fire safety and extinguishing media

- PFOS ban in fire-extinguishing media
From 1 January 2026, fire-extinguishing systems and equipment must not use or store PFOS-containing media. This applies to SOLAS ships; 1994 and 2000 High-Speed Craft (HSC) Codes and; Fixed and portable fire-fighting systems and
- Fire safety upgrades for ro-ro and vehicle spaces
New requirements for smoke and heat detection, video monitoring, water-based fire-extinguishing systems,

and structural fire protection on ships carrying vehicles.

- Fire protection of control stations and cargo control rooms

New SOLAS requirements apply to cargo ships constructed on or after 1 January 2026.

Environmental protection and fuels

- Amendments to SOLAS II-2/4 on oil fuel parameters
Oil fuel must not jeopardise ship safety, machinery performance, or crew health. Suppliers, ship managers and crews all carry new responsibilities.
- Reporting of non-compliant oil fuel suppliers
Amendments to SOLAS Chapter II-2 introduce reporting obligations where flashpoint requirements are not met.

Navigation, reporting and documentation

- Mandatory reporting of containers lost at sea
Amendments to SOLAS Chapter V require immediate reporting of container losses or sightings.
- Amendments to IAMSAR Manual (Volumes II & III)
Updated SAR guidance enters into force, including new appendices, improved night-search guidance, offshore wind farm considerations and enhanced flight-tracking use.
- Procedures for Port State Control, 2025
New PSC procedures take effect, including:
 - Security-specific guidelines for PSCOs
 - Updated list of relevant instruments, including SEEMP and IGF Code changes

Training and human element

- New STCW training requirements
Mandatory training on preventing and responding to violence, harassment, bullying and sexual assault must be included in all basic and advanced safety courses.

Cargoes and dangerous goods

- Amendments 42-24 to the IMDG Code
New and revised requirements apply to all ships carrying dangerous goods in packaged form.
- Amendments to the Grain Code
New provisions clarify loading conditions and calculation of heeling moments for partially filled compartments.

Polar and high-seas operations

- UN High Seas Treaty (BBNJ Agreement)
The treaty enters into force, establishing a new global framework for protecting biodiversity beyond national jurisdiction.
- Amendments to SOLAS Chapter XIV and the Polar Code
New navigation and voyage planning requirements apply to non-SOLAS ships operating in polar waters, with transitional provisions for existing vessels.

Materials and alternative fuels

- High manganese austenitic steel introduced
Approved for use under both the IGC Code and IGF Code for tanks, barriers and pressure vessels.

February 2026 – Arctic fuels in focus

IMO PPR 13 meeting

Governments meet at the IMO's Pollution Prevention and Response Committee, with strong pressure from the Clean Arctic Alliance to:

- Eliminate single-hulled ships in the Arctic
- Accelerate the transition to cleaner polar fuels
- Strengthen Arctic environmental regulation

This meeting was expected to shape future fuel and design requirements for polar shipping.

March 2026 – New Emission Control Areas

1 March 2026

- Canadian Arctic Emission Control Area (ECA)
MARPOL Annex VI amendments establish a new ECA for NO_x, SO_x and particulate matter.
- Norwegian Sea Emission Control Area (ECA)
A new ECA is established, with phased requirements for NO_x Tier III engines and low-sulphur fuel use.

Shipowners operating in these regions must plan engine certification, fuel strategies and compliance timelines carefully.

July 2026 – Alternative fuels on gas carriers

Amendments to IGC Code paragraph 16.9

From 1 July 2026, gas carriers may be permitted to use toxic cargoes as fuel, subject to:

- Demonstrating an equivalent level of safety
- Explicit approval from the flag Administration

September 2026 – Engine recertification clarified

Amendments to the NO_x Technical Code

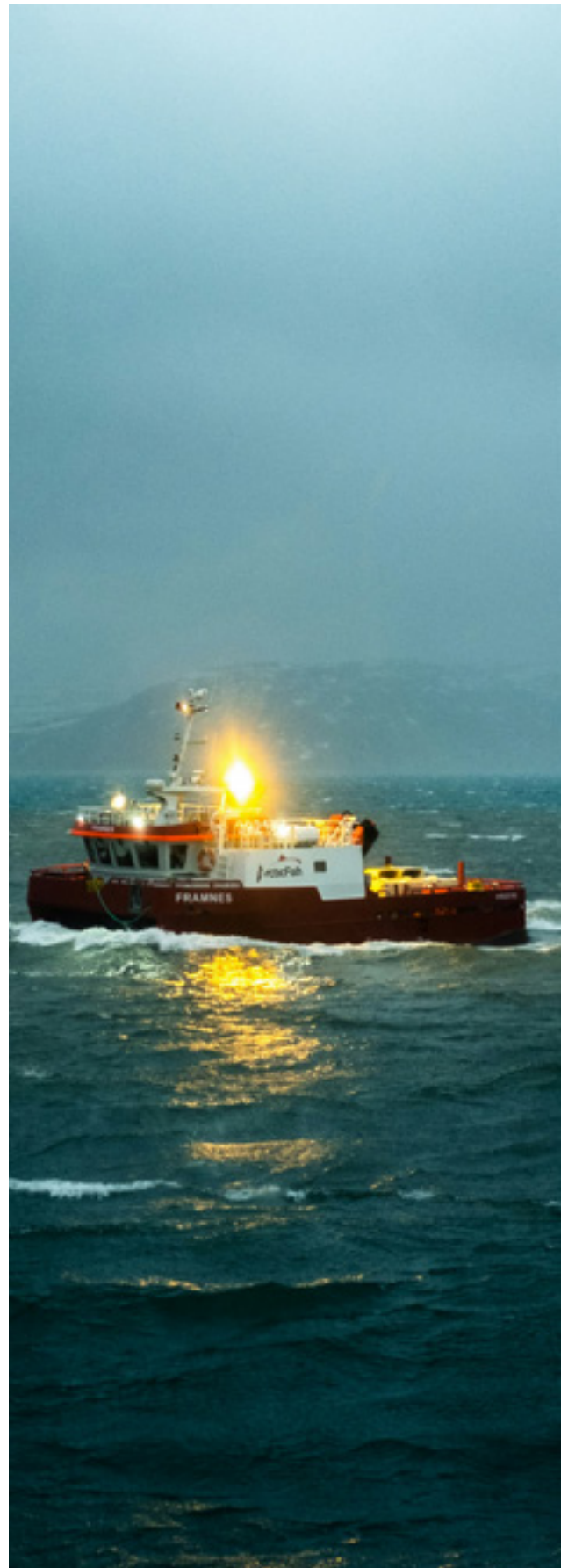
New procedures enter into force for:

- Engines undergoing substantial modification
- Engines being certified to a different NO_x Tier than originally approved

Applicants must prepare an Engine Emission Test Plan agreed by the Administration or Recognised Organisation.

Inspection and enforcement throughout 2026

Australia, together with the Tokyo and Indian Ocean MoUs, will conduct a CIC focusing on cargo securing, stowage practices, crew training and weather preparedness. Other MoUs are expected to follow.



New EU ETS rules took effect from January 2026

After a two-year phase-in, maritime transport is now facing full compliance under the EU ETS, alongside an expanded scope covering additional greenhouse gases and a tighter emissions cap.

These changes reinforce the EU's climate ambition while significantly raising the stakes for affected sectors.

EU ETS performance and 2025 Carbon Market Report

The 2025 Carbon Market Report, published by the European Commission in December, shows that the EU Emissions Trading System (EU ETS) continued to drive significant emissions reductions in the power and industrial sectors throughout 2024. The system has played a key role in incentivizing decarbonization while generating substantial revenues to support investment in the clean energy transition.

The EU ETS is a cornerstone of the EU's climate policy. Built on the "polluter pays" principle, it places a cap and a price on emissions from the energy, industrial and maritime transport sectors, as well as parts of the aviation sector. Emissions covered by the EU ETS represent approximately 40% of the EU's total greenhouse gas emissions.

Emissions reductions and progress towards 2030 targets

According to the report, emissions from power and industrial installations covered by the EU ETS are now around 50% below 2005 levels. The system remains on track to achieve its 2030 emissions reduction target of -62%.

Notably, 2024 marked the first year that CO₂ emissions from maritime transport were included in the EU ETS, representing a major expansion of the system's scope.

Maritime transport coverage and compliance

The EU ETS now covers:

- 100% of emissions from voyages between two ports within the European Economic Area (EEA) and emissions generated while ships are at an EEA port; and
- 50% of emissions from voyages departing from or arriving at ports outside the EEA.

Compliance in the first year was high. By the 30 September deadline, shipping companies surrendered allowances covering more than 99% of their required emissions, demonstrating a smooth introduction of the maritime component of the EU ETS.

In 2025, shipping companies were required to surrender

allowances for 40% of their verified 2024 emissions, with a permitted 5% reduction for ice-class ships. To safeguard the environmental integrity of the system, any shortfall between verified emissions and surrendered allowances for 2024 and 2025 will be cancelled by Member States from future auction volumes.

Greenhouse gases covered under the EU ETS

Beyond CO₂, the EU ETS also covers other greenhouse gases from specific sectors, including:

- Nitrous oxide (N₂O) from the production of nitric, adipic and glyoxylic acids and glyoxal;
- Perfluorocarbons (PFCs) from primary aluminium production.

From January 2026, methane (CH₄) and nitrous oxide (N₂O) emissions from maritime transport will also fall under the EU ETS.

EU ETS revenues and clean transition funding

EU ETS revenues remain a major source of funding for Europe's clean transition. In 2024, the system generated €38.8 billion, bringing total revenues since inception to over €250 billion.

These funds are primarily distributed to Member States to support climate action, clean energy deployment and innovation. Additional funding is channelled to the Innovation Fund, the Modernisation Fund, and the Recovery and Resilience Facility, including the REPowerEU plan.

Phase-in of maritime compliance costs

Maritime transport has been introduced with a gradual phase-in of compliance obligations:

- 2024 emissions: companies paid for 40% of compliance costs
- 2025 emissions: compliance increased to 70%

From 1 January 2026: companies must pay 100% of compliance costs

The regulation applies to ships of over 5,000 gross tonnage (GT) calling at EU ports and requires payment for emissions on a per-voyage basis.

Allowance cancellation and auction adjustments

Under Articles of the ETS Directive, when fewer allowances are surrendered than verified emissions during the phase-in period, the corresponding number of allowances must be cancelled from auctioning.

For 2024, a total of 54,243,768 allowances will be cancelled in 2026 through an amendment to the auction calendar.

Increase in allowances for non-co₂ maritime emissions
Article 9 of the ETS Directive provides that, from January

2026, the total quantity of allowances will be increased to reflect the inclusion of non-CO₂ greenhouse gas emissions from maritime transport. These additional allowances will be auctioned in 2026 and allocated to the Innovation Fund via an updated auction calendar.

Adjustments to the EU ETS Cap in 2026

The report also outlines key adjustments to the EU ETS cap effective from 2026, driven by:

- A planned rebasing of the cap
- The expanded scope to cover additional maritime GHG emissions
- An updated list of small emitters excluded from the system

The EU ETS cap defines the maximum total emissions permitted within a trading phase and corresponds to the total number of allowances issued, with one allowance equal to one tonne of CO₂ equivalent (CO₂e). The cap declines annually, ensuring alignment with the EU's long-term emissions reduction targets and providing market certainty on allowance scarcity.

In 2026, the cap will be:

- Reduced by 27 million allowances in line with the 2030 target; and
- Increased to reflect the inclusion of CH₄ and N₂O emissions from maritime transport.

In total, 1,185,420,090 allowances will be issued in 2026 for electricity and heat generation, industrial production and maritime transport, alongside 24,903,076 allowances for aviation.

What the EU ETS Extension means for maritime transport

The extension of the EU ETS to maritime transport builds on existing ETS rules and the Maritime Monitoring, Reporting and Verification (MRV) Regulation. During 2024 and 2025, only CO₂ emissions were covered, with CH₄ and N₂O included from 2026.

Shipping companies reported 89.8 million tonnes of verified CO₂ emissions in 2024. The surrender obligation is phased in, requiring:

- Surrender in 2025 for 40% of 2024 emissions
- Surrender in 2026 for 70% of 2025 emissions, with additional reductions for ice-class vessels

Review of the maritime EU ETS

The European Commission will conduct a review of the EU ETS for maritime transport in 2026. This review will assess:

- A potential extension of the system to ships below 5,000 GT, but not below 400 GT; and
- Relevant developments at the International Maritime Organization (IMO).





IACS issues new requirement on ammonia release mitigation systems

IACS has published a new Unified Requirement (UR H2) establishing a comprehensive safety framework for ammonia release mitigation systems (ARMS) on ammonia-fuelled ships.

The UR provides harmonised requirements for the design, testing and certification of ARMS intended to manage ammonia releases during normal operations and foreseeable abnormal scenarios. Key takeaways from the new UR H2 include:

- Enabling the Safe uptake of ammonia as a marine fuel: It aligns with MSC.1/Circ.1687 and provides clarity on how ammonia release mitigation systems should be implemented, assessed, and approved by Classification Societies.
- Facilitating the application of ARMS: Achieved through setting out a clear framework for evaluating ammonia release scenarios and corresponding mitigation measures. This approach supports the development of tailored technical solutions while maintaining a consistent safety objective.
- Recognising multiple technical solutions while ensuring consistent safety outcomes: It covers a range of mitigation concepts—including dissolution tanks, scrubbers, combustion units, and dilution systems—without constraining innovation, provided that defined safety objectives and exposure limits are met.
- Establishing clear expectations for testing, certification, and onboard readiness: The UR defines workshop and onboard testing regimes, certification requirements, and operational readiness criteria to ensure that ARMS remain effective in mitigating the hazards connected with operational ammonia fuel releases.
- According to IACS, as the industry accelerates its transition toward alternative fuels, the need for harmonised standards becomes increasingly important in meeting decarbonisation objectives. IACS UR H2 is therefore a welcome contribution to the global efforts to transition to zero-carbon fuels.

"This publication represents an important step towards harmonised global standards for ammonia-fuelled ships. By providing a common technical reference, the UR supports designers, shipowners, equipment manufacturers and regulators, and facilitates consistent implementation across the IACS membership," said Eva Peno Jimenez, the Safe Decarbonisation Panel Chair.

Infrastructure and regulation remain key barriers to hydrogen adoption

Lloyd's Register (LR) has issued the latest instalment of its Fuel for Thought series, in which it explores hydrogen as an alternative fuel for the maritime industry. The report offers insights into hydrogen's potential to transform shipping, offering a clear-eyed assessment of the opportunities, challenges, and pathways for adoption. It also provides an assessment of hydrogen propulsion technologies, including internal combustion engines and fuel cells, and evaluates their maturity for marine applications.



Challenges and adoption outlook

According to LR's assessment, hydrogen has the potential to deliver the ultimate goal of net zero emissions shipping by 2050, eliminating the industry's GHG emissions and increasing air quality.

As with other zero-emissions solutions, there are technical, commercial and regulatory challenges to be overcome, but there are no roadblocks to hydrogen's broad adoption in the shipping industry. Despite the hurdles, the analysis points to near-term opportunities. Early adoption is most viable for short-sea trades such as ferries, tugs and coastal vessels where regular bunkering cycles reduce the constraints of onboard storage.

Fuel cell technologies show particular promise for these applications, supported by improving cost trajectories and advances in durability. Hydrogen-ready designs and hybrid fuel strategies also offer shipowners a practical route to futureproof assets.

Role of hydrogen in e-fuel pathways

As a necessary component of other e-fuels such as e-ammonia, e-methanol, and e-LNG, adoption of those other fuel pathways will bring benefits through incentivizing investment in green hydrogen production and research into hydrogen technologies.

Regulatory developments and safety considerations

On the regulatory front, global awareness of hydrogen's role in decarbonization is supporting work on national hydrogen policies and relevant technical standards.

Within shipping, regulations for hydrogen are currently incomplete, but interim guidelines for the safe adoption of hydrogen are in active development at the IMO and are on course to bring greater clarity to support adoption. Such work is vital to understanding and managing fire and explosion risks as well as others arising from the use of hydrogen onboard.

Infrastructure and investment requirements

The establishment of hydrogen infrastructure will require significant capital investment due to the lack of existing facilities and the specific requirements of hydrogen storage and transportation. Despite a few emerging bunkering projects, low-emissions hydrogen as a whole – including hydrogen produced via renewable-energy powered electrolysis (green hydrogen), biomass and fossil fuels with high levels of carbon capture and permanent storage (blue hydrogen) – accounted for less than 1% of global production in 2025, according to IEA.

Technical integration and cost challenges

The energy density of hydrogen presents integration challenges for larger vessels, requiring efficient propulsion systems and appropriate operating profiles to be viable. Broader challenges include the high price for prime movers, storage, and handling equipment, and the space requirements for LH2 tanks.

As production of relevant technologies scale up, equipment costs will fall, and innovations such as onboard ammonia cracking will expand the fleet for which hydrogen is a viable fuel choice.

IMB Annual Piracy Report 2025 published

The ICC International Maritime Bureau (IMB) reported an increase in global maritime incidents and piracy and armed robbery in 2025, classifying most cases as low-level.

According to the IMB Annual Piracy and Armed Robbery Report, 137 incidents against ships were recorded in 2025 compared to 116 in 2024 and 120 in 2023. It reveals that 121 vessels were boarded, four vessels were hijacked and two fired upon as well as 10 attempted attacks.

While most reported incidents in 2025 were categorised as low level, violence against crew continues, with 46 crew members taken hostage in 2025 compared to 126 in 2024 and 73 in 2023. Twenty-five crew were reported kidnapped, compared to 12 in 2024 and 14 in 2023. A further 10 crew were threatened, four injured and three assaulted in 2025.

The reported use of guns continues to rise. In 2025, they were reported in 42 incidents compared to 26 in 2024. Knives were reported in 33 incidents in 2025, compared to 39 incidents in 2024.

ICC Secretary General John W.H. Denton AO said, "Maritime trade remains a cornerstone of real economic activity and growth. The rise in reported maritime incidents highlights the importance of protecting seafarers and securing key shipping routes not only for crew safety, but for the stability of global supply chains and the economies that depend on them. Ensuring safe passage at sea requires sustained cooperation, with regional and international partners working together to safeguard maritime commerce."

Request to receive a copy of the report at <https://bit.ly/4rfJTt3>.



New report: Performance of extinguishing agents against lithium-ion battery fires

This study presents a systematic evaluation of fire suppression strategies for lithium-ion Battery Energy Storage Systems (BESS), specifically examining thermal runaway propagation in small domestic system (8 kWh). Five distinct suppression methods were evaluated: water mist, encapsulator agent (water mist with proprietary encapsulator), carbonate agent (water mist with ammonium bicarbonate), mixed agent (containing boron compounds and surfactants), and liquid nitrogen.

Performed experiments revealed significant differences between suppression methods. Water mist and encapsulator agents demonstrated better performance, extending propagation delay times by 179% and 167%, respectively, compared to control tests without a suppression method. Registered maximum temperatures varied across methods from 780° to 890 °C. However, none of the tested methods prevented thermal runaway propagation entirely and were able to save the system from being destroyed.

Critical safety concerns emerged regarding vapour cloud production, which correlated strongly with cooling effectiveness ($r = 0.87$) but increased explosion risks. Statistical analysis confirmed significant method-dependent differences ($p < 0.001$), with water mist and encapsulator agents reducing thermal runaway hazard ratios by over 70%. These results indicate that current suppression technologies can delay but not prevent thermal runaway propagation. Findings emphasize the need for integrated approaches combining efficient cooling with vapour management strategies, particularly for residential BESS installations.

Lithium-ion batteries (LIBs) have revolutionized energy storage, offering high energy and power densities, long cycle lives, and low self-discharge rates. Their widespread adoption spans portable electronics, electric vehicles, and grid-scale energy storage. However, the very properties that make LIBs attractive also present safety challenges, most notably the risk of thermal runaway leading to fire and potential explosions. This phenomenon, triggered by abuse scenarios such as overcharging, over-discharging, short circuits, or external heat, involves a rapid and uncontrolled increase in temperature and pressure within the battery cell. The presence of flammable organic liquid electrolytes further exacerbates fire hazards, facilitating rapid propagation throughout the battery pack.

The consequences of LIB fires can be devastating and endanger life, property, and the environment. High-profile incidents involving LIB fires in various applications underscore the urgent need for effective fire safety measures. These incidents highlight the critical importance of understanding the mechanisms of LIB fires and developing strategies for their prevention, mitigation, and suppression. A comprehensive approach for the fire safety of LIBs involves multiple layers of protection. This includes enhancing the inherent safety of battery key components (electrolyte, active materials, binders, separator, additives) and cell design, implementing robust battery management systems to prevent and detect thermal runaway, and developing effective fire suppression techniques.

Although advancements in materials science and BMS technology have improved battery safety, effective fire suppression remains a critical area of ongoing research. Traditional fire extinguishing agents, such as water and foam, may not be ideal for LIB fires owing to the unique characteristics of these batteries. Water, while effective in cooling some fires, can react with the electrolyte in LIBs (additional formation of HF), potentially exacerbating the situation. The high temperature and pressure generated during thermal runaway can also hinder the penetration and effectiveness of conventional agents. Moreover, any casing, i.e. BESS enclosure or electric vehicle pack and chassis on top, may hinder the penetration of the agent into the affected spot.

Consequently, specialized fire suppression agents and techniques tailored to LIB fires are essential. Researchers are actively exploring various approaches, including novel extinguishing agents, cooling methods,

and fire-resistant materials. Water mist systems, delivering finely atomized water droplets for effective cooling and flame suppression, and encapsulator agents, which form a barrier to prevent oxygen from reaching the fire, are among the most scrutinized solutions.

Several tunnel fire detection and fighting systems are currently available in the market, each with its own advantages and disadvantages. Although no single system is perfect, the water mist system is one of the top-performing conventional tunnel fire suppression systems available. Other approaches include the use of inert gases, such as nitrogen or argon, to displace oxygen and develop fire-resistant electrolytes and battery casings.

Recent advances in fire-suppressing agents for mitigating LIB fires have focused on the development of composite materials with enhanced properties. These materials offer advantages such as environmental friendliness, high heat dissipation rates, electrical insulation, and prevention of re-ignition. A comprehensive review of various fire-extinguishing agents highlights their distinct characteristics and effectiveness in addressing LIB fires by considering factors such as insulation, toxicity, fire suppression speed, reactivity with fire sources, degradation capacity, and corrosion.

Despite these developments, a comprehensive understanding of suppression effectiveness across different battery configurations and failure modes is limited. This study addresses this gap by evaluating multiple suppression agents against lithium-ion battery fires, with particular focus on their ability to prevent thermal runaway propagation in an emulated domestic energy storage system.

The research objectives of this study were to:

1. Evaluate the effectiveness of water mist, encapsulator agents, carbonate-based suppressants, and liquid nitrogen in extinguishing LIB fires.
2. Assess these agents' capability to prevent thermal runaway propagation.
3. Quantify key performance metrics, including extinguishment time, cooling rate, and re-ignition prevention. This paper presents experimental results from controlled tests, providing quantitative data to inform the development of more effective fire safety protocols for lithium-ion battery systems.

Download the full document at <https://bit.ly/4jQzyGM>.

NEW marine reports and guides



Canal & River Trust Vital Connector for Nature and People report published

A major new report has highlighted how the UK's historic canal network — the nation's longest and most connected corridor of freshwater habitat — is one of Britain's most important yet under-recognised assets for nature recovery, public wellbeing and community connection.

The Vital Connector for Nature and People report, published by the Canal & River Trust and supported by environmental leaders including Dr Tony Juniper CBE, chair of Natural England, shows how canals can play a unique role in tackling three converging national challenges: biodiversity loss, declining connection with nature, and widening health and wellbeing inequalities.

Originally engineered as transport routes during the 18th and 19th centuries, canals today support a remarkable range of wildlife, including bats, kingfishers, otters, aquatic plants, pollinating insects and rare invertebrates. As linear corridors, canals allow species to move across urban and rural landscapes, a role that is particularly important in post-industrial and intensively farmed regions of central England where natural habitats have been heavily reduced.

The report explains that canals now function as one of the UK's most effective wildlife corridors, linking landscapes in ways that other green spaces cannot. By running directly through urban areas, canals bring nature into daily life, allowing people to experience wildlife close to where they live and work. Canals are also increasingly important for people's health and wellbeing. Research shows that access to green and blue spaces is a key determinant of physical and mental health, yet access remains unequal, particularly in urban and minority communities. Many of these communities have limited access to traditional green spaces and experience poorer health outcomes.

Download the report at <https://bit.ly/3NvdXRa>.



Australian Government

Australian Maritime Safety Authority

AMSA marine incident annual report 2024

Each year, vessel owners, operators and crew report marine incidents to AMSA. They analyse this data to understand the safety risks affecting domestic commercial vessels (DCVs), regulated Australian vessels (RAVs) and foreign-flagged vessels operating in Australian waters.

The Marine Incident Annual Report 2024 presents key findings from the past year and identifies trends over the last 5 years, including common incident types, their impacts, and some of the contributing safety factors. These insights directly inform the development of AMSA's 2025–26 National Compliance Plan, our targeted strategy to improve vessel safety across the sector.

In 2024

- 5,625 marine incidents reported (up 2.8% from 2023).
- Larger DCVs (12 m and over) made up nearly 70% of marine incident reports, despite comprising only 20.6% of the DCV fleet.
- Bulk carriers accounted for the most marine incidents among foreign-flagged vessels.
- 5 fatalities were reported across all vessel types.
- Over 500 reported injuries with 157 of these serious.
- Most serious crew injuries were linked to navigation (DCVs) or maintenance and cargo handling (RAVs/foreign-flagged vessels).
- Collisions, groundings, and propulsion or system failures were the most common marine incident types with engineering system failures rising across all vessel types.
- Person overboard incidents on DCVs dropped by 12.9%.
- Common contributing factors included poor lookout, equipment failures, and gaps in risk assessments or risk management procedures.

Download the report at <https://bit.ly/4a0ZSJr>.

NEW marine reports and guides



NET-ZERO GUIDE

Practical approaches for
global shipping companies



DNV and WMMF collaborate on net-zero guide for shipping companies

DNV and the World Maritime Merchants Forum (WMMF) have collaborated to create the Net-Zero Guide: Practical approaches for shipping companies.

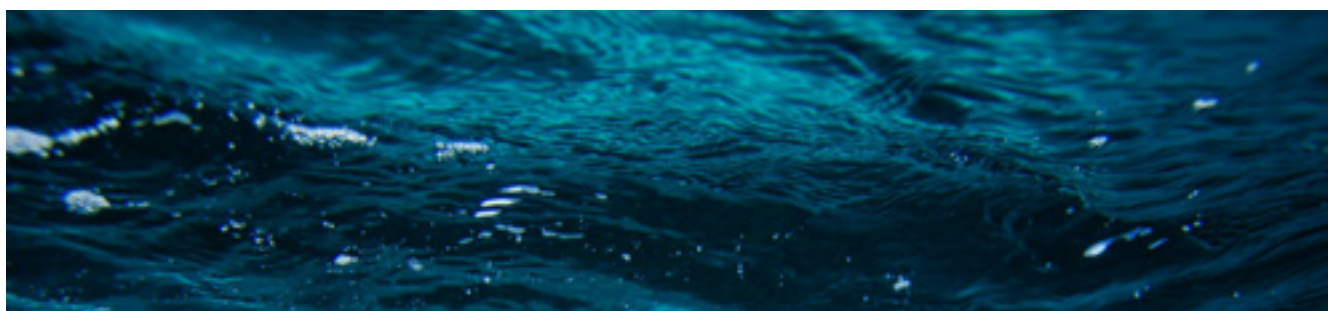
The maritime industry is entering a decisive decade of transformation, driven by evolving regulations, commercial pressures, and a general global shift towards reduced greenhouse gas (GHG) emissions.

The report provides a structured framework to help shipowners, operators, and managers translate decarbonization objectives into actionable strategies. It focuses on how to align fleet operations, investments, and value-chain partnerships with emerging regulatory and market expectations.

As regulatory and commercial frameworks grow increasingly complex and fragmented, particularly for small and medium-sized enterprises, the Guide introduces a clear three-step approach to help companies plan and implement decarbonization measures across short-, medium-, and long-term horizons.

In its executive summary, the guide recommends a three-step framework to help shipping companies translate decarbonization objectives into executable actions across their fleets including assessment, strategic planning, and implementation and monitoring.

Download the report: DNV WMMF Net-Zero Guide - Practical approaches for global shipping companies <https://bit.ly/49HT11Y>



Alarm overload is undermining safety is new report finding

Analysis of more than 40 million alarm-related events shows most alarms offer little operational value, disrupt rest and push crews toward risky workarounds. New research from Lloyd's Register (LR) has revealed that excessive and nuisance shipboard alarm systems are routinely overwhelming crews and, in many cases, actively undermining safety at sea.

The findings, published in Effective Alarm Management in the Maritime Industry are based on data collected from 11 operational vessels, spanning over 2,000 days and more than 40 million alarm-related events. The study shows that many ships generate thousands of alarms every day, many of which provide little or no operational value. The result is widespread alarm fatigue, disrupted rest periods and a growing erosion of trust in systems that are intended to protect both crews and assets.

The research applied recognised industrial best practice, including IEC 62682 and EEMUA 191, to maritime operations for the first time at this scale. It found that fewer than half of the vessels studied met the recommended benchmark of fewer than 30 alarms per hour, while on ships with unattended machinery spaces alarms disrupted 63% of rest periods. In some cases, cruise ships experienced up to 2,600 alarms per day, with peak rates reaching 4,691 alarms in just ten minutes.

Crews, overwhelmed by the volume of alerts, are forced to silence alarms without acknowledgement or physically bypass alarm circuits, normalising unsafe practices and eroding trust in critical safety systems.

Download the report at <https://bit.ly/3Nuk1cT>

Rules without enforcement are no rules at all

by
Geoff Waddington
IIMS Past President and HonFIIMS

Many of you may recall an open letter published by the IIMS to the worldwide yacht and boat manufacturing industry, which was released in October 2019. This was written about professional standards and the response to known defects in vessels, engines and equipment. Although we wanted to bring the issues to peoples' attention, we certainly weren't expecting to bring about any meaningful changes and, unsurprisingly, it appears that nothing has altered. What has changed, however, are the rules in this area since Brexit.

Before we look at some of the failings which have recently crossed my desk I think that it is best that we look at the changes to the Rules and Regulations first for this purpose, and for clarity, and to avoid any misunderstandings in the following text sections I have downloaded directly as published on behalf of GOV.UK by The Office for Product Safety and Standards (OPSS). The points of interest in all of this I have highlighted in **bold text**.

This information all refers to the current marine market rules and regulations.

The UK left the EU at the end of 31 January 2020. This kick started a transition period that formally ended on 31 December 2020.

- **The RCD** (Recreational Craft Directive) is the original European Union directive (Directive 2013/53/EU) concerning the design and construction of recreational boats, setting essential safety requirements for boats sold within the EU.
- **The RCR** (Recreational Craft Regulations). Following Brexit, the UK incorporated the EU rules into its own law. The RCR is the UK equivalent and currently mirrors the EU RCD.

- Key point: While they are currently the same document in principle, the RCR is now the legally applicable regulation for selling a boat in the UK, superseding the RCD in a legal sense within the UK's jurisdiction. The EU RCD remains applicable for selling a boat in the EU.

The Recreational Craft Regulations 2017 implement Directive 2013/53/EU on recreational craft and personal watercraft. The EU Withdrawal Act 2018 preserved the 2017 Regulations and enabled them to be amended so as to continue to function effectively now the UK has left the EU. Accordingly, Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019 fixed any deficiencies that arose from the UK leaving the EU (such as references to EU institutions) and made specific provision for the GB market.

- There is therefore one set of UK 2017 Regulations, but some of the provisions apply differently in Northern Ireland (NI) under the terms of the Windsor Framework. References to the 2017 Regulations in this guidance are references to those Regulations as they apply in The Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019 were amended by the **Product Safety and Metrology** etc. (Amendment to Extent and Meaning of Market) (EU Exit) Regulations 2020 to apply to GB only, and not to NI, in support of implementing The Protocol of Ireland and Northern Ireland ("The Northern Ireland Protocol") and now the Windsor Framework.GB.
- The Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019 were further amended by the **Product Safety and Metrology** etc. (Amendment etc.) (UK (NI) Indication) (EU Exit) Regulations 2020 to provide for a 24 month transition period for importer labelling (for goods from the EEA), UKCA marking, to amend the definition of "authorised representative" as well as introducing an end (in 12 months from the end of the Transition Period) to the recognition of goods meeting EU requirements, as well as introducing provisions for qualifying NI goods.
- On 24 August 2021 the Government announced the transition period for UKCA marking would be extended until 31 December 2022. The Product Safety and Metrology etc (Amendment) Regulations 2021 gave effect to this. On 14

November 2022 the Government announced it would be extending this until 31 December 2024. **The Product Safety and Metrology** (Amendment and Transitional Provisions) Regulations 2022 (SI 2022/1393) gave effect to this.

- On 20 June 2022, the Government announced the provisions for UKCA labelling and importer labelling would be extended until 31 December 2025. On 14 November 2022 the Government announced it would be extending the provisions for UKCA labelling and importer labelling until 31 December 2027. **The Product Safety and Metrology** (Amendment and Transitional Provisions) Regulations 2022 (SI 2022/1393) give effect to this.
- **On 1 August 2023 and 24 January 2024, the UK Government announced it would extend recognition of goods that meet EU requirements (including the CE marking), indefinitely, beyond 2024 for many products. This means that certain goods that meet EU requirements can be placed on the GB market beyond 31 December 2024. The Product Safety and Metrology etc. (Amendment) Regulations 2024 give effect to this and came into force on 1 October 2024. The legislation also provides for a 'Fast-Track' UKCA scheme, whereby steps taken towards CE marking will count towards UKCA marking, while UK product safety regulations remain aligned with EU product safety law.**

The products covered by the Regulations are as follows (collectively referred to as **"products"** in this guidance):

1. **Recreational craft** and partly completed recreational craft which are watercraft excluding personal watercraft intended for sports and leisure purposes of hull length from 2.5m to 24m regardless of the means of propulsion.
2. **Personal watercraft (e.g. jet skis) and partly completed personal watercraft**, which are watercraft for sports and leisure purposes of less than 4m in hull length which use a propulsion engine having a water jet pump as its primary source of propulsion and designed to be operated by a person or persons sitting, standing or kneeling on, rather than within, the confines of the hull.
3. **Components of watercraft** listed in Schedule 2 (when placed on the market separately and when intended for installation in watercraft).
4. **Propulsion engines** installed or intended for use in watercraft.

There are a number of exclusions from the Regulations including:

1. watercraft intended solely for racing (labelled as such by the manufacturer)
2. canoes and kayaks designed to be propelled solely by human power, gondolas and pedalos
3. surfboards
4. submersibles eg submarines
5. aircushion vehicles eg hovercraft
6. hydrofoils
7. amphibious vehicles

4. Obligations of manufacturers

A manufacturer is a person who **manufactures a product**, or has a product **designed or manufactured**, and markets that product under their name or trademark.

The obligations of manufacturers of products include:

1) Before making a product available on the GB market or putting them into service, the manufacturer must:

- a) design and **manufacture it in accordance with the essential requirements** set out in Schedule 1 of the Regulations and that **they do not endanger the health and safety of persons, property or the environment, when used correctly as intended.**

- b) **decide which conformity assessment** marking (UKCA, CE, or CE + UKNI) they intend the equipment to have when placed on the GB market.

- c) **carry out or have carried out the applicable conformity assessment procedure** referred to in Part 3 of the Regulations. Schedule 15 to the **Regulations introduced by the Product Safety and Metrology etc.** (Amendment etc.) (EU Exit) Regulations 2019 sets out all the different types of conformity assessment procedures.

- d) draw up the required technical documentation (Regulation 9 and Schedule 9).

2) When the product meets the requirements of the Regulations, and before placing on the GB market, **a manufacturer must:**

- a) **draw up a declaration of conformity** (UK DoC if UKCA marked, EU DoC if CE marked) in the model format set out in Schedule 4 (or for partly completed watercraft, in Schedule 3).

- b) ensure the declaration accompanies the product when the product is placed on the GB market.

