ANNUAL DIGEST

CH!RP

An independent and confidential reporting system for the Maritime industry

2025-26

WELFARE ISSUES
DESIGN ISSUES
SEARCH AND RESCUE
SUPERYACHTS
ENGINEERING AND TECHNICAL
DECK AND CARGO OPERATIONS
BRIDGE, PILOTAGE AND NAVIGATION

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Together we can promote the development of a 'just' reporting culture across the maritime sector to improve safety outcomes. The key attributes of a successful ambassador is a passion for safety and a willingness to speak up for CHIRP among your colleagues and contacts.

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Annual Digest of Reports and Insight Articles 2025-26

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Maritime Director's Foreword

The past year has once again demonstrated that when maritime voices speak up, meaningful safety improvements can follow. In 2025 we received 330 reports concerning safety, welfare or compliance from all sectors: commercial shipping, superyachts, fishing, maritime pilots, offshore installations, ports, SAR units, recreational vessels and even the "shadow fleet". CHIRP responded to every case.

Many of the issues raised were serious, and some were urgent. Through close engagement with companies, Flag States, Port States Control, classification societies and MoU bodies, corrective action was taken in virtually every instance: unsafe equipment and procedures were corrected; abandoned seafarers repatriated; unpaid seafarers received their wages; harbour staffing levels restored to safe standards; MARPOL breaches investigated, and several allegations of criminal behaviour were escalated appropriately.

Alongside the casework, CHIRP continued to promote learning and share lessons widely: 10 FEEDBACK editions were published across maritime, superyacht and SAR programmes; 8 podcast episodes were released, alongside 2 short educational videos on the dangers of enclosed spaces; and we published Mastering the Lee, our practical guidance for improving the safety of pilot embarkation on larger vessels.

Our engagement across the sector also increased. This year, CHIRP presented at the Palma Yacht Show, Metstrade, to the aviation industry's ICASS conference, and many others. We also co-hosted three significant gatherings: a safety event at the London International Shipping Week, the Kind Leadership conference and the 4th International Maritime Human Factors Symposium in Glasgow.

None of this would be possible without the generosity of our funders to whom we are exceptionally thankful, and for our volunteer Advisory Board members and our international Ambassadors who represent us in over 40 countries.

Most importantly, I want to thank every person who contacted CHIRP this year. Speaking up is not always easy, but your reports have prevented harm, corrected unsafe practices and improved working conditions for many others. I hope that this Digest encourages even more people to come forward in the year ahead.

Yours in Safety,

Adam Parnell
Director Maritime

Introduction

Welcome to our eleventh Annual Digest, containing all the reports we published during 2025 and some additional material which has been specially commissioned.

Looking back over all the Annual Digests, it is possible to see how our industry is changing. Who could have imagined, eleven years ago, that we would be receiving reports about unmanned surface vessels or the dark fleet, for example? Yet there is also a sad continuity as we continue to see reports about dangerous enclosed space entry, improper pilot boarding arrangements and the traditional slips, trips and falls. The sea is a dangerous place, and it is up to all of us to do what we can to make it safer.

CHIRP Maritime is still run by our indefatigable Director, Adam Parnell and his excellent deputy, Dave Watkins. Ably assisted by Stephanie Dykes and our newest member Liz Moran, they get through a remarkable amount of work and it is thanks to them that CHIRP Maritime goes from strength to strength. They are supported by our Trustees and the wise men and women of our Maritime Advisory Board, who give freely of their years of experience and knowledge of almost every facet of the industry.

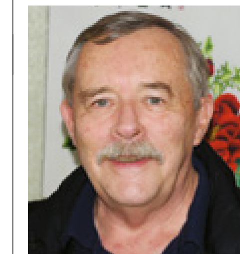
We continue to publish in several languages, and our Ambassadors continue to spread the word about what we do.

In addition to our regular editions of Maritime FEEDBACK, we also publish specialized newsletters for the superyacht and fishing communities and, most recently, we have been working with the international Search and Rescue community. The results of this collaboration will be seen in the pages which follow.

None of this would be possible, of course, without the generosity of our sponsors. Their support is vital and we thank them all.

Finally, we pay tribute to our reporters. They are the lifeblood of CHIRP Maritime and their dedication to safety is admirable. We would not be here without them!

We hope you will find this Annual Digest useful and, until next time, may all your voyages bring you safely home.



Editor: Captain Alan Loynd
FNI FITA MCIArb BA(Hons)

CHIRP Maritime's collaboration activities

- We organised a co-sponsored event for London International Shipping Week.
- We organised a co-sponsored event for the International Maritime Human Factors Symposium, Glasgow, December 2025
- We organised and co-sponsored a Kind Leadership workshop at the NI Headquarters in November 2025
- We attended a Forum for Contingency Planning-Fire on Roll-on / Roll-off passenger Ferries carrying passengers
- We collaborated with CROSS for a publication in the Structure Magazine, published in October 2025.

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1. Welfare Issues

When living conditions become safety risks

This section highlights how poor living conditions directly undermine safety, wellbeing, and regulatory compliance. Reports detail pest infestations, crew abandonment, substandard MLC accommodation, bullying behaviour ashore, and unsafe hygiene and welfare arrangements. They also highlight themes of weak safety culture, fear of retaliation, poor communication, and management failing to meet legal responsibilities.