- c) **affix the relevant conformity marking** (see section 9 (or section 10 for Qualifying NI Goods)) on the product or where applicable, a watercraft's builder's plate or propulsion engine (for components where it is not possible or warranted to affix the marking to the product, it can be affixed to its packaging and accompanying documentation). **The manufacturer must ensure that the conformity assessment marking is followed by the identification number of the approved body.**

3) **The manufacturer must keep the declaration of conformity up to date.** The manufacturer must be able to provide the **market surveillance authority (MSA)** with the relevant technical documentation for 10 years after the specific product was placed on the GB market.

4) The manufacturer must also label products (or, where in the case of components it is not possible, on accompanying documentation or packaging) with their name, registered trade name or registered trademark, their address, and the type batch or serial number (or other information identifying the manufacturer). This applies to all products.

5) When placing products on the GB market, the manufacturer must ensure that they are accompanied by instructions and safety information in English.

6) **The manufacturer must, when appropriate with regard to any risk posed to consumers, carry out sample testing of products they have placed on the market and investigate any complaints that the products are not in conformity with the relevant legal requirements in the Regulations and keep records of these complaints, as well as records of any products that are not in conformity and any products recalled.**

7) **Manufacturers must take action where they have reason to believe that any product is not in conformity with the Regulations (either to bring the product into conformity, withdraw it or recall it); where there is a risk to consumers, they must**

inform the relevant MSA. In GB this is local trading standards authorities. Manufacturers must take appropriate corrective action and co-operate with the enforcement authority.

8) Manufacturers that require a manufacturer's code (MIC) in relation to watercraft identification as set out in Schedule 1, 2.1 (3) **(see below)** must obtain one from British Marine who are authorised to issue MICs on behalf of the Secretary of State. Manufacturers who have a MIC from British Marine or the Secretary of State will not have to re-apply for a new code but can continue to use the code they have.

In the context of the Recreational Craft Regulations (RCR) 2017, Schedule 1, Section 2.1(3) specifies the legal requirements for the Manufacturer's Identification Code (MIC).

This section mandates that:

- **Mandatory Code:** Manufacturers must obtain a unique identification code (MIC) for any watercraft required to have a Watercraft Identification Number (WIN).
- **Issuing Authority:** In Great Britain, this code must be obtained from British Marine, which is authorized to issue MICs on behalf of the Secretary of State.
- **Exemptions:** Craft exempted under Clause 4 of the RCR 2017, such as certain home-built boats, are not required to display a WIN and therefore do not require an MIC under this specific regulation.
- **Existing Codes:** Manufacturers who already possess a valid MIC issued by British Marine or the Secretary of State are not required to re-apply and may continue using their existing code.

Manufacturers wishing to place goods on the NI market should follow the Regulation as it applies to NI. Qualifying NI goods can be placed on the GB market without any additional approvals, although additional information as to the UK based importer may be required, if the goods have an importer based in the EU/EEA. See further detail in section 10 on Qualifying NI Goods.

5. Obligations of authorised representatives

Manufacturers are able to appoint authorised representatives to perform certain tasks on their behalf.

Mandated authorised representatives for the GB market can be based in GB or NI but cannot be based outside the UK. A manufacturer can only mandate an authorised representative established in the UK, under the 2017 Regulations as they apply in GB.

No GB-based authorised representatives are recognised under EU law. This means GB-based authorised representatives cannot carry out tasks on the manufacturer's behalf for products being placed on the NI and EEA markets. Therefore, a GB manufacturer selling products to the EEA or into NI, who wishes to appoint an authorised representative to carry out tasks for them in respect of those products, must appoint an authorised representative established in NI or the EEA.

An authorised representative must comply with all the duties imposed on the manufacturer under the 2017 Regulations that they are appointed by the manufacturer to perform. The manufacturer remains responsible for the proper performance of any obligations the authorised representative performs on their behalf.

Any references in the 2017 Regulations to the manufacturer are to be taken to include a reference to the authorised representative including in relation to penalties for failure to comply with those duties.

6. Obligations of importers

An importer is a person or business based in the UK who places products on the GB market from a country outside the UK. This means that a UK business which acted as a 'distributor' before 1 January 2021 is now legally an 'importer' if they place products from an EEA country or Switzerland on the GB market and therefore must comply with the importer duties under GB legislation.

This includes products that are supplied to NI businesses from the EEA and then placed on the GB market. In this instance the NI business will take on importer obligations for EEA-supplied goods that are placed on the GB market (see also section 10 on Qualifying NI Goods).

Importers have additional legal obligations which go beyond those of distributors, such as checking that manufacturers have carried out the required conformity assessment procedures and including their (the importer's) name, registered trade name or mark and a postal address on the equipment.

Importers need to ensure that their address appears on the product or in accompanying documentation. Where it is not possible to indicate the information on a component, the importer can set out their details on the packaging or in accompanying documentation. To assist with the transition, the UK is applying a transitional period ending on 31 December 2027 to allow UK businesses who import from EEA states (and from 1 January 2021 become importers into the GB market) to provide their details on the accompanying documentation as an alternative to placing them on the product itself. This applies to goods that are not qualifying NI goods. For further detail on qualifying NI goods, please see section 10 on Qualifying NI Goods.

The obligations of importers include:

- 1) Before placing a product on the market or putting it into service, an importer must ensure that:
 - a) the relevant conformity assessment has been carried out by the manufacturer. This means that the product must comply with the requirements in Schedule 1.
 - b) the manufacturer has drawn up the technical documentation.
 - c) the product has the relevant conformity assessment marking affixed and is accompanied by the required documents.
 - d) the manufacturer has complied with the labelling requirements imposed on the manufacturer.
- 2) **When the importer has reason to believe that a product to which the Regulations apply is not in conformity with the essential requirements, the importer must not place the product on the GB market.**
- 3) The importer must ensure that when placing products on the GB market, that they are accompanied by instructions which are in English.
- 4) The importer must provide their name, registered trade name or registered trademark and a postal address at which they can be contacted on the product. Where the product is a component and it is not possible to indicate this information on the component itself, the information may be provided in a document accompanying the component or on the component's packaging. Where the importer has imported the product from an EEA state or Switzerland and places it on the GB market before 31 December 2027, the information may be provided in an accompanying document.

5) The importer must keep a copy of the relevant technical documentation and declaration of conformity for a period of 10 years after the products have been placed on the market and must co-operate with and provide information to the MSAs following any requests.

6) The importer must ensure that when products are under their responsibility they are stored and transported under conditions that do not affect their conformity with the essential requirements.

7) The importer must, when appropriate and taking into account the risks to the health and safety of consumers, carry out testing of the products and **investigate complaints about products that are not in conformity with the 2017 Regulations and keep a register of those complaints.**

8) The importer **must take action where they have reason to believe that products that they have placed on the GB market are not in conformity with the 2017 Regulations. Where they are considered to present a risk to consumers then the importer is required to inform the MSA (Trading Standards in GB).**

Qualifying NI goods complying with the legislation as it applies in NI, including affixing the CE marking, may also be placed on the GB market. See further detail in section 10 on Qualifying NI Goods.

Where do I affix the conformity assessment marking?

The conformity assessment marking should be affixed visibly, legibly and indelibly to the product. Where it is not possible or not warranted on account of the nature of the product to affix the conformity assessment marking directly on the product (or its data plate), then it can be affixed to the packaging and accompanying documents.

Until 31 December 2027, the UKCA marking may be affixed to a label affixed to the product or a document accompanying the product, rather than being affixed to the product itself (even where it is otherwise possible to affix it to the product itself).

Placing on the market

A fully manufactured good is 'placed on the market' when there is a written or verbal agreement (or offer of an agreement) to transfer ownership or possession or other rights in the product. This does not require physical transfer of the good.

You can usually provide proof of placing on the market on the basis of any relevant document ordinarily used in business transactions, including:

- contracts of sale concerning goods which have already been manufactured and meet the legal requirements;
- invoices;
- documents concerning the shipping of goods for distribution.

Products imported for further manufacture and components

When products are **imported into GB for further manufacture or processing, they are not considered placed on the market.** Only **fully manufactured** products can be considered placed on the market. Under these circumstances, the GB manufacturer of the finished product has the **sole and ultimate responsibility** for ensuring it is compliant before they place it on the GB market.

A finished product **must be compliant with all applicable legislation** when placed on the GB market. Components may be placed on the market separately and can constitute a fully manufactured product in its own right. This may include a requirement for the components of the product to be individually conformity assessed and marked. However, for many products, a single marking covering the overall product is sufficient.

Spares

Products which are repaired, refurbished or exchanged without changing their original performance, purpose, or type, are **not considered 'new' and therefore do not need to be recertified and remarked.**

This includes if the product is **temporarily exported for repair** (as the product is not being placed on the GB market for the first time when re-imported).

Repair, replacement and maintenance operations are often carried out using other products which are spare parts. Spare parts are considered to have been placed on the market at the time at which the original product or system they are ultimately intended to repair, replace or maintain was placed on the market.

This means that spare parts can comply with the same conformity assessment requirements that were in place at the time the original product or system they are ultimately intended to repair, replace or maintain was placed on the market.

The definition of a spare part will vary depending on the commercial context, but it is broadly determined by a product's ultimate intended usage. Whether a product is ultimately intended to be used as a spare part should be evidenced by any document demonstrating this intended use, which should be produced when requested by MSAs.

If the product has been subject to important changes, substantially changing its original performance, purpose, or type, it will be considered as a 'new' product. Therefore, the modified product must comply with the relevant legislative requirements at the time the product is first placed on the market or put into service.

10. Qualifying Northern Ireland Goods

The Government committed to providing unfettered access for qualifying NI goods to the rest of the UK market after 1 January 2021. Recreational craft and personal watercraft that can be placed on the market in NI in accordance with the legislation, as it applies to NI, can be sold in the rest of the UK without any additional approvals.

This means that products that are qualifying NI goods can be sold in the rest of the UK if any of the following apply:

- the CE marking is lawfully applied to the good on the basis of self-declaration;
- any mandatory third-party conformity assessment was carried out by an EU-recognised notified body (including a body in a country with which the EU has a relevant mutual recognition agreement) and a CE marking is affixed;
- the certificate of conformity previously held by a UK approved body has been transferred to an EU-recognised notified body and a CE marking has been affixed;
- any mandatory third-party conformity assessment was carried out by a UK-based body, and the good is therefore marked with the CE marking and with the new UKNI marking.

This will be the case even if there are changes between the EU rules that apply in NI under the terms of the Windsor Framework and the GB rules.

NI businesses that are importing products from the EEA and placing them on the GB market must ensure that the relevant conformity assessment procedure has been carried out, that the technical documentation has been drawn up and that the products bear the CE marking. They will also have to comply with the importer labelling duties (see section 6 on obligations of importers).

11. Approved Bodies

The UK established a new framework for UK based bodies to assess products against GB rules. Existing UK notified bodies were granted new UK 'approved body' status and are listed on a new UK database.

Approved bodies are conformity assessment bodies which have been approved by the Secretary of State to carry out the procedures for conformity assessment and certification for the GB market set out in the 2017 Regulations.

These approved bodies retain their 4-digit identification number. New approved bodies will be assigned a number by the Office for Product Safety and Standards on behalf of the Secretary of State.

Approved bodies can assess products for the GB market against GB essential requirements (which are, as yet, the same as EU essential requirements).

UK approved bodies must be established in the UK and be **independent of the manufacturer**. Approved bodies must examine the technical documentation and supporting evidence in respect of recreational craft to assess their adequacy.

12. Enforcement and penalties

Enforcement

In GB, the local weights and measures authorities (more commonly referred to as "Trading Standards"), are the MSAs responsible for enforcement of these Regulations.

The 2017 Regulations also provide powers to the Secretary of State or a person appointed to act on their behalf to enforce the Regulations and RAMS (Regulation (EC 765/2008), as amended by the Product Safety and Metrology etc. (Amendment etc.) (EU Exit) Regulations 2019, which sets out requirements for market surveillance of products).

The 2017 Regulations provide the power for MSAs to take action against economic operators for products that are not in conformity with the 2017 Regulations or that present a risk. There are requirements on economic operators and private importers to co-operate with the enforcement authority as appropriate on request.

The UK MSA will take all appropriate measures to withdraw from the market, to prohibit or restrict the supply of products which may endanger the health and safety of persons, property or the environment.

Penalties

A person committing an offence under the 2017 Regulations **may** be liable to a penalty. Penalties **can include** a fine or a prison sentence of up to three months for the most serious offences. It is matter for the enforcing authority to decide whether prosecution is appropriate in each case taking into account the circumstances of the case and the enforcement authorities' own policies, operational procedures and practices in line with the Regulators' Code. Should a prosecution take place, it is at the discretion of the court to decide the penalties imposed on the offender.

Geoff takes up the story...

Marine manufacturers in common with all manufacturing industries face the same basic key challenges. They must be competitive within the markets they operate in, which requires them to produce the best possible products within strict financial constraints ensuring they make a profit and can continue to invest in research and development to create new products. This often leads to some manufacturers using components that are competitively priced rather than their quality and serviceability.

This is all very well, but the desire to produce a vessel which is a cut above the rest is driving designers and manufacturers to lose sight of the most important element which is safety.

A boat built to be 'easy to use' may compromise it being 'safe to use'. As examples, I have included a couple of vessels which I have recently looked at that had safety issues.

In the first instance (Boat A), the vessel has a watertight/weather tight door which opens inward fitted in

the forward face of a wheelhouse/deck saloon situated within a deep foredeck recess. The door is held closed by a magnetic catch released by a button. For aesthetics there are no obtrusive handles or clips, and this is a recipe for potential disaster. Without the door opening outwards and closing over a smaller opening any external pressure from wind or waves will force it open, as opposed to a door which closes over an opening where any external pressure would force it closed. (The door doesn't seal anyway)!

The same Boat A has an aft cockpit deck which is positioned as close to the water line as possible. This is to allow the cockpit side bulwarks to fold down creating a flat level beach deck. Taking into account freeboard requirements this in itself is questionable, but then there is the cockpit deck hatch to consider, this gives access to the vessel's electrical installation. In common with the forward door this hatch is only operated electrically by the push of a button and once again, for aesthetics, there are no obtrusive handles or clips - here is another recipe for potential disaster.

To make matters worse still, Boat A also has a soft sliding roof, the sealing of which is so poor that rainwater was dripping onto the helm when I visited her tied up at her berth in a marina. One can only imagine what would happen if a wave broke over her.

One operator of another Boat A, which is a commercially coded vessel, stated "when driving on rough seas, the door for passage from the bow to the ship's cabin opens by itself. There is no handle. The door opens and therefore bangs a lot, so the door must be held closed, which is very impractical" - apparently the helmsman would have to extend his/her left leg and hold the door closed by foot.

The following text is a summary of events which led to the swamping of Boat A:

While motoring at low speed the vessel encountered a series of waves typical of usual Solent conditions given the wind and tide forecast. On the day there was only 10knts of wind and well within the CE marking plate classification of Cat B Offshore Max 6 persons and Cat C Max 9 persons. The first wave that hit the bow, sprayed into the recessed bow area, the second and subsequent waves broke over the bow and through the anchor roller aperture flooding the anchor locker. Due to the water not draining quick enough the water flooded through into the forward cabin. The water flooding the forward seating area pinned the bow down to water level lifting the outboard engines out of the water rendering the vessel adrift. Water was also forced through the lower corner of the closed front door. The bow became submerged due to the amount of water in the vessel compromising its stability. The lower cabin flooded above the height of the bunk, and the helm station accumulated 100mm of water. Because of the bow down attitude the water could not drain through the bilges to aft, so the bilge pumps and drainage systems failed to cope. This allowed the water to rapidly accumulate in the bow of the vessel which meant that the engines were useless.

Now call me old fashioned, and I am sure that most people who know me will agree with that statement, but above all else a boat has to be a boat, and not merely a design statement.

Having spent at least half of my life at sea in ships and small craft I have experienced pretty much everything that mother nature can throw at you, and at times that can be very scary indeed. In the past, all

boats were capable of surviving a complete swamping, (even my first sailing dinghy had buoyancy bags etc). Some motorboats and all the old sailing boats were self-righting in the event of a knock down or capsize. I am not so sure that this is now the case. Boat A clearly failed on several counts.

The owner was not at all happy, unsurprisingly, with his recent expensive purchase of a brand new boat that was out on one of its first trips, so he contacted the Agent (Importer) and received this reply:

"I write in response to your letter of --- ----- in which you purport to reject the above vessel and claim a refund for the full purchase price pursuant to the Consumer Rights Act 2015.

"This Company" does not accept your claim to reject the boat. No refunds of any kind will be made to you and we will not be collecting the vessel as you demand.

Claims by you that the vessel was mis-sold and not fit for purpose are categorically denied.

As a direct consequence of flooding, damage has occurred which is not a new boat warranty issue, or the responsibility of "This Company".

I strongly urge you to make a claim against your own boat insurance. Failure to do so in a reasonable and timely manner could prejudice your position in getting repairs done.

I must leave you in no doubt as to the position of "This Company" and I can confidently say that "The Manufacturer" agrees with us whole heartedly.

Another problem which has come across my desk involves Boat B, which had an inherent steering design issue. This appears to have been realised by the first owner, who as a consequence, and after very little use, sold the boat through the agent/dealer. As a lightly used example of its type, the boat sold quickly. During the pre-purchase process whilst on sea trials, the

steering problem soon came to light. The problem was brought to the attention of the distributor (now the importer) who declared that it was a minor issue and that having checked the system and replenished the oil, it was now safe to use.

Unfortunately, having taken ownership of the vessel this was found not to be the case, as the problem persisted. The boat will not track in a straight line and requires constant adjustments to the helm position. The problem appears to be a design fault due to a hydraulic helm system of one manufacturer being coupled to an on-engine driven hydraulic steering system of another manufacturer, as a consequence, we are told by the investigating engineers, the boat will require a whole new steering system to be installed.

In both the above scenarios the dealers, or importers, or agents (depending on your take of the rules) have denied responsibility and, so far, the manufacturers have not accepted any liability either.

The Boat B owner with the steering issue received this response:

"We have discussed this within ----- and all things considered we do not feel that we are in the wrong. We have followed the standard brokerage protocol throughout, as for any other second hand boat."

So, there are two very unhappy boat owners, one of whom had been through a similar situation before with his last boat. His boat had been factory fitted with the wrong propellers, which had only been discovered during pre-purchase sea trials, but the defect was denied by the agent/broker, of course.

It seems the customer is not always right. What ever happened to good old fashioned customer service? As the surveyor involved with both these vessels, I am very disappointed with the standards of customer service and care demonstrated by those involved.

Another case brought to my attention recently involved the proud owner of a 20 metre sailing yacht who was tempted by the promise of a set of sails which would provide "increased performance, sexy glittery looks, and the promise of increased longevity". The distributor (importer) stated that they would "never wear out!!" (A bold statement if ever there was one).

Needless to say, the sails did wear out, but more importantly, they wore out after what would be considered very little use. Rather than replacing the sails the response from the dealer was to offer the owner a discount on another set of sails, a slightly better response than the previous two, but once again falling short of what could be considered as good customer service.

I must now refer you back to the Rules and Regulations at the opening of this article.

Before placing a vessel on the market a **Manufacturer must:**

- Design and manufacture it in accordance with the essential requirements.
- Draw up a declaration of conformity and ensure that the conformity assessment marking is followed by the identification number of the approved body. Manufacturers must take action where they have reason to believe that any product is not in conformity with the Regulations (either to bring the product into conformity, withdraw it or recall it); where there is a risk to consumers they must inform the relevant MSA. In GB this is local trading standards authorities. Manufacturers must take appropriate corrective action and co-operate with the enforcement authority.

An **Importer** is a person or business based in the UK who places products on the GB market from a country outside the UK. This means that a UK business which acted as a 'distributor' before 1 January 2021

is now legally an 'importer' The importer must, when appropriate and taking into account the risks to the health and safety of consumers, carry out testing of the products and investigate complaints about products that are not in conformity with the 2017 Regulations and keep a register of those complaints. The importer must take action where they have reason to believe that products that they have placed on the GB market are not in conformity with the 2017 Regulations. Where they are considered to present a risk to consumers then the importer is required to inform the MSA (Trading Standards in GB).

In regard to part completed Vessels - **Only fully manufactured products can be considered placed on the market.** Under these circumstances, the GB manufacturer of the finished product has the **sole and ultimate responsibility** for ensuring it is compliant before they place it on the GB market.

This means that if a vessel is supplied without engines fitted for example (quite common with outboard installations), then the company installing the engines and therefore completing the build of the vessel now takes on the responsibility of **First placing of the Vessel on the Market** and therefore the **compliance** of the vessel.

Repair, replacement and maintenance operations are often carried out using other products which are spare parts. Spare parts are considered to have been placed on the market at the time at which the original product or system they are ultimately intended to repair, replace or maintain was placed on the market.

This means that spare parts can comply with the same conformity assessment requirements that were in place at the time the original product or system they are ultimately intended to repair, replace or maintain was placed on the market.

This implies that the Spare Parts must comply with the original conformity assessment.

From a brief analysis of the above scenarios, we can draw conclusions.

Boat A was clearly not compliant in several areas, **some of which** were:

- The CE plate including vessel loading and design category was generic for three completely differing designs based on the same hull and the identification number of the approved body was not included.
- The forward cable locker was open at the bow and the internal/collision bulkhead was not watertight.
- The recessed cockpit drains were inadequate and too close to the water line due to inadequate freeboard.
- The forward facing wheelhouse door did not close or seal securely.

Boat A, having been imported with engines means that the EU manufacturer was responsible in the first instance. However, the importer remains responsible for ensuring it was compliant before they placed it on the GB market and 'investigate complaints' and 'take action' as necessary.

In the case of Boat B, as the vessel was imported as a completed vessel the manufacturer should ultimately be responsible to rectify the defect as the steering system 'As Fitted' does not, and therefore, could never have functioned correctly and therefore safely.

In the final case, the question is one of quality of supplied spares, rather than conformity for which there are consumer protection rules under serviceable goods.

The question remains **'Who will discover a case of non-compliance?'**

Answer **'The Surveyor'** because vessel safety is, or should be, the surveyor's primary aim.

In the past, I have been in conflict with dealers and brokers where during a pre-purchase survey a vessel was found to be non-compliant, ie placed on the market in the UK without a hull number, CE Plate, or certificate of compliance. The arguments were always:

- does it need to be compliant?
- and ultimately "do you know anyone who has been prosecuted for selling a non-compliant vessel? The answer to which had to be **no!**

Looking at the penalties section, I note the wording which is a little vague. All surveyors will be familiar with the use of 'May', 'Should', 'Could' (Can) and that seldom do we see the word 'Must' in government department regulations.

In the new Regulations it states that you **may** be liable to a penalty and that penalties **can include** a fine, or prison sentence, which is a matter for the enforcing authority to decide and that **should** a prosecution take place it is at the discretion of the courts to decide the penalty.

However, having said that, from personal experience in regard to cheap imported replacement parts and equipment used in vessels, the MSA (Trading Standards) and OPSS can have them impounded and subsequently removed from the market.

Perhaps the government is asking too much of Manufacturers and Importers, lets face it they are hardly likely to say "don't buy one of these unless your going out on a nice sunny day with flat calm seas", known commercially as 'favourable weather and daylight'.

They could argue that the skipper of the vessel was not competent (this also was implied) however as we all know there is no requirement to prove that you are competent when buying a boat and I am sure that they would not ask anyway (sales would plummet). At the end of the day I doubt whether being a novice or being an expert will make any difference when the coastguard or RNLI turn up to fish you out of the water or tow you to safety.

My final comment therefore is that the manufacturers, importers and suppliers in the scenarios I have shared in this article should do their homework and realise their responsibilities particularly in regard to "taking into account the risks to the health and safety of consumers" and ultimately because failing to give customer satisfaction may not just be totally unacceptable, it may also be in breach of the law.



The Grain Code has been revised



By **Hiroka Suzuki**,

Loss Prevention Executive and Satoru Yamashita, Senior Claims Executive, Gard P&I Club

The revision of the International Grain Code was adopted at the IMO Maritime Safety Committee in 2024 and came into effect on 1 January 2026. The main purpose of the amendment is to formally incorporate into the code the cargo handling method of "specially suitable compartment, partly filled in way of the hatch opening, with ends untrimmed". This article highlights the key changes and discusses potential practical and legal implications.

The International Code for the Safe Carriage of Grain in Bulk provides specific requirements for the loading conditions according to the following classification:

- filled compartments (trimmed)
- filled compartments (untrimmed)
- partly filled compartments.

In the practice of loading ships with grain, a loading condition is frequently observed where a compartment is "specially suitable" as defined in A 2.7, filled up to or above the bottom edge of the hatch end beams but not to the highest possible level in way of the hatch opening. The condition where the grain cargo is slacked in the coaming of a "specially suitable

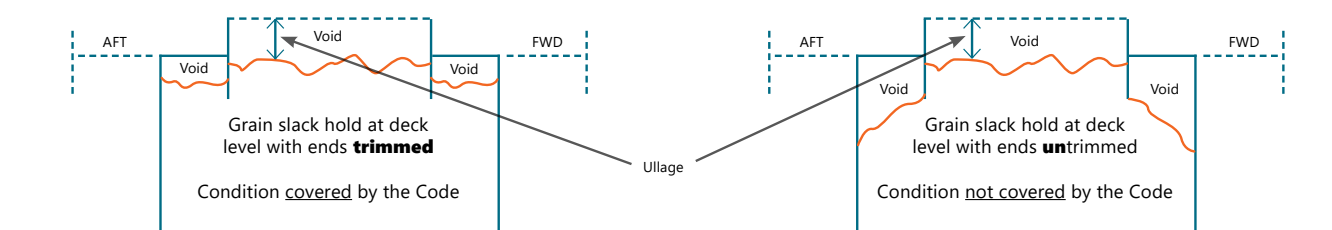
compartment" with the ends being trimmed according to A 10.6 is illustrated below to the left. The same condition with the ends untrimmed (illustration to the right) is not covered by the current Code and cannot be calculated for stability purposes in an accurate fashion. This condition often arises unintentionally due to variations in cargo stowage factor, or operational and voyage order constraints.

A ship finishing in the condition shown on the right therefore may formally be not in compliance with the Grain Code, even if adequate stability could be categorically demonstrated by the calculations. To address this, Canada and United States jointly proposed for a new output on amendments to the International

Code for the Safe Carriage of Grain in Bulk in 2019 (MSC 101/21/12). These amendments to allow partly filled grain holds with untrimmed ends, were adopted via Resolution MSC.552(108) at the 108th session of the Maritime Safety Committee (MSC) in May 2024 and will come into effect on 1 January 2026.

The changes that came into force as of 1 January 2026

This amendment formally recognises this intermediate loading condition and requires that the Grain Loading Manual include the corresponding heeling moment values for "specially suitable compartment, partly filled in way of the hatch opening, with ends



untrimmed". It refers to "a specially suitable compartment which is not filled to the maximum extent possible in way of the hatch opening but is filled to a level equal with or above the bottom edge of the hatch end beams and has not been trimmed outside the periphery of the hatch opening by the provisions of A 10.4". In this scenario, the compartment is filled to or above the bottom edge of the hatch end beams, but not to the maximum possible level, and the ends outside the hatch coaming are left untrimmed. The grain outside the hatch opening may rest at its natural angle of repose, and only the free grain surface in way of the hatch opening must be level.

One of the advantages of this method is that it eliminates the need for trimming the ends, which was previously required, thereby significantly reducing cargo handling time. Allowing trimming operations to be omitted beneath a cross deck significantly reduces the operational burden while maintaining compliance with safety requirements, this is presumed to be the rationale behind the amendment. When trimming is deemed unnecessary, the fundamental premise is that the risk of lateral movement does not arise. Nevertheless, safety considerations remain critical, including recalculating the inclination moment, shifting moment, and cargo volume curve under the new configuration, and ensuring that stability calculations (including residual stability) are accurately reflected. Failure to meet these requirements may result in the condition being judged unsafe, creating a risk of warnings during cargo handling authorisation or inspection.

The amendments apply to new buildings with keel laid on or after 1 January 2026, and to existing ships wishing to use the new loading condition for improved flexibility and compliance. For existing ships, the amended Grain Code can also be applied to improve loading flexibility and demonstrate compliance with the new requirements.

Actions required by vessels and owners

While the changes offer the advantage of reducing cargo handling time, if existing vessels are to load in this way it will be necessary to address the heeling moments for the new loading configuration and update the Grain Loading Manual accordingly. The following actions should be taken by shipowners/operators:

Revision of the Grain Loading Manual:

Incorporate into the existing manual the new heeling moment curves, filling levels and volume curves, and assumptions regarding the angle of repose.

Update of the Grain Loading Computer:

Integrate the new loading configuration into the loading computer and obtain certification.

Class and Authority Approval:

Submit the revised Grain Loading Manual (for the relevant vessel) to the flag administration or a recognised organisation for approval. For vessels intending to use the new condition, the definition of "specially suitable compartment" must be correctly included in the manual.

Coordination with Charterers and Loading Ports:

Discuss in advance with charterers, grain shippers, and stevedores the potential use of the "new loading condition," and confirm that the loading port understands the new condition and agrees to omit trimming during cargo operations.

How this matters for P&I claims

As we have seen, the upcoming revision of the Grain Code allows untrimmed ends below the Cross Deck with only the exposed surface near the hatch level. If the revised inclination/shifting moments and residual stability are not correctly

calculated and approved, any resulting list or cargo shift may be argued as foreseeable and preventable, which potentially weakens a carrier's defence under Hague or Hague-Visby Rules by assisting the cargo interests to argue about the vessel's unseaworthiness or want of due diligence for seaworthiness at the commencement of the voyage. Conversely, evidence of correct calculations/approvals and records of proper monitoring on each voyage (e.g. verified stowage plans, hold-by-hold trim photos and records of on-voyage monitoring etc.) can strengthen the carrier's defences in cargo damage claims resulting from the vessel's list or cargo shift.

In addition, where the cargo loading under the new condition can affect the fumigation efficacy and ventilation plans, potential claims (including recoveries) for insect damage, taint or crew exposure may hinge on whether the revised preparation/monitoring steps were followed, and on the chain of responsibility within the charterparty chain (and possibly with the fumigator).

Potential legal implications

One issue that we see being raised is whether Owners or Charterers should pay for the costs associated with the operational steps above. The cost of revising a vessel's manual documentation, updating computer software and dealing with Flag administration could be significant, so if the Charterers want this to be done, should the costs be for their account? Unfortunately, the answer is not easy and will depend on the particular terms of the charterparty in question, but as there is no obligation on the owners of existing vessels to make any of these changes, the starting position is likely to be that Charterers must persuade Owners to take these steps and revise their manuals – rather than being able to force it on the Owners.





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RESPONSIBILITIES of the DPA (Designated Person Ashore under the ISM Code) as our industry understands them today

By **Capt Bertrand Apperry**, HonFIIMS and IIMS Past President

After much uncertainty, we can now finally consolidate the actual responsibilities of the DPA as they exist in our industry.

FOREWORD

An atypical function in the industry in general, the **DPA concept** encountered some difficulties in gaining acceptance from the inception of the ISM Code due to vague interpretations, particularly by some Administrations and shipping companies, to the point that the IMO, as is often the case, had to publish "clarification circulars."

These are Circular MSC-MEPC.7/Circ.8 of June 2013, which concerns "Revised Guidelines for the Operational Implementation of the ISM Code by Companies," and Circular MSC-MEPC.7/Circ.6 of October 19, 2007. Both fall under "Guidelines on the Qualifications, Training, and Experience required to fulfil the role of the Designated Person Ashore under the provisions of the ISM Code."^{*1}

Note: These circulars were issued more than 10 years ago by the IMO's two most important committees, which join for special occasions.

We therefore have, on the one hand, clarifications for the application of the ISM Code and, on the other, necessary clarifications regarding the role of the DPA. These two circulars detail all of the DPA's responsibilities from the usual IMO perspective: the "Codes" are the **minimum required**, and the guidelines are merely recommendations for implementation ... sometimes "fortunately" required later by the better Flag Administrations!

In addition to these circulars, we will examine the reality of things on the ground: how our industry ultimately took the recommendations into account while ensuring necessary compliance with the ISM Code!

INTRODUCTION

After my initial article published in maritime magazines about ten years ago, a sufficient period to "digest" the IMO circulars relating to the DPA, it seemed necessary to clarify again and expand on this strange function of our industry, which still seems unique today. Indeed, with a remarkable inertia specific to our industry, the demand for ISM training in general or ISM internal auditor in particular, is exploding. A demand for specific DPA training is also called for, and if possible, in a hyper-specialised and individual manner.

1-MODALITIES OF THE "DPA TRAINING" TAUGHT UNTIL NOW

For a classic DPA, we could limit ourselves to the three basic requirements of Section 4 of the ISM Code. Even if, like the entire code, this paragraph is condensed, it is very precise and does not allow for any approximation.

Reminder: The three responsibilities required by the ISM Code itself are:

- **1-Ensure a privileged link with top management in a "bypass" system for intermediate management, when necessary, to ensure (particularly in emergencies involving safety or the environment) reliable, direct, and instant communication between vessels and their Masters and head of Senior Management - particularly when important rapid decisions need to be carried out.**
- **2-Monitoring the safety and pollution aspects of vessel operations on a day-to-day basis via the Master, both at sea and in port.**
- **3-Ship support: ensuring that appropriate resources are provided to vessels, including at their request even with a classic process of moderation and mitigation when necessary.**

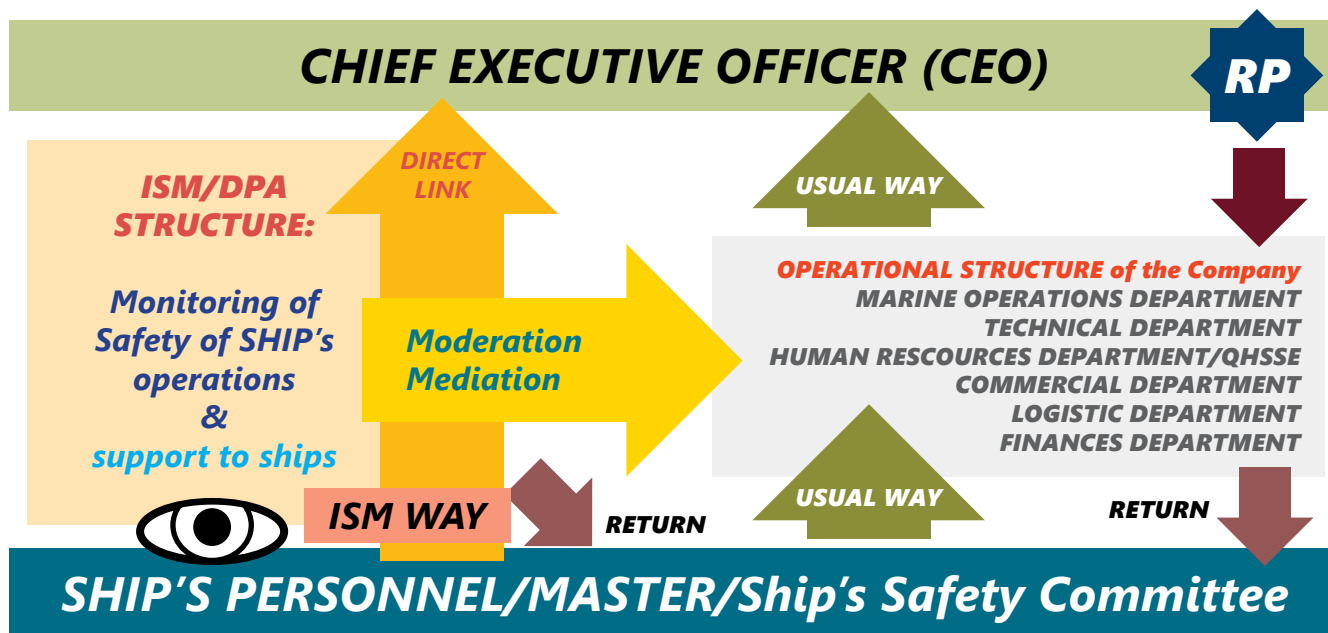
For any shipping company today, these requirements are understood and applied at least in theory. This must be true since all 100,000+ vessels subject to the ISM Code continue to sail, i.e., with their SMC-DOC (Safety management certificate/document of compliance) and operate under a Company safety and environmental protection management system complying with the Code!

However, we must not be naive, especially in this profession. Regarding the DPA's role in maintaining this compliance, there are still "holes in the bag," and sometimes even some analysts insist on different concepts ... unfortunately bordering on heresy!

*NB: The responsibility for **monitoring** ship operations includes operations at sea and in port. Port operations regulations are the primary domain of the ILO. However, the interface is such that the ILO long ago issued "best practices" that concern us, such as "Safety and health in ports" and its counterpart, "Prevention of accidents on board ships at sea and in port".*

NB: These "two little gems" are therefore naturally in the libraries of companies and ships and should be familiar to the DPA.

The classic flow chart of the DPA role:



2-PUBLICATION OF TWO IMO CIRCULARS ON THE SUBJECT

The IMO is ultimately just an international regulatory body, but fortunately, it always effectively clarifies these regulations. Indeed, the world's best experts work and rework on them with the sole aim of helping us implement what we have agreed upon by a majority to reduce maritime accidents and clarify all the other existing approximations in our industry.

Refusals or approximations still exist, based on a certain narrow view of "freedom of enterprise". They are the prerogatives of those who transport goods and passengers across the "beautiful sea" without concern for others ... often deliberately forgetting the professional code of ethics!

The IMO committees, which are made up of our representatives, conscientiously study and publish the results "free of charge". We cannot deliberately ignore them without facing sanctions at the first PSC (Port State Control) ... so feared by shipowners!

The publication of the two ISM circulars drawn up by the IMO's committees: one on safety and the other on environmental protection, jointly issued for special occasions, had the effect of a mini bombshell but fortunately reducing the proliferation of existing heresies in the application of the code.

3-CIRCULAR MSC-MEPC.7/circ.8: Revised Guidelines for the Operational Application of the ISM Code by Companies

A set of intelligent recommendations to assist companies, including clarifications on the role and responsibilities of the DPA, namely:

3-1 Communicate and implement the safety and environmental policy to which the Company has committed in its general statement signed by the CEO.

There is a significant responsibility for "communication" in this, and even if today this "communication" often hides a lack of effective implementation, it must exist, and it is therefore the DPA in particular that should be responsible for it. This responsibility includes the DPA being part of the Company's communications department, which can be important, but its role will remain limited to the already broad "safety and environmental protection" sector. Its sector will only grow with the increasing consideration of crew wellbeing and new environmental issues caused by ships: transfers of fauna and flora via stability ballast water; underwater noise disrupting the life and reproduction of marine species; difficulties extinguishing fires on PCs and RoRos; different pollution levels from new fuels; the dangers of liquid-electrolyte li-ion batteries transported alone in containers or in electric or hybrid vehicles; the acceptability of future nuclear PCs, etc...

Next, for the DPA, “the implementation of the Company’s policy” naturally means the operation of the Safety Management System (SMS), which requires daily attention, whether on land or at sea, on all the Company vessels. For those who oppose the ISM Code, whether satisfied or not, this demonstrates the DPA’s responsibility in the operation (synonymous with implementation) of the SMS. The Company’s SMS may be created at the operational management level, but it is validated by senior management and then implemented and updated with the assistance of the DPA.

The SMS, on the other hand, and therefore the DPA, naturally follows the requirements of the code at a minimum. This includes the risk assessment of the Company’s activities and its vessels and their continuous updating, as well as regulatory monitoring, i.e., the monitoring of regulations concerning the Company’s activities and all advanced studies currently concerning the rapid modernisation of our industry, whether in new fuels or the digitalisation of all our operational processes.

To conclude partially again, the responsibility for implementing the SMS is certainly one of the most important for the DPA ... while not forgetting the other responsibilities listed in the circular.

3-2 “Evaluate and review the effectiveness of the SMS”

This is a well-established responsibility today and, to my knowledge, works well everywhere. It is generally the DPA in charge of implementation, who prepares the management review (SMS operating report) required by ISM Section 12.3.

Moreover, sometimes, like the OCMIF which, to the great “delight” of tanker crews, has introduced the TMSA (Tanker Management Self-Assessment) or “ISM+”. This effectiveness assessment is facilitated by using performance criteria. These performance criteria, cleverly chosen by the Company, allow for a rapid mathematical assessment of the level of operation, the strengths and weaknesses of the SMS, and the areas that require improvement. These evaluated criteria allow for a graphical representation in the form of an instantaneous or evolving dashboard ... which the bosses love: try it and see!

Internal audits, both on board and onshore, are already conducted every 12 months, with a possible three-month margin, given that the vessels will not necessarily be available in a port on the anniversary date. For a management review, an annual review can also be considered.

As a partial conclusion, the DPA prepares the management review by presenting, among other things, the results of the internal and external audits carried out during the past year.

NB: When valid reasons arise, the SMS is missing important items and certain ISM Code requirements are more or less well covered by the Company’s expansion. For example, a systems review is recommended to rectify or clarify what was not fully covered or not very well interpreted, or when the Company’s growth changes the situation. On this occasion, all “cross-functional managers” are invited to contribute, and the DPA ensures a synthesis of the day-to-day operations ... this seems logical!

3-3 “Notify and analyse non-conformities/accidents and near-misses”

Daily reporting, i.e., the transmission of non-conformities discovered either by vessel operators or occasional auditors (inspections, PSC, audits, various reports), requires the DPA to analyse and develop corrective actions in agreement with operators and cross-functional managers. Not forgetting senior management when these corrective actions have a financial impact exceeding the limit set by senior management itself!

Unless there is a classic emergency endangering the vessel and its crew, appropriate corrective actions may be presented to management during the management review for approval or rejection.

An SMS procedure stipulates, in accordance with Section 9 of the ISM Code, that irregularities, accidents, or near misses be communicated to the Company, i.e., to the appropriate cross-functional managers. This is logical! The DPA’s responsibility, however, is to ensure that these irregularities are followed up on ... which is certainly one of the weakest points in the application of the Code. Indeed, while it is logical that irregularities/non-compliance/accidents and near misses be communicated directly to those in charge in order to ensure it is monitored and followed up, it is equally logical that the DPA be on the information path along with the **responsible person** created by Section 6.3 of our circular.

Today, when communication between the ship and the land-based operational services is duplicated by email, it’s easy to copy the DPA! Moreover, in current attempts to digitise processes, the DPA is automatically informed. Furthermore, and this is quite unusual, accidents and “near misses,” which are mandatory internal investigations with the aim of improving prevention, are also entrusted to the DPA!

Quite unusual indeed, because would anyone want to entrust investigations to someone more theoretically independent, as with non-conformities? I would tend to say YES, of course! ... Always this problem of the investigator’s or auditor’s independence, alongside the operational responsibility of cross-functional managers!

Accidents must be investigated by the Company in accordance with Section 9.1 of the ISM Code. However, this requirement is often overlooked or botched, with the Company relying solely on the Master’s sea report and the MAIB (Marine Accident Investigation Branch) report, when it exists. This aspect seems unacceptable because, firstly, the MAIB (SOLAS requirement) does not always intervene, and internal investigations also have their advantages when conducted honestly and independently, a sort of “in-house washing of dirty laundry.” Not to mention the potential inaccuracies of official accident investigators unfortunately!

An important reminder: in 2006, the MSC and MEPC committees, again together, issued a circular (MSC-MEPC.2/Circ.3) very much in line with current concerns (2006 was also the birth of MLC, remember!) that corresponded to a European directive on “workers at work” in 2001.

Finally, in the circular above, a valuable aid, internal investigations can be conducted according to the recommendations seen in an appendix.

3-4 Organising and Monitoring ISM Internal Audits

This often raises issues related to the **independence** of internal auditors. As we can see, the DPA has never been considered as an internal auditor, even though many companies have unfortunately adopted this approach. Indeed, according to the Code, the DPA is responsible for monitoring the safety-related aspects of each vessel's operation, particularly through the ship's Master. He cannot then audit something ... for which he is responsible himself! The definition of an audit is unequivocal, "systematic and independent control" ... here, in the case of the DPA as internal auditor, there is no independence, quite ... the opposite!

Given this requirement for auditor independence, it makes sense to entrust this task to people outside the Company. Or at least somebody outside of the audited sector, as required by the ISM Code itself (Section 12.5). In rare cases, among certain small shipowners of the "one ship/one Company" type, where any new verification is unfortunately systematically considered "inappropriate," some internal audits, when they exist, have been conducted by the responsible shore-based manager. The results are generally significant: either they note deficiencies that are their own responsibility (sic!), or the "everything is fine, move along, there's nothing to see here" syndrome prevails. (0 non-compliances, 0 recommendations!) This is firstly senseless and secondly useless!

For the IMO, therefore, based on this concept of independence, so dear to the logic of **self-regulation**, it is agreed that, within the framework of the SMS operation entrusted to the DPA, it is up to the latter to appoint internal auditors who can evaluate the SMS's operation sector by sector.

The concept of independence inspired by ISO standards is essential for obtaining a comprehensive analysis of SMS operation and, by definition, allows for objective, uninfluenced results.

So, while the DPA cannot be one of the internal auditors, according to our circular, they are responsible for organising and monitoring internal audits. This monitoring includes verifying the independence and training of the internal auditors involved. Despite possible translation difficulties from English into another language of the circular, all of this is clear enough to **prevent DPAs from auditing themselves!**

In practice, while organising internal audits is relatively easy, based on the availability of individual staff, the selection and training of auditors is more difficult.

Indeed, to be an auditor, you must:

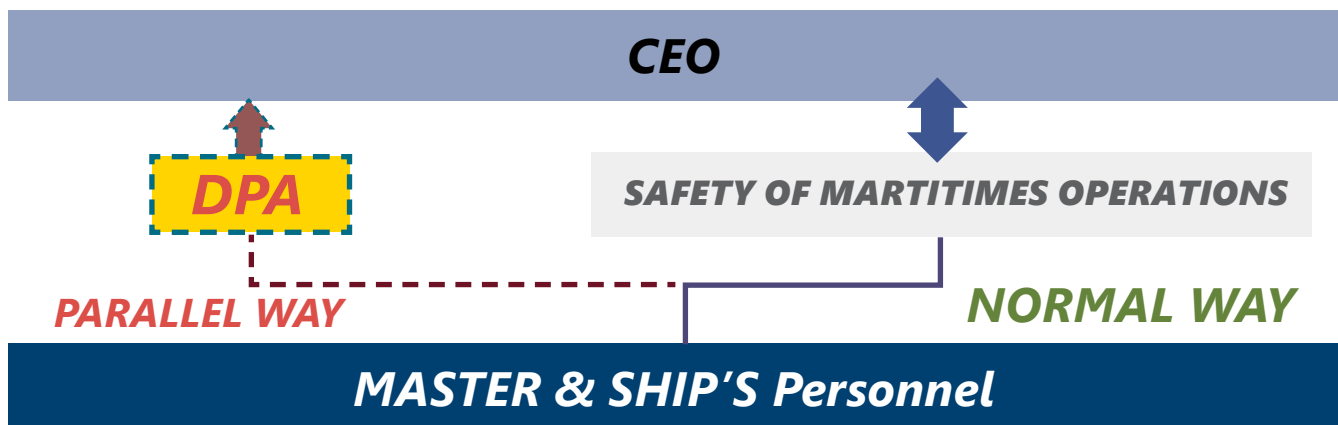
- Have a thorough understanding of the scope of the SMS sector being audited.
- Choose the key people to be audited.
- Interview operators chosen, if possible, with a thorough understanding of the operations concerned.
- Be able to detect possible lies or omissions, sometimes the poor results of a certain "culture of adjustment"
- Quickly consult the corresponding objective evidence such as reports, notifications or recordings.
- Be able, if possible, to make an initial proposal for corrective action and discuss it with the person(s) being audited.
- Be able to reject a statement like "yes, we always do that" or "we know that very well!" without objective evidence!
- Be able to interview a senior executive without apprehension.
- Be able to tell the truth, even if the findings show a failure—including at the very highest level—in your own Company!
- Be able to still report a non-compliance even if corrective action is decided upon instantly (a recording oversight, for example!).

In fact, choosing internal auditors is not easy, especially when the Company is small or young. Using a call for volunteers, which is the recommended method, and then carefully explaining the ins and outs of such an approach, the results are far from guaranteed. Various attempts have been made in all companies, and sometimes a hybrid solution has been found. In this solution, external auditors specialised and unrelated to the flag(s) of the Company's ships can effectively conduct internal audits, including at the management level, provided they commit to strict confidentiality. ***3**

Furthermore, the organisation of certification audits and the maintenance of this compliance certification are generally also entrusted to the DPA. This responsibility is all the more important since, according to Flag regulations, it is the Company's responsibility to request Flag audits on time. With any oversight jeopardising the relevant certificates!

We are wondering, in this context, where the mandatory maritime Administration's help lies!

Principle of the accurate communication link between CEO & ships



3-5 Conduct appropriate SMS reviews

This system review can be decided upon following a management review for reasons as diverse as they are important: a need identified during a management review, fleet expansion, change of management, search for a charter, response to a call for tenders, a customer request, etc.

This review is the responsibility of senior management, and it is quite logical that the proposal and then practical implementation are entrusted to the DPA with the help of cross-functional managers. They would certainly have their own ideas for this review over the course of the annual inspections, which generally tend towards improvement!

Amendments and revisions to the SMS, prepared and then proposed by the DPA to senior management, are part of the DPA's normal actions. These proposals are then subject to acceptance and decision by the CEO after consultation with managers from all areas of the Company.

3-6 Ensure that adequate resources and appropriate shore-based support for all ships are provided by the Company

This is perhaps the most difficult responsibility the DPA has to fulfil.

Indeed, in this particular environment of the shipping industry, which is all too often focused on finding the cheapest option, assigning such responsibility to the DPA sometimes borders on outrageous!

I'm joking of course, but since the purse strings are in the hands of management and its shareholders everywhere, the DPA will certainly often have their work cut out to obtain the resources/support requested by vessels and their Masters. When the requests are reasonably costly, there is generally no problem. However, when the costs are substantial, decisions are often more difficult to obtain, are postponed, forgotten, etc.

While all this is logical in principle, the reality on the ground is different. It sometimes takes extraordinary tenacity for the DPA to succeed in obtaining significant corrective action at the request of those responsible, even though senior and/or financial management are not initially "convinced" of it.

This is reminiscent of the accident we are all familiar with and which is practically the "progenitor" of the ISM Code. Namely the sinking of the HERALD of FREE ENTERPRISE March 6, 1987, in Zeebrugge. While the causes of accidents are always multiple, the urgent request from the senior officers of the HOFE and its sister ships (POFE/ PRIDE OF FREE ENTERPRISE and SOFE/SPIRIT OF FREE ENTERPRISE) for a ballast water transfer pump twice as powerful as the existing one, which could rectify the trim more quickly, could have been granted ... one of the holes in James REASON's « Swiss cheese model » might not have existed on this occasion!

This problem naturally exists, but here we come close to the human factor. "I am myself completely convinced, but can I insist beyond what is reasonable?" A cruel dilemma that, for some truly motivated DPAs, borders on a case of conscience, going as far as the right to quit!

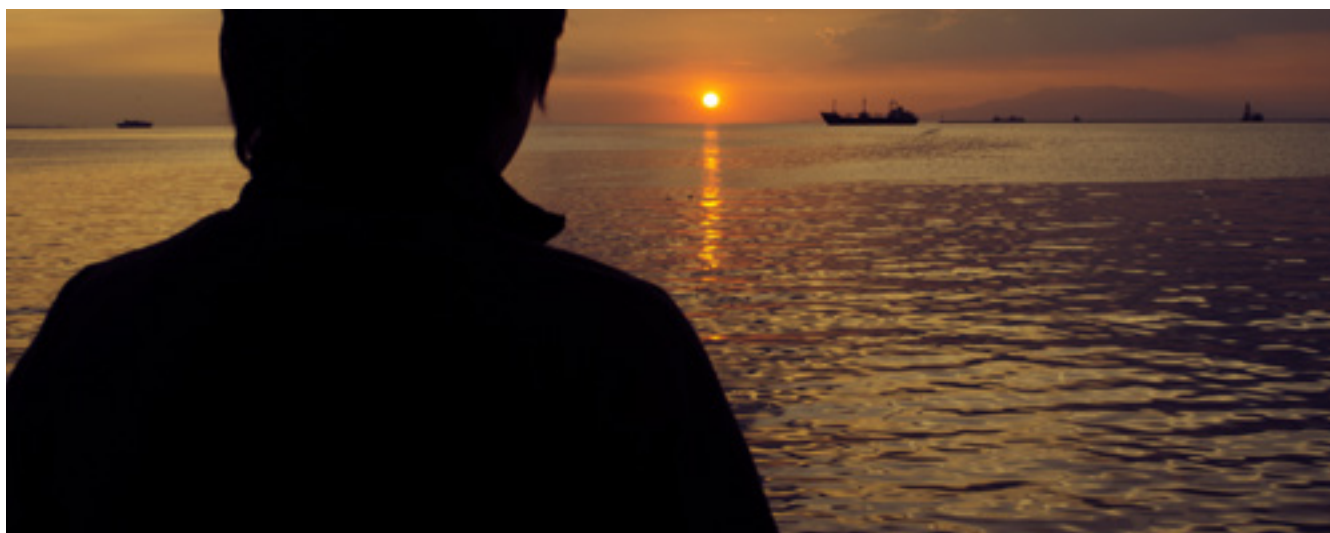
Without dwelling on the criminal liability aspect of the DPA, it is certain that in cases of serious accidents due to a failure of critical equipment not knowingly addressed by the Company, the judge will seek liability, including that of the DPA in its role of providing ultimate information to the CEO!

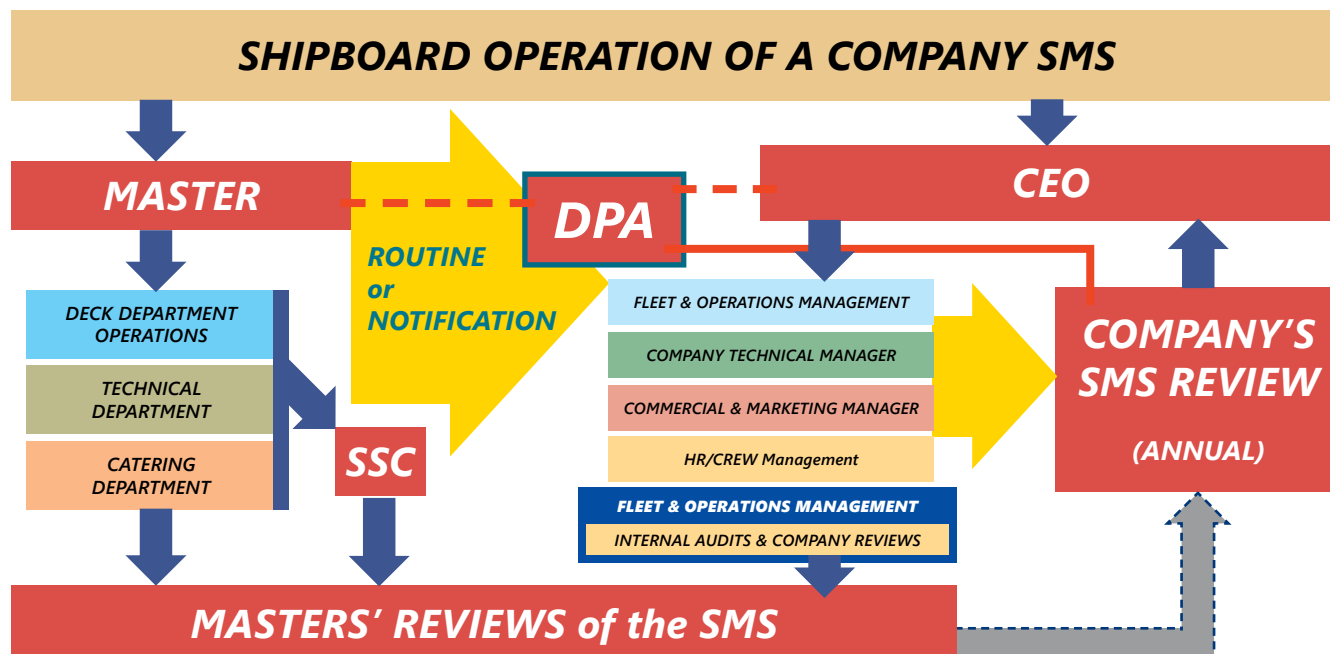
3-7 DPA Resources: staff, budget, appropriate training, job description, and the effective power to report irregularities at the highest level

From the very beginning of the code's implementation, the problem of a DPA's resources was apparent. Well, at least in companies that had understood the DPA's role needing staff, a budget and traditional resources! By appointing a DPA without truly understanding their supervisory role, or by establishing a DPA department without a proper description of responsibilities, the Code's early days were disastrous. They appeared completely useless ... which, among other things, gave the ISM Code a completely false reputation initially. We're still struggling to overcome this almost 20 years later!

So today, a DPA service is included in the budget and is a natural part of budgetary decisions.

But let's not kid ourselves, things don't always go smoothly, especially when the sums involved are substantial!





A significant example. The DPA's intervention in the context of planned maintenance work. It is traditional for the ship's Chief Engineer, the local maintenance manager—a critical element in the safety and environmental protection of operations—to draw up a list of operations to be performed during the next technical stop/dry docking. This list, with the Master's approval, is communicated to the shore-based technical manager, who will normally carry out an initial screening ... following his budget! So, this is a fairly logical first review and perhaps the first decision! Do you think the DPA can intervene on this occasion? Yes, of course. Aren't they responsible for ensuring adequate resources and appropriate support on shore as needed? A process of informing the DPA therefore seems necessary throughout the actual decisions made during the "technical stopover," as we call it!

Work flow: All requests from the shipboard management under a list of work prepared by the technical manager → submitted to the shipyard for quotation → in response: the same list amended by the technical superintendent following quotation in comparison with the budget → list of works jointly decided and → the list of repairs really completed at the end of the technical stop over!

NB: All MMS or other software programs are now able to automatically transmit this information to the DPA, allowing direct oversight by the DPA of company support to ship's demands within the framework of their responsibilities.

3-8 The DPA as the first person informed in the event of an accident and subsequently an important member of the Company's crisis unit!

... perhaps an omission in the circular?

Indeed, the modern issue of crisis management as well as media management during a crisis situation, must be taken into account within the Company. Poor crisis management in the face of the media could be catastrophic for many companies.

Crisis management by the Company is a requirement of the Code (ISM Section 8.3), while, along with irregularities, accidents or near misses are "subject to investigation and analysis with the aim of strengthening safety" (ISM Section 9.1). Almost all companies (small or large) have a crisis cell that will help the Master to manage the situation and liaise with emergency services, families, and the media. Yet media management will be a very important part of the emergency response in the event of a maritime accident with casualties or pollution! Companies which have neglected or mismanaged the media during an emergency situation -the EXXON VALDEZ and COSTA CONCORDIA cases are the most significant- have been vilified in all media outlets, to

the point that some have disappeared (TONWSEND THORESEN) or almost disappeared (COSTA CROISIERE).

Or there was even the strange « banishment » of the EXXON VALDEZ from « American waters ». In the event of an accident, good media management is an essential function of the crisis unit. A Company's training plan would be well advised to include serious training for all stakeholders (CEO, DPA, and other cross-functional managers, Masters), and even crew members!

4-DPA QUALIFICATIONS & TRAINING

Somewhat overlooked at first, appropriate DPA training has finally been released, not without difficulty, with these circulars ... 14 years after its creation in the Code!

Wanting to be concise and brief, Jorgen Rasmussen († 2022), president, and our working group in IMO (HTW today) certainly considered that DPA training was included, if not almost automatic ... this was a sign of not knowing the shipowners well ... "we only do what is mandatory," they continue to say!

Today, intelligently, Flag Administrations strongly recommend training described in the appropriate circular. Qualifications and training are simply but sufficiently described. However, the required experience is much more nebulous. Indeed, it's as if a DPA must have DPA experience before being appointed ... which doesn't make much sense, I'm sure you'll agree!

4-1 Qualifications

A DPA is not necessarily a seafarer or former seafarer and therefore does not require STCW training. The best idea was to recommend a senior manager based on

actual responsibilities, with specific qualifications, such as knowledge of physical and technical disciplines, similar to a high-level certified officer. Or at least someone with a minimum of three years' experience in a responsible position in ship management.



In many companies around the world, the DPAs currently employ the majority of Merchant Navy officers, who have generally chosen this position, often by default but sometimes with specific motivation!

NB: An often-overlooked point is the monitoring of the ship's port operations, which are, of course, the responsibility of both the Master and the DPA.

4-2 Training

It is obvious that the DPA must have a perfect knowledge of SMS and, of course, be familiar with the mandatory rules and regulations that apply to the ships operated by the Company. Like any Master, they must be familiar with all the best practices regarding ships' operations and the specific relevant port regulations. Indeed, this aspect of port regulations has seemingly been overlooked, even though it is a very important aspect of a Master's duties around the world. Be confident, Masters in their follow up report generally focus primarily on the intricacies of loading and unloading, of passengers or cargo, in the ports concerned!

Then, performance criteria evaluation techniques, interviewing and reporting techniques, etc, can also be learned in special courses if necessary.

In partial conclusion, while effective communication is necessary to ensure necessary, reliable communication between the ship & crew and the highest levels of the Company, an important aspect has been somewhat overlooked. Namely, the DPA, being made aware of an emergency on board from the first minute, is often the first person to contact the media. Today, failing to take this aspect of emergency situations into account could be very detrimental to the Company. It would certainly be catastrophic in the event of a serious accident involving

loss of life or a polluted environment (e.g. the COSTA CONCORDIA disaster in 2012)!

It would therefore be wise to provide a specific training to the DPA, along with directors, on **responding to or managing the media in maritime emergencies**.

4-3 Finally, a recommended experience should enable the DPA to:

Make observations regarding the ISM Code at the highest management level with a view to continuously improve the SMS. This requires a thorough understanding of the Code and its application.

- Determine whether "the SMS complies with the requirements of the Code" after a personal analysis, even if minimal training has been received during years of maritime officer schools or other training. This should not be too difficult with the help of an appropriate checklist.
- Determine "the effectiveness of the SMS" through the results of internal audits or various reviews. We strongly recommend establishing performance criteria that have the advantage of being understood by everyone. Indeed, the SMS concerns all Company personnel, even if the involvement varies depending on the hierarchical level (ref: Preamble to the Code, Section 5).
- Determine the extent to which the SMS takes into account other rules and regulations not covered by regulatory inspections. By definition, ships travel. Regional and local regulations are often not covered and, moreover, are rarely up to date. Frequent knowledge and communication between port partners must be initiated through onsite Company agents. This is an important task, carried out jointly with the Company's commercial departments.



- To ensure existing all best practices are taken into account in the SMS, given the very good knowledge of these published practices, certainly in English, but sometimes also in a different working language. Today, the IMO's free GISIS database ensures an update of these "best practices," particularly in the port sector ... which is not, however, the exclusive domain of the IMO.
- Finally, to collect and study accident cases not just within the Company but also within our industry in order to draw lessons to improve the SMS. The IMO's GISIS website also publishes the regulatory accident investigation reports according to SOLAS and international maritime newspapers ... Some publish the results of near misses in a voluntarily and anonymously manner (CHIRP). Considering the results or recommendations can then be used to develop appropriate preventive measures. This approach is logical and should become popular in our industry. Just think, this is completely free feedback!

Ultimately, this type of experience, highly recommended for a DPA, is acquired through training and maintained through continuing education. Today, various analyses are published on many related

websites, which generally include feedback. It would be counterproductive to refuse to participate, even if the circular above does not specify it.

NB: Civil aviation is also testing this CHIRP (Confidential Human Incident Reporting Program[FB1.1][MS1.2]) system.

For your information: near-miss reports are submitted to reports@chirp.co.uk

5-LEGAL ASPECT OF THE FUNCTION

The DPA was created 30 years ago, and of course, the legal risks associated with this function have generated a lot of discussion. The subject is not easy because, deliberately, the code is written in general terms ... which are not at all part of the normal legal process ... criminal liabilities related to the ISM Code have therefore, admittedly, had a hard time to emerge.

Philip Anderson deserved credit for starting work on the legal aspect of the DPA's responsibilities, and he said he was waiting for the courts to clarify reciprocal responsibilities, especially in emergency situations.

Since the implementation of the ISM Code, the maritime world is still waiting for clear case law on the DPA's responsibilities. Particularly when it is proven that the DPA has not done its job! To clarify this, it is therefore essential:

- That the DPA's role is clear and sufficiently detailed
- That the Company cover the costs of defending the DPA in the event of a possible indictment
- That the right of withdrawal be provided for in the event of a major dispute, particularly due to the following: "ensuring that adequate resources and appropriate support for the vessels are provided by the Company ashore, as needed"!

This seems easy at first glance. However, when looking around, case law hasn't clarified much yet, not even during the Costa Concordia trial. And for the DPA, sometimes it's only the « right to quit » possibility that works!

I don't think this aspect of the DPA's role will be clarified soon ... the will doesn't seem to be there! We are in a sensitive area that, for example, the Masters are well aware of ... so ... are Masters and DPA fighting the same battle?

6-SOME DEVIATIONS REMAIN

After the publication of the circular concerning guidelines for companies, many companies have gained a better understanding of the role of the DPA, which is nonetheless "unique" and certainly not a heap of new safety management responsibilities in the hands of the Company's operations manager, whether they be the ship's Master, fleet director, or safety officer!

The wording in the ISM Code is clear enough to understand that the idea was to appoint a new person on shore to ensure, in all cases, a liaison between the ship's managers and the CEO, when necessary, while also ensuring reliable link communication between the Company and those on board. As well as monitoring the

safety and pollution prevention aspects of each vessel and ensuring that adequate resources and appropriate shore-based support are provided.

The text of Section 4 of the ISM Code was sufficient clear in itself to define the role of the DPA. But given the many misinterpretations, the IMO had to clarify this invention!

The circular in question therefore emphasised the DPA's responsibilities related to a modern management method, and indeed, everything we have just seen now even more justifies a high-level position for the DPA within the Company's management, whether large or small.

Some companies sometimes felt they could not afford or did not want this new manager independent of the more traditional ones.

Surprisingly, these companies have easily granted their DOC and SMC, meaning "compliant with the ISM Code" ... So?

By comparing the two possible situations identified below:

1. The DPA is the Operations Manager or other traditional marine superintendent, assuming all the responsibilities listed above, and
2. The DPA is a person independent of the traditional managers to avoid information blockages like those of the HOFE and also assumes all the responsibilities listed above.

In the first case, we see that access to important information to the CEO is practically the same as before, and therefore the risk of blockages remains (HOFE Case). Ultimately, we are simply modernising operations, i.e., with management focused on self-monitoring and continuous improvement.

Wow, all that for that!

ISM/DPA Flow Chart compliant with corresponding IMO CIRCULARS



Even if no accident disrupts this type of modern management, the lack of a bypass or double backup link with the highest level brings us back to a HOFE risk so unbearable that the ISM Code would be considered a waste of time in this regard! ***3**

So, if a designated person **is independent** of the operations manager and **ensures** the operation of an SMS resolutely created to modernise and ensure such operations worthy of the progress of our century, we are "compliant" with a modern international standard, the ISM Code ... that was the goal!

On the other hand, the lack of independence in monitoring the SMS operating circuit does nothing to change the risk created by a possible blockage in the CEO's

information and only gives this designated person additional responsibilities ... perhaps detrimental to efficiency?

Who knows?

It's back to the beginning ... which should not allow the issuance of a DOC to the Company and, consequently, an SMC for each of the Company's vessels either! ***4**

WARNING: In the event of an accident, the presiding judge will likely reflect: if the DPA had been independent of the traditional sector, could the accident have been avoided?

This means that the risk of an accident persists, and also that the DPA/Operations Manager/Marine superintendent risks ... double sentence in court!



7-CONCLUSION

The circulars we have just studied were imposed following studies conducted by the IMO on the level of application, internationally speaking, of the ISM Code.

Today, the application of the ISM Code is fortunately much, much better!

Indeed, at the beginning, the implementation was a bit harsh we would say, including in our countries. It therefore turned out that for the Code itself, the general terms option was not the right one. That we needed to clarify much more through circulars to try to « right the course » as quickly as possible and as much as possible, because we were heading towards a predictable disaster and the definitive discrediting of the Code!

The IMO did not beat itself up over this, however, I do recall roughly the terms used by William O'Neil († 2012), the IMO Secretary-General at the time, at the working group when the drafting of the ISPS Code was launched: "be more specific than for the ISM Code, and this time, don't forget training!" ... I remember I was there!

While clarifications on the original function of the DPA were absolutely necessary, we could have gone further in training the seafarers themselves, who had the same difficulty applying the code for the same reasons mentioned above. STCW is currently undergoing a major overhaul, and we hope that seafarers' suggestions will be taken into account by creating ISM modules that are part of the training of all crew members and adapted to their level of responsibility on board, as required by the preamble to the ISM Code itself.

I think it would be a good idea ... 'putting the cart behind the horse' would be a smart "land-based" response, even in our maritime industry!

Cdt Bertrand APPERRY HonFIIMS

"JEUNE MARINE- AFCAN AFEXMAR HYDROS" (4/2024)
bertrand.apperry@orange.fr
original in French - translation 2025

***1** These circulars are now under review at IMO (HTW subcommittee working group)

***2** Confidentiality in the application of the ISM Code is a topic that also deserves its own study in the future.

***3** The "HOFE" risk ("blocking risk") should normally be already included in the Risk Assessment study of ships' operations.

***4** Some heresies still persist today, such as the DPA who conducts internal audits or the marine superintendent of the Company is the DPA. Perhaps this would deserve a future analysis of these incompatibilities by myself!



Enclosed spaces: When saving a life turns fatal

By **Siddharth Mahajan**,

Team Leader, Loss Prevention Asia and Amit Kamo, Senior Loss Prevention Executive, Gard P&I Club

Enclosed spaces on ships - such as cargo tanks, holds, and chain lockers - are among the most dangerous environments onboard. While much attention is paid to the initial victims of asphyxiation or toxic exposure, a significant and tragic share of fatalities are would-be rescuers: crew members who rush in to save a colleague, only to become victims themselves.

Concerningly, the majority of multi-fatality incidents in enclosed spaces involve at least one rescuer who perished after entering without proper precautions.

The numbers speak for themselves

Many fatalities involve would-be rescuers - individuals who entered enclosed spaces to save others and became casualties themselves. According to NIOSH, more than 60% of confined space deaths occur among rescuers. IBTA's analysis submitted to the IMO shows that between 2000 and 2024, there were 67 such fatalities on ships - 48 were crew members and 19 were shore workers. Senior officers (masters, chief officers, chief engineers) are disproportionately represented among rescuer fatalities; for example, nearly half of the 23 masters who died in enclosed spaces lost their lives in rescue attempts.

Case study

The vessel concluded discharging Ultra-Low Sulfur Diesel (ULSD) and initiated extensive tank cleaning over six days in preparation for loading Soyabean and Sunflower oil. All tanks were gas-freed, and multiple crew entries were conducted. On the final cleaning day, the Port Slop tank was successfully de-slopped of Annex I wash water. However, the Starboard Slop tank still contained approximately 70 cubic meters of Annex II wash water mixed with a tank cleaning chemical. Over the next week, the vessel then loaded Soyabean and Sunflower oil cargoes into the tanks, except Slop (P & S). Two days after departure from the load port, the crew began pumping out the contents of the slop starboard tank using the Annex II overboard line. When the tank reached stripping level, the Chief Officer instructed the Bosun to open the tank dome and descend to the first platform to hose down the tank. The Chief Officer and Bosun were at the tank dome, while a deck cadet was stationed at the hydrant to operate the fire hose valve.

Upon entering the slop tank, the Bosun collapsed onto the top platform of the slop tank, located 2 meters below the tank entrance. The Chief Officer immediately instructed the deck cadet to retrieve Self-Contained Breathing Apparatus (SCBA) sets. However, before the equipment arrived, the Chief Officer entered the slop tank to rescue the Bosun and also collapsed.

Seeing this, the cadet alerted the bridge. The Third Officer donned the SCBA and descended to the top platform. Thankfully, both the Bosun and the Chief Officer were successfully retrieved within approximately 7 minutes. They received first aid and were transferred to the ship's hospital. The company's doctor was contacted for further medical assistance. For the next 36 hours, both crew members were closely monitored by the onboard crew and the doctor (remotely) until they recovered fully.