CHIRP emphasises that welfare is inseparable from safety: when crews are unsupported or unsafe, risks escalate rapidly. A strong reporting culture, regulatory oversight, and accountable leadership are essential to prevent recurrence.

M2459

Pest infestation

Initial report

We are facing a severe infestation of pests on the ship, with cockroaches present throughout the vessel. They are found in food supplies, refrigerators, utensils, bedding, and other areas. This situation has caused significant psychological and emotional distress among the crew. We are unable to eat or sleep peacefully, constantly feeling anxious and stressed. The captain's behaviour exacerbates our situation. He behaves erratically, making threats to ensure our silence regarding these issues. There is fear among the crew, and speaking out feels unsafe. During recent inspections, port inspectors did not inspect the onboard condition closely. This same behaviour by port officials also occurred at the last port and during the current inspection. The captain has warned us against saying anything.

CHIRP Comments

CHIRP contacted the flag state, which in turn contacted the company, and arrangements were made to carry out fumigation of the vessel. However, the arrangements made to fumigate the ship did not follow the procedures outlined in the company's safety management system. CHIRP was allowed to review the relevant sections of the safety management system, and none of the risk assessment controls were implemented.

This report highlights a breakdown in safety culture and procedural compliance on board.

No safety meetings were conducted, and there was no explanation of the fumigant's chemical data sheet. Some crew members were reportedly asleep in their cabins when fumigation began; an unacceptable practice that exposed them to serious health risks. Video evidence supports the crew's account. The psychological effect on the crew regarding the infestation and the lack of support by the master and company until intervention by CHIRP led to very high stress levels, according to the reporters.

CHIRP managed to obtain the Safety Data Sheet for the fumigant used, and the risk of health issues associated with inhalation was high. The crew was instructed to conduct a second round of fumigation en route to their next port but was left without hazmat gear or proper masks, rendering the fumigation unsafe.

The master's behaviour reflects a person under severe stress and not capable of making informed decisions concerning the safety of the crew. The management company appears to be severely lacking in experience and support for the crew.

This case serves as a stark reminder that documentation alone does not guarantee safety. Procedures must be understood, implemented, and routinely verified. CHIRP has escalated this matter to the flag state and continues to engage with the crew to ensure their safety concerns are heard and addressed.

Superficial or weak auditing, whether internal or external, can miss serious risks, especially if the crew feel unable to speak openly during inspections. Such circumstances not only endanger seafarers but also erode trust in the regulatory framework meant to protect them.

The presence of procedures means little if they are not being lived and enforced on board. This case is a textbook example of "paper compliance", where documentation exists primarily to tick boxes rather than to drive real safety outcomes.

Representative image. Credit: Shutterstock

Factors relating to this report

Local Practices – management appears to have its own rules for managing the vessel, with no adherence to the safety management system, despite a specific reference to fumigation.

Culture – There is no authentic safety culture, except for the fact that you should not get caught!

Capability – The vessel's operational leadership appears incapable of operating a safety management system.

Key takeaways

Seafarers: When silence endangers safety—speaking up saves lives A severe pest infestation, improper fumigation, and a captain's threatening behaviour created a psychologically unsafe and physically hazardous environment. Despite formal procedures existing on paper, none were followed, placing the crew at significant health risk.

Managers: Leadership without listening breeds risk—your safety culture is what happens when you are not on board The breakdown in leadership, procedural enforcement, and crew wellbeing in this case reflects deep-rooted safety culture failures. Procedures were ignored, risks were unassessed, and the crew was left vulnerable. Managers must ensure that documented systems translate into lived practice and that masters and crews are empowered and psychologically feel safe to raise concerns. Leadership accountability and visible commitment to safety are non-negotiable.

Regulators: Silent crew resulted in missed signals—regulation fails when crews cannot speak freely This case highlights how inspection regimes can overlook critical hazards when crews are too afraid to speak up. Despite clear procedural violations and health threats, port inspectors overlooked the issues on two separate occasions. Regulators must strengthen inspection protocols to uncover both technical noncompliance and suppressed reporting cultures, ensuring seafarers can safely disclose concerns and that just culture principles are allowed to flourish.

M2491

Crew abandonment

Initial Report

CHIRP received a report from several crew members who were abruptly dismissed from a 24m vessel after raising repeated concerns about living conditions and on board safety. The captain, who was also the vessel's owner, terminated their contracts without notice, support, or provision for repatriation. It was only after intervention from an ITF Inspector that assistance was provided. This incident appears to meet the criteria for abandonment under the Maritime Labour Convention (MLC) .

The crew had previously reported a persistent spider infestation in the accommodation spaces. One crew member required hospital treatment as a result. Alongside this, there were ongoing concerns about black mould, poor ventilation, and unsanitary accommodation. A heavily stained and damaged mattress was only replaced following a formal request. A missing toilet seat was replaced only after a complaint was lodged. There was no privacy in cabins due to the absence of curtains, and bathrooms were described as damp and poorly ventilated. These conditions made the crew quarters uninhabitable. The crew were relocated multiple times, including to a hotel, student dormitories without hot water, the captain's private home, and other guest spaces.

In addition to the living conditions, serious safety concerns were raised. The vessel was reportedly operating in violation of SOLAS and Flag State safety requirements. All fire extinguishers were either expired, corroded, or inoperable. No flares were carried on board, and there were no life jackets available in the crew or guest cabins or anywhere within the vessel's interior. Despite these critical deficiencies, the vessel continued to operate at sea, placing both crew and passengers at risk.

CHIRP Comment

This case highlights a broader concern regarding vessels operated solely by their owners, where the usual checks and balances provided by an independent management structure may be absent. When command and ownership are combined, especially on vessels under 30 metres, external oversight is often limited and accountability difficult to enforce.

CHIRP shares this report to encourage greater scrutiny of crew welfare and vessel safety on owner-operated yachts. It is essential that crew members feel able to raise concerns without fear of retaliation, and that enforcement mechanisms are strong enough to prevent recurrence of such incidents. Safeguards must also be in place to ensure that new crew are not recruited under false pretences, and that international standards such as MLC and SOLAS are consistently upheld.

CHIRP advocates extending MLC protections to all yachts, regardless of size or tonnage, because working conditions can vary significantly between MLC-compliant vessels and those that are not. The same applies to SOLAS: vessels not obligated to comply may operate under lower safety standards, and seafarers should be aware of these differences when seeking employment.

CHIRP encourages prospective crew to ask clear questions during recruitment and urges owners and management companies to take greater responsibility for ensuring compliance, transparency, and fair treatment across all vessels under their remit.

Key Issues relating to this report

Communications – Crew concerns were often ignored or dismissed, and formal complaints were needed to prompt basic responses (e.g., mattress and toilet seat replacement). Are your concerns truly heard when you raise them?

Pressure – The crew were placed under pressure to remain in unsafe and unfit conditions without repatriation or protection of their welfare.

Complacency – The continued operation of the vessel despite expired fire extinguishers, the absence of lifejackets, and the lack of flares indicates a command that does not appreciate the risks regarding practical safety and compliance with safety regulations.

Local Practices – Unacceptable standards appear to have become normalised (e.g., operating with no lifejackets or uninhabitable cabins).

Key Takeaways

Seafarers: Know your rights, speak up and retain supporting documents Seafarers should document unsafe conditions and report them through formal channels. Understanding your rights under MLC is vital, especially regarding health, safety, and repatriation. If internal reporting fails, seek help from unions or ITF inspectors without delay.

Managers: Safety concerns are not insubordination Dismissing a crew member for raising valid concerns undermines the safety culture and breaches international obligations. Managers must ensure compliant living conditions, maintain safety equipment, and respond constructively to crew feedback.

Regulators: Where there is smoke, act fast This case highlights serious SOLAS and MLC violations. Regulators should prioritise oversight of vessels with combined owner-captain roles and act swiftly on signs of abandonment, poor habitability, or safety equipment failure.

M2325

MLC living conditions

Initial report

Our reporter stated that during a recent dry-docking period, the crew were compelled to remain on board while the vessel underwent substantial repairs, raising serious safety and welfare concerns. Open fuel tanks were situated in crew living areas, and essential services such as air conditioning, water, and sewage were intermittently shut down for prolonged periods. Galley refrigerators were switched off, necessitating chefs to store food in domestic fridges on the aft deck. Hazardous work, including antifouling, painting, and grinding, occurred throughout the vessel, while smoke detectors were disconnected to facilitate the removal of ceiling panels, compromising fire safety. Despite these issues, no action was taken by management, prompting the crew to report the situation to CHIRP.

CHIRP Comments

CHIRP emphasises that crew living conditions were found inadequate during essential service repairs. According to the Maritime Labour Convention (MLC), management must provide suitable alternative accommodation, whether commercial or private, and health, safety, and environmental (HSE) regulations take precedence during dry-docking periods regardless of vessel size or purpose.

Moreover, the master has a duty of care toward the crew, always ensuring their well-being. During dry dock, the vessel encountered hazardous operations that management should have addressed promptly. The owner's and manager's lack of response to crew concerns highlights a poor safety culture within the company.

It's important to emphasise that standards must be strictly applied whether the vessel is MLC-compliant or a private yacht.

If a proper assessment of the work during the dry dock had been planned, the planned work could have been carefully managed. Management must ensure an experienced team of officers is brought in to manage the dry dock.

Factors related to this report

Culture – Management does not show a duty of care to the crew by not providing appropriate accommodation during a phase of the dry-dock when living conditions become unacceptable.

Situational awareness – Management has not examined the dry-dock operation in its entirety. It has either failed to recognise or ignored that the crew will face unacceptable living conditions as work progresses on the vessel.

Capability – The management has not supported their crew, and they appear to lack the knowledge and experience to recognise the work requirements during the dry-dock.

Communications – Management has not conveyed their expectations regarding the living arrangements during the dry-docking period.

M2613

Bullying ship manager – safety and leadership culture ashore?

Initial Report

The vessel's manager consistently behaves aggressively, intimidating and humiliating the crew.

He insists on illegal actions, such as MARPOL violations, pumping out engine room bilge water without using the oily water separator (OWS), and several other things. When we said that it was unlawful, he started shouting and threatening that we would lose our jobs. We don't want to commit a crime or breach the regulations, but we also need to work to support our families.

We are seeking your assistance to stop this harassment, intimidation, and abusive behaviour by the vessel manager. We have already approached company DPA, but they are trying to hide the issue and are not helping us.