Gas readings taken at the top of the platform after the rescue showed normal atmosphere. It is suspected that oxygen levels were lower and LEL higher at the time the Bosun entered the tank, as the hatch had only been opened moments earlier. Toxic gases, particularly lighter-than-air vapours, may also have been present. At the time of the incident, the vessel was approximately 400 nautical miles from the nearest port.

While the investigation is ongoing, preliminary findings have confirmed that no tank atmosphere check was performed, no enclosed space entry permit was issued, and no SCBA or rescue equipment was prepared at the entry point. What is clear is that the initial double collapse was followed by a swift and coordinated response from the remaining crew, ultimately saving two lives.

This case highlights the importance of understanding the human impulse of would-be rescuers to enter without proper safety equipment. Equally important, it demonstrates that a well-executed rescue, grounded in teamwork and adherence to safety protocols can mean the difference between tragedy and survival. Finally, it emphasizes the crew's ability to provide effective medical first aid immediately after the rescue.

Reasons for fatalities of would-be rescuers

There can be multiple reasons behind the deaths of would-be rescuers. Some highlight psychological aspects, such as the "rescuer syndrome," as referred to in InterManager's submission to IMO (III 11/4/4, 2025 [KJ1]), where people feel a compulsive urge to react instantly and instinctively. Research by Pearn and Franklin (2012) describes "rescue altruism" as a blend of:

- **Ethos:** Driven by the Good Samaritan or Golden Rule ethic.
- **Identity:** Rescuer identifies with the victim, often due to a perceived duty-of-care.
- **Risk perception:** Belief that there is a chance of success, even if the risk is high.
- **Courage:** Personal bravery that often overrides rational risk assessment.

In emergencies, especially when a colleague or subordinate is in peril, this impulse can override training and procedural requirements, resulting in a chain of fatalities as each rescuer succumbs to the same unseen hazard.

There are also other contributing factors behind the fatalities:

- **Holding breath:** Some rescuers attempt to hold their breath, believing a quick entry is safe, as highlighted in MAIB Safety Bulletin 02/2008.
- **Improper equipment:** Emergency Escape Breathing Devices (EEBDs), designed for escape only, are sometimes misused for rescue entry, despite clear warnings. There have also been instances where would-be rescuers have entered the space using an air hose.
- **Unrealistic drills:** Practicing rescue in non-hazardous spaces or without full gear leaves crews unprepared for the realities of a true emergency.
- **Misinterpretation of collapse:** Would-be rescuers may not realize the initial casualty collapsed from asphyxiation, assuming a slip, trip, or fall instead.
- **Delayed or uncoordinated response:** Lack of immediate access to rescue equipment or poor coordination can delay effective rescue, reducing survival chances.

*"more than 60%
of confined space
deaths occur
among rescuers"*



“Incidents in enclosed spaces remain among the most preventable causes of fatalities at sea”



What does a successful rescue entail?

A successful enclosed space rescue depends on replacing the impulse to rush in with disciplined, methodical action and strict adherence to emergency procedures. Key requirements include:

- **Proper equipment:** Only trained personnel equipped with self-contained breathing apparatus (SCBA) should enter the space.
- **Rescue equipment ready:** Harnesses, lifelines, and communication devices must be available and set up at the entry point before any entry.
- **Designated attendant:** An attendant should remain outside the space to coordinate and monitor the rescue operation.
- **Clear rescue plan:** A well-communicated rescue plan with clearly defined roles for all involved is essential.
- **Effective communication:** Maintain constant communication between rescuers, attendants, and command throughout the operation.
- **Realistic drills:** Regular, realistic rescue drills ensure the crew can instinctively follow procedures under pressure.
- **No impulsive entry:** Unplanned or impulsive entry must never be allowed—always pause, assess, and follow the established rescue protocol.

The time the rescue team has is critically dependent on the atmosphere inside the enclosed space, as different gases have varying levels of fatal readings and time-to-effect. For example, when oxygen concentration drops to 6–8% by volume, exposure can be fatal within eight minutes; if oxygen falls below 6%, a person may lapse into a coma within a minute, as highlighted in Singapore’s Technical Advisory on Working Safely in Confined Spaces. Therefore, it is strongly recommended that time-based objectives be incorporated into enclosed space entry drills, so that crew members fully understand the urgency.

In the case study mentioned, several factors contributed to the successful rescue, as per the vessel’s Managers. The casualties were located on the top platform, which significantly eased the complexity of the physical rescue compared to a recovery from a lower level in the tank. Timely intervention was also facilitated by the slop tank’s proximity to the SCBA storage locker, minimizing retrieval time. The swift donning of the SCBA by the Third Officer under stress demonstrated effective training, and the medical oversight provided immediately post-rescue, in conjunction with remote consultation from the company-appointed doctor ashore, ensured proper care and full recovery.

Key take-aways

Incidents in enclosed spaces remain among the most preventable causes of fatalities at sea, yet they persist, often claiming the lives of well-intentioned rescuers. This case study and supporting data underscore a critical truth: safety must take precedence over instinct. Breaking the cycle of impulsive rescue attempts requires unwavering adherence to established procedures, proper use of equipment, and realistic, scenario-based training.

The challenge is twofold: ensuring that drills and training are robust and consistently implemented, while addressing the human factors that drive individuals to act impulsively, sometimes with tragic consequences. Equally important is fostering an organisational culture that truly empowers people to pause, speak up, and prioritise safety over urgency.

Drills and briefings should explicitly acknowledge the natural rescue instinct and rehearse resisting it. In a real emergency, the first reaction must be to follow the plan and not rush in, so that every crew member has the best chance of returning home safe.

Industry's demographic time bomb is ticking tick tick tick tick tick

By **Zella Compton**,
Marine Industry News

Industry leaders at Metstrade and the Yacht Racing Forum (YRF) have warned that boating's traditional customer base is disappearing, and without meaningful progress on representation, inclusion and youth pathways, the sector risks losing an entire generation of participants.

The marine industry is facing an existential demographic crisis. Women, young people, and minority groups need to enter the ecosystem - as consumers, athletes, employees, and / or boat owners - and unless the industry chooses to reform its pathways, representation, and mindset, it risks losing its next generation entirely.



Image courtesy of Yacht Racing Forum

Industry leaders warn boating's customer base is ageing out

"Disrupt yourself or be disrupted," Frank Hugelmeyer, president ICOMIA & CEO at National Marine Manufacturers Association (NMMA) said in his address to Metstrade in November 2025. "Our competition is all of the other industry sectors we are competing against. We all have to come together and understand how we are moving forward to meet the future. We need to be intensely consumer focused."

According to Hugelmeyer, there's been a massive change in consumer sentiment and behaviour.

The way the marine industry operates is "built on what we've known." But now, it's "seeing a massive new wave of consumers who think differently and look differently and are different." It's a foundational shift, which means reconsidering the sector's approach to boating.

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Marine industry's protecting legacy business

Knut Frostad, executive chairman Henri-Lloyd speaking at Metstrade believes similar.

He says the wider marine industry is scared about the fact that its "whole population of customers" is going to disappear.

"It's not just about men and women; this is also a huge age issue."

Speaking as a panellist at the Yacht Racing Forum: Sustainability and inclusivity (with no borders or barriers), Frostad noted the industry also "needs to go to women, they need to go to other ethnic groups, to sell boats."

"There's no choice, there won't be only men owning superyachts – there won't be [anyone] owning superyachts, because that category is getting smaller and smaller."

He was at the same venue, saying the same thing in 2022 and puts a perceived lack of action down to the industry protecting what it already has.

"This is the discussion that's happening in Brunswick, NMMA, all the big players in the US, in the voting industry. It's how to get into this new audience, while still selling to the old conservative 65-year-olds. This is a huge challenge."



Knut Frostad (pictured)

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Younger and more diverse consumers aren't entering the pipeline

As Frostad notes, this is not a new theme. Anecdotal and other evidence suggests again and again that the boating industry is not attracting enough young people. And the ones that are attracted aren't into buying. They're into renting/shared experiences and not having to deal with the pain/joy of ownership. No wonder Brunswick's so busily growing its Freedom network.

Hugelmeyer and Frostad are clear – the industry has to reach out and connect with new audiences. But the question over and above that is (and remains) how that can happen, especially when women and minorities are underrepresented at every level of participation?

Potential customers need to see themselves represented

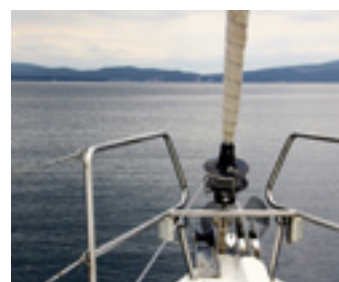
Whatever Trump (or the old boy in the corner at the pub) says about DEI, when people see themselves represented, it's a signal they need to take the next step forward with the brand they are interacting with.

"When they don't see themselves represented, they receive the signal 'this isn't for you' which often causes them to go off in search of another option that shows them they belong," says Sonia Thompson for Forbes, as well as every marketing book, ever.

Solutions on the table to attract more women and minority groups (and many were mentioned during both Metstrade and YRF that work towards grass roots participation) include quotas, mentorship programs, and regulation to drive change.

But, Victoria Low – CEO Magenta Project and panellist alongside Frostad – warns about upcoming numbers from research her organisation's undertaken. The full details of Magenta Project's data are due next spring but meanwhile the results are concerning – women and underrepresented minorities definitely don't feel welcome in yacht clubs. And these are people who are already connected with the industry.

Extrapolate that – lots of women and minority groups don't feel they belong – so they won't be investing anytime soon.



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High-performance sailing has visibility and authority to accelerate change

Russell Coutts, CEO SailGP has – without a doubt – done a marvellous job bringing sail racing to a wider population. But is that helping to bring in the young people (of both genders) needed to stem the demographic time bomb?

During his panel (Insights into SailGP's latest and future technological developments) and being interviewed by Shirley Robertson (iconic sailor and chair for YRF) – Coutts discussed the growth and evolution of sailing as a sport, with a focus on making it more accessible, commercially viable, and gender-balanced within SailGP.

"What's really going to drive change is marketing. If we can have a top female athlete winning at the top level, that will change the game," Coutts believes, underpinning Thompson's (and – again – every marketing book's) thesis. "We've taken steps by mandating one female athlete on boats, and we've seen women's crews in the America's Cup and Ocean Race, but it hasn't created enough change yet.

"What will really change the game is when a young female child getting into sailing sees an aspirational female athlete winning. That will change everything."

And, of course, that would be nice. But will it change 'everything'?

As Robertson frequently pointed out during the forum, the room was literally full of rule makers. They could make an immediate and straightforward difference to change 'everything' in 2026 without waiting for a top female athlete (who also has to win against social inequity by overcoming unequal distribution of resources, opportunities, and burdens).

At one point in the proceedings Robertson declared: "There is no change and no progress. And it is quite alarming, actually."

During the Future technological developments session, Alex Reid, SailGP's director performance engineering, said: "It's a great thing about SailGP . . . the way that you can make up the rules . . . as you go along."

At the time he was referring to allowing coaches to speak to the boats, and added propulsion for light wind venues. Surely determining crews need to have more women shouldn't be that hard?



Shirley Robertson (pictured).
Image courtesy of Yacht Racing Forum

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What older leaders see as progressive, younger audiences see as inadequate

Thankfully never one to hold back, Frostad recalled his daughter's experiences visiting SailGP in Cadiz. While he was pleased to see gender inclusion (the one woman per boat mentioned by Coutts), his daughter had naturally expected a 50/50 split.

And that's the difference in generations. Expectations of parity. Especially when it was often mentioned during YRF that, as a sport, sail racing enjoys a strategic advantage on gender equity.

Frostad says he doesn't feel that entry-level sailing is an issue these days, but the challenge happens afterwards. He sees a 50-50 gender split in entry-level fleets, but then club races happen in bigger boats and that's when structural difficulties start.

"Sailing has been run by 65, 70 year olds for a long time. They grew-up in a man's world."

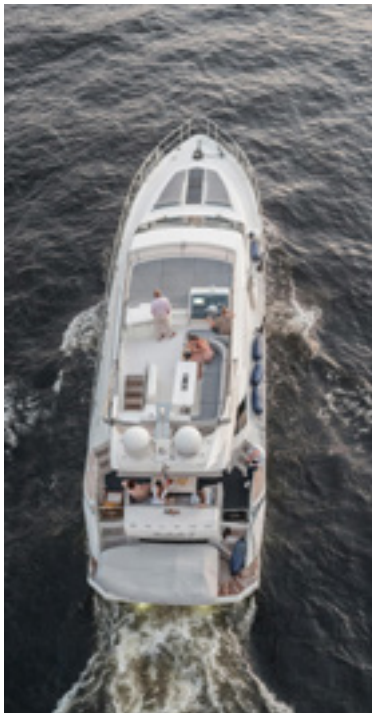
Representation, pathways, and mindset change are crucial

Robertson – who was "slightly miffed" that sustainability and gender inequality were being presented together in one panel – says she sees them as very different.

"Sustainability is a problem that we all need to fix around the globe, we need solutions to fix this problem that we've all created. And I don't see that particularly with gender, it's a mindset."

"We need to look very clearly and carefully at ourselves, because we are in a bubble, we're in a massive bubble and there's a whole load of other things going on in the world, and I sometimes wonder whether we actually do realise that," agrees Low.

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Structural talent shortage at elite level

"It's hard to achieve everything at once. You've got to pick your projects and then basically pick an order and prioritise them," says Coutts.

SailGP is in the process of developing its training base, to enable teams to build up their squads, bring in younger athletes, train them, and then create an athlete transfer market.

In July 2025, it opened a hub for future off-water athlete training and development, with a fully operational simulator. The idea is to encourage teams to invest in young athletes, knowing that even if the teams don't end up using them, they can trade them to another team and probably recruit some of their funds that they've invested. The hub will create more flight controllers, wing trimmers and drivers for the F50s racing.

"We need programmes that train and evaluate athletes more professionally," says Coutts.

"I would like to mandate that 50 per cent of the athletes in the training centre were female, you know, so the male-female demographic was evenly split." The elite yacht racing industry, high-end performance, is often credited with delivering a trickle-down effect into the marine industry, for example technological innovation. If Coutts' 50/50 mandate comes to fruition, creating gender parity could create a tsunami.

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Not enough athletes for the number of jobs

Among many speakers who detailed encouraging youth participation, Jo Grindley – CCO and CMO for Emirates GBR SailGP – (panellist during YRF / SailGP: State of the league five years on) reflected on the work that the Athena Pathway program has been involved with, both to develop talent at the top end, but also at grassroots as well.

The pathway constantly has young people taking part. "We have inner city schools coming through in London, but we also have sports, female squads, under 18 squads, over 18 squads that are developing into that foiling capability."

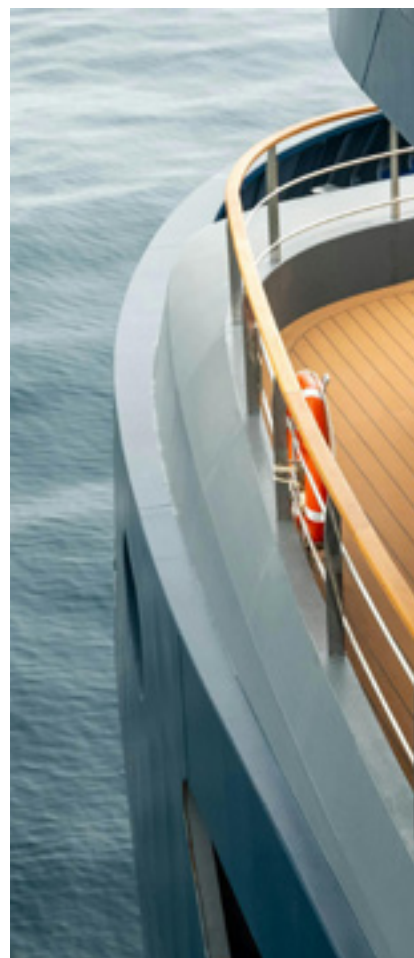
But: "One of the main problems I think us as teams are having is actually there's such a small pool of sailors that can actually race on these boats now."

Thus, one of Grindley's winter projects is going to learn from other sports how they monetise training academies. She's heading to the Football Association to "really understand the financial model as well as the performance model around how to develop an academy." Grindley is pictured above.

The lack of talent has pushed the prices for athletes through the roof, says Bruno Dubois, CEO and team principal France SailGP. "You don't want to know the salary of people. I've never seen that in my life, which is amazing for the sailor. But it's going to go down as soon as we have more sailors coming in. Because then you pick up and choose the one you want. That's the reason why you want your young sailors coming in."

The message from Metstrade and the Yacht Racing Forum is unmistakable: the future of boating will not wait for the industry to feel ready. Demographics are shifting, expectations are changing, and the next generation is already looking elsewhere. Whether through representation, redesigned pathways, or bold rule-making, the marine sector must actively build the audience it wants – because the one it has is disappearing. Simply acknowledging problems is no longer acceptable.

Change isn't optional anymore; it's the price of survival.





Container ship fires and ports of refuge for the big ship era

By **Tom Morgan**,
Partner at law firm HFW



In this article, Tom explores the growing challenge of securing a port of refuge for container ships affected by onboard fires, highlighting the legal, operational and environmental complexities that arise in managing these incidents.

The increasing frequency and severity of fires aboard container ships is a pressing concern for the maritime industry. Recent incidents have highlighted the dangers these fires pose, not only to vessels and their crews, but also to cargo and the surrounding environment. In many cases, the consequences have been catastrophic, with some ships lost entirely and others facing substantial legal and financial repercussions.

Once salvage arrangements are in place and firefighting efforts have begun, a vital step will be identifying and securing a port of refuge (POR). Throughout maritime history, vessels have needed to take fast action to protect lives, prevent environmental damage, and limit further losses. However, the scale and complexity of modern container ships, often carrying hazardous materials and involving multiple stakeholders, makes this process increasingly challenging.

Early decision-making is crucial – this will involve evaluating the immediate risks, the ship's current position, its destination, nearby PORs and whether those ports are

accessible and willing to accept the vessel. In cases where a Lloyd's Open Form (LOF) salvage contract is used, the salvage master will assume command of the operation. The shipowner formally requests entry, while insurers, charterers, and alliance partners all have vested interests.

Regulatory bodies such as Flag and Class must also be consulted. Ideally, all parties will collaborate, holding daily briefings and sharing key documents including cargo and dangerous goods manifests, to ensure informed and safe decision-making. LOF clauses reinforce the shared responsibility of all property owners to support salvors in securing a place of safety.

The process of securing permission to enter a POR varies widely depending on the port and local authorities. Coastal States that are signatories to IMO Resolution A.1184(33) are encouraged to follow its guidelines, which were outlined in December 2023. These reiterate the need to stabilise the casualty, reducing onboard hazards, and repairing any damage as the best way to prevent further harm.

That said, these are only 'guidelines'. While they promote a cooperative approach, they require only an 'objective analysis' to be made and that each case be assessed individually. States are not obligated to accept ships in distress.

In reality, local resistance (often driven by "Not In My Back Yard" or "NIMBY" attitudes) can hinder access. Even when national authorities are willing to assist, local decision-makers may deny entry for their own reasons. In some cases, neighbouring states are pressured to follow suit, leaving the vessel stranded, with nowhere to go, and vulnerable to secondary incidents.

That said, in addition to preventing an ecological disaster on their doorstep, there are regions that recognise the economic benefits to a local maritime cluster in accepting such ships and may be more accommodating. Ultimately, Coastal States will weigh the risks against potential rewards.

Engaging early with key decision-makers early within authorities and commercial stakeholders is essential. Building trust through in-person communication on site can make a significant difference. Importantly, authorities dislike unannounced arrivals, so initiating dialogue with potential PORs as soon as possible following (or during) the initial casualty response is strongly advised.

Identifying a POR needs to consider the cargo onboard. The initial fire, explosion and firefighting efforts will often damage hundreds of containers, leaving behind scrap, burnt materials, debris and damaged reefer units. Handling this is

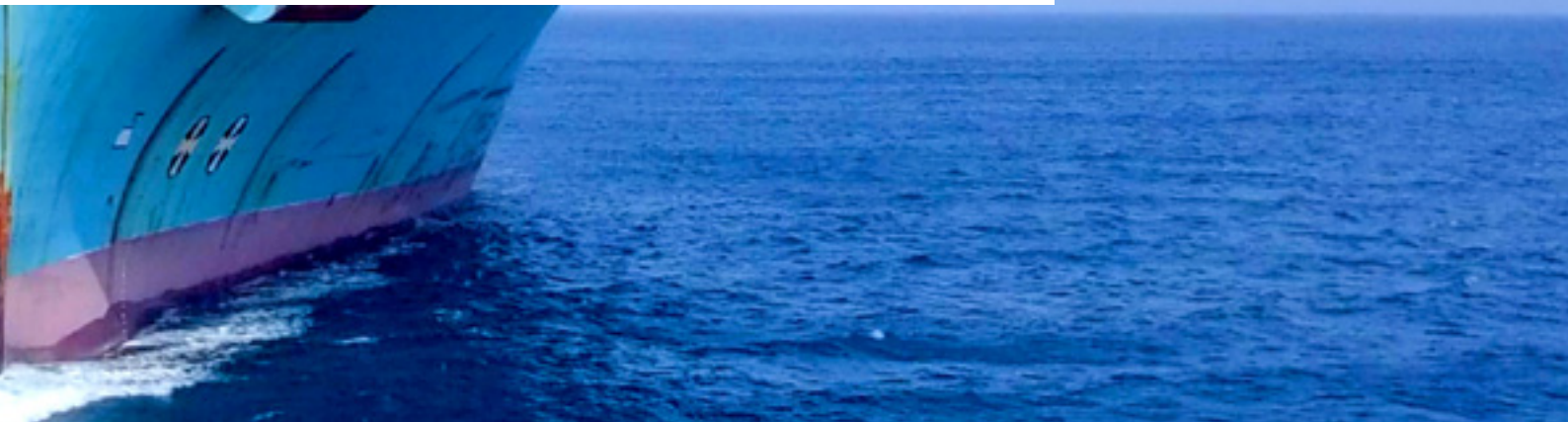
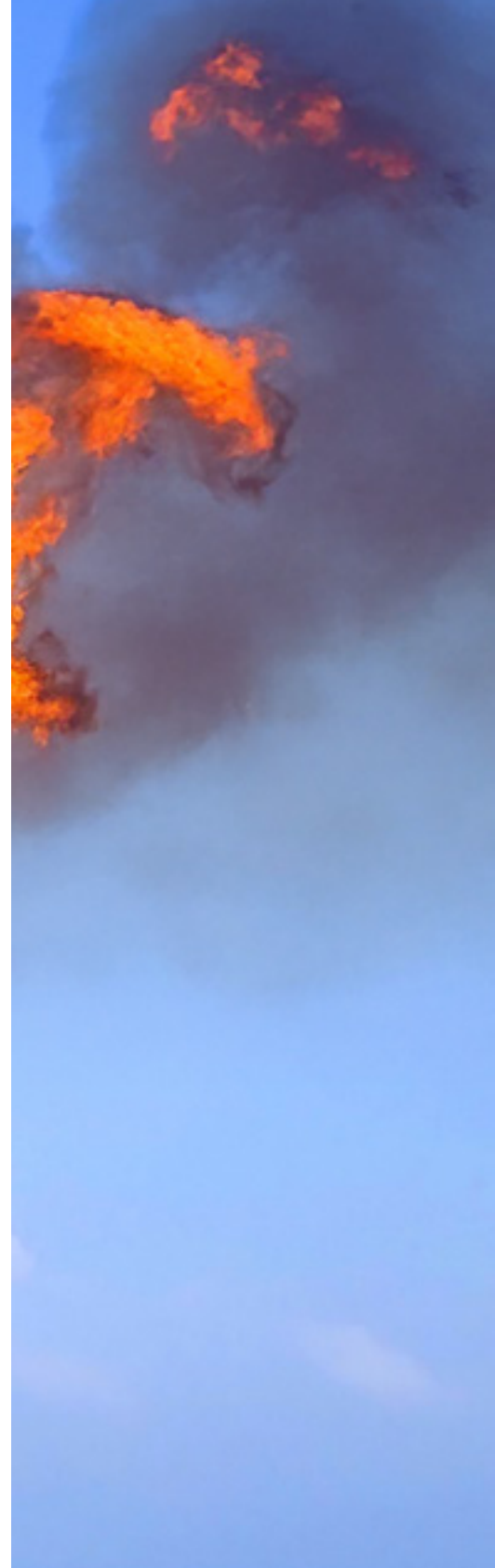
costly and complex, frequently surpassing the cost of repairing the vessel itself.

Disposal is governed by international conventions, local laws and environmental standards – damaged goods must be safely removed, cleaned, sorted, recycled, or disposed of in accordance with regulations. ESG concerns are rightly at the forefront. Responsibility for this process depends on contractual arrangements and may be unclear following a casualty.

Regardless, all parties should work together to find a practical, cost-effective and compliant solution. A single, integrated POR solution works best. If damaged cargo or debris is to be moved between territories, care must be taken to ensure if it falls under the definition of hazardous waste which might trigger onerous obligations under the Basel Convention.

While hull and machinery insurers may view shoreside matters as the domain of P&I Clubs, cooperation between all insurers is crucial – especially when cargo removal is tied to the vessel's ability to undergo repairs and return to service.

Given the ongoing risk of container ship fires, shipowners and insurers should establish clear procedures for securing a POR following a casualty. Proactive early engagement with authorities, personnel on the ground, and integrated shoreside solutions can significantly streamline the process. Above all, constant dialogue among all stakeholders is key to managing these complex and high-stakes situations effectively.



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The Dangerous Erosion of Iron Ore Sampling Standards in India: A Call for Urgent Action

By
Capt Ruchin Dayal,
IIMS President



We Have Been Here Before

Fifteen years ago, India exported over 100 million tonnes of iron ore annually, with Goa alone contributing half of that volume. During that period, two vessels—MV Black Rose at Paradip and MV Asian Forest at Mangalore—capsized and sank after loading iron ore fines. Crew members lost their lives. Other vessels were held in litigation, stopped from sailing, their crews unknowingly saved from potential disaster. The cause in each case was cargo liquefaction: wet iron ore fines loaded during monsoon rains turned into slurry, shifted catastrophically, and destroyed the vessel's stability within minutes.

Those casualties prompted immediate regulatory intervention. The Directorate General of Shipping established a framework for marine laboratory approval. The IMSBC Code became mandatory. Shippers began covering stockpiles with tarpaulins. Masters gained clearer authority to refuse unsafe cargo. The industry learned, adapted, and improved.

Today, as iron ore exports from India prepare to resume after years of decline, we face a troubling reality: the infrastructure, expertise, and vigilance that emerged from those 2009 tragedies have quietly deteriorated. We are returning to the conditions that caused those casualties. The question is not whether another incident will occur, but when.

The Cycle of Decline

The numbers tell part of the story. India's iron ore exports collapsed from over 100 million tonnes in 2010 to less than 10 million tonnes by 2015. Goa's mining ban in 2012 removed 50 million tonnes from the market overnight. This decline was not merely statistical—it represented the systematic dismantling of an entire safety ecosystem.

Shippers facing zero revenue laid off contract labour and machinery operators, retired experienced mining and shipping staff, and closed offices. The 450 barges that operated in Goa in 2010 sat idle, degrading and wasting. Ports that had relied on iron ore export income faced severe cash flow constraints. Survey and sampling companies, which had thrived when handling hundreds of samples monthly, suddenly received only occasional requests. Many reduced staff and equipment. Others closed entirely. Those that remained often resorted to untrained contract labour with no accountability.

The marine laboratories approved by the Directorate General of Shipping—starting with the pioneering eDOT Marine Laboratory and eventually expanding to eight facilities—struggled to maintain standards when sample volumes dropped to a fraction of previous levels. The economic pressure was immense. When business declines by 90%, maintaining ISO accreditation, calibrated equipment, trained personnel, and quality systems becomes financially unsustainable for commercial entities.

The Present Danger

This season, iron ore fines exports from Goa are set to resume, with some mining activity being allowed in the state; an estimated 15 to 25 million tonnes will be shipped. This is welcome news for the economy, but it presents a significant safety concern for critical reasons: the cargo intended for shipment has been stockpiled and exposed to the elements for many years. Freshly mined cargo, if any at all, will be blended with these “dumps” as they are commonly called. But how does one sample a stationary stockpile—especially ones which have existed forever and even have green vegetation growing on their surfaces? This is not a theoretical concern. Representative sampling of large static stockpiles is extraordinarily difficult even under ideal conditions. The IMSBC Code Chapter 4 provides guidance, but proper execution requires a trained team, a detailed sampling plan, heavy machinery such as bulldozers to dig into the cargo, and multiple rounds of sampling as the stockpile is progressively broken down during its transportation. Very few organizations in India currently possess this capability.

The Commercial Pressure

The resumption of exports has created intense commercial pressure. Shippers who have held non-performing assets for over a decade are eager to monetize their cargo. Shipowners and charterers, facing tight freight markets, are reluctant to refuse cargo or delay sailing for additional testing. Surveyors and sampling companies, having survived years of minimal business, face pressure to provide “cargo pass” certificates at the lowest possible cost.

The writer has witnessed this pressure firsthand. Samples are delivered to accredited laboratories and fail testing. Shortly afterward, another sample arrives, purportedly from the same stockpile for the same vessel, and passes. How these samples are drawn, where they are drawn from, and how they are mixed remains unclear. While the laboratory may note that samples were not drawn under their supervision, this disclaimer means little to a master who sees a certificate from a competent authority-approved laboratory and accepts the cargo.

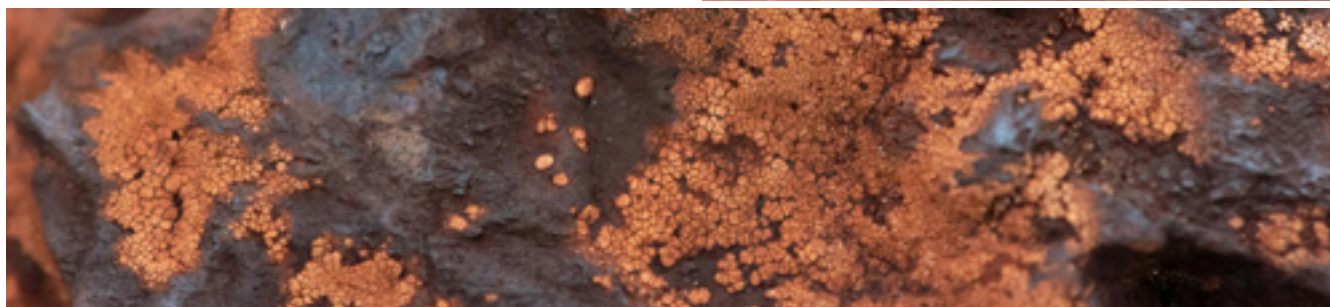
Shippers are appointing surveyors with no experience or competency in iron ore sampling, selecting them purely on cost. Some requests are explicit: provide a certificate that allows the cargo to be loaded, regardless of actual conditions. Surveyors who maintain proper standards risk losing business to competitors willing to provide the desired result.

The Institutional Memory Gap

The officers currently serving in the Competent Authority, in P&I Clubs, and in correspondent organizations have largely changed since 2009. The new generation has studied cargo liquefaction in training courses. Few have seen it occur. Fewer still experienced the landscape as it existed before the 2009 casualties—the commercial pressures, the inadequate testing, the near-misses, and the ultimate tragedies.

This gap in institutional memory is dangerous. Those who witnessed the Black Rose and Asian Forest casualties understood viscerally why proper sampling and testing procedures are non-negotiable. They saw the consequences of cutting corners. They knew that behind every certificate and every test result stood the lives of seafarers who would sail with that cargo.

Today’s decision-makers may lack that direct experience. Commercial considerations have begun to influence survey appointments by clubs and their correspondents. Correspondents, who serve as the clubs’ eyes and ears in port, appear to have forgotten that the best surveyor should be appointed, not the most convenient or least expensive one. Some correspondents have abandoned professional ethics entirely and invested in their own private survey firms, creating direct conflicts of interest. The loss of export volume has meant a loss of commission income, and the temptation to recover that income through cost-cutting or self-dealing has proven difficult to resist.



The Master's Dilemma

Masters face an impossible situation. They arrive at an Indian port to load iron ore fines. The shipper provides certificates from a laboratory approved by the Directorate General of Shipping showing that the cargo's moisture content is below the Transportable Moisture Limit. The certificates appear to comply with IMSBC Code requirements. The master has limited time, limited local knowledge, and immense commercial pressure to load and sail.

How is the master to know that the samples were not drawn properly? How is he to know that the laboratory, while accredited, received samples of unknown origins? How is he to verify that the stockpile from which his cargo will be loaded is the same stockpile that was sampled? How is he to assess whether a stockpile that has sat for twelve years through multiple monsoons is safe to load, when no approved sampling procedure exists for stockpiles over three metres high?

Yes, he has the Can-test to turn to – which at best remains a rudimentary method to determine the fitness of the cargo, and it cannot replace laboratory testing.

The master's authority to refuse unsafe cargo is clear under SOLAS and the IMSBC Code. But exercising that authority requires either clear evidence of danger or strong support from the shipowner and P&I Club. When certificates appear to be in order and commercial pressure is intense, masters often have no practical choice but to load.

This places the master in an untenable position. If the cargo liquefies at sea, the master and crew pay the price. If the master refuses cargo based on reasonable concerns but cannot prove it is unsafe, the shipowner faces claims for delay and breach of charter. The system should protect masters who exercise proper caution. Instead, it often penalizes them.

The Role of P&I Clubs and the IIMS

Protection and Indemnity Clubs have a vital role in preventing casualties. They provide insurance, but more importantly, they provide loss prevention guidance and support to masters facing difficult cargo decisions. Clubs maintain correspondent networks in ports worldwide to provide local expertise and oversight.

However, the effectiveness of this system depends entirely on the quality of correspondents and surveyors appointed. When correspondents prioritize cost over competence, or when they have financial interests in the survey firms they appoint, the system fails. When clubs accept the lowest-cost survey rather than insisting on the best-qualified surveyor, they undermine their own loss prevention objectives.

The International Institute of Marine Surveying (IIMS) has a critical role to play in addressing this problem. As the professional body representing marine surveyors worldwide, the IIMS can establish and maintain lists of qualified experts for critical cargo operations, including iron ore fines sampling and testing. These lists should be made available to the International Group of P&I Clubs, allowing claims handlers to identify and appoint competent surveyors regardless of local commercial pressures.

The IIMS has raised this issue at every forum, conference, and annual general meeting. The organization's leadership, including the current President, has highlighted the dangerous state of affairs in Indian iron ore exports. But awareness alone is insufficient. The IIMS must work with the International Group to create a formal framework ensuring that the best surveyor is appointed for safety-critical operations, not merely the most convenient or least expensive.



What Must Happen Now

The situation is urgent but not yet irreversible. Exports are resuming, but large-scale shipments have not yet commenced. There is a narrow window of opportunity to prevent the next casualty. The following actions must be taken immediately:

For P&I Clubs and the International Group

Establish minimum standards for surveyor appointment on iron ore fines shipments, particularly from Indian ports. Cost must not be the determining factor. Competence, experience, and independence must be verified before appointment.

Prohibit correspondents from appointing their own affiliated survey firms for safety-critical operations. The conflict of interest is obvious and unacceptable.

Require independent pre-loading surveys by qualified surveyors for all iron ore fines shipments from stockpiles that have been inactive for more than one year. The survey must include visual inspection of stockpiles, witnessing of sampling, and independent verification of cargo condition.

Establish standard rates across clubs for specific regions and cargo types to prevent a “race to the bottom” where surveyors compete solely on price. Professional services should be compensated at levels that allow proper execution.

Work with the IIMS to maintain and publish lists of qualified surveyors for iron ore fines operations, making these lists available to all claims handlers and correspondents.

Issue clear guidance to members that masters have full authority to refuse cargo if they have reasonable concerns about safety, and that clubs will support masters who exercise proper professional judgment even if this results in commercial disputes.

For Shipowners and Masters

Do not rely solely on shipper-provided certificates. Appoint independent surveyors to witness sampling and verify cargo condition before loading commences.

Exercise the authority provided under SOLAS and the IMSBC Code to refuse cargo that presents a reasonable safety concern, even if certificates appear to be in order. Document concerns clearly and seek support from the P&I Club.

Conduct can tests on cargo from each barge or stockpile before accepting it aboard. If the can test shows free moisture or cargo instability, stop loading immediately and require additional laboratory testing.