CHIRP Comment

This report raises serious concerns about crew welfare and regulatory compliance. Aggressive, intimidating, or humiliating behaviour by a vessel manager can significantly affect morale and safety. Seafarers should never feel pressured to engage in illegal acts, such as bypassing MARPOL regulations. When internal reporting channels fail, it is essential to be aware of other options, including flag state authorities, port state control, and independent safety organisations. Maintaining detailed records of incidents is crucial, and seafarers should seek support from professional welfare or legal bodies if necessary. The main lesson is that safety and compliance must take priority, and a respectful working environment is essential for everyone on board. CHIRP has contacted the management company for a response.

Key Issues relating to this report

Communications – The vessel manager's aggressive and intimidating behaviour prevents open communication, making the crew feel unsafe to report concerns and blocking proper feedback and reporting channels.

Pressure – The situation promotes "fear-driven compliance" rather than safety-oriented behaviour.

Teamwork – The manager's behaviour creates a hostile environment and erodes trust within the team, especially towards the engineers. Effective leadership is absent, and intimidation prevails.

Key Takeaways

Regulators: Promptly address harassment and illegal practices Effective oversight and support for safe reporting are essential for vessel safety.

Managers: Leadership through intimidation endangers everyone Respect, communication, and adherence to regulations are non-negotiable. Kind leadership implemented across the company will ultimately eradicate poor management behaviours.

Seafarers: Be aware of the options for help globally when communications with your management company are difficult.

M2317

Unacceptable living conditions

Initial report

During a recent deployment, a temporarily embarked armed security guard reported that the ship's material condition and living conditions were deplorable. The potable drinking water system was inoperative, and the crew relied on outdated bottled water. The water used for showering, brushing teeth, and laundering clothes was rusty. There was no air conditioning, and the toilet system was broken. Additionally, the living quarters were unhygienic, and the crew experienced numerous bed bug bites all over their bodies.

Food was also unsatisfactory: meals were monotonous, with limited meat or fish options. Fruit was rarely available and tasted of rust.

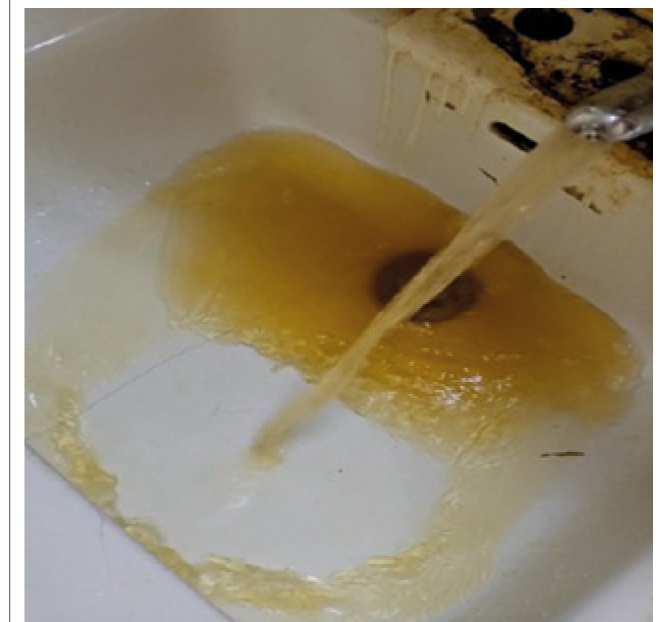
CHIRP Comments

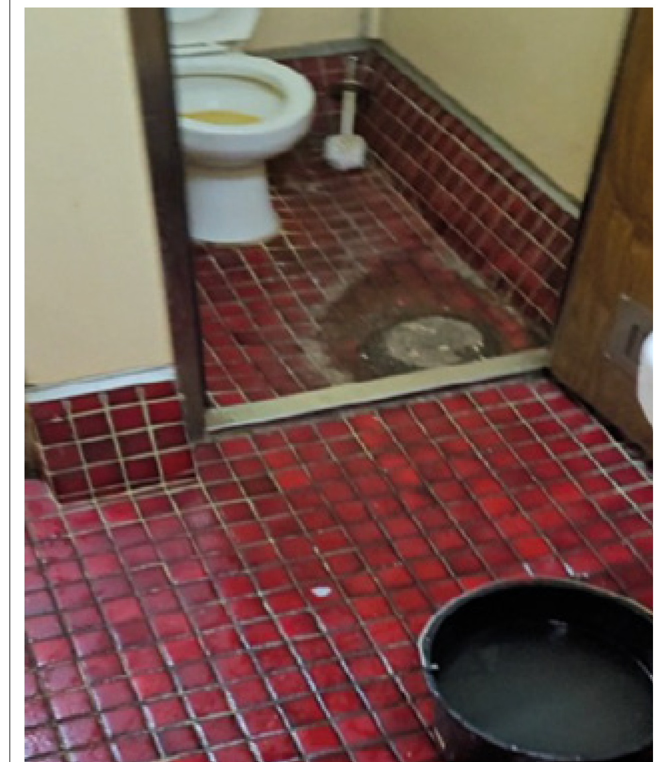
The armed guard is to be praised for raising this report because the crew were too afraid of reprisals to do so themselves. This raises worrying questions about the company's safety culture. Many seafarers are unaware of their rights, set out in the Maritime Labour Convention, regulation 3.1. The vessel in this report is breaching many of these legal requirements. CHIRP contacted the vessel's Flag State, which has a legal obligation to ensure that the vessel addresses these shortcomings immediately.