Obtain moisture analysis when approximately 75% of cargo is loaded to verify that conditions have not changed during loading operations.

Avoid loading iron ore fines during or immediately after the monsoon season unless absolutely confident that cargo has been properly protected and tested.

Maintain detailed records of all cargo documentation, sampling procedures, test results, and any concerns raised during loading. These records are essential if a dispute or casualty occurs.

For Shippers

Accept that proper sampling and testing are non-negotiable requirements, not obstacles to trade. The cost is minimal and the alternative is unacceptable.

Engage qualified sampling companies with trained personnel and proper equipment to conduct sampling under approved procedures. Do not select samplers based solely on cost.

Protect stockpiles from weather exposure using effective covering systems. Cargo that has been exposed to multiple monsoon seasons cannot be assumed safe for loading without extensive testing.

Provide complete and accurate information about stockpile history, including age, source, previous handling, and exposure to weather.

Cooperate fully with masters and surveyors who raise legitimate concerns about cargo condition. Commercial considerations must not override safety.

Recognize that providing false or misleading cargo certificates is not merely a commercial matter—it is a criminal act that endangers lives.





The Choice Before Us

We stand at a critical juncture. India's iron ore exports are resuming after years of decline. This presents an economic opportunity. It also presents a safety challenge. The infrastructure, expertise, and vigilance that emerged from the 2009 casualties have eroded. We are returning to the conditions that caused those tragedies.

We have a choice. We can acknowledge this reality and take immediate action to rebuild standards, enforce procedures, and prioritize safety over short-term commercial gain. Or we can proceed as if the past fifteen years of decline have not mattered, as if institutional memory and professional competence can be instantly restored, as if proper sampling and testing are optional luxuries rather than essential safeguards.

If we choose the latter path, we will face another casualty. It is not a question of if, but when. Another vessel will capsize. More crew members will die. There will be investigations, reports, and recommendations. Regulators will implement new requirements. The industry will pledge to do better. And the cycle will repeat.

We have been here before. We know what happens when sampling and testing standards erode. We know the cost in lives and vessels. We know the regulatory and commercial disruption that follows a major casualty. We have no excuse for allowing history to repeat itself.

The question is simple: Will we act now, or will we wait for the next casualty to force our hand?

The answer should be equally simple. But it requires commitment from every stakeholder—regulators, clubs, surveyors, shipowners, masters, and shippers. It requires prioritizing long-term safety over short-term profit. It requires professional integrity over commercial convenience. It requires remembering the lessons of 2009 and ensuring they are not forgotten again.

The lives of seafarers depend on our choice. We must choose wisely, and we must choose now.



About the Author

Capt Ruchin C Dayal is the President of the International Institute of Marine Surveying, founder of eDOT Marine Laboratory, with extensive experience in iron ore fines sampling and testing, having witnessed the evolution of standards and practices over the past twenty years.



Promoting excellence in
professional maritime standards

The purpose of the **Maritime Professional Council of the UK** is:

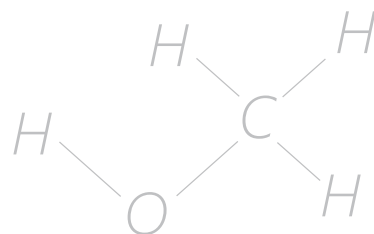
- To promote the professionalism and esteem within the British Merchant Navy and to those organisations directly concerned with the sector.
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- To provide independent expert advice and guidance based on our combined professional knowledge and experience unhindered by any financial or commercial interests.
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THE METHANOL MOMENT IS NOW



How
alternative
fuels are redefining
the future of yachting



As the marine industry faces growing pressure to decarbonise, methanol is beginning to emerge as a realistic, scalable solution, bridging today's technology with tomorrow's zero-carbon ambitions.

From container ships to superyachts, the industry accounts for nearly 3% of global greenhouse gas emissions. Regulators are tightening standards, consumers are demanding cleaner alternatives, and the window for action is narrowing. For decades, diesel has dominated, but its reign is ending.

A fuel once overlooked, methanol is now surging to the forefront of the decarbonisation debate. Its appeal lies in practical versatility of cleaner combustion, relative safety and ease of storage, and renewable production potential. Recent UK consortium funding for a methanol range-extension project signals that innovation is accelerating from theory to reality.

The decarbonisation challenge

International shipping produces nearly one billion tonnes of CO₂ annually. Beyond carbon dioxide, pollutants such as nitrogen oxides, sulphur compounds, and particulate matter contribute to air pollution, while some of them also play a role in ocean acidification, leading to far-reaching consequences.

The International Maritime Organisation has mandated a forty percent reduction in carbon intensity by 2030 and a fifty percent reduction in total emissions by 2050, both compared to 2008 levels. Upcoming regulations may impose carbon pricing and emission standards that make business-as-usual untenable. Even luxury yacht markets, once insulated from scrutiny, now face pressure.

As a result, high-net-worth individuals are increasingly demanding vessels that reflect their values that sustainability credentials matter as much as performance. Marinas and ports are also introducing green berth incentives and, in some cases, restricting high-emission vessels.

Despite this, diesel remains entrenched in the industry. Its energy density, established infrastructure, and proven reliability have made it the default choice. But beyond emissions, diesel carries a reputational burden. Plumes of black smoke and visible environmental impact have become increasingly

difficult to justify in an era of heightened ecological awareness.

Methanol's rising star

Methanol's credentials are compelling. Liquid at room temperature and traded globally for decades as an industrial feedstock, it offers infrastructure familiarity that reduces adoption barriers.

What distinguishes methanol is its production pathway. While conventional methanol derives from natural gas, renewable e-methanol can be synthesised from captured CO₂ and green hydrogen produced via electrolysis powered by renewable energy. This circular approach means combustion CO₂ emissions are balanced by the CO₂ captured during production, achieving net-zero emissions over the full lifecycle. As renewable energy costs fall, e-methanol economics improve, making it genuinely scalable.

Methanol also delivers tangible combustion benefits: significantly lower nitrogen oxide and particulate emissions than diesel, zero sulphur emissions, and carbon dioxide reductions of up to fifteen percent even with fossil-derived methanol, approaching zero with renewable variants.

Crucially, methanol integrates with existing engine technologies. Modified internal combustion engines can run on methanol with minor adjustments, avoiding wholesale redesigns. It also

works with fuel cells, where methanol reforms into hydrogen onboard, enabling zero-emission propulsion without pure hydrogen's storage challenges.

All alternative fuels come with drawbacks, especially for the leisure yachting industry:

- Hydrogen requires storage at minus 253°C or extreme pressure, creating unsuitable safety and space challenges for leisure vessels.
- Ammonia is highly toxic and corrosive, presenting risks difficult to mitigate in confined yacht spaces.
- Battery-electric propulsion remains hobbled by limited range and lengthy charging times.
- LNG, once a transitional fuel, is losing favour as methane leakage undermines climate credentials, and it remains a fossil fuel.
- Bio-diesel and synthetic diesel face feedstock availability and lifecycle emission questions, alongside potential storage challenges at low temperatures.

Methanol strikes a pragmatic balance: safe, scalable, available now, with a clear pathway to full decarbonisation as production matures.

Commercial shipping has taken notice, with Maersk now committing to methanol dual-fuelled vessels, with multiple containerships operational or under construction. This trickle-down effect is reaching the leisure market, where yacht builders explore how methanol technologies proven at commercial scale can adapt for private and charter vessels.





Technical and operational hurdles

Despite its promise, methanol faces its own challenge, with renewable e-methanol remaining in limited production. Scaling requires substantial investment in renewable energy, carbon capture, and electrolyser facilities. Equally bio-methanol, where breakdown of organic matter produces methane gas which can be converted to methanol, is in its infancy. Both of these current “green” methanol prices are several times higher than fossil methanol, though costs are expected to fall.

Safety and regulatory frameworks also present various hurdles. Methanol is toxic if ingested and mildly corrosive, requiring robust handling procedures. Certification bodies are still developing comprehensive standards for methanol-fuelled vessels, particularly in leisure markets. Without clear guidelines, uncertainty slows adoption.

Infrastructure is perhaps the most immediate constraint. Methanol refuelling facilities are sparse outside industrial ports, and leisure marinas

lack incentive to invest without critical mass. This creates a chicken-and-egg problem: owners hesitate without convenient refuelling, while operators won’t install infrastructure without guaranteed demand.

Integrating methanol systems within yacht confines also presents engineering challenges. Methanol has roughly half diesel’s energy density, requiring larger tanks for equivalent range. This impacts weight distribution, storage, and interior layout; trade-offs requiring careful management to preserve performance and comfort.

Government support is critical, with programmes like Innovate UK’s funding help de-risk early development, enabling prototyping that would otherwise be financially prohibitive. Grants, incentives, and regulatory frameworks favouring low-carbon fuels can accelerate adoption.

From commercial to leisure

The leap from commercial vessels to leisure yachts requires translating industrial robustness into elegance and comfort. Technologies proven in harsh commercial environments

must be refined and integrated where aesthetics and user experience are paramount.

The Archipelago zero.63 exemplifies this evolution. Designed as a methanol-hydrogen hybrid, it combines parallel hybrid propulsion with onboard reformers and fuel cells alongside a methanol combustion engine, enabling long-range, zero-carbon cruising.

The vessel’s design is centred on flexibility and resilience. The methanol engine provides reliable propulsion and range extension, while fuel cells offer silent, emission-free operation for coastal cruising and harbour manoeuvring. Reformers convert methanol into hydrogen on demand, eliminating high-pressure storage needs, an elegant solution prioritising practicality without sacrificing ambition.

Dr Stephen Weatherley, CEO of Archipelago Yachts, describes it as a proving ground. “We’re demonstrating what’s possible when you combine existing technologies innovatively. Methanol gives us the range and reliability clients expect,

while the hybrid architecture allows zero emissions when it matters most.”

The original Archipelago zero.63 vessel was designed in collaboration with Chartwell Marine. Managing Director of Chartwell, Andy Page, added; “The route away from the industry’s reliance on diesel is still unclear. Innovative leisure vessels, such as the zero.63, can pave the way for the de-risking commercial uptake of alternative fuels. Chartwell Marine is involved in a number of methanol projects across leisure and commercial and we are increasingly seeing customer demand for lower-carbon vessels across the industry.”

A blueprint for change

Methanol’s value lies in being a bridge; practical enough to deploy today, while offering a clear pathway to full decarbonisation as renewable production scales. This dual character suits an industry in transition.

For yacht builders, methanol represents a differentiation opportunity. As regulations tighten and preferences shift, early adopters gain competitive advantage. Collaborations such as the work between Archipelago Yachts and Chartwell Marine are proving essential, combining expertise to cut risk and bring solutions to market faster. Ports and marinas

must evolve in tandem. Installing methanol infrastructure requires investment but positions facilities as leaders in the green transition. Government initiatives like Innovate UK’s Transport Vision 2050 explicitly support alternative fuel infrastructure development.

Demonstration vessels are essential for building confidence in new maritime technologies. Projects like the Methanol Pathfinder UK provide empirical data on performance, reliability, and emissions that inform both regulatory frameworks and commercial decisions. Each successful voyage strengthens the case for wider adoption.

The road ahead

Methanol’s journey is accelerating, but mainstream adoption requires coordinated action: expanding production, building infrastructure, refining safety standards, and demonstrating real-world performance.

The yachting sector has an opportunity to rewrite its narrative. By embracing methanol and sustainable technologies, the industry can position itself as a leader where innovation and environmental stewardship coexist, where luxury is redefined not by conspicuous consumption but by responsible excellence.

ARCHIPELAGO

About Archipelago Yachts

Building and offering yachts that are understated, look and feel unlike anything else on the market, yet perform in any condition was a lifelong ambition for the creator of Archipelago Expedition Yachts.

Dr Stephen Weatherley, the son of a British engineer, has spent his life around sailing boats, fishing vessels and pleasure craft. He inspired the birth of a company steeped in British engineering excellence, focusing on every single detail of the yacht’s performance and design, interior outfit and overall look.

Stephen wanted more from boating: more adventure, more space, more exciting design, more sustainability, and more accessibility for those who are less able to access the traditional yachting market. He wanted to share all this with other adventurers, and so Archipelago was born. For more information visit www.archipelago-yachts.co.uk



Key info and guidance issued to avoid collisions with fishing vessels in China



Huatai Marine has conducted an analysis of collision accidents between merchant vessels and fishing vessels in China's coastal waters, examining their patterns, underlying causes, and providing targeted recommendations.

According to Huatai Marine, collisions between merchant and fishing vessels have become a prominent safety risk in maritime transportation. Such accidents not only tend to cause severe casualties and property losses but also pose potential threats to the marine environment. In recent years, although the number of such collision accidents in China's coastal waters has shown a yearly downward trend, the casualty rate per accident remains notably high. With this in mind, Huatai provides the following key info for operators to keep in mind.

High-risk areas for merchant vessel–fishing vessel collisions are mainly concentrated in the following water types:

- Areas where customary routes of merchant vessels overlap with fishing grounds.
- Port anchorages and approach/departure channels.
- Waters with concentrated fishing activities during fishing seasons.
- Inshore waters with complex ocean currents and tides.
- Temporal patterns of accidents

The high-risk period for such accidents is typically before the summer fishing ban (April–June) and after the ban is lifted (September–November) each year. During these periods, intensive fishing vessel operations lead to a sharp increase in maritime traffic density in coastal waters, thereby significantly raising collision risks.

Accident investigation results have found that the vast majority of collisions occurred at night, particularly between 23:00 and 04:00 the next day.

Vessel types involved

Container ships and bulk carriers are the primary vessel types involved in such collisions. These vessels typically sail at high speeds and have significant inertia, resulting in shorter collision avoidance response times and severe damage to fishing vessels.

Trawlers and purse seiners account for the highest proportion of accidents. Trawlers have a wide range of extended fishing gear, while purse seiners operate in dense groups. These characteristics significantly elevate the likelihood of collisions with merchant vessels.

Analysis of causes of collision accidents between merchant vessels and fishing vessels in China's coastal waters

Investigation and analysis indicate that in most cases, both merchant and fishing vessels bear varying degrees of responsibility for the occurrence of such accidents. There are several factors that cause the accidents and may involve aspects such as vessel manoeuvre, safety awareness, environmental backgrounds, and equipment operated on both sides.

Merchant vessel aspects

1 Improper and inadequate look-out

Some officers on watch (OOW) fail to properly perform look-out duties, e.g., over-relying on navigation equipment like Radar, ECDIS, AIS, whilst neglecting the importance of visual look-out. Furthermore, in nighttime, or restricted visibility conditions, the bridge may fail to maintain sufficient lookout personnel as appropriate to the prevailing circumstances and conditions, resulting in a failure to detect fishing vessels at an early stage.

2 Insufficient risk anticipation

The actual density of fishing vessels during specific periods in China's coastal waters often exceeds the OOW's expectations of the traffic environment. This scenario often causes OOWs to fail to develop adequate response plans to address potential risks and dynamic changes in the navigational environment, including:

- Failure to plan routes in advance to avoid dense fishing areas.
- Failure to prepare the vessel in all aspects for immediate manoeuvring.
- Failure to promptly call the master to the bridge for supervision and support when circumstances so demanded.

3 Inappropriate collision avoidance manoeuvres

Failing to take collision avoidance actions in ample time to keep well clear of fishing vessels in accordance with the International Regulations for Preventing Collisions at Sea (COLREGS). Accident investigations have shown that some OOWs tend to take action only when approaching fishing vessels at close range, leaving inadequate time for decision-making or leading to hasty judgments and unsatisfactory outcomes.

Some merchant vessels adopt a succession of small course alterations and/or speed adjustments, particularly via autopilot, after determining collision risk. These practices may cause fishing vessels to misjudge intentions and result in collisions due to uncoordinated actions.

Upon entering waters with concentrated fishing vessels, available manoeuvring space for merchant vessels is extremely limited, making effective collision avoidance difficult. Even when taking actions with utmost endeavour, maintaining a safe distance from fishing vessels (and their gear) is challenging. The high density of fishing vessels significantly narrows the margin of error for emergency actions, escalating collision risk.

4 Navigation equipment issues

Due to smaller size and limited radar cross-section, fishing vessels can be difficult to detect effectively on radar, particularly in rough seas. Traditional merchant vessel radar also struggles to distinguish nets from sea clutter, leading to visual detection only at close range. Over-reliance on AIS data while neglecting radar plotting can result in poor situational awareness. If AIS data are incorrect due to malfunction or interference, inappropriate decisions may follow.

Excessive AIS signals from fishing gear beacons can flood radar screens, impairing OOWs' ability to identify collision risks.

Fishing vessel aspects

Many fishing vessel accidents stem from poor safety practices and insufficient navigation awareness. Bridge watchkeepers often leave their posts to focus on fishing, compromising lookout duties. Safety awareness is weak: fishing in risky areas, crossing close ahead of merchant ships, and making sudden manoeuvres raise collision



risks. Non-compliance with COLREGS, such as failing to display proper lights or shapes, worsens visibility and identification issues.

Additionally, inadequate knowledge of navigation rules and merchant vessel behaviour leads to delayed or incorrect collision avoidance. Limited or improperly used communication and navigation equipment, often turned off to save fuel, further reduces situational awareness and communication, significantly increasing the risk of collisions.

Other contributing factors

Environmental factors

- Judgment and reaction are impaired by severe weather such as typhoons, cold waves, and fog.
- Following the lifting of the summer fishing ban, many fishing vessels return to sea, increasing traffic density and encounter complexity.

Nighttime impacts

- Intense operational lights on fishing vessels may prevent timely detection by merchant vessels and impair risk assessment.
- Fatigue among night watchkeepers reduces concentration and responsiveness.

Communication

- Language barriers and terminology differences may hinder effective communication and exchange of collision-avoidance intentions.



Key preventive measures

- The Guideline for the Prevention of Collisions between Merchant Vessels and Fishing Vessels in Coastal Waters of China issued by China MSA provides comprehensive safety standards and risk prevention guidelines. Bridge teams should familiarize themselves with it and adopt the recommended practices.
- In 2023, China MSA identified 38 high-risk areas (e.g., Bohai Bay, Zhoushan Fishing Ground, Pearl River Estuary). Before entering these areas, merchant vessels should review their locations, plot them on charts, and, where possible, detour around them. If unavoidable, maintain heightened vigilance and caution.
- Regional MSAs may require ship agents to distribute these documents to vessels and obtain signed acknowledgments from masters.
- Prioritize using public routes published by China MSA when planning coastal routes.
- Before entering China's coastal waters, ensure:
 - OOWs understand vessel manoeuvring characteristics and bridge blind sectors.
 - Key equipment (steering, signals, lights, etc.) has been functionally tested and is in good order.
- When approaching dense fishing areas, prepare the engine, engage manual steering, and proceed at a safe speed allowing ample assessment time.
- Upon entering fishing areas, the Master should assess factors such as OOW experience, vessel density, and conditions to decide on additional lookouts or taking command personally. Use radar of different frequency bands, combine visual and AIS assessments to monitor fishing vessels and evaluate collision risks.
- When a collision risk arises, make substantial course/speed changes in ample time, supported by sound/light signals, to pass clear of the fishing vessel and its gear. Communicate via VHF if necessary. Timely and effective communication reduces collision risk.
- If the propeller becomes entangled by fishing gear, stop the main engine immediately to prevent further loss.
- Understand fishing vessel operations, radar characteristics, and avoidance points to act effectively in critical situations.
- Pay special attention to fishing vessels not engaged in fishing or using gear not restricting manoeuvrability:
- Such vessels are "power-driven vessels" under COLREGS. Merchant vessels are not always obliged to give way but should exercise prudence considering visibility, encounter situations, and manoeuvring capability. Given fishing vessel crews limited COLREGS awareness, merchant vessels should act proactively when necessary.
- Maintain vigilance regarding unpredictable manoeuvres, such as stopping suddenly to deploy nets or altering course abruptly. Familiarity with fishing vessel patterns aids anticipation and avoidance.

The dry dock danger zone: Why a shipyard safety plan must be bulletproof



Shipyards are singular industrial environments, combining the hazards of heavy construction, manufacturing, and complex marine operations into one sprawling, high-stakes location. For any vessel owner, operator, or contractor, the yard represents a necessary but incredibly risky location. The complex nature of repair, maintenance, and construction, often conducted under tight deadlines, elevates the potential for catastrophic accidents.

A shipyard is a constantly evolving workspace. One moment, a section of the hull is being pre-fabricated in a clean workshop; the next, it is being hoisted by cranes over active work zones to be welded into place many meters above the dry dock floor. This dynamic, multi-hazard environment necessitates a safety culture that is not merely compliant, but proactively rigorous.



The Core Dangers of the Shipyard

The potential dangers within a working shipyard are layered and severe. Recognizing these primary hazards underscores the urgent need for comprehensive safety controls:

1. Working at Height and Heavy Lifting

The scale of shipbuilding and repair means that workers are frequently operating high above the ground on temporary scaffolding, gangways, or vessel decks. Falls from height remain one of the leading causes of fatality and serious injury. Simultaneously, the routine use of massive gantry cranes and mobile lifting equipment to move multi-ton blocks or machinery introduces severe risk of crushing injuries, structural collapse, and dropped objects. Proper rigging, competent personnel, and inspected equipment are non-negotiable.

2. Confined Spaces and Atmospheric Hazards

Vessels are labyrinthine structures defined by tanks, voids, and cargo holds. Entering these confined spaces carries the immediate risk of oxygen depletion, engulfment, or exposure to toxic, explosive, or flammable gases that may have accumulated. Strict Permit-to-Work (PTW) systems, atmospheric testing, and continuous ventilation are essential to save lives.

3. Hot Work and Fire

Hot work - including welding, cutting, grinding, and burning - is constant in a shipyard. This activity creates immediate ignition sources near flammable materials, lubricants, and fuel residue on the vessel, particularly within the engine room or on tankers. The complexity of the vessel structure means fires can spread rapidly and be difficult to access, making robust fire watches, hot work permits, and isolation protocols mandatory.

4. Simultaneous Operations (SIMOPS)

Perhaps the most complex hazard is SIMOPS, where multiple independent activities occur in the same area. For example, a crane lift might be happening over a scaffolding crew while hot work is ongoing inside a tank nearby. The risk of one activity negatively impacting another - like a falling object from a lift injuring a welder - is extreme. Effective coordination, communication, and clear demarcation of work zones are critical for mitigating SIMOPS hazards.

The Necessity of a Strong Safety Framework

A robust safety framework is not an administrative burden; it is the fundamental mechanism for protecting personnel, assets, and schedule integrity. When an accident occurs, the direct costs of medical care, equipment damage, and investigation are quickly overshadowed by the indirect costs of work stoppage, project delays, legal liability, and irreparable reputational damage.

The goal of a strong safety system is to establish a shared, non-negotiable standard that spans the entire project - from the shipyard's native staff to the vessel owner's team and every third-party subcontractor. This includes:

- Clear lines of responsibility.
- The use of formalized tools like Risk Assessments and Lock Out/Tag Out (LOTO) procedures.
- Empowering every individual with Stop Work Authority (SWA).

A mature safety program ensures that risks are identified, communicated, and controlled before work begins, not after an incident occurs.

Introducing Guidance for Safer Operations

Recognizing the criticality of aligning safety standards between vessel operators and shipyards, the International Marine Contractors Association (IMCA) has developed a comprehensive resource.

To assist vessel owners and contractors in navigating these complex, high-risk environments, IMCA has published the *Guidance on Safety in Shipyards* (IMCA HSS032, M221 - Rev. 2). This document serves as an indispensable tool, providing a structured, phased approach to safety management from initial planning and auditing through to operational execution and final project closeout. It offers practical checklists and procedures to help companies establish a unified safety standard, bridge documentation requirements, and ultimately ensure a safe and successful project delivery.

Download the guidance:
Guidance on safety in Shipyards



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Backflush filter failures could cause engine damage

Photo credit: Gard



Automatic backflush filters are intended to safeguard engines by maintaining clean fuel and lubricating oil, however, Gard Club highlighted that recent claims indicate that when they malfunction, they can instead become a significant cause of engine damage.

Automatic backflush filters are widely used in fuel and lubricating oil systems to continuously remove contaminants using fine wire mesh candles. Unlike traditional filters, they clean themselves through a pressure-triggered backflush process that allows uninterrupted engine operation by switching between filter chambers.

However, failures have been reported to Gard Club where the fine mesh disintegrates during use, allowing metal fragments to enter the lubrication system and cause severe damage to engine bearings.

Differential pressure concerns

Pressure-triggered rinsing cycles are an inherent risk. If the filter candle mesh start disintegrating, the mesh becomes riddled with holes. With enough ruptures, the differential pressure drops, as the oil will follow the easiest route through the mesh. This will lead to a free flow through the housing, with oil potentially carrying wire mesh parts directly into the engine.

The damage

The small wires of the mesh break off and can travel through the entire lubrication system, causing severe damage. This damage will be primarily located on bearing surfaces on camshafts and crankshafts. This will in turn create severe surface deterioration and breakdown that can damage the engine even further and lead to dangerous situations. Replacement of main bearings and even the crankshaft itself can be very expensive and time consuming.

How to avoid serious incidents

Depending on the make and type of the filters, maintenance requirements will differ. In the matters seen by Gard, disintegration is either due to mechanical damages from rough handling by the crew or old candles having suffered excessive rinsing cycles and use beyond the expected lifetime.

The lifetime is determined by shelf-life storage conditions, rinsing cycles and handling, the Club highlights.

Gard recommendations

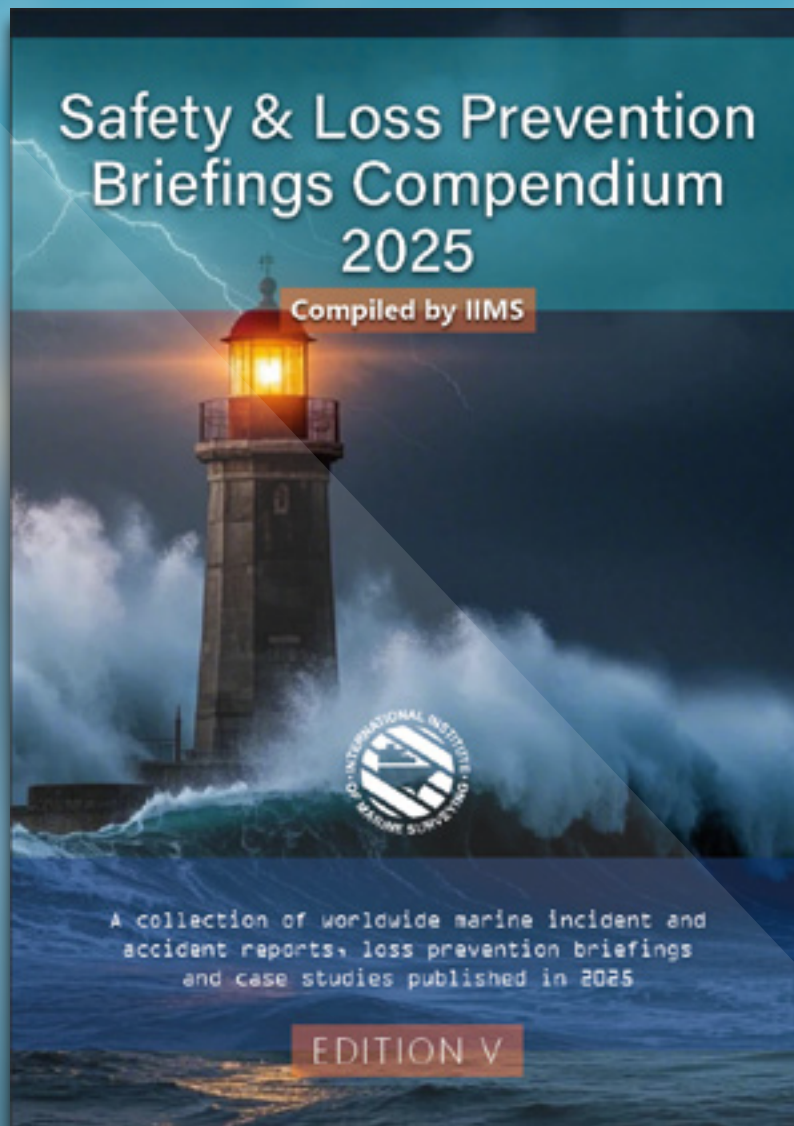
To maintain backflush filters and prevent damage due to deterioration:

- Ensure the correct manual and procedures for the actual filter system installed are available onboard the vessel and that the crew have been adequately familiarised and trained.
- To ensure safe operation of the backflush filters, procedures on manual handling adherent to makers' recommendations should be in place, together with clear procedures on when filters are to be taken out of use due to damage and risk of failure.
- The engine crew should be trained to spot even minor damage to the candles. Training on how to handle the filters with care during cleaning is vital. We recommend having cleaning tools onboard like an ultrasonic cleaner unit or cleaning gun which blows horizontally onboard,
- If not already installed, a strainer or in-line filter should be installed after the backflush filter to ensure debris from candle disintegration is captured before it contaminates the oil system.
- Use OEM parts. If in doubt, contact your filter manufacturer for advice.



Read the full advice, including how to avoid serious incidents: **Gard – Beware of backflush filter failures**

THE 2025 COMPENDIUM IS
available for download



<https://bit.ly/4pKqd5n>

OR VIEW PAST COMPENDIUMS AT
<https://www.iims.org.uk/safety-briefings-compendium/>



Dangerous goods quick reference guides

IIMS is indebted to TT Club and their team for producing an information and easy to read series of handy dangerous goods quick reference guides, which we are delighted to publish and share.

Dangerous goods quick reference guide - Class 1: Explosive substances and articles

Class 1 dangerous goods include explosive substances and articles that pose risks such as property damage, cargo damage, injury, environmental harm, insurance invalidation, and potential criminal prosecution.

Explosives are divided into six divisions under ADR guidelines:

- 1.1: Mass explosion hazard (e.g., TNT, dynamite, RDX).
- 1.2: Projection hazard without mass explosion (e.g., large fireworks, munitions).
- 1.3: Fire hazard with minor blast/projection hazard (e.g., rocket propellant).
- 1.4: No significant hazard (e.g., consumer fireworks, airbags).
- 1.5: Very insensitive substances with mass explosion hazard (e.g., blasting agents).
- 1.6: Extremely insensitive articles with no mass explosion hazard.

Key Handling Guidelines:

- Packing: Use correct, protective, watertight packaging; avoid plastic that generates static or packaging that creates internal pressure.
- Storing: Store separately from incompatible items; avoid stairways/emergency exits; follow documented procedures.
- Transporting: Ensure security provisions, proper training, and compliance with CTU Code; never transport with reactive cargo or military equipment enabled.

Handling: Never throw, drop, or expose to adverse weather; maintain emergency response plans; communicate clearly across the supply chain.



Dangerous goods quick reference guide - Class 2: Gases

Gases are divided into three divisions:

- 2.1: Flammable Gases: Ignite in air or contribute to fire; sensitive to temperature changes. Examples: Acetylene, butane, propane, LPG, hydrogen, aerosols.
- 2.2: Non-Flammable, Non-Toxic Gases: Can cause asphyxiation, oxidization, or explode under pressure. Examples: Carbon dioxide, helium, nitrogen, oxygen, argon.
- 2.3: Toxic Gases: Harmful or fatal if inhaled. Examples: Chlorine, fluorine, methyl bromide, hydrogen fluoride, sulphur dioxide.

Key Handling Guidelines:

- Packing: Use tanks/cylinders per manufacturer's instructions; never use damaged or overfilled containers; do not repackage without expert advice.
- Storing: Store in well-ventilated, temperature-controlled areas; keep away from heat sources; use leak detectors; inspect regularly; train staff in emergency response.
- Transporting: Ensure ventilation during transport; secure tanks/cylinders tightly; avoid ignition sources near flammable gases; have a security plan for high-consequence cargo; comply with CTU Code.

Handling:

Never throw, drop, or drag cargo; maintain emergency response plans; communicate clearly across the supply chain.



TTV Dangerous Goods

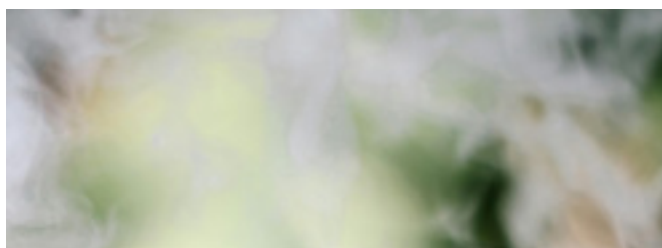
Class 2: Gases

Rules:

- Prohibited
- Prohibited
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- Prohibited

Which cargoes fall under the Class?

Label	Class 2 division	Examples
	DIVISION 2.1 Flammable gases – can ignite in air or contribute to burning. They are usually not soluble in liquid and are not toxic.	Acetylene, propane, oxygen gas, liquefied petroleum gas, hydrogen, helium, carbon dioxide, nitrogen, argon, and other gases.
	DIVISION 2.2 Non-flammable, non-toxic gases – if exposed to air, they may contribute to burning, but they are not toxic.	Carbon dioxide, helium, nitrogen, argon, and other gases.
	DIVISION 2.3 Toxic gases – can cause serious injury or death to humans or animals if inhaled.	Chlorine, fluorine, methyl bromide, hydrogen fluoride, sulphur dioxide, and other gases.



Dangerous goods quick reference guide - Class 3: Flammable liquids

Class 3 dangerous goods include flammable liquids that pose risks such as property damage, cargo damage, injury, environmental harm, insurance invalidation, and potential criminal prosecution.

Common Types & Examples:

Alcohol-based products: Methanol, Ethanol.

Fuels: Petrol, Gasoline, Kerosene, Diesel.

Industrial products: Adhesives, Paints, Turpentine, Printing inks, Varnishes, Perfumery products.

Solvents: Methyl ethyl ketone (MEK), Acetone.

Flammable liquids are grouped into Packing Groups I, II, III based on boiling and flash points. Some cargoes (e.g., paint) can fall into multiple groups.

Key Handling Guidelines:

- Packing: Use only approved tanks/packaging; avoid damaged or contaminated containers; never overfill; keep spill management equipment nearby; control ignition sources.
- Storing: Store in well-ventilated, temperature-controlled areas; away from heat and ignition sources; close to ground; inspect regularly; train staff in emergency response; alert DG competent person if issues arise.
- Transporting: Segregate from other cargoes; follow manufacturer's instructions; secure containers; comply with CTU Code; avoid ignition sources; obtain permissions for public/built-up areas.



TTV Dangerous Goods

Class 3: Flammable liquids

Rules:

- Prohibited
- Prohibited
- Prohibited
- Prohibited
- Prohibited
- Prohibited
- Prohibited

Which cargoes fall under the Class?

Label	Class 3 common types	Examples
	Neutral liquid products	Various alcohols
	Fuels	Petrol, Gasoline, Kerosene, Diesel
	Other industrial products	Adhesives, Paints, Turpentine, Printing inks, Varnishes, Perfumery products
	Solvents	Methyl ethyl ketone (MEK), Acetone

Flammable liquids are grouped into packing groups I, II, and III based on their boiling and flash points. Some cargoes can be allocated to more than one packing group. For example, petrol can be allocated to packing group I or II.

Handling:

Never expose to extreme temperatures; never throw, drop, or drag cargo; maintain emergency response plans; communicate clearly across the supply chain.

Dangerous goods quick reference - Class 4: Flammable substances

Class 4 dangerous goods include flammable solids and substances that can ignite spontaneously or emit flammable gases when in contact with water. These pose risks such as property damage, cargo damage, injury, environmental harm, insurance invalidation, and potential criminal prosecution.

Classification & Examples:

- 4.1: Flammable Solids: Self-reactive, polymerising substances, and solid desensitised explosives. Examples: Aluminium powder, matches, sulphur, fire lighters, activated charcoal.
- 4.2: Spontaneously Combustible Substances: Liable to ignite without external ignition. Examples: Phosphorus, sodium sulphide, fishmeal, carbon, oily cotton waste.
- 4.3: Dangerous When Wet: Emit flammable gases when in contact with water. Examples: Calcium carbide, sodium, potassium.

Key Handling Guidelines:

- Packing: Use only approved packaging; airtight for 4.2, watertight for 4.3; never repackage without expert advice.
- Storing: Store in well-ventilated, temperature-controlled areas; away from heat, ignition sources, and (for 4.3) water; inspect regularly; train staff in emergency response; alert DG competent person if issues arise.
- Transporting: Keep risk assessments updated; secure cargo; use temperature-controlled units for self-reactive substances; comply with CTU Code; never allow ignition sources near cargo.