Factors relating to this report

Culture – Management has very little regard for safety, MLC compliance and contractor welfare.

Alerting – CHIRP notes that this report comes from embarked contractors, suggesting that the crew does not feel safe reporting these obvious failings.





Insight

Pevention and Response to Violence and Harassment on board Ship

By Carole Davis Emeritus Professor Warsash Maritime School Solent University & Courtney Newsham Seafarer

In May 2024, the IMO approved amendments to the Seafarers' Training, Certification, and Watchkeeping (STCW) Code aimed at combating and reducing violence and harassment within the maritime industry. On 1 January 2026, the new amendment to STCW TABLE A-V1/-4 took effect and introduced a mandatory requirement for all seafarers to undergo training on Prevention and Response to Violence and Harassment Onboard Ships. SASH amendments support related obligations under MLC Reg 4.3 and the ISM Code, so that colleges and companies have both a culture intervention and something they can stand behind in front of auditors.

Training providers will incorporate the new requirements into Personal Safety and Social Responsibility (PSSR) courses delivered from 1 January 2026. The recommended minimum hours of training given for this is yet unspecified.

What must be explicitly specified is that, during the limited training, the trainers must be suitably experienced and qualified to facilitate sensitive discussions..

While these sensitive topics are being brought to the surface, an individual may recall their own traumatic experience. If it isn't handled appropriately, and if the required resources aren't readily available, it may be the last time they disclose.

The MCA has confirmed that seafarers who completed PSSR training before 1 January 2026 are not required to retake the course. Existing PSSR certificates issued by MCA-approved providers remain valid, with no requirement for reissue. UK-issued Certificates of Competency and Certificates of Proficiency will also continue to act as proof of PSSR training, in line with current guidance.

It is safe to say that the reactions amongst seafarers have varied. Some seafarers express concern about the financial implications for individual seafarers and the poor quality of training courses, which appear to be little more than a checklist rather than a genuine learning experience. Others are offended that after many years of working on ships they are required to engage with something perceived to be 'woke nonsense' and 'garbage courses'. They object to seafarers being singled out while shore staff, remain exempt from the new training.

That said, other seafarers argue that, finally maritime is catching up with other safety critical industries as regards bullying and harassment at work; conversations about it are normalised and there's a shift to improved communication and empathy. They believe that the amendment sends a message to all survivors of violence and harassment at sea is being taken seriously; sending a clear message to perpetrators that their actions are unacceptable and that they should be held to account for them.

As individuals writing about and researching gendered sexual violence and harassment, we welcome this development. Our caveat is that you can advocate against violence and harassment whilst still expressing some ambivalence about how the changes are implemented. We also believe that the MCA response could be stronger.

The limitations of STCW on this subject and its' existing standard framework is evidenced by the table outlining the new additional content to PSSR. This includes the following learning outcome:

'Basic knowledge and understanding of the consequences of violence and harassment, including sexual harassment, bullying and sexual assault on victims, perpetrators, bystanders and stakeholders, and its effect on safety, health and well-being.'

Such consequences are far from basic and to apply this term is an opportunity missed and far removed from the 'bold initiative' and 'decisive step' suggested by the IMO when celebrating Year of the Seafarer 2025.

However, we do recognise that this amendment starts a dialogue on how best to include and address sensitive and often contested topics into a limited and reductionist framework for training. It is essential that such a dialogue listens to all points of view: both of those who welcome the changes and of those who feel deeply uncomfortable. Unless this happens, we will not make the progress that is so badly needed.

We are encouraged and heartened by this development. One hopes that at the very least by the end of the course, participants will know the acceptable practices and procedures for the prevention and identification of violence, and all other forms of harassment.

However, the amendments to training won't be enough to bring the change that is needed. It is essential that shipping companies, maritime organisations alongside training providers and colleges ensure that:

- Training courses balance the delivery of factual context with extremely sensitive, divisive and personal topics in a restricted period.
- Learning and teaching approaches are selected for maximum relevance and ensure engaged participants within a safe learning environment, including creating opportunities for reflection and self-awareness.
- The success of the training is measured and evaluated in both the short and long-term and that successful outcomes are identified?
- Instructors, companies, training providers and colleges know what to do if an historic sex crime or criminal act comes to light.
- The existing MCA auditing regime ensures consistency and quality standards based on best pedagogic practice for this amendment.

There is also the contradiction of making the training mandatory for some i.e., new starters and optional for others then what are we saying? We argue it should apply to everyone including new crew members and HR staff working onshore. If cost is an issue, it should not fall to the individual and instead it should be paid for by companies.

In summary, we suggest that this amendment alone will not result in changing a complex set of beliefs and behaviours or necessarily make individuals feel safer. It is a step in the right direction covering the bare minimum of what should be considered standard practice. However, it must ultimately be supported by the management company and the owners. Without this support, it will be another course for which the certificate will be filed away and forgotten.

2. Design Issues

When poor design becomes an operational hazard

Design flaws continue to place seafarers at risk.

The incidents described below include evidence of non-compliant pilot boarding arrangements, corroded walkways, unsafe working-at-height configurations, firefighting systems rendered ineffective by overlooked design details, blocked escape routes, and more.

Although many arrangements are "compliant on paper," they often fail in practice. Functional safety must be physically validated, not assumed from drawings. Inclusive, experience-driven design and continuous feedback among designers, operators, and regulators are vital.

M2494

Unacceptable design for pilot boarding and crew attendance

Initial report

Pilot Boarding Report – Learning Points from Repeated Transfer Attempts
Weather Conditions (First Attempt):
Wind: 33 knots SW
Sea: 1.7 – 2.5m swell
Swell breaking over the lower deck, making it inaccessible.

First Attempt – Boarding aborted – The crew was observed standing on the hatch cover above a fixed yellow metal ladder (see attached image), appearing to expect the pilot to board via this structure. No pilot ladder was rigged.

The pilotage act was aborted due to the absence of a compliant ladder. The Master was informed, and a second attempt was planned for the following morning.

Second Attempt – Boarding aborted – Weather conditions remained similar to those of the first attempt.

The pilot was directed to board near the accommodation area at the vessel's stern, at the lower deck level. However, this area was repeatedly overtopped by swell, making it unsafe for transfer.

Two crew members were again stationed at the top of the fixed vertical metal steps. This arrangement is non-compliant and places both pilots and crew at unnecessary risk.

The crew attempted to open a gate amidships as an alternative boarding position, but the vessel was shipping seas on deck and clearly unsafe (see image above).

Third Attempt – Boarding completed – Conditions had eased, and the pilot was able to transfer via the lower deck.

However, several safety issues were observed with the rigged pilot ladder (see image above):

The ladder was not resting against the ship's hull.

It was secured to the handrail, not to strong points on deck.

There was an obstruction at the top – the ladder rope did not sit flush with the deck, creating a tripping and entanglement hazard.

CHIRP Comments

Boarding eventually took place some 48 hrs after the first attempt, and CHIRP commends the strong safety stance taken by the pilots. This report highlights a persistent issue: some vessels continue to be unable to provide safe and compliant pilot transfer arrangements, particularly in adverse weather conditions. In this case, two boarding attempts were aborted due to unsafe setups and the absence of a properly rigged pilot ladder. Crew members were seen using vertical fixed ladders and standing on hatch covers, neither of which is safe or compliant in dynamic sea conditions.

Although the third attempt succeeded in calmer weather, the pilot ladder rigged was still unsafe, with poor securing, gaps between the ladder and hull, and obstructions at the top. This raises serious concerns. Improvised boarding methods, however well-intentioned, expose pilots and crew to unacceptable risk. SOLAS and IMO regulations are not optional; they are the minimum standard.

If the lower deck is the only viable transfer point, this must be clearly stated in the vessel's pilot card and agreed in advance. It is not helpful to inform the pilot when they are on the bridge about the transfer arrangement. This raises the question: do ports have heavy weather boarding procedures in place, with weather and sea state limits established? Only those conditions that fall within the criteria should be allowed for pilot boarding to take place.

This case reminds us that if a vessel cannot provide a safe and compliant means of pilot transfer under expected conditions, it may not be suitable for pilotage operations without modification. CHIRP will raise this issue with the relevant authorities to explore whether further action or guidance is necessary to prevent recurrence.

The subject of creating a safe lee for boarding was discussed by our Maritime Advisory Board. Below this report is a short article written by members of the board with expertise in this area of seamanship.

Factors relating to this report

Local Practice norms – The continued reliance on non-compliant methods implies that unsafe practices may have become informally accepted aboard this vessel.

Complacency – The crew appeared to accept unsafe methods (e.g., fixed ladders, hatch covers) as viable boarding options, indicating the normalisation of non-compliant practices.

Capability – Improper ladder rigging and repeated use of unsafe arrangements suggest a poor understanding of SOLAS Ch V Reg 23 and pilot transfer standards.

Communication – Unclear coordination between the pilot and vessel on boarding points and conditions led to unsafe or aborted attempts.

Key Takeaways

Seafarers – Know the rules, do not improvise Unsafe boarding improvisations aren't just non-compliant — they endanger lives. Always use properly rigged pilot ladders, never fixed ladders or hatch covers. If in doubt, stop and escalate the issue.

Managers – If your ship cannot comply, it is not ready
Vessels must be physically and procedurally capable of safe pilot transfer in the expected weather conditions. Ensure that pilot cards accurately reflect the actual boarding arrangements and that crews are trained to meet SOLAS standards.

Regulators – Unsafe boarding is still too common
Persistent non-compliance shows the need for enforcement, not just guidance. Strengthen oversight of pilot transfer design and onboard practices, and ensure unsuitable vessels are forced to change their poor practices before incidents occur.

M2355

Corroded walkways over deck pipes

Initial report

While walking between holds 2 and 3 on a bulk carrier, the bosun observed that the platform made a crackling sound under load. The metal plate was found to be significantly worn and no longer capable of safely supporting the weight of a single crew member. The bosun reported the issue to the master, who ordered an inspection of other walkways, which were found to be in a similar state.