Handling: Never expose to extreme temperatures; never throw, drop, or drag cargo; maintain emergency response plans; communicate clearly across the supply chain.

Class 4: Flammable substances

Label	Class 4 definition	Examples
4.1	Class 4.1: Flammable solids, self-reactive and polymerising substances and solid desensitised explosives	Aluminium powder, matches, sulphur, fire lighters, activated charcoal
4.2	Class 4.2: Spontaneously combustible	Phosphorus, sodium sulphide, fishmeal, carbon, oily cotton waste
4.3	Class 4.3: Dangerous when wet, in contact with water, emit flammable gases	Calcium carbide, sodium, potassium



Dangerous goods - quick reference guide - Class 5: Oxidising substances and organic peroxides

Class 5 dangerous goods include oxidising substances and organic peroxides that can intensify combustion or react dangerously. They pose risks such as property damage, cargo damage, injury, environmental harm, insurance invalidation, and potential criminal prosecution.

Classification & Examples:

- 5.1: Oxidising Substances: Not combustible but emit oxygen, increasing fire risk. Examples: Hydrogen peroxide, potassium chlorate, ammonium nitrate fertilisers, pool cleaning chemicals.
- 5.2: Organic Peroxides: Thermally unstable, generate heat, and can polymerise. Examples: Dibenzoyl peroxide, tert-butyl hydroperoxide.

Some Class 5.2 products have a Self-Accelerating Decomposition Temperature (SADT) and may require temperature-controlled transport (e.g., insulated or refrigerated vehicles).

Key Handling Guidelines:

- Packing: Use only approved packaging; never repackage without expert advice; avoid damaged containers.
- Storing: Store in well-ventilated, temperature-controlled areas; away from heat, ignition sources, and incompatible cargo (e.g., Class 1 explosives, Class 3 flammable liquids, Class 8 corrosives); inspect regularly; train staff in emergency response.
- Transporting: Keep risk assessments updated; segregate from reactive cargo; secure loads; comply with CTU Code; never allow ignition sources near cargo; have a security plan for high-consequence loads.

Handling: Never expose to temperature deviations; never throw, drop, or drag cargo; maintain emergency response plans; communicate clearly across the supply chain.

Class 5: Oxidising substances and organic peroxides

Label	Class 5 definition	Examples
5.1	Class 5.1: Oxidising substances - not combustible but may, with oxygen and heat, contribute to combustion of nearby combustible materials	Hydrogen peroxide, potassium chlorate, ammonium nitrate, fertilisers, pool cleaning chemicals
5.2	Class 5.2: Organic peroxides - generate heat and may polymerise, are thermally unstable and can be highly reactive	Dibenzoyl peroxide, tert-butyl hydroperoxide

Note: Class 5.2 products may have a self-accelerating decomposition temperature (SADT). These products may require temperature-controlled transport and ventilation in refrigerated vehicles.

Dangerous goods quick reference guide - Class 6: Toxic substances and infectious substances

Class 6 dangerous goods include substances that are toxic or infectious, posing severe risks such as property damage, cargo damage, injury, environmental harm, insurance invalidation, and potential criminal prosecution.

Classification & Examples:

- 6.1: Toxic Substances: Cause serious or fatal injury if inhaled, swallowed, or in contact with skin. Examples: Cyanide, cadmium, arsenic, lead.
- 6.2: Infectious Substances: Contain pathogens that can harm the host. Examples: Ebola, clinical waste, Lassa fever, HIV/AIDS.

Key Handling Guidelines:

- Packing: Use only approved packaging; secure cargo to prevent movement; never repack without expert advice; avoid damaged containers.
- Storing: Use secure facilities; keep away from heat, ignition sources, and incompatible cargo; inspect regularly; train staff in emergency response; alert DG competent person if issues arise.
- Transporting: Ensure proper segregation; avoid ignition sources for cargo with subsidiary flammable hazards; comply with CTU Code; obtain permissions for public/built-up areas; secure cargo during transport.

Handling: Never expose to extreme temperatures; never throw, drop, or drag cargo; maintain emergency response plans; communicate clearly across the supply chain.

TTV Dangerous Goods		
Class 6: Toxic substances and infectious substances		
Risks		
Which cargoes fall under this Class?		
Label	Class 6 division	Examples
	Class 6.1 Toxic substances that cause serious or fatal health effects, including or without delay.	Cyanide, cadmium, arsenic, lead
	Class 6.2 Infectious substances likely to contain pathogens, requiring appropriate containment measures.	Ebola, clinical waste, Lassa fever, HIV/AIDS



Dangerous goods quick reference guide - Class 7: Radioactive Material

Definition:

Materials containing radionuclides where activity concentration and total activity exceed specified thresholds.

Classification:

No divisions or packing groups exist; instead, they are categorized into three categories based on maximum radiation dose exposure.

Key Handling Guidelines:

- Packing: Adhere to manufacturer instructions; never use damaged or overfilled containers.
- Storing/Transporting: Ensure proper ventilation, security, and regular inspection.
- Compliance: Follow the latest IMDG Code amendments (e.g., Amendment 42-24, effective 1 January 2026).



Dangerous goods quick reference guide - Class 8: Corrosive substances

Class 8 dangerous goods include corrosive substances that chemically damage living tissue and metals. They can react violently, produce heat and gases when mixed with other substances or exposed to temperature deviations. Risks include property damage, cargo damage, injury, environmental harm, insurance invalidation, and potential criminal prosecution.

Examples:

Acids: Sulfuric acid, Hydrochloric acid, Oleum (fuming sulfuric acid), Nitric acid, Hydrofluoric acid.

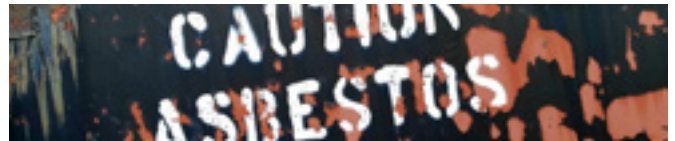
Alkalis/Bases: Caustic potash (Potassium hydroxide), Caustic soda (Sodium hydroxide), Ammonia anhydrous, some drain cleaners, some bleaches.

Classification is influenced by chemistry (organic/inorganic) and state (liquid/solid).

Key Handling Guidelines:

- Packing: Use only approved containers; never use damaged or overfilled packaging; clean containers before refilling; keep spill management equipment nearby; choose packaging material carefully.
- Storing: Store in well-ventilated, temperature-controlled areas; away from heat, ignition sources, and incompatible cargo; close to ground; inspect regularly; train staff in emergency response; alert DG competent person if issues arise.
- Transporting: Keep risk assessments updated; secure cargo; comply with CTU Code; never assume segregation rules are the same for all modes; avoid exposure to moisture and temperature deviations.

Handling: Never throw, drop, or drag cargo; maintain emergency response plans; communicate clearly across the supply chain.



Dangerous goods quick reference guide - Class 9: Miscellaneous dangerous substances and articles

Class 9 is a catch-all category for dangerous goods that do not fit into other classes but still pose significant risks, including environmental hazards, marine pollutants, or substances requiring elevated temperature transport. Some may act as catalysts or accelerants for fire or explosion, requiring additional risk management.

Examples:

Internal combustion engines

Self-inflating life rafts

Vehicles

Asbestos

Elevated temperature substances

(e.g., Bitumen)

Polymeric beads

PCBs

Lithium batteries

Key Handling Guidelines:

- Packing: Use only approved packaging; select packaging carefully due to the wide variety of substances; avoid damaged containers.
- Storing: Store in well-ventilated, temperature-controlled areas; away from ignition sources, heat, and incompatible cargo; inspect regularly; train staff in emergency response; alert DG competent person if issues arise.
- Transporting: Keep risk assessments updated; secure cargo; comply with CTU Code; never allow ignition sources near cargo that could accelerate fire or explosion; remove lithium batteries showing blistering, bulging, or heat to quarantine for checks.

Handling: Never expose cargo to extreme temperatures; never throw, drop, or drag cargo; maintain emergency response plans; communicate clearly across the supply chain.





KEY TIPS FOR TRANSFERRING PLASTIC PELLETS IN CONTAINERS

Steamship Mutual P&I Club has provided guidance on the risks associated with the carriage of plastic pellets in containers and provides practical measures to prevent spillage and protect the marine environment.



UNDERSTANDING THE RISKS OF PLASTIC PELLETS

According to the Club, in recent years, several high-profile incidents have occurred, such as the Trans Carrier in 2020 and the XPress Pearl in 2021, where containers have fallen overboard and resulted in the release of plastic pellets into seas and oceans with subsequent harm to the marine environment.

While the carriage of plastic pellets in shipping containers is a secure means of shipment, the environmental concern arises when these containers are lost overboard. Once plastic pellets are released, their physical properties of being small and light allow them to travel extensive distances from the initial release location.

These incidents have given rise to concerns within the shipping industry about not only the risks plastic pellets pose to marine ecosystems, but also about the resulting multi-million-dollar clean-up and recovery operations, which can span many months or even years.

These costs include shoreline recovery, wildlife rehabilitation and long-term monitoring, and achieving complete recovery is often impossible.

The inclusion of plastic nurdles in the IMDG Code is being considered in part due to the escalating cost of recovery, because mandatory packaging, labelling, and stowage requirements are considered essential in reducing the frequency and severity of such incidents.



IMO GUIDANCE AND REGULATORY DEVELOPMENTS

Shipping operations are inherently unpredictable and involve many stakeholders within the supply chain, all of which increases the likelihood of errors.

While best practices aim to mitigate against the known risks, incidents can occur due to various causation factors.

Where an incident results in containers carrying plastic pellets being lost overboard, spillage into the sea is likely, either because the containers sustain damage or because packaging integrity has been compromised through damage or by seawater.

Pending the adoption of future mandatory measures for the carriage of plastic pellets in freight containers, the International Maritime Organisation (IMO) has published (MEPC.1/Circ.909 – Recommendations for the Carriage of Plastic Pellets by Sea in Freight Containers) on packaging, cargo information and stowage of plastic pellets in freight containers to avoid marine environmental damage.

Whilst these IMO guidelines are voluntary and aim to reduce the likelihood of plastic pellets spillage, the Club recommends that operators abide by these international Recommendations.

GENERAL CAUSATION

There are various factors that could contribute to the loss of containers from ships, resulting in marine environmental damage caused by plastic pellets. These factors may include:

1

Risks linked to shore-based handling

- The use of damaged or weakened containers for shipment can result in structural collapse and trigger the failure of entire stacks and adjacent stacks.
- Inadequate or damaged packaging of plastic pellet shipments.
- Cargo within containers is not properly secured, causing cargo to shift and potential container damage.

2

Stowage planning errors

- Heavy containers stowed on top of lighter ones.
- Exceeding stack height limits, particularly with high-cube containers.
- Exceeding stack weight limits.

3

Securing failures

- Non-compliance with the Cargo Securing Manual (CSM).
- Ineffective lashing management during the voyage.
- Failures of fixed and portable securing equipment (ISO sockets, lashing pad eyes, twistlocks, lashing rods).

4

Voyage factors

- Parametric rolling, an unstable phenomenon that can quickly generate large roll angles coupled with significant pitch and yaw motions.
- Synchronous rolling, which occurs when large rolling motions may be induced because the natural rolling period of a ship coincides with the encounter wave period.
- Poor voyage planning.
- Adverse weather conditions.

5

Mechanical failures

- Machinery or propulsion failures leaving the vessel adrift and exposed to heavy seas.
- Consequential excessive rolling beyond safe limits, putting extreme loads on container stacks and lashing equipment.
- All the above could result in the collapse of container stacks with loss of containers including container carrying plastic pellets potentially resulting in marine environmental damage.

GENERAL RECOMMENDATIONS

- Carriers and shippers should be aware that failure to comply with best practices and emerging regulations may result not only in environmental harm but also in significant financial exposure and reputational risk.
- The Club recommends operators consider the following measures to mitigate the loss of containers at sea, which could result in significant damage to the marine environment from plastic pellet spillage.

SHORE-BASED TRAINING AND AWARENESS

- Ensure that all shore-based personnel involved in packing, stowage planning and loading plastic pellets containers are fully aware of the environmental risks associated with pellet spillage and understand the procedures required to prevent spillage.
- Proper training and clear instructions should be provided so that everyone involved in the shipment knows their responsibilities and can take the necessary measures to minimize the likelihood of incidents.
- Operator expectations in regard to the packaging, loading and securing of cargo within containers should, where possible, be brought to the attention of relevant parties, including shippers and suppliers.

PACKAGING AND CONTAINMENT

- The packaging utilized for plastic pellets should be "strong enough" to withstand the shocks and loads normally encountered during shipping of containers and should ideally maintain its integrity in the event of these packages floating free from lost containers.



SECURING ARRANGEMENT WITHIN CONTAINERS

- Plastic pellet packages inside the container should be secured adequately to ensure they do not move or shift during adverse sea conditions.

CARGO INFORMATION

- Shipping documentation must clearly identify containers carrying plastic pellets, in addition to the cargo details required under SOLAS Regulation VI/2.
- This includes providing the Verified Gross Mass (VGM) for all containers to prevent weight misdeclaration and ensure accurate stowage planning.

STOWAGE PLANNING

- The shipper must provide complete cargo information, including any special stowage requirements.
- Containers carrying plastic pellets should be properly planned, stowed and secured to minimize risks to the marine environment without compromising the safety of the ship and those on board.
- Wherever reasonably practicable, these containers should be stowed under deck or alternatively, inboard within sheltered areas of exposed decks.
- Heavier containers must not be placed over lighter ones, stack height and weight limits must not be exceeded and the vessel's overall stability should be carefully assessed for the entire voyage.

LABELLING AND DOCUMENTATION

- All shipping documents and booking systems should explicitly indicate that the containers contain plastic pellets.
- This ensures that appropriate stowage arrangements can be planned and implemented effectively.

CARGO SECURING BEFORE DEPARTURE

- Containers must be secured in accordance with the approved Cargo Securing Manual (CSM).
- Weather routing should be reviewed and evaluated to minimize exposure to extreme conditions.

CREW AWARENESS AND TRAINING

- Masters and navigating officers should be trained to recognize signs of parametric and synchronous rolling.
- They must also be prepared to adjust course and/or speed when necessary to maintain safety.

MONITORING DURING VOYAGE

- Lashing arrangements should be inspected regularly and tightened as required throughout the voyage.
- The passage plan should be reviewed daily and adjusted in line with the latest weather reports.

MAINTENANCE OF SECURING EQUIPMENT

- Container sockets and lashing pad eyes should be maintained as part of the ship's planned maintenance regime.
- When the thickness of container sockets and lashing pad eyes falls below the required limit, they must be replaced or clearly marked as "Not to be used."
- Defective portable lashing equipment should be removed from the vessel or segregated to prevent accidental use.

OPERATIONAL PRECAUTIONS

- Carriers, terminals and shippers are encouraged to follow the IMO guidelines to minimize the likelihood of damage, mis-declaration or improper handling.
- Implementing the above measures and good seamanship practices will significantly reduce the likelihood of containers carrying plastic pellets going overboard and help mitigate associated environmental risks.

LOOKING AHEAD

The IMO continues to collect feedback on the application of MEPC.1/Circ.909 and is working towards developing mandatory global requirements under MARPOL Annex III and the IMDG Code. The objective is to ensure that all parties involved in the supply chain are aligned in taking effective steps to prevent plastic pellets loss and in protecting the marine environment.





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The Compliance Crunch: Preparing mariners for new waves of reporting

The maritime industry is entering a new era of accountability. Environmental standards are tightening, customer expectations are rising, and regulatory bodies are demanding more transparency than ever before. From carbon reporting to waste documentation to diversity and inclusion expectations, the compliance landscape is expanding rapidly. What once felt like occasional paperwork now resembles an ongoing, recurring audit.

For maritime organizations, the question is no longer whether these requirements will affect day-to-day operations, but whether crews and shore teams are trained to handle them.

Why compliance is becoming a frontline skill

For years, compliance lived mostly in offices and boardrooms. Today, it begins on the deck. Modern regulations demand accurate reporting of emissions, fuel use, waste handling, and even social metrics that reflect company culture. Charterers, port authorities, insurers, and major customers are all requesting data that proves your organization operates responsibly. Training must now equip mariners not only with technical and safety skills, but with the knowledge and discipline to record and report information correctly. A single inaccurate number can affect environmental scores, port fees, and even contract eligibility.

Training crews to record CO₂, fuel, and waste data correctly

Reliable environmental data begins with the crew. Recording fuel consumption, waste volumes, and emissions is no longer a clerical task. It is now a regulatory requirement linked to the International Maritime

Organization, the Environmental Protection Agency, and customer-driven sustainability programs.

Training should cover:

- How to take accurate readings from meters and monitoring systems
- What constitutes reportable waste and how to categorize it
- How small errors in measurement affect the vessel's carbon profile
- Why consistent logging is essential for audits

Consider incorporating daily microlearning on environmental reporting. Short reminders about common mistakes, updated procedures, or new requirements can reinforce habits over time. Crew members who understand the weight of each entry are more likely to approach recordkeeping with care.



Helping mariners understand the commercial impact of ESG

Environmental, Social, and Governance (ESG) commitments influence business opportunities. Large shippers, energy companies, and government agencies now evaluate vendors through ESG lenses. A vessel with incomplete environmental logs or a company with poor diversity metrics may lose out on lucrative contracts.

This is where training shifts from compliance to commercial awareness. Mariners should understand that clear documentation does more than satisfy the IMO. It strengthens the company's competitive position. When crews see that accurate reporting protects jobs, opens doors, and aligns with the expectations of charterers and regulators, they become partners in the process rather than reluctant participants.

In training sessions, include real-world examples that demonstrate the commercial value of ESG. Show how strong environmental performance influences customer choice, how social programs improve retention, and how transparent governance practices reduce legal and financial risk. Make it tangible, not theoretical.

Preparing shore-based staff for audit readiness

Compliance does not end onboard. Shoreside staff must be prepared to store, analyze, and present environmental and social data during audits or customer reviews. Training should focus on:

- Understanding audit trails and data integrity
- Tracking anomalies or missing logs
- Responding to customer ESG questionnaires
- Preparing vessels for inspections related to emissions and waste handling

Cross-training is helpful here. When shore teams understand how data is collected onboard and mariners understand how the office uses it, accuracy increases and audits become smoother. The better the communication between ship and shore, the more reliable the company's compliance posture.

Keeping regulatory training engaging rather than dry

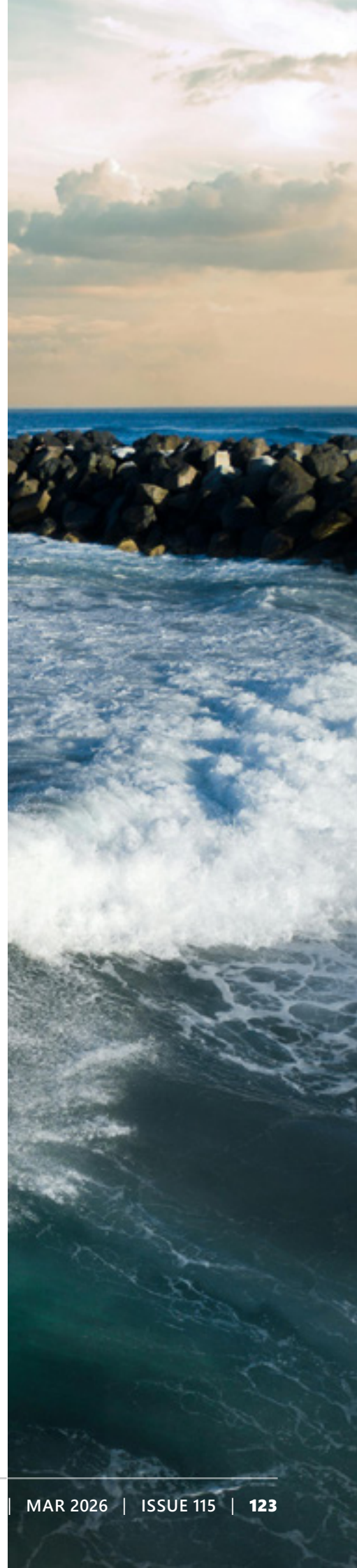
Compliance training has a reputation for being dull. However, the stakes are too high for disengagement. To make these topics compelling:

- Personalize content with case studies of real maritime compliance failures
- Use short scenario videos that show the impact of poor reporting
- Break lessons into small, focused segments
- Provide tools such as mobile checklists or quick reference cards

When training is relatable and practical, retention improves and compliance becomes part of the crew's daily rhythm. Avoid long lectures or thick manuals. Instead, deliver content that respects the learner's time and mirrors how people consume information today.

Looking ahead

The compliance landscape will continue to expand, not contract. From carbon intensity indexing to diversity reporting to new environmental operating requirements, maritime companies must prepare their people to meet expectations that evolve each year. Training is the bridge that makes compliance sustainable. By teaching mariners why these requirements matter, how to record data correctly, and how compliance affects the company's commercial health, you create a culture that embraces accountability rather than fearing it.





TOP TEN CLASSIFICATION SOCIETIES IN 2025 REVEALED

Lloyd's List

According to Lloyd's List, the 2025 ranking of world-leading classification societies brings a notable shift in the maritime industry's landscape. For the first time, American Bureau of Shipping (ABS) overtakes DNV to become the largest class society in terms of gross tonnage in service — a milestone that reflects both growing capacities and changing dynamics. Meanwhile, China Classification Society (CCS) climbed from sixth to fifth place, replacing Bureau Veritas (BV) in the top-five.

This reshuffling underscores a broader transformation. Classification societies are no longer just certifiers of seaworthiness, they are becoming central actors in the shipping industry's technological, environmental, and regulatory evolution.

What's driving the change

Innovation and new propulsion paths

Under the leadership of ABS's outgoing chairman and CEO, Christopher Wiernicki, the society pushed for bold innovation. At the 2025 London International Shipping Week, Wiernicki urged the maritime sector to ask, "Does it make us safer?" — a guiding principle that underpinned new technical notations. In 2025 ABS updated its containership lashing-system notation (CLP-V(PARR)) to include a seasonality factor, giving operators better flexibility under varying sea conditions.

More strikingly, ABS granted "Approval in Principle" (AiP) for two nuclear-powered vessel designs: a 15,000 TEU containership concept using molten salt reactor technology, and a floating nuclear-power barge for port support or coastal power supply. ABS also floated proposals for offshore "floating nuclear data centers" to serve burgeoning AI and cloud-computing infrastructure needs.

Simultaneously, ABS advanced other fuel pathways: dual-fuel solutions for LNG, methanol or ammonia, and safety advisories for ammonia as marine fuel. It also developed simulation models to address lithium-ion battery thermal-runaway risks aboard vehicle carriers.

Sustainability, decarbonisation & digitalisation across the board

Other societies in the top 10, such as DNV, ClassNK, BV, Korean Register of Shipping (KR), and Rina, reaffirmed their commitment to supporting decarbonisation, regulatory compliance, digital transformation, and new-technology adoption.

DNV forecasts substantial growth in vessels delivered with alternative-fuel capabilities, projecting that by 2030, such ships could consume roughly 50 million tonnes of non-oil fuels annually — a major step toward global emissions reduction.

ClassNK opened a Tech Expertise Centre in Piraeus, Greece, expanding its presence in a key maritime hub and boosting support for emerging technologies, emissions-based certification, and “smart ship” solutions.

BV and others are enabling next-generation technologies such as ammonia bunkering vessels, hydrogen/fuel-cell propulsion, and wind-assisted propulsion, highlighting how classification societies increasingly serve as enablers — not gatekeepers — of maritime innovation.

Broadening advisory and lifecycle services Ranking societies are also evolving beyond traditional survey roles. For instance, DNV and others emphasise advisory services, regulatory forecasting, and alternative-fuel readiness assessments, acknowledging that the shipping industry now requires more than certification: it needs strategic guidance.

What it means for shipowners, regulators and the industry

The 2025 ranking is more than symbolism. It reflects real shifts in where power and influence lie in global shipping. With ABS at the top, backed by bold moves into nuclear propulsion and aggressive support for alternative fuels, the maritime industry may be entering a new era. Classification societies are increasingly acting as architects - influencing design, technology adoption, and fuel decisions - not just auditors.

For shipowners, this could mean broader options: more flexible notations, earlier access to new fuel- and propulsion-technologies, and classification societies offering advisory services across the lifecycle of vessels. For regulators and policymakers, it may signal a need to engage more with class societies, given their growing role in shaping which technologies become mainstream.

Finally, and perhaps most importantly, the shift reflects the maritime industry's adaptation to global demands: decarbonisation, sustainability, regulatory complexity, and the pressures of digitalisation. Classification societies, once dependably conservative, are becoming innovation enablers.

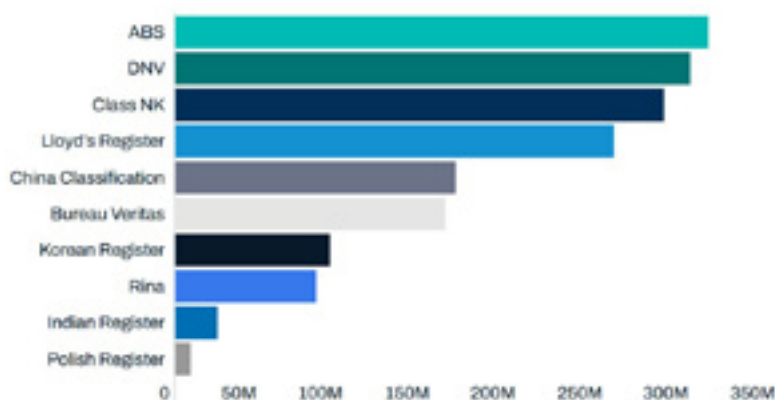
A sea change indeed

The new 2025 ranking of the top 10 classification societies captures a moment of transformation. The dominance of ABS, and the rise of CCS, shows that influence is realigning. But more broadly, it reveals that classification societies are pivoting from traditional certifiers of safety and seaworthiness, to strategic partners in sustainability, technology and design.

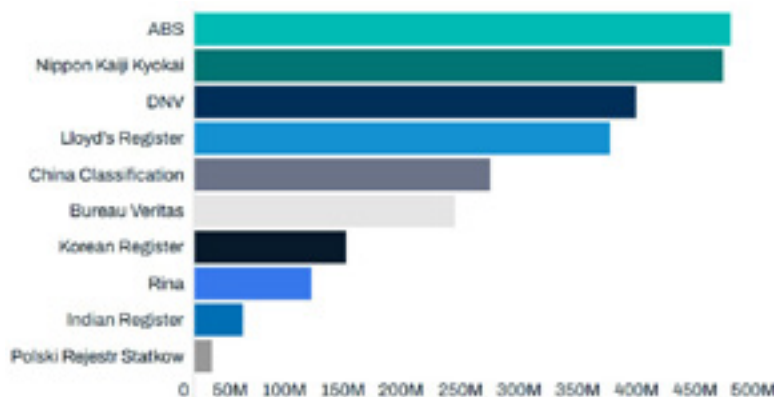
In a shipping world confronting climate change, regulatory overhaul, and rapid technological progress, class societies are reinventing themselves, and by doing so, helping steer the future of maritime transport.

Top 10 classification societies in 2025*

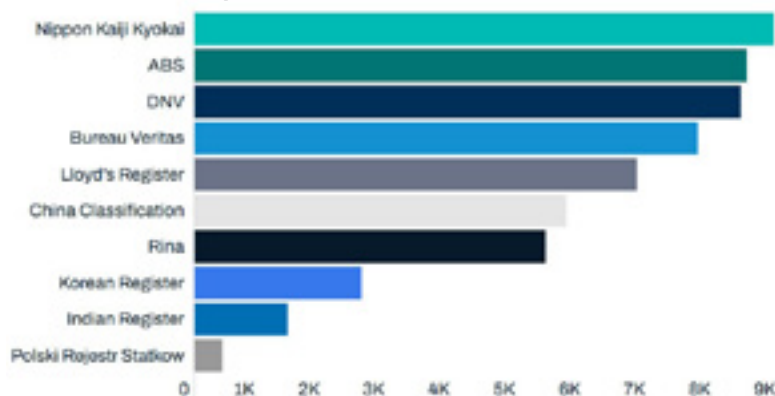
by Total GT



by Total DWT



by Total vessels



*** Vessels in service above 500 gt, including those provisionally classed**
Source: Classification societies and Lloyd's List Intelligence (data as of November 2025)

About Lloyd's List - Lloyd's List provides curated news, expert commentary, and in-depth analysis, ensuring businesses and professionals remain ahead of industry changes. For nearly 300 years, Lloyd's List has been the trusted partner for maritime insights, offering a complete view of the evolving global industry. From daily news articles and briefings to monthly reports, webinars, and podcasts, they cover everything you need to know about the latest trends, events, and market shifts in the shipping world.



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VIMMS

Sea Trial Results and System Benefits

by
Maritime Systems Ltd

1 Introduction

The Vessel Impact and Motion Monitoring System (VIMMS) was used to assess potential for acute and chronic injuries during maritime operations on small vessels (under 24 metres), and demonstrate the capability for data to assist in injury risk management and operational decision-making. The system combines real-time acceleration monitoring with whole-body vibration (WBV) exposure tracking, enabling operators and management to identify and mitigate both acute and chronic injury risks.

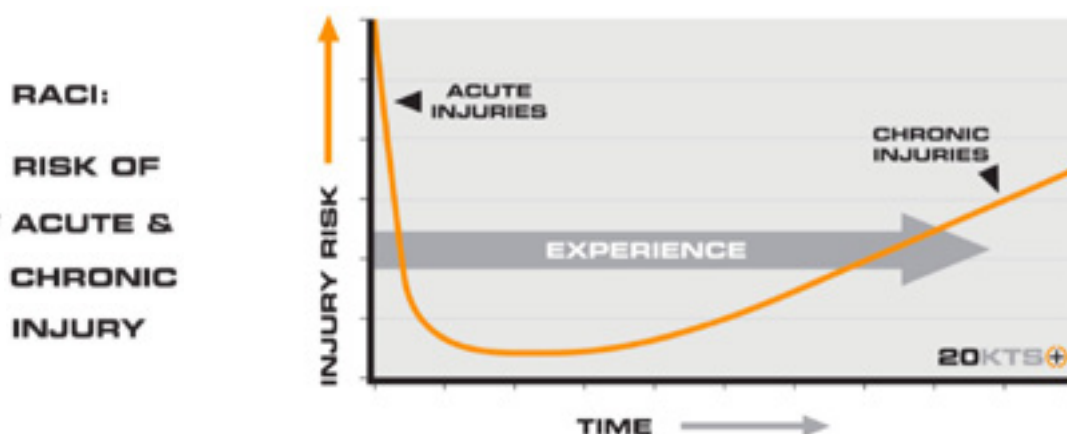
2 Understanding Injury Types

2.1 Acute Injuries

- Occur from sudden, high-G impacts such as slamming or wave strikes.
- Lead to instant pain and short-term recovery needs.
- Typically result in low financial cost but immediate operational disruption.
- These injuries are effectively managed through real-time monitoring, as operators can respond to live impact warnings and adjust vessel speed or course to prevent further harm.

2.2 Chronic Injuries

- Develop gradually from repeated low-level exposure to vibration and shock.
- Characterised by long-term recovery, debilitating symptoms, and high financial impact due to compensation or long-term absence.
- Unlike acute injuries, chronic issues cannot be detected in the moment—they require long term WBV data and analysis of exposure patterns to identify risk trends.



3 Benefits of VIMMS Technology

3.1 Real-Time Accelerations

The VIMMS onboard display provides a traffic-light warning system for vessel operators.

- Alerts indicate when impact thresholds are being approached or exceeded.
- Enables immediate corrective action to reduce acute injury risk.
- Provides evidence for training and operational procedures, reinforcing safe driving behaviours.
- Each impact event is recorded and timestamped, allowing post-trial review.

3.2 Whole-Body Vibration (WBV) Monitoring

In addition to acute impact logging, VIMMS continuously captures 3-axis acceleration data from the crew seats during the voyage, filtered to the requirements of the WBV regulations.

- Individual WBV monitoring of all personnel
- The WBV dashboard summarises individual exposure levels over time to assess compliance with ISO 2631-5 and HSE guidelines.
- Enables identification of vessels, routes, and operators associated with elevated long-term risk.
- Supports data-driven maintenance and vessel design improvements by highlighting vibration sources.

Helm Real-time display



4 Regulatory Context

4.1 Merchant Shipping and Fishing Vessels (Control of Vibration at Work) Regulations 2007

The Merchant Shipping and Fishing Vessels (Control of Vibration at Work) Regulations 2007 set the legal framework for managing vibration exposure on marine vessels.

These regulations set the legal framework for managing vibration exposure on marine vessels, establishing mandatory limits designed to protect crew from health risks caused by whole-body vibration and repeated shocks.

Key thresholds are defined as:

- Exposure Action Value (EAV): $0.5 \text{ m/s}^2 \text{ A}(8)$ – the level at which employers must assess exposure and implement measures to reduce it.
- Exposure Limit Value (ELV): $1.15 \text{ m/s}^2 \text{ A}(8)$ – the maximum daily exposure that must not be exceeded.

Employers are required to:

- Assess and record crew exposure, particularly where the EAV is likely to be exceeded.
- Implement technical and organisational controls to reduce vibration at source (e.g. through seat design, speed management, or operational procedures).
- Provide training and information to affected personnel on the risks and protective measures.

4.2 MGN 436 (M+F)

MGN 436 (M+F) Section 8 provides guidance on how vibration data should be used to comply with the Merchant Shipping and Fishing Vessels (Control of Vibration at Work) Regulations 2007.

It explains that the Exposure Action Value ($0.5 \text{ m/s}^2 \text{ A(8)}$) and Exposure Limit Value ($1.15 \text{ m/s}^2 \text{ A(8)}$) apply to marine craft just as they do to land and air transport, but that marine operations are more variable and require vessel-specific data to identify and manage risks.

The guidance encourages operators to collect and interpret vibration data when exposures may exceed the action value, using accelerometers at key crew locations such as the seat or deck.

Real-time monitoring and traffic-light displays (green-amber-red) are highlighted as best practice, allowing drivers to understand the impact of their handling and take immediate corrective action.

4.3 Workboat Code 3

The Workboat Code 3, Section 22.3, sets clear expectations for the safety of personnel during transfer and voyage operations. Of particular relevance to this study is Clause 22.3.4, which states:

“Ambient sea conditions and whole-body vibration shall be continually assessed throughout the voyage.”

This requirement recognises that crew and passenger safety is not static but varies with changing environmental conditions and vessel dynamics. Operators are therefore obliged to monitor and evaluate sea state and vibration exposure in real time to maintain safe conditions and minimise injury risk.

The VIMMS system directly supports compliance with this regulation by providing:

- Continuous measurement of vessel accelerations and WBV exposure throughout each voyage.
- Real-time feedback to the operator on shock and motion levels, allowing corrective action such as speed reduction or course alteration.
- Automated recording of data for post-voyage review, enabling operators to demonstrate that monitoring and assessment have been performed in line with Code requirements.

5 Financial and Operational Risk of Crew Injury

Crew injuries—both acute and chronic—carry significant financial and operational implications for marine operators.

- **Direct Costs:** Medical treatment, compensation claims, legal fees, and insurance excesses.
- **Indirect Costs:** Lost productivity, training of replacement crew, vessel downtime, and reduced operational availability.
- **Reputational Impact:** Frequent injury reports can affect client confidence, contract renewals, and regulatory scrutiny.
- **Insurance Premiums:** A sustained record of incidents leads to higher premiums and potential exclusion from preferred operator lists.

By implementing VIMMS, operators can demonstrate a proactive safety management approach, supported by objective data. This not only reduces injury frequency but also strengthens a company's position in contract bids, insurance negotiations, and compliance audits. Over time, this translates into measurable financial savings and enhanced operational resilience.

6 Sea Trial Findings

During the sea trials, VIMMS sensors recorded accelerations received on the operator seats, correlating data from high-speed transits and adverse sea states.

- The real-time display provided instant operator feedback, allowing immediate speed moderation to remain within safe thresholds.
- WBV data demonstrated cumulative exposure trends consistent with chronic risk development models, validating the system's suitability for long-term health monitoring.