CHIRP Comments

Cross-deck walkways are often made of steel plates, but these can be corroded by seawater or chemicals carried as cargo. Although the upper surface of these plates is usually well-painted, the underside is frequently overlooked or inaccessible for painting, allowing undetected corrosion to develop until failure occurs, potentially resulting in serious injuries like leg fractures and lacerations.

CHIRP recommends replacing these steel plates with open grating made from composite materials, which are resistant to corrosion. An open grating also exposes the underlying pipework, making leak detection considerably easier.

Factors relating to this report

Situational Awareness – The condition of the walkway could not be assessed because inspecting the underside of the steel plate was difficult.

Design – Assessing the condition of the steel plate was difficult due to accessibility issues, so gratings are preferred.

M2353

Working aloft: unsafe by design?

Initial report

Our reporter had recently joined a vessel during construction. They had read several CHIRP reports that mentioned the need to wear a harness when working at height, so they made a point of checking if their vessel had enough 'pad eyes' (strong points) in the right places on their vessel so that a crewmember could work aloft in safety once the vessel was operational.

In their opinion, more pad eyes were needed but when they raised this with the shipyard, they were told that the design had been approved by the owner, the architects and the Classification Society, so they saw no need to make a change.

CHIRP Comments

Once a design is approved, getting shipyards to implement changes becomes nearly impossible due to the high costs and complexity of the reapproval process, which inevitably delays delivery schedules. Additionally, since shipyards often construct multiple vessels based on the same design, the absence of a formal feedback loop from operational vessels back to the architects and Classification Society results in future hulls having the same deficiencies, too. It is therefore imperative that architects seek and incorporate the experiences of operators alongside the wishes of the owner during the design process.

CHIRP urges all authorities involved in superyacht design to consider the safety implications for crew and passengers from the outset and to introduce a formal feedback process so that experiential learning can be incorporated into future hull builds.

Owners, classification societies, and flag states should actively participate in this process during the design phase. Similarly, crews must provide feedback to the flag states regarding design issues. In this context, our reporters have offered an excellent example of active involvement in operational safety for the crews working on superyachts, and CHIRP wants to thank them.

Factors related to this report

Culture – A calculative rather than proactive safety culture prevails. The owners do just enough to meet essential compliance. Would your superyacht benefit from installing additional safety features, particularly when working at height?

Local Practice – Just because a superyacht design is built with limited securing points does not mean it cannot be reconfigured to incorporate additional safety features.

Communications – Do you have your say on safety design? Is there engagement with the flag state, the classification society, and the designers?

M2311

Near miss: poor configuration of CO_2 firefighting system

Initial report

Following a period of maintenance, a pre-sailing inspection revealed that the safety pins which prevented the CO_2 firefighting system from operating were still in place. A contractor had inserted the safety pins to prevent accidental discharge while maintaining the system but had not removed them once the work was completed.

Had these remained in place, the system could not have been used in the event of an engine room fire.

CHIRP Comments

There is always a pressure to get vessels out of dock and back to operational service as quickly as possible. However, similar to report M2319 (Fire on large motor yacht), this pressure resulted in several important steps being missed. Whenever equipment is handed over to or from a contractor, it is best practice that a suitably qualified crewmember and the contractor jointly inspect the equipment so that both agree on its material condition and out-of-service status and operational readiness configuration at the start and end of a job.

The design of the pins is a contributing factor: they are a similar colour to other nearby items and CHIRP suggests that if they had been painted, or had a label like the 'Remove before Flying' tags used in the aviation industry, it would have been much easier to identify that the pins had not been removed.

Factors relating to this report:

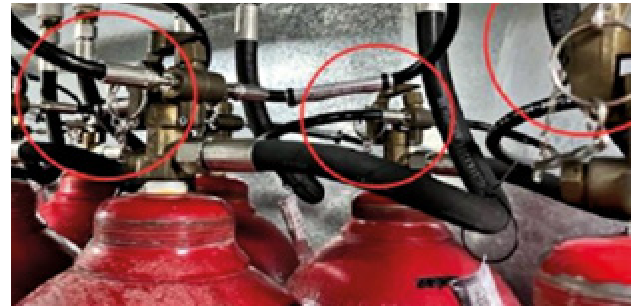
Pressure – Are your crew adequately qualified and resourced to withstand additional pressure that can come at the end of a dry-dock?

Teamwork – It is crucial to have a shared mental model when re-entering service after a dry-dock period, as this encourages facing challenges together.

Situational awareness – Actively seek input from other crew members and update your awareness. Never assume other people's intentions- ALWAYS CHECK.

Local practices – Equipment hand-over checklists can be a valuable tool in these circumstances and should be used.

Communications – 'Remove before sailing' tags are useful to help crew and contractors identify the state of the system.



M2460

Near miss: escape route blocked

Initial report

During a routine inspection, the team found that an emergency escape hatch from the engine room to the deck could not be opened. The hatch, located near the aft mooring bitts, was obstructed by the turned-up mooring lines. Just 2 to 3 centimetres of rope extending beyond the edge of the bitts was enough to prevent the hatch from opening — a small detail that could have had serious consequences in an emergency.

CHIRP Comments

This issue stems from the vessel's design phase. Mooring arrangements and emergency escape routes were developed using CAD software and approved as compliant with the relevant regulations. However, it seems no one physically checked how these systems would work together in real-life conditions. CHIRP is aware of several such incidents, as reported to the International Marine Contractors Association (IMCA) and has written to the International Association of Classification Societies (IACS) to raise awareness.