6.1 Pilot Boats

Vital for the efficient operations of Ports, Pilot Boats operate in all weathers transferring crew to and from ships. A recent trial monitored a single shift, with the crew performing 5 trips to ships on a typical day with a Sea State of 3 to 4.

The VIMMS system recorded daily RMS A(8) vibration exposures of 0.57 m/s² and 0.60 m/s² for the two crew members, as shown in the report output below.

Under the Control of Vibration at Work Regulations 2005, the Exposure Action Value (EAV) is 0.5 m/s² A(8) and the Exposure Limit Value (ELV) is 1.15 m/s² A(8). Both crew members therefore exceeded the action value, requiring the operator to assess and, where possible, reduce exposure.

It is important to note that these figures were recorded on a typical operational day (Sea State 3–4). On days with rougher conditions or heavier seas, exposure levels would likely increase significantly, potentially approaching or exceeding the Exposure Limit Value. This represents a realistic operational risk for pilot boat crews who routinely operate in variable sea states and weather conditions.

Although the measured levels remain below the Exposure Limit, repeated exposure above the action threshold contributes to cumulative fatigue and increases the risk of chronic musculoskeletal disorders, including spinal compression injuries and lower back pain. Over time, these can lead to lost workdays, compensation claims, and increased insurance costs.

The results demonstrate that even during normal operations, WBV exposure is high enough to justify continuous monitoring through VIMMS. The system provides verifiable data for compliance reviews, informs vessel and seat design improvements, and supports proactive management of crew wellbeing before conditions become critical.

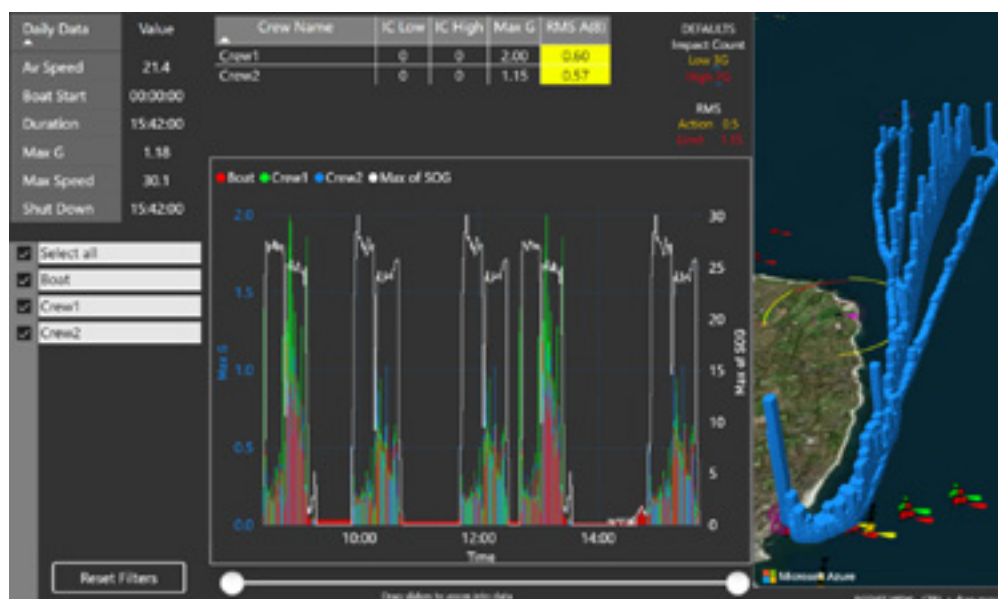


Interviews with the crew during the trials confirmed the effects of long term exposure to low levels of shock and vibration, with respondents stating:

- They often experience stiffness or discomfort after extended periods at the sea.
- Fatigue accumulates over consecutive shifts, particularly in rougher sea states.
- The motion is tolerable in the moment but leads to noticeable soreness and reduced concentration later in the day.
- Some crew have are not adjusting seating position correctly, causing poor postures to absorb impacts, which may increase long-term musculoskeletal strain.
- Pilots noted reduced concentration after rough transits, causing safety concerns due to impaired capabilities when climbing the ladder to the awaiting ship.

These qualitative findings align closely with the VIMMS data, which showed WBV A(8) exposures above the regulatory action level even on an average Sea State 3–4 day. This indicates that the risk is both measurable and perceptible to operators, reinforcing the need for ongoing vibration management, including:

- Operational review of vessel speeds and routing in higher seas.
- Ergonomic assessment of seat design and posture support.
- Regular WBV monitoring to track exposure trends and verify improvements.



Together, the crew feedback and recorded data present a clear case for proactive intervention. VIMMS provides the quantitative foundation for this, offering continuous measurement, evidence for compliance, and insights that can directly inform safer working practices for pilot boat operations.

6.2 Safari Rib Boats

Recent incidents have highlighted the risks to passengers from accidents whilst enjoying boat safari tours and on water experiences, leading the MAIB and MCA to introduce new guidance to operators.

When the boat impacts a wave the bow rides up in the water, pivoting the boat upwards around a point towards the rear of the hull. If the driver is at the rear, they will experience the smoothest ride. Passengers located near the front will experience a higher vertical acceleration than those towards the rear.

The increase in impact felt by the passengers can be magnified by a combination of factors including:

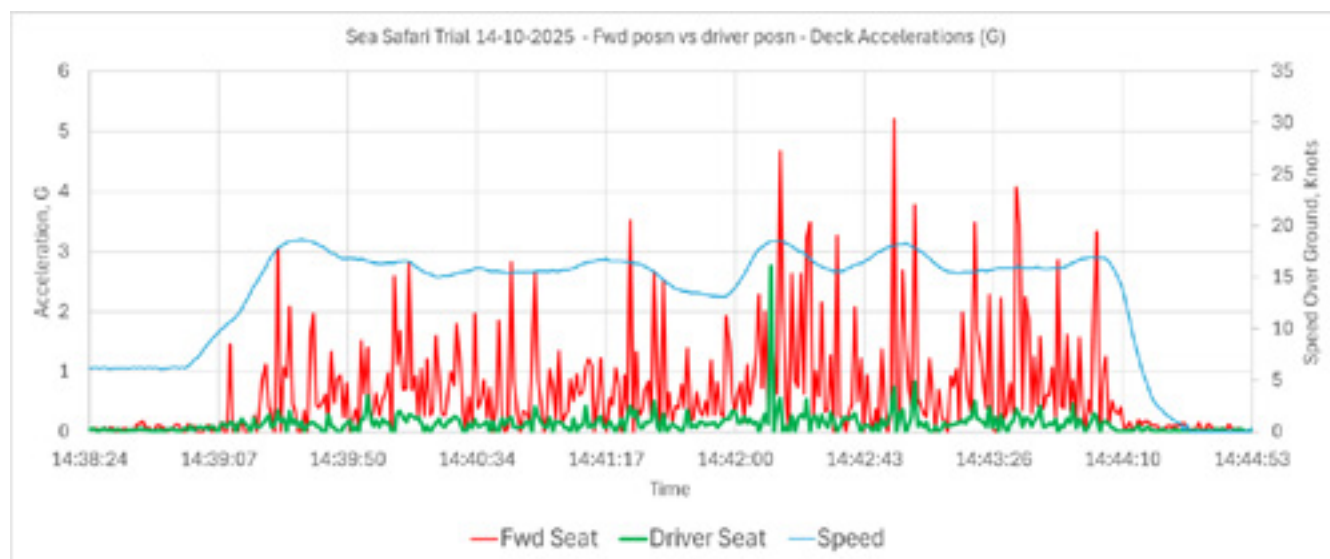
- How far forward they are seated
- Number of passengers onboard
- Speed & sea conditions
- Sitting position

Results from a recent sea trial demonstrate the difference between the acceleration experienced by passengers seated at the forward position of the vessel compared with the driver's seat.



In this example:

- Passengers are seated at the bow significantly increasing the severity of impacts.
- Seat and handle design causes passengers to be hunched over, increasing risk of spinal injury.
- Poor posture reduces their ability to brace against forward and sideways motions.
- In waves, forward passengers will experience greater severity of impacts compared to a person at the rear.
- The Boat Driver appears comfortable without awareness of passenger discomfort.



As shown in the graph, accelerations at the bow (red line) are consistently higher than those recorded at the helm (green line), even though the vessel speed (blue line) remains relatively constant. This clearly indicates that passenger location within the vessel has a major influence on exposure levels and perceived comfort.

During testing, forward-seated passengers experienced impacts exceeding 4–5 g, while the driver position remained below 1 g for the same events. Such discrepancies help explain why passengers are at greater risk of acute spinal loading, whereas the driver—often better protected by better seating and a more neutral posture—may remain unaware of passenger discomfort.

This evidence supports the use of the VIMMS system to:

- Quantify motion differences between seating positions.
- Identify operational practices that increase passenger risk.
- Inform training, vessel layout, and seating design improvements.

By integrating VIMMS data into passenger vessel operations, operators can make evidence-based decisions to reduce injury risk, enhance comfort, and demonstrate due diligence with safety regulations.

7 Conclusion

The VIMMS system provides a comprehensive risk management tool addressing both short-term and long-term injury prevention:

- Real-time acceleration monitoring supports immediate response to acute impact events.
- WBV data analytics facilitate identification and mitigation of chronic exposure risks.

Adoption of VIMMS can improve safety culture, reduce injury-related downtime, and provide objective data for both operational and insurance purposes.

About Maritime Systems Ltd

Maritime Systems is a multi-faceted design engineering company based in the UK, producing its own range of products and providing consultancy support for clients around the world.

Maritime Systems was established in 2005 as a design consultancy company. In 2011 we began to produce our own range of products as a direct response to the maritime industries requirement to monitor marine personnel's levels of exposure to shock and vibration during their daily activities.

All of our devices are designed specifically to be easy to set up and provide data in an understandable format. Features including automatic calibration and on-board processing make gathering useful data a simple process.



Maritime Systems Ltd

South Western House,
Southampton, SO14 3AL, UK

+44 (0) 2380 231 991
info@maritimesys.com
www.maritimesys.com

Metstrade 2025

electric boat highlights

By **Jeff Butler** at www.plugboats.com



The 37th edition of Metstrade, the largest show in the world for the leisure marine industry, was held last November at the RAI Centre in Amsterdam. More than 100 electric boats and boating exhibitors were among the 1,700 exhibitors spread throughout the venue.



The new models and highlights are presented in alphabetical order in the sections Outboards, Inboards, Saildrives, Jetdrives, and Batteries.

Outboard motors



Boatee: a new rudder style electric outboard

Since Remigo introduced the first 'rudder style' electric outboard in 2021, there have been a number of entries in the category, all with similar power (1 – 1.5 kW). One of the main differences between them now is the design, of both overall look and user functionality. Boatee is a new motor out of Italy and, as you would expect from a country with a strong design DNA, has a very sleek and distinctive look with bold lines and black/aqua colour combination. The most obvious functional element setting it apart is the flip top handle/tiller/monitor with information about the energy usage, battery state of charge and GPS up close to you at the end of the tiller handle. The motor itself is 1.3 kW and weighs 6 kilos (13 lb). The 48V Li-ion is separate, weighing 5.8 kg and storing .932 kWh of electricity. Boatee's performance stats are based on a 3m (10 ft) inflatable dinghy with one passenger aboard and the company says the range at 3 knots is over six hours – about 18 nM depending on conditions (5.5 kph and ≈30 km/3.5 mph and ≈20 mi.) The cost is €2.190,00.

Competr: contra-rotating propellers in a tractor electric OB

We first saw the Competr at this year's Monaco Energy Boat Challenge, where it was powering both the University of Bologna's winning entry in the Energy Class and the Red Wave RIB that won the SeaLab class. The motor was developed by students of the university under the leadership of U of B Professor Nicolò Cavina. The natural upshot of their work was to create a commercial entity, and Competr was showing their new product at Metstrade. Weighing just 22 kg, the 15 kW motor is extremely efficient for two key reasons. One is the use of contra rotating propellers – a system where two propellers spin in opposite directions on the same shaft to contain the turbulence that a propeller generates. This can increase efficiency by as much as 16%. The second factor is the tractor motor configuration (Volvo Penta's is the best known use of this technology) in which the propellers are ahead of the lower leg and pull the boat through the water.



ePropulsion: New Spirit 2.0 electric outboard

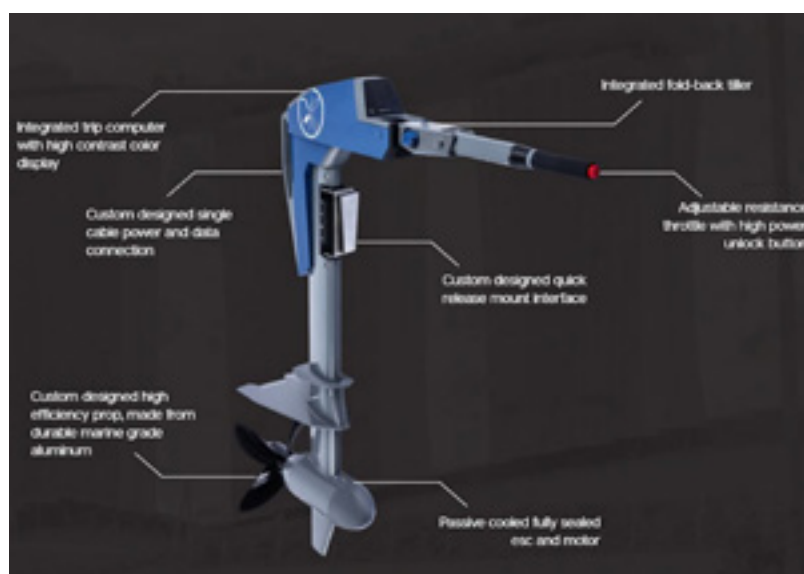
It was 10 years ago, at Metstrade 2015, that a young man named Danny Tao introduced the boating industry to the first product from the company he had founded in 2012 with fellow graduates from the Hong Kong University of Science and Technology. The product was the Spirit 1.0 electric outboard motor and the then-unknown company was ePropulsion.

The 2 kW motor has a newly introduced 3 kW Boost Mode and is paired with a 1.5 kWh quick connect battery that clicks onto the top of the motor system similarly to the Spirit 1.0. The total weight is 21.3 kg / 47 lb, with motor weighing in at 10 kg / 22 lb and the battery at 11.3 kg / 25 lb). We will be writing a full article about all the features of the new Spirit 2, but very quickly, it also has a 90-degree tilt function, and the motor includes ePropulsion's hydrogeneration technology. The motor will be available worldwide in Spring 2026.



Momentum: The new U2 e-outboard with integrated battery

Momentum outboards were a DAME Awards Nominee in 2024 for their 10 kW M-10 model. In 2025 they showcased their new U2 model, with 2.5 kW of power to make it roughly the equivalent of a 5hp combustion unit. The motor, together with an integrated battery storing 1.4 kWh of energy, weighs in at 17 kg (38 lb). The U2 is designed for portability and flexibility with its quick swap battery, quick release transom mount and foldaway tiller that also acts as a carrying handle. It incorporates a trip computer with GPS and high-contrast colour display, as do the company's two other models, the M10 and M6 (6 kW of power).



Remigo: RemigoOne Neo Outboard

Slovenia's Remigo is the company that first designed the popular 'rudder style' electric outboard, launching as the RemigoOne in 2021. The same 'form-is-function' design is now available with a higher power output in the RemigoOne Neo, which houses a 1.5 kW (≈ 4 hp) motor in the same size aluminum unibody of the original 1 kW (≈ 3 hp) model. It has an integrated battery, variable shaft height, a new 60-second Boost mode for wind, tide, or tight berthing, and an optional remote control for steering and throttle. The weight of the entire system, including the battery and quick release transom bracket, is 14.5 kg (32 lb.).



Inboard motors

Bosch: New plug and play EDM (Electric Drive for Marine)

The EDM (Electric Drive for Marine) system introduced at Metstrade takes advantages of that in "a new plug-and-play complete solution for electrified drive systems." It combines drive components from Bosch with selected

third-party components and provides a ready-to-install inboard motor with gearbox, inverter, on-board charger, heat exchanger, control unit, and the necessary cooling pumps in a single compact unit. It produces 120 kW continuous power (160 hp) and weighs around 180 kg (≈ 400 lb) for an impressive power density of around 0.7 kW/kg. The EDM is promoted as a simple and efficient way for naval architects, system integrators, and builders to electrify boats and small ships. The company says it can be used for planing or displacement hulls and is adaptable for Z drives (stern drives), saildrives, inboard rigid shaft drives or outboard motors.

Evoy: Gen 2 Inboard makes giant leap in weight and price

We wrote in Plugboats a few months ago about how the synergy of electric boat motor companies Evoy and Vita collaborating with the Taiga electric jetski company is working to the benefit of all, and the 2nd generation Evoy BREEZE 120+ HP inboard unveiled at Metstrade is dramatic proof.



The Inboard Breeze 'G2' is a compact 90 kW continuous / 137 kW peak inboard motor (equivalent to 120 and 185 hp) that maintains peak output longer than the original Breeze, improving both acceleration and sustained speed in planing boats. It pairs with twin 24 kWh Taiga NMC battery packs that deliver 48 kWh of usable energy. The battery was originally developed for the gruelling conditions that Taiga's snowmobiles endure, and the result is a technology that also operates extremely well in temperate and high heat conditions and can recharge from 10% to 80% in just 21 minutes.

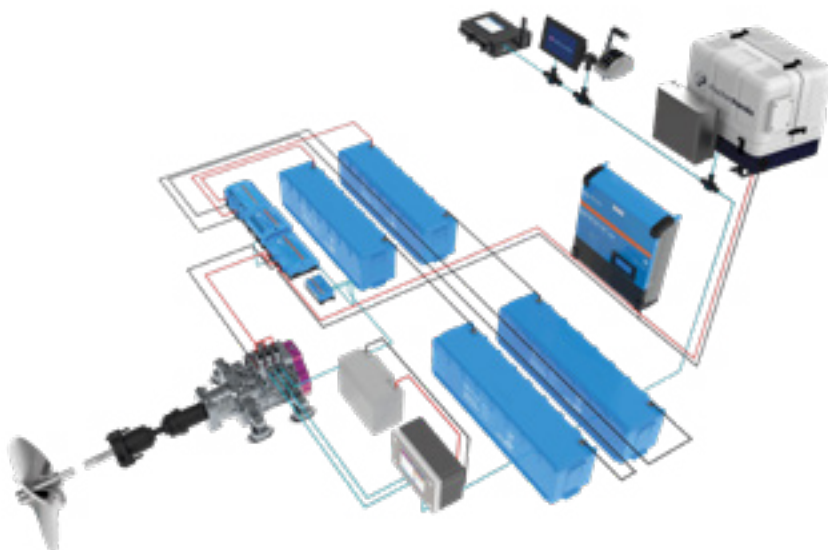
The Gen2 Evoy motor can now be lighter partly because its cooling system doesn't have to work as hard with the Taiga battery. That means more energy packed into lower overall weight – and economies of scale mean a lower price.

Molabo X Fischer Panda serial hybrid system

German electric motor manufacturer Molabo came together at Metstrade with market-leading genset maker Fischer Panda to unveil a new serial hybrid system that combines Molabo's safe, high-performance 48-volt ARIES drive with Fischer Panda's lightweight and compact AGT-series generators.

The system, which was developed for the IMOCA racing yacht of Boris Herrmann's Team Malizia, allows boatbuilders to combine pure-electric operation with generator-assisted cruising, offering flexible and ultra-efficient energy management for long-range or high-demand applications. All components operate at 48 V DC, ensuring safety and ease of installation; no specialized high-voltage certification or equipment required.

Because the entire system remains low voltage, it can be installed by existing trained shipyard staff without slowing production lines. Routine service is equally straightforward: owners retain access to Fischer Panda's worldwide service network for the gensets, while most marine electricians can safely maintain Molabo's 48 V ARIES drive. In addition, the diesel-fuelled 6 to 22 kW integrated DC generators can be run on HVO – hydrotreated vegetable oil biofuel.



VETUS: 22 kW E-Line inboard motor

VETUS has been selling boat motors and accessories since 1964 and developed the world's first electric bow thruster for pleasure craft in 1982 and their own electric inboards in 2000. At Metstrade they launched the latest model, the E-LINE 22kW Inboard Electric Propulsion Motor.

A liquid-cooled, low-maintenance option for those looking to electrify, it delivers the highest output within the VETUS electric range and is suitable for every vessel with a shaft drive, whether newly built or undergoing a refit. It can also be cooled with fresh surface water or through keel cooler for boats in salty or contaminated water. All of this makes it an excellent choice for boaters who value strong performance, high efficiency and complete freedom on the water.

Mitek: The RD Rotating Saildrive line

Last year at METS the Italian manufacturer Mitek introduced their 'REVOLVE', a clever outboard where the entire unit revolves parallel to the transom to tuck away close to the boat when not in use. This year they are showing their rotating saildrive that can be freely oriented to function both as a propulsion system and stern thruster, allowing you to direct the thrust where needed. This makes manoeuvring in port much easier and more precise because you can move the boat or turn it on the spot regardless of weather conditions.



Saildrives

Jetdrives



Molabo X Kaiser electric jetdrive

In addition to their serial hybrid system with Fischer Panda, Molabo also showed their latest collaboration with Kaiser Bootsmanufaktur, with an ARIES 48V 50kW drive paired with Kaiser's LRHV Jet Drive to create a compact, low-maintenance propulsion system for tenders, RIBs, and light motorboats.

The LRHV is designed according to the mix-flow principle, with a specially shaped impeller that delivers a high volume of water at very low rotational speeds, making for high efficiency and smooth operation. With only one rotating part there is very little maintenance required, minimal turbulence and cavitation, and no need for any additional cooling pump. Developer Jurgen Kaiser says this matches perfectly with the ARIES operating profile.

ZeroJet: New 30kW model and Gen3 features

New Zealand's ZeroJet, a world pioneer in electric jet propulsion, took the opportunity at METS 2025 to show off the new 30kW model (40 hp equivalent) that is added to their 15kW (20 hp) and 20 kW (30 hp) models.

All of the models run on safe-to-touch 48 Volt architecture and connect the motors to a patented optimized jet pump, with an integrated smart hub and cooling system. ZeroJet systems are already found in boats by Highfield, Agilis, IAM and Offshore Cruising Tenders (OCT) and the wider model range will open up other arrangements with more OEMs. They jetdrives have a new portable charger, instant electric reverse with an electric bucket that enables digital control and agile engagement, and lighter battery technology to extend range without adding battery weight.

Batteries



EPTechnologies: solid state batteries now DNV approved

EPTechnologies, who dramatically demonstrated the safety of their solid state battery at Metstrade 2023 by driving a nail through it at their booth, announced at this year's show that their next-generation Solid-State Tech Battery pack - SVENNER - is now fully class-approved by DNV, the maritime world's largest certifier of products for safety, quality, energy efficiency and environmental performance.

At the heart of the Svenner Battery is solid-state cell technology that replaces most liquid electrolytes with advanced solid materials. Safety is the keyword. Svenner can withstand overcharging of up to 6X recommendation and the individual battery cells (where overheating starts) remain stable with no fire or heat buildup, even under extreme electrical or mechanical stress.

Without getting deeply into the specifics it means that the battery can contain any thermal incident within one module, making installation easier and fully compliant with current DNV rules for boat and shipbuilders. On top of that, the battery can undergo 10,000+ cycle lives, which maximize the financial efficiency and reduces lifecycle costs.

This article first appeared on the [www.plugboats.com](https://plugboats.com/) website and is republished here with our thanks. Website: <https://plugboats.com/>



The maritime industry is entering its most profound modernization since the invention of the internal combustion engine. From artificial intelligence (AI) and wireless connectivity to electrification, autonomy, and advanced digitalization, a new wave of technologies promises to transform maritime transport, making it safer, cleaner, and more efficient.

As Bjørn Kjærand Haugland, Co-founder and CEO of Skift – Business Climate Leaders, argues, “Across land, air, and sea, a full stack of new technologies, autonomy, digitalization, electrification, and AI is converging to make mobility systems safer, more efficient, and dramatically more sustainable.” The maritime sector sits at the heart of this transformation, connecting millions of people and moving the majority of goods worldwide.

How AI, electrification, and autonomy are transforming shipping

Optimism and investment in fleet modernization

According to the SMM Maritime Industry Report 2025 (MIR), shipowners, shipyards, and suppliers are poised to invest heavily in efficiency, AI, and fleet modernization. The report, issued by Hamburg Messe und Congress (HMC), shows an optimistic Maritime Industry Score of 50.5 points, reflecting strong confidence despite global volatility.

Shipyards report record optimism at 49.9 points, while suppliers remain highly confident at 64.6 points. Shipowners are planning significant investments, with 48% likely to order new vessels by

2026, especially containerships, RoRo and passenger ferries, cruise ships, and naval vessels.

“The industry continues to grow dynamically, setting a strong signal in times of rapid change,” noted Claus Ulrich Selbach, Vice President Exhibitions – Maritime & Energy at HMC.

Sustainability remains a top priority. Six out of ten respondents anticipate growing pressure to modernize fleets for maximum energy efficiency, while data-driven solutions and AI have become increasingly important in decision-making.

Autonomy: Removing human error
A critical driver of modernization

is autonomy. "Autonomy is not about removing humans; it's about removing human error," explains Haugland. Human factors such as fatigue, miscommunication, and cognitive overload remain major causes of maritime incidents. Autonomous navigation systems, supported by advanced sensor fusion and AI, monitor surroundings continuously, anticipate risks, and act faster and more precisely than human operators.

At Zeabuz, autonomous ferries operate with zero-emission propulsion, docking with millimetre precision, even in dense urban waterways. Haugland notes that over the next decade, "autonomous and remotely supervised operations will become the new normal for short-sea shipping, port logistics, and passenger transport."

Dual-use platforms, combining civil and defence applications, are also emerging. The ZeaFalcon, a 7-meter uncrewed vessel developed with Damen Shipyards Group, exemplifies how autonomous systems can support both commercial and naval operations, improving safety, efficiency, and profitability.

Digitalization: The nervous system of modern transport

While autonomy is the muscle, digitalization acts as the nervous system. Connected ecosystems allow data to flow seamlessly between ships, ports, energy providers, and regulators. Real-time connectivity enables predictive maintenance, route optimization, and digital twins that simulate port operations before vessels even arrive.

Haugland emphasizes, "Digitalization transforms transport from a static timetable into a living, adaptive service," allowing fleets to respond dynamically to weather, passenger demand, or renewable energy availability.

Electrification: The engine of the future

Electrification complements autonomy and digitalization by redefining vessel propulsion. Battery-electric ships drastically reduce emissions, noise, and maintenance costs.

Cities like Oslo, Stockholm, and Rotterdam are already piloting autonomous electric ferries, demonstrating the viability of zero-emission urban maritime transport. Advances in charging infrastructure and battery technology will enable coastal cargo and logistics fleets to follow suit, driving both sustainability and profitability.

AI: Turning data into foresight

AI serves as the brain behind these transformations. Beyond predictive maintenance and obstacle detection, AI is moving toward strategic foresight. It will enable fleet coordination, energy balancing, and real-time optimization of entire transport corridors.

AI-driven route optimization tools, such as OSR-OW, developed by Weathernews and HD Hyundai Marine Solution, have already demonstrated average fuel savings of 5.3% during early trials in 2024. According to Elias J. Makris, Director of European Business Development at Weathernews, "Accurate atmospheric modelling allows captains to navigate efficiently, cutting fuel costs and emissions."

AI will also transform safety culture, shifting from reactive responses to proactive prevention, much like airbags revolutionized automotive safety.

Wireless intelligence: Safer, smarter ships

The transition to automation and digitalization requires robust connectivity. A recent Thetius-ScanReach report highlights the limitations of wired systems, which

dominate current maritime infrastructure. Wired setups create operational downtime, high costs, and safety blind spots. Wireless mesh networks now allow real-time monitoring of personnel and equipment, reducing risks and improving operational efficiency.

Sven-Eric Brooks, CEO of ScanReach, said, "Integrating people, infrastructure, and assets into one operational data platform enhances safety and simplifies upgrades throughout a vessel's life."

Global trade and economic implications

AI and digitalization also have broad economic implications. The 2025 WTO World Trade Report estimates that AI could boost cross-border trade by nearly 40% by 2040, increasing global GDP by up to 13%. For developing economies, closing the digital gap could raise incomes by 14–15%. WTO Director-General Ngozi Okonjo-Iweala stresses that inclusive policies, workforce training, and open trade frameworks are essential to ensure equitable benefits.

Cybersecurity: Mitigating digital risks

While technology improves efficiency, it also introduces cyber risks. According to Allianz's "Cyber Security Resilience 2025" report, ransomware remains the top threat, while data exfiltration is rising. Effective detection, response, and crew training can dramatically reduce potential losses. As vessels become increasingly connected, cybersecurity becomes integral to operational resilience.

Towards a more sustainable and smarter future

When autonomy, digitalization, electrification, wireless intelligence, and AI converge, the result is more than efficiency - it is resilience.

The human element will remain central, evolving from manual operation to oversight, analytics, and AI management roles. Crew reskilling, adaptive regulation, and collaboration among shipowners, technology providers, and authorities will be critical.





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FIN and Ifop study: Challenges and new opportunities for the French yachting industry



La FIN has presented the results of its major 2025 study, carried out in collaboration with Ifop, aimed at taking stock of French people's appetite for water sports activities. The aim was to identify the profiles of the interested public, understand their expectations and obstacles, and provide watersports professionals with ideas for adapting their offers.

Methodology and panel

The study was based on a representative sample: 2,015 people from the general population (aged 15 and over) and 1,820 pleasure boaters. It offers a precise overview of practices and intentions at a pivotal time for the industry in France.

Who are the French when it comes to water?

Of the 57 million French people aged 15 and over:

- 2.3 million sail regularly and are active boaters.
- 9.7 million sail occasionally.

The study clearly distinguishes between a potentially convertible general public, and a solid base of existing enthusiasts.

A priority target: aspiring and occasional customers

According to the results, securing the loyalty of occasional sailors appears to be a particularly promising lever for the industry. Beyond that, it's the aspiring millions, those who don't yet sail but show an interest, who represent a major growth reserve.

The stakes are twofold:

- Transform curiosity into regular practice, rather than trying to convince French people who are little or not at all interested.
- Propose adapted access routes and formats to encourage recurrence and attachment to the practice of boating.
- Boating as a leisure activity: one of many, but increasingly appealing.

The FIN and Ifop study shows that French yachtsmen are often multi-leisure profiles: they practice outdoor sports, travel as well as engaging in watersports. These practices testify to an attraction for escape, the outdoors and nature, as opposed to the intensive practice of team sports.

When we asked the general public about nautical activities, we noticed a keen interest in certain forms: day sailing, gliding, light sailing or kayaking, which are more accessible and less demanding than a boat several meters long.

Identified obstacles

But the study also points to a number of real and persistent barriers to entry into yachting:

- 73% of nonparticipants cite cost as the main obstacle.
- 64% mention mental workload (boat management, maintenance, logistics).
- 61% cite lack of access to infrastructure (berths, availability).

Added to this are lack of time, the remoteness of nautical areas, or lack of experience.

These factors explain why a large segment of the 28 million aspiring sailors have yet to take the plunge.

Expectations: simplicity, flexibility, experience

To attract both aspiring and occasional boaters, the study highlights several key expectations:

- Affordable, simple, low-commitment offers: rental, pooling, daily or short-term formulas rather than ownership.
- Turnkey services: easy boarding, escorting, equipment rental, assisted navigation.
- Easy access, whether in terms of cost, time, organization or technical constraints.

According to the study, boating can be positioned as a leisure activity offering freedom, nature and escape as an alternative to other leisure activities, with a strong appeal to urban and mobile populations.

Implications for industry: rethinking business models

For manufacturers, construction sites, rental companies, infrastructure providers and services, the study sets out clear specifications:

- Develop usage-based offers (rental, sharing, shared fleet, subscriptions) rather than an ownership-based model.
- Focus on simplicity, modularity and minimal maintenance: easy-to-use boats, simplified fittings, delegated maintenance
- Adapt communication: target aspirants, emphasize experiences, pleasure, accessibility and escapism rather than prestige.
- Invest in infrastructure (ports, marinas, easy docking) to remove logistical access barriers.

Towards a new era for French yachting

The FIN and Ifop study confirms what many had suspected: the yachting market no longer relies solely on boat owners or regular yachtsmen, but on a large pool of potential enthusiasts, aspiring and occasional yachtsmen.

The key for the industry? Transform this reserve into real growth, by focusing on flexibility, accessibility, simplicity and models adapted to new lifestyles.

The challenge has been set. To meet it, the French nautical industry, services, ports and distributors are going to have to not only adjust but also innovate. The potential is there.





At least 1,010 fatalities in enclosed spaces aboard vessels between 2000-2024

In response to concerns over the ongoing loss of life in the cargo holds of ships loading or discharging solid bulk cargoes at ports and terminals worldwide, Vistrato undertook a review of all reported accidents to identify underlying trends and consolidated the data on the "True Scale of Enclosed Space Fatalities aboard Ships" report.

Initially, the International Bulk Terminals Association (IBTA) submitted data to IMO on ship and shore worker fatalities in cargo holds during solid bulk cargo handling and later expanded the analysis to assess the full scale of cargo-related and non-cargo-related fatalities in enclosed spaces across all ship types.

Total enclosed space fatalities for the period 2000 to 2024

At least 1,010 ship and shore workers lost their lives in enclosed spaces between 2000 and 2024 on ships covered by the SOLAS Convention. The average loss of life is 40 fatalities per year for the 25-year period. The worst year on record was 2019 with 72 fatalities.

The total loss of life for the last 5 years from 2020 to 2024 is 250, averaging 50 deaths per year, but is now showing a significant downward trend, with at least 29 fatalities reported to date for 2024.

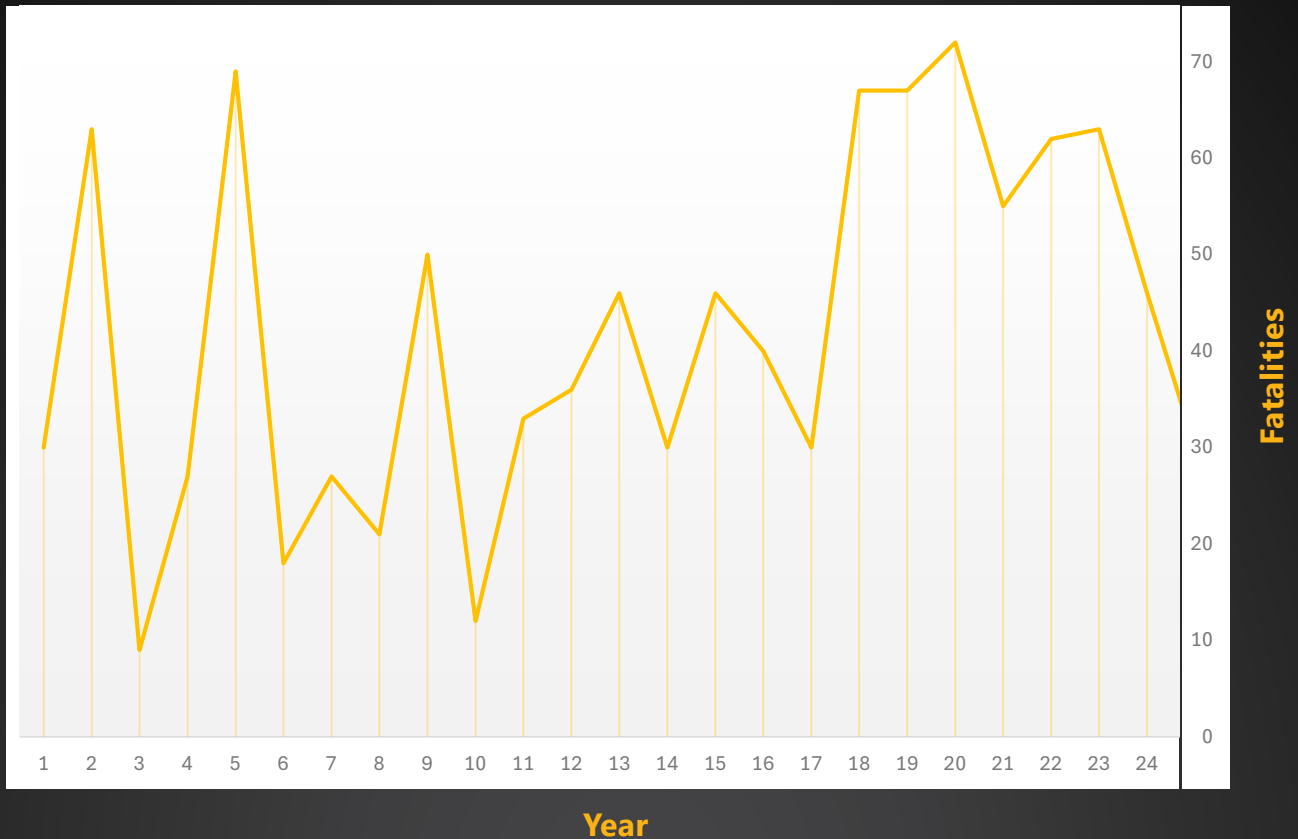
Fatalities by ship type

In summary, tankers accounted for the highest number of enclosed space fatalities, with a total of 402 deaths, followed by 308 on bulk carriers and 134 on general cargo ships. Containerships and offshore vessels each recorded 53 fatalities, while Ro-Ro and reefer ships had 15 deaths each.

Dredgers accounted for 11 deaths, passenger ships 10, and other vessel types, including car carriers, livestock carriers, and commercial yachts, totalled 9 fatalities.

Smaller ships appear to be more frequently involved in these incidents than larger vessels, largely due to the leakage of cargo gases from cargo spaces into adjacent accommodation, forecastle working areas, electrical switch rooms, ballast tanks, and void spaces.

Enclosed Space Fatalities 2000-2024



Vistrato 2025

Taking a closer look at enclosed space fatalities aboard tankers

Tanker crew members are most at risk during tank cleaning operations, when over 45% of all fatalities occurred, mainly due to explosions. Shore workers are most at risk during shipyard repair work, with 25% of fatalities. Small coastal tankers are the highest risk vessel type. More detailed numbers are as follows:

- Cargo and non-cargo-related: 249 fatalities were liquid bulk cargo-related, of which 233 were crew members and 16 were shore workers. Of the 153 non-cargo-related fatalities, 62 were crew and 91 were shore workers.
- Ship/shore: 295 (73%) were crew members and 107 (27%) were shore workers.
- Causes: 250 (62%) fatalities were due to explosions and fires, 120 were due to asphyxiation/toxic gas poisoning, and 32 were due to falls and struck-by accidents.
- In port/at sea/in shipyards: 154 fatalities on tankers occurred at sea, 131 in port, 99 on tankers in shipyards and drydocks, 18 N/A. Almost all the fatalities at sea occurred during tank cleaning operations.
- Locations on board: 249 (62%) of deaths occurred in cargo tanks and accesses, with 38 on deck, 30 in ballast, bunker and slop tanks, 18 in forecastle workspaces and electrical switch rooms, 11 in pumprooms, 5 in compressor rooms, and the rest in other spaces.
- Activities: of the 249 cargo-related fatalities, 181 (80%) occurred in cargo tanks during tank cleaning and inspection operations. The remainder occurred mainly during maintenance work, hot work and recovery of fallen objects from cargo tanks.
- Of the 153 non-cargo-related fatalities, almost all occurred during repair and maintenance activities, hot work and routine inspections. Of the 99 fatalities in shipyards 68 occurred in cargo tanks.
- Ship sizes: of 338 fatalities on tankers where the ship size was reported, 109 occurred on coastal tankers, 55 on small tankers, 83 on medium sizes, 57 on large and 34 on very large tankers.

Causes of fatalities

Analysis of enclosed space fatalities shows that 466 (46%) of all deaths were caused by asphyxiation due to oxygen depletion and/or toxic gas poisoning, 364 (36%) resulted from explosions and/or fires, and 180 (18%) were due to physical hazards, with over half of these linked to falls.

Furthermore, on tankers, explosions and fires from flammable atmospheres were the leading cause of the 402 enclosed space fatalities (64%), followed by asphyxiation/toxic gas (31%) and physical hazards (5%). For bulk carriers, asphyxiation/toxic gas accounted for the majority of the 308 deaths (65%), followed by physical hazards (24%) and explosion/fire (11%).

Across all other ship types, asphyxiation/toxic gas was also the primary cause (48%), with physical hazards responsible for 28% and explosions/fires for 24% of the 300 fatalities.

LIFEBOAT INCIDENTS:

KEY OBSERVATIONS & LESSONS LEARNED

Since lifesaving appliances became mandatory onboard vessels, significant changes have been observed in the design of lifeboats and their launching systems. These changes have largely been driven by the need for larger lifeboat capacity, enhanced protection, easier operation, and improved overall safety.

Traditional open wooden boats have been replaced by fully enclosed lifeboats and free-fall boats, while modern rescue boat designs now support a wide range of maritime rescue operations. Despite these advancements, accidents during lifeboat operations – launching, running, or recovery – continue to occur, resulting in fatalities and injuries. Many of these incidents are linked to increased reliance on technology, despite improvements in design, equipment, and maintenance standards.

Research and industry studies highlight the critical importance of lifeboat and rescue boat systems. Key studies include:

- InterManager (1981–2023) – Lifeboat accidents resulted in approximately 419–420 deaths, 346 serious injuries, and 116 minor injuries.
- MAIB Study 01/2001 (1989–2000) – 115 incidents, with 12 fatalities and 87 injuries.
- Joint Survey by OCIMF, INTERTANKO, and SIGTTO (2000) – Analysis of 75 lifeboat/rescue boat accidents.

EMSA also publishes annual reports on incidents and accidents, including data specific to lifesaving appliances (LSA), though there is no dedicated section for lifeboats.

An important observation from these records is that over 98% of lifeboat-related incidents occur during drills, maintenance, inspections, or training, rather than actual emergencies. Furthermore, in three major European ship abandonment incidents, no casualties were reported related to lifeboats or associated equipment.

Vessel Name	Express Samina, 2000	Sea Diamond, 2007	Costa Concordia, 2012
Area	Paros, Greece	Santorini, Greece	Giglio, Italy
Total Persons onboard	533	1,554	4,252
Official casualties	81	2 (missing)	32
Casualties caused by lifeboat use	0	0	0



This raises an important question within the maritime industry: why do fire drills or enclosed space drills rarely result in casualties, while lifeboat drills and ship abandonment exercises consistently reveal safety issues? The answer largely lies in the nature of the operation itself. Launching a lifeboat from a height of more than 10 meters, whether the ship is at slow speed or at anchor, is inherently challenging.

Safe operation depends on several critical factors:

- Proper use and condition of the equipment.
- Competence and training of the crew.
- Weather conditions and the overall status of the ship.

IMO regulatory updates for enhanced safety

The Maritime Safety Committee (MSC) has taken several steps to enhance lifeboat safety and reduce accidents during drills and operations:

- At its 96th session in May 2016, the MSC adopted amendments to SOLAS regulations III/3 and III/20 through resolution MSC.404(96). These amendments made it mandatory to carry out maintenance, thorough examination, operational testing, overhaul, and repair of lifeboats, rescue boats, launching appliances, and release gear.
- Earlier, at its 82nd session (29 November – 8 December 2006), the MSC amended SOLAS regulation III/19.3.3.4 concerning the launch of free-fall lifeboats during abandon-ship drills. The amendment allows lifeboats to be:
 - Free-fall launched with only the required operating crew on board, or
 - Lowered into the water using secondary launching equipment without the operating crew on board, and then manoeuvred in the water by the crew.



The purpose of this amendment is to prevent accidents during abandon-ship drills, and it entered into force on 1 July 2008.

- Additionally, on 1 July 2006, amendments to SOLAS Chapter III – Life-saving appliances and arrangements, adopted in May 2004, came into effect. These amendments were introduced following work by the Sub-Committee on Ship Design and Equipment (DE) to address the high number of accidents involving lifeboats. Many crew members had been injured or even killed during lifeboat drills and inspections, and these changes were designed to improve safety and prevent such incidents.

Best Practices

The following list highlights key considerations for the safe operation of lifeboats and related equipment:

- All lifeboats and associated systems must be certified in accordance with applicable regulations and properly installed on board.
- Both the managing company and the company responsible for inspections must ensure that lifeboats and systems are inspected at the required intervals.
- Tests and dynamic inspections should be conducted in accordance with the manufacturer's instructions.
- Fall preventers (where applicable) must be used.
- Comprehensive training covering all aspects of lifeboat operation and associated systems should be provided on board regularly.
- Maintenance of lifeboats and related systems should be treated as a critical priority.
- A detailed risk assessment must be conducted before the use of lifeboats or any supporting machinery.
- Records of all use, training, maintenance, and inspections of lifeboats and associated systems must be maintained in accordance with the Safety Management System (SMS).

Comprehensive risk assessment is essential before any lifeboat operation. The IMO provides guidance and documentation for the inspection, maintenance, and operational use of lifeboats and related equipment.

Shipping companies must ensure that crews are equipped with fully operational and well-maintained lifeboats and receive the necessary training to perform lifeboat operations safely.





Major drop in ship sulphur emissions confirmed following global regulation change

Recent global regulations have significantly reduced sulphur emissions from ships, helping to improve air quality in coastal regions – confirmed by a new international study led by researchers at the National Centre for Atmospheric Science.

The research, published in *Environmental Science: Atmospheres*, used aircraft and ground-based instruments to measure sulphur dioxide and nitrogen oxides emitted by ships in the North-East Atlantic and European coastal waters between 2019 and 2023. The team found that the average sulphur content in ship fuel dropped nearly tenfold in open ocean areas following the International Maritime Organization's 2020 regulation, which capped sulphur content in marine fuel at 0.5%.

Before the change, many ships exceeded the previous 3.5% limit. After 2020, only a small number of ships were found to breach the new standard.

In European Sulphur Emission Control Areas (SECAs), such as the English Channel and the Port of Tyne, sulphur levels were even lower – well

below the stricter 0.1% limit. Interestingly, ports outside these zones, like Valencia in Spain, also showed low sulphur levels, likely due to EU rules requiring cleaner fuel when ships are docked for extended periods.

This is the first study to use aircraft-based measurements and predictions from the Ship Traffic Emission Assessment Model (STEAM3) to assess ship emissions outside of sulphur control zones since the 2020 regulation came into effect. The findings support the widely held view that ships now emit around seven times less sulphur than before the rule change – an important step toward cleaner air and healthier coastal environments.

Professor James Lee and Professor Hugh Coe spoke about the study.

What motivated this research? Was there a specific concern or gap in knowledge you wanted to address?

"Large amounts of sulphur in the atmosphere can be detrimental for people's health and the environment. It's important to understand where sulphur emissions come from and how they behave,

because it helps us make better predictions about air quality and our changing climate. Shipping is the most important human source of sulphur in marine environments, largely found as sulphur dioxide, and is estimated to be responsible for around 13% of global sulphur emissions,” said Professor Hugh Coe, atmospheric composition research scientist at NCAS and the University of Manchester.

Professor James Lee, an atmospheric chemist at NCAS and the University of York, commented, “There was a large reduction in the maximum allowed sulphur emission from ships in 2020, so we wanted to measure emissions before (in 2019) and after the change (in 2021 and 2022) to see what the effect was.”

Why use aircraft and land-based platforms for measuring ship emissions? What advantages did this approach offer?

“Regulations are different in ports and inland waterways compared to the open ocean so using an aircraft was the only way to get the open ocean measurements. To our knowledge this is the only study of its type,” said Professor Lee.

“Because of their location, often a long distance from land, emissions from ships are difficult to study. Compared to ports, inland waterways, or special sulphur control zones, ships actually spend most of their time in the open ocean. This is also where they produce most of their emissions,” added Professor Coe.

How significant is the reduction in sulphur emissions since the 2020 IMO regulation change? Can you describe what this means for air quality and marine ecosystems?

Professor Lee said, “It’s a big reduction, largely in line with the change in regulations. It will undoubtedly improve air quality in regions close to shipping, although the reduction in sulphur might have an unintended global warming effect due to the change in ship plumes interacting with clouds.”

How do these findings compare with expectations or predictions made before the regulation took effect? And what might explain why some ships still exceed the sulphur limits?

Commented Professor Coe, “It’s worth noting that, in the open ocean, 5 ships out of 78 breached the 0.5% sulphur content limit in 2021 and 2022. That’s quite a substantial proportion of the observed fleet. While it’s reasonable to assume the fleet’s average is below the 0.5% limit, there could be a significant number of outlier ships breaching that limit, potentially having a large effect on local air quality.

The limited sample size makes it difficult to draw any conclusions about what might cause a ship to breach the limit e.g. its age or its tonnage, so more measurements would be needed to investigate the cause of these outliers.”

Professor Lee added, “I think it was generally expected that the regulations would be adhered to and this research shows evidence that this is the case. I’m not sure why some ships still exceed the limits – it could be that exhaust scrubbing systems are not working very well or that high sulphur fuel is still being used in some cases.”

Can you explain in simple terms what the NO_x/CO₂ ratio tells us about ship emissions? Why do emissions vary between locations like the open ocean, SECA zones, and ports?

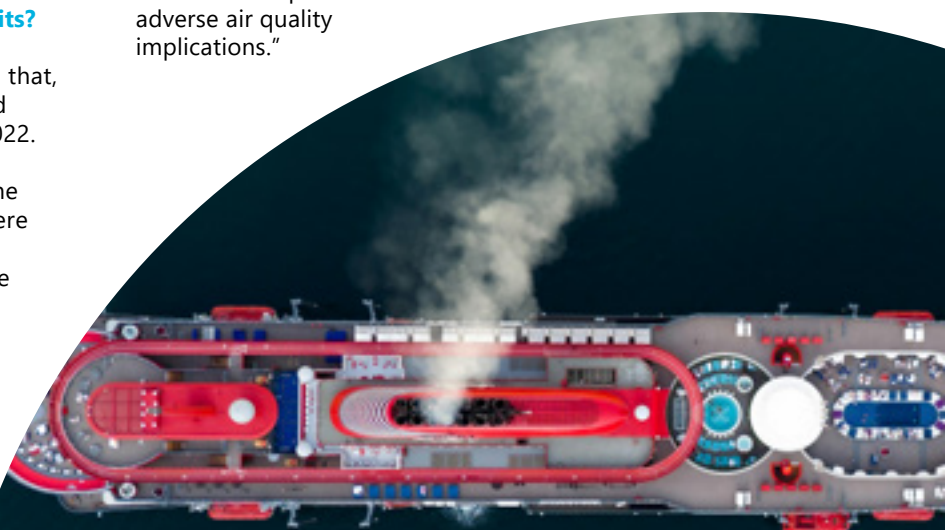
“The ratio tells us how efficiently ship engines are removing NO_x compared to other vehicles. The lower ratio in ports is probably because ships are using auxiliary engines rather than their main engines, and these probably run on different and cleaner fuel. There are also different regulations in the different regions. In general SECA zones and ports have more stringent regulations, which the ships were largely keeping to,” said Professor Lee.

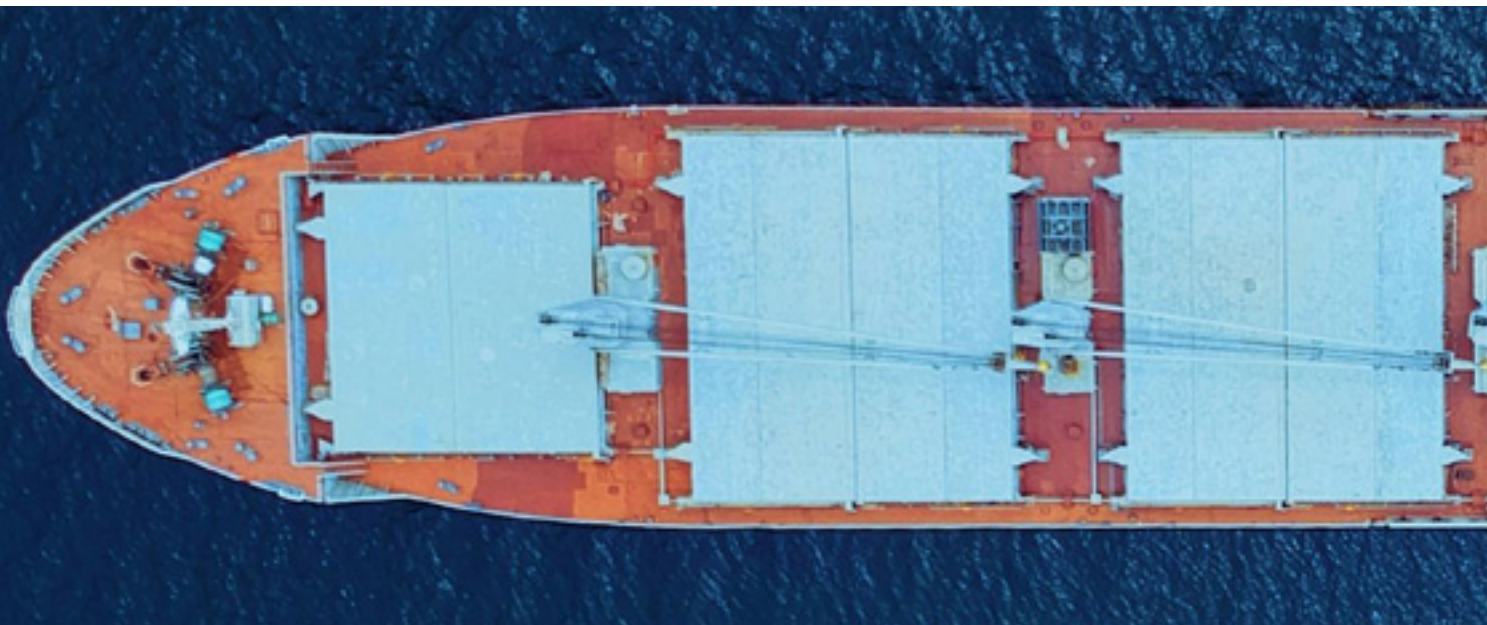
“This study was limited to the Eastern North Atlantic Ocean, English Channel and two European ports, so measurements in other parts of the world, especially in the open ocean, would be required to see if this result is representative of the global shipping industry,” said Professor Coe.

What’s the biggest takeaway from the research, and what can policymakers do to support cleaner shipping practices?

The final word goes to Professor Lee, who said, “We found that there is fairly good compliance with the new sulphur regulations, both in SECA zones and the open ocean. This is the first experimental evidence of this in the open ocean. Air quality in ports and coastal regions is going to become more of an issue going forward as emissions from road transport reduce. There is no obvious way to move away from combustion for shipping, although alternative fuels are being thought of (such as liquefied natural gas and ammonia).

“Policymakers need to keep a careful eye on this to make sure that any change that might be beneficial from a carbon reduction point of view does not have unexpected and adverse air quality implications.”





Critical insurance policy blind spot: It's time to move beyond simple asset replacement

By **Armand Lans**, FDR Risk



There's a compliance gap that could sink Europe's green shipping goals, writes Armand Lans from FDR Risk (pictured left). As a senior broker for a marine insurance consultancy firm, Lans warns that 'compliant' replacement can triple costs.

As European regulators accelerate their decarbonisation push, a hidden challenge is emerging – outdated insurance policies that fail to reflect the realities of the energy transition and pose a serious threat to shipowners and operators.

Across Europe, thousands of inland vessel owners and operators are under mounting pressure to meet ambitious EU climate targets. Regulations such as the Renewable Energy Directive (RED II) and the FuelEU Maritime regulation are forcing operators to phase out fossil-fuel engines in favour of cleaner, low-emission alternatives.

Like-for-like replacement doesn't work for 'compliant' replacement

Most existing marine insurance policies are structured around the assumption of like-for-like replacement. For instance, if an engine is damaged beyond repair, the insurer covers the cost of replacing it with an equivalent model. But 'equivalence' has taken on a new meaning under EU law. The compliant replacement is no longer a diesel unit but a cleaner, costlier, and often more complex system. The price gap and vessel configuration requirements can be substantial.

For instance, an inland barge transitioning from marine diesel to an ammonia-compatible engine must also invest in new fuel tanks and safety systems, as ammonia's lower energy density requires greater storage volume. This space comes at a premium, often at the expense of cargo capacity. The owner faces not just higher replacement costs but also reduced earning potential. Yet none of these factors are reflected in current insurance structures, which still calculate compensation based on legacy technology.



This isn't hypothetical - it's a looming reality for many operators. Depending on the vessel's age and design, replacing an older engine with a compliant one can double or even triple total costs.

Regulators demand cleaner vessels, insurers lag behind policy shifts, and financiers hesitate to bridge the gap continued participation in the transport system, culminating in a deadlock. The risk is that an engine failure could trigger a chain reaction of insolvencies across smaller operators, eroding confidence in the very sector the EU aims to decarbonise.

The complexity of today's regulatory environment requires a return to consultative 'human-first' underwriting.

Replace checklists with flexible coverage

Rather than relying on rigid checklists, insurers need to engage directly with shipowners, engineers, and regulators to design flexible coverage that reflects real-world challenges and transition costs. This includes allowances for retrofitting downtime, fuel system upgrades,

and potential income losses during compliance-related refits.

Some forward-thinking brokers are already taking this approach, arguing that no risk should be deemed 'uninsurable' until it has been fully assessed. Their proactive stance is paving the way for insurance models that reward sustainability rather than penalise it.

Inland waterways carry a sizeable share of the EU's freight, from bulk commodities to essential materials. If smaller operators are forced out by unmanageable financial risks, freight will inevitably shift to road, driving up emissions, congestion, and costs.

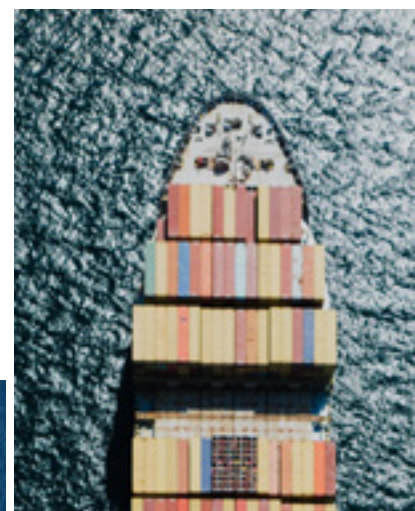
A modern insurance framework needs to move beyond simple asset replacement to encompass total lifecycle risk, covering compliance-driven upgrades, transition-related downtime, and long-term emissions benefits. Modular products that adjust premiums based on a vessel's fuel type or verified carbon reduction could provide a viable solution.

Crucially, collaboration is needed. Regulators, financiers, and insurers must align on clear guidelines for the transition to low-emission vessel coverage.

Energy transition defining test for marine insurance

The crux of a marine insurers' role is to anticipate and manage risk. There is no greater collective and existential risk than climate change itself. By embracing the shift, insurers can become catalysts of innovation rather than obstacles to it. The energy transition is a defining test for the sector, it is vital the sector take action and 'pass' with flying colours.

Rightly, the EU's imperative is clear, the transition to clean energy is non-negotiable. The insurance industry must be equally decisive: this transition is insurable. Only by closing the gap between policy and protection can Europe ensure its inland shipping fleet stays afloat.



A full-page photograph of a man, Peter Pope, sitting and smiling. He is wearing a black leather motorcycle jacket over a black and white horizontally striped t-shirt. A blue and white patterned scarf is tied around his neck. He has a grey mustache and is wearing black sunglasses. The background is a bright, slightly out-of-focus interior space with a white wall, a small framed picture, and some potted plants hanging on the wall.

A day in the life of...

Peter Pope

MIIMS

Dressed ready to ride!

In this edition's 'A day in the life of', feature, Mike Schwarz is in discussion with IIMS member, Peter Pope, an experienced marine surveyor based in Queensland, Australia. Mike was particularly keen to find out more about Peter's enviable role as a mentor to a number of IIMS members going back over many years.

Q1. Peter, I know of your keen interest in providing mentoring to new entrants to the surveying business, but before we chat about that, I'd like to understand more about your background. What was it that attracted you to the marine surveying profession in your younger days?

I got into the marine survey industry through a very roundabout journey. I had previous experience as a diesel mechanic, electrician, boilermaker and did an apprenticeship as a flour miller. For example, as an apprentice flour milling manager, I was required to learn every process of the flour mill, from intake of wheat to milling flour. This included learning about the mechanics of the machines, pneumatic, bucket elevators and electrical systems in a flour mill from 415-volt three phase to 240-volt single phase. As part of my apprenticeship, I did coursework that reinforced everything I learned on the job: Flour Milling diploma with City & Guilds London Institute.

I am very curious by nature, so I have often learned how to do things myself, like fixing cars, wiring my own boat, etc. I have always had the ability to problem solve, to logically

work things out, and will give most things a go. My wife says I have an "encyclopedic mind" because once I have seen or fixed something, I remember what the problem is and what to do to fix it.

I built a fibreglass boat from 1992 to 1995 (Martz craft 35, centre cockpit sailing sloop) then sailed around the world (circumnavigated) for 7 years. With this variety of experience, I was employed as a marine electrician in the Caribbean (St Marteen) and a superyacht captain in the USA on three large vessels from timber to Sanlorenzo and Sunseeker. I also helped other sailors to troubleshoot their boat problems and could usually fix them.

When I returned to Australia in 2003, I started up a business doing electrical and electronics for boats. This was a rewarding but tedious trade and I became tired of crawling around in small spaces on hot yachts. I decided I wanted to "get off the tools" and began to consider what else I could do while still working on and around boats.

I had seen marine survey reports that were poor and lots of things were often missed. I also thought I could

do a better job than what I saw the surveyors doing! I realized I knew a lot about boats and how to build or fix them. Assessing them (surveying) was like the next step.

This type of work excited me and gave me something to work towards. I did the marine surveying course with U.S. based SAMS (Society of Accredited Marine Surveyors) and I found a mentor to teach me on the job - that person was the Australian Director for SAMS. Later I met Captain Peter Lambert who I relied on for information and thus he introduced me to IIMS.

Q2. How has the industry evolved and what are the major changes you have witnessed over your time as a surveyor?

- I've been a marine surveyor for 23 years. I have seen the industry improve and provide better surveyors, who are more educated and better informed. I also thought that some of them needed mentoring and advice on how to express themselves when writing a report; and generally offered myself for them to seek information from my expertise over the years.



IIMS conference in Brisbane.



Completing a Tonnage Certificate at Maritimo Manufacturing.



Insurance assessing of a Hylas 46.



Assisting Peter Lambert (left) with an Insurance assessing an Hylas 46.

- There are now more marine surveyors that know the industry well, and less people who just decide to be a marine surveyor and hang out a shingle - (these inexperienced surveyors can miss important problems which can lead to accidents and drownings).
- I also think that there are more clients that blame the surveyor for any issues they have with their boats. They think the surveyor missed or assessed something incorrectly. They may come back after the survey, sometimes a month later and sometimes years later! I have to reply diplomatically and clearly, that the survey is based on the condition of the yacht, at the time, on the day of the survey.
- The public more commonly understand the benefits to having a survey when they are buying a boat. I often have clients that are grateful for a survey that helps them to make an informed decision when buying their boat.
- More people seem to understand that it is an essential service because people need to make sure that when they spend big money, sometimes life savings, that they are getting value for the yacht they are buying. We are talking hundreds of thousands of dollars, sometimes a retirement fund!
- An accurate and thorough survey protects the client's investment, and they know what they are getting for their money. It can also be a bargaining tool for a sale price reduction.

- In Australia now, all the insurance companies require a marine survey every 5 years. This means that there is always work, even when boat sales are low (decrease in demand for pre-purchase), but there is always assessing work for insurance companies too.

Q3. We hear of ever-increasing temperatures affecting the Queensland area of Australia. The thought of being in a bilge/engine bay inside a steel boat is unappealing. How are you coping with this phenomenon?

During an inspection, areas that can get hot, like the engine bay, are cool before the engine is started. More and more boats have air conditioning and often the temperature where

I work is quite pleasant. There is always a breeze on the water. Plus, the amount of time spent in small spaces is minimal in an inspection.

GRP (fibreglass) boats plus some timber and aluminum vessels make up the majority of my work and don't get as hot as steel boats.

Q4. I mentioned your love of mentoring earlier, so, as a mentor, what personal satisfaction do you get from mentoring a less experienced surveyor and why?

Because I am so busy and many of the older surveyors have retired, the workload has increased significantly. When I train and mentor new surveyors, I can pass on work to them and give them quite a lot to do



Peter (right) with his original mentor when he first started, Paul Slivka (left) the SAMS director in Australia (long ago retired but still a good friend) and next to Peter is Serge Testa whom he mentored but is also now retired. They're standing next to a plaque by Redcliffe council celebrating Serge's record for circumnavigating in the smallest boat, for which he still holds the record.

during the first 6 months until they establish themselves. This is a great relief to have help with the workload coming in, plus it keeps the work flowing to IIMS member surveyors.

I get excited to see them gain confidence, take pride in their work and become independent surveyors who still call me frequently to bounce ideas off and thoughts with me.

Surveying work is a single person job generally, so having a new marine surveyor who is keen to learn gives me company and a second pair of eyes. Also, I like the process of teaching and describing what I do as I'm doing it and the pit falls of certain types of boats. It's a way to reflect on my own methods. So, I'm learning new skills too and sometimes I learn new ideas from them as well. Maybe you can teach an old dog new tricks!

Q5. How do you go about mentoring? What are the key components and guidance you share with a mentee?

There are still no formal mentoring programs and the current training for marine surveyors is course work – remember, every boat is different even if there are two alike. Mentees have usually completed (or nearly finished) their formal training (IIMS Professional

Qualification) and are ready to learn “on the job” so they require guidance rather than intensive training. Mentees look for an experienced surveyor (mentor) and have approached me. Between us, we discuss how it will work and what the trainee wants out of the relationship.

The mentees come with me for several surveys over six months to a year on a weekly basis to observe what I do and how I do it. I try to provide a variety of yachts and power boats. I give them copies of my templates for drafts, service agreements, invoices and final reports, plus on every job that they accompany me their name also goes on the report as evidence.

Q6. I understand you have mentored a number of new entrants to the surveying profession, many of whom have gone on to become successful surveyors and members of IIMS. What do they gain most from being a mentee?

In most jobs there are experienced people in the workplace, where you can learn on the job with supervision. A surveyor works alone and doesn't have the benefit of support from co-workers in the office. Therefore, a mentee has access to guidance,

information and experience from a seasoned professional surveyor and in many cases years later can ring and discuss (bounce off) things that require a second opinion before things are written down.

Q7. Typically, what are the key issues for someone coming into this industry that are likely to cause the biggest challenges.

As already mentioned, there can be difficult clients. A good marine surveyor requires first-class people skills and the ability to put everyone at ease during an inspection. The surveyor needs to be able to convey that most items discovered can be fixed or repaired as it takes time and money in most cases, and often just means the boat has potential.

Clients not understanding that the survey is for what is seen “at the time/on the day” and coming back, sometimes years later, saying things have broken that the surveyor should have picked up can be a real challenge.

Sometimes, from lack of experience or knowledge, items and faults can be missed and could have serious consequences – all the people I have mentored can call me anytime to discuss any concerns to avoid this situation arising.



The boat Peter built and with which he did a seven-year circumnavigation.



Peter and Jan on their Greek motorbike in Crete.



Q8. What message would you like to give to others who may be thinking about undertaking some mentoring and passing on their skills and knowledge?

That it is rewarding, gives me satisfaction and I feel like I'm creating and leaving my legacy. I have a good reputation and this carries onto to my mentees through the network. I take pride in my work and

Peter on his bike in Brisbane Australia.

I instill this in my mentees. I teach them to always answer their phone professionally, have a good reliable vehicle, a good computer, have a great manner, be ethical and humble and always listen.

It takes a lot of my time initially to mentor. When the mentee gains confidence and competence, it relieves my workload because I can pass on work and share the load.

Q9. If there is one essential piece of advice you could pass on to less experienced marine surveyors, what would it be?

Be honest, be humble, act with integrity and don't be influenced to change anything in your report. Write the facts down as you see them.

If you are known to be dishonest, or doctoring your assessments, it can be devastating to your reputation. Most of my work comes from clients and people in the industry that know I have integrity and my reports are true to what I see.

Q10. When the work is done for the day, how do you choose to relax and unwind?

Sailing, motorbiking, taking my wife out, spending time with friends and overseas travel.

Q11. What was the last good book you read?

"Bad Monkey" by Carl Hiaasen.

Editor's note - About the book: Former Miami cop Andrew Yancy investigates a suspicious death involving a frozen arm while dealing with eccentric characters, including a voodoo witch and a troublesome monkey.)

Q12. I believe you split your time between Queensland and Corfu. For those who do not know this idyllic Greek island, what is it that you like so much about the area?

Our trips to Greece each year are a mix of holiday, plus a bit of work so it becomes a working holiday, meaning we can afford the trip and stay all summer, usually 3-4 months at a time. I do the occasional inspection for local Greek brokers and also some insurance claims work for insurers.

We also have a motorbike in Greece and undertake trips to Greek islands and neighbouring Italy.



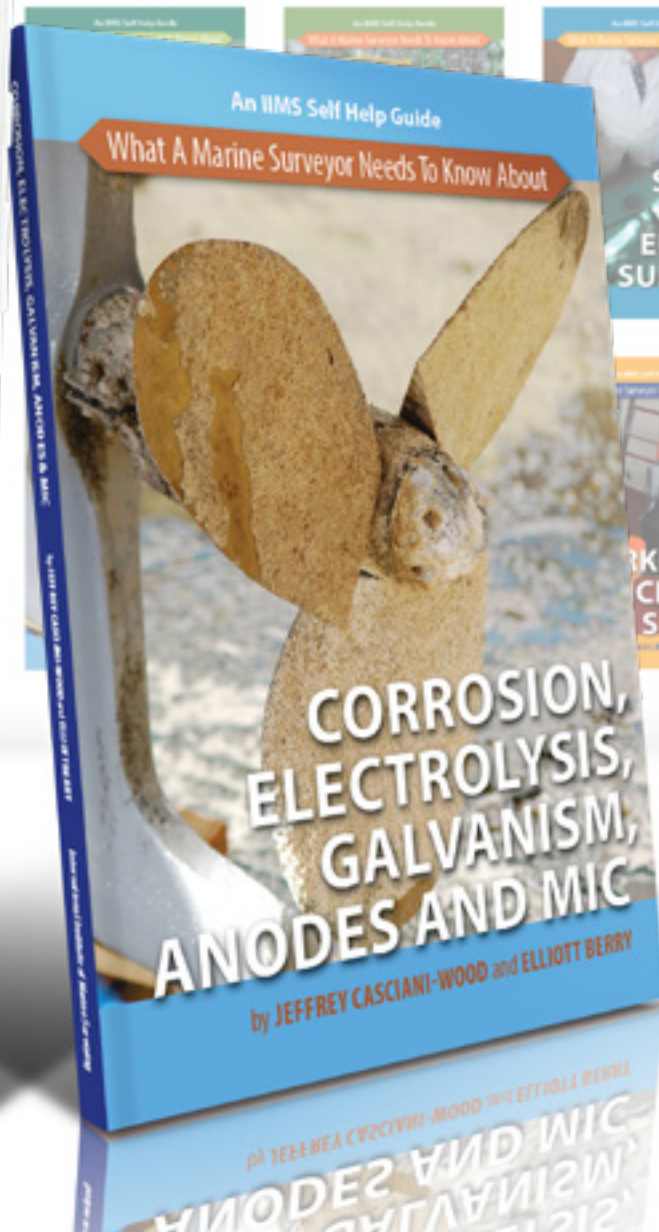
Peter and his wife Jan with best friend George (a Greek maritime lawyer) on their charter boat in the Greek islands.



Peter's yacht charter crew every year, Corfu.

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For 10 years, our crisis team has stood side by side with those who face the most terrifying moments at sea.

We are marking 10 years of our Crisis Response Network – our free support and care to seafarers, their families and shipping companies following critical incidents.

From piracy and imprisonment to shipwrecks and suicides, our global team of crisis responders have been there, able to provide the immediate and long-term support that is needed to get through the trauma of a crisis at sea.

These situations are frightening and overwhelming for those caught up in them and for those awaiting news on shore. But, thanks to our Crisis Response Network, they have not had to face this alone.

For 10 years we have been by their side, visiting and comforting them, supporting their families and liaising with companies, lawyers, governments and other agencies.

And we continue to be there, across the globe and around the clock – whenever and wherever we are needed. We are always just a call away.

You can read about some of the seafarers and families we have helped over the past 10 years here: sailors-society.org/crn-10

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