The problem only becomes evident when the vessel is alongside or under tow, but that is precisely when escape routes must be fully functional. Being unable to open an emergency hatch because of a few centimetres of mooring line is a critical design oversight with potentially severe consequences. Blocked emergency escape hatches have led to deaths in the past, e.g. the *Marchioness* on the River Thames.

This highlights the need for practical, operational checks during the design and approval stages of newbuilds, not just digital validations. Safety depends not only on compliance but on proven functionality. It underlines the need for integrated risk thinking across routine operations, design layout, and inspection regimes.

Emergency systems must be constantly validated against the realities of onboard work practices. Incorporating escape routes during your familiarisation process, particularly when joining a different type of ship, is vital. Additionally, emergency escape hatches and their access ways should be incorporated into contingency exercises so that their use can be part of both egress and access during an exercise.

During a vessel's quarterly inspection, the function and securing of escape hatches should be reviewed by an officer and crew from a different department.

Factors relating to this report

Situational Awareness – The design and approval teams failed to anticipate that the mooring operation would obstruct an emergency route. This suggests limited foresight regarding how the vessel would be used, particularly in an emergency scenario where every second counts.

Communication – There may have been insufficient communication between designers, builders, and operational stakeholders. Without input from those with lived experience on board, subtle but serious flaws like this can go unnoticed until it is too late.

Teamwork – The design process lacked interdisciplinary coordination. Engineers, naval architects, shipyard teams, and operational staff all play a role in ensuring systems function safely. Here, the lack of collaborative review meant a potential emergency hazard was built in from day one.

Key Takeaways

Seafarers – Don't assume safety systems work as designed Regularly inspect and test escape routes under real-world conditions, including when the vessel is moored, to ensure they are functional and practical. Speak up if something isn't right, even if it complies with the ship's plans.

Managers – Engage operational staff early in the design process Crews bring essential insight into how systems are used on a day-to-day basis. Build in practical walk-throughs and validation steps to catch risks before they become built-in hazards.

Regulators – Approval processes must include practical verification, not just CAD-based assessments Design compliance must be matched by functional performance. Safety-critical access points must function reliably under all operational conditions, particularly in emergencies.

M2433

The ship's aerial plans were incorrectly labelled

Initial report

Indications and markings for the GPS 1 and GPS 2 antennas were incorrectly displayed on both the bridge antenna arrangement plan and the compass deck. Incorrect markings, in the event of specific issues, can lead to misunderstandings regarding which equipment needs checking and repair. A complete survey of the ship's antennae was conducted and the plans were updated accordingly.

CHIRP Comments

This report illustrates how a minor error, such as incorrect labelling, can lead to significant issues. The GPS 1 and GPS 2 antennas were wrongly marked on both the bridge plan and the compass deck. If a fault had occurred, the crew might have checked the wrong antenna, wasted time, and possibly overlooked the real issue.

The antennas were installed in the correct place, but the signs and drawings did not match. This indicates that no one properly checked the labels after installation was completed.

For something as crucial as GPS, all information, including markings and drawings, must be clear and precise. If the crew cannot trust what they see, it can cause delays or mistakes during fault-finding.

This case serves as a reminder that when antennae are installed during the new build phase or at dry dock, any new equipment must be rigorously checked. The area/antenna plan should also be updated and cross-checked to ensure accuracy.

On a critical and operationally practical note, an antenna position must be correctly marked and located so that the navigation system can apply the correct offset from the vessel's centre line. E.g. on a 60-meter beam vessel, a 20-meter error in recording can put you outside of a navigable channel!

It is essential that, during the annual or five-year radio survey, aerial verification of all bridge equipment is physically carried out. This also applies after any refits at dry dock, where bridge equipment is renewed or replaced.

Factors relating to this report

Situational Awareness – During technical troubleshooting, bridge teams rely on plans and labels to quickly isolate faults. Incorrect markings can easily mislead the operator and prolong a problem that requires urgent attention.

Communication – Poor information flow between design, installation, and operations teams likely contributed to this discrepancy. Without effective feedback loops, errors can persist unnoticed until they lead to failure.

Teamwork – The eventual resolution required a coordinated review of all antenna locations and documents. This highlights the importance of collaboration across departments in identifying and addressing safety risks.

Key Takeaways

Seafarers – Check, do not assume Don't rely unthinkingly on diagrams or deck markings — especially during fault-finding. Visually confirm the actual installation and speak up if you notice any discrepancies.

Managers – Mistakes hide in small details Include signage and documentation checks in post-installation and maintenance routines. Even minor labelling errors can cause significant operational delays.

Regulators – Do not simply test systems — test assumptions, too Ensure that commissioning and inspection processes verify not only the functionality of equipment but also the accuracy of associated markings and plans, particularly for critical systems such as GPS.

M2280

Safety equipment obstructed by cargo gear

Initial report

As the reporter prepared to disembark a Ro-Ro, they noticed that a heavy-duty ratchet strap impeded access to a fire extinguisher. The strap secured a wheeled dolly supporting drop trailers on the car deck. The ratchet strap was pulled taut over the extinguisher, meaning it would have to be released before it could be used.

The reporter could not investigate further because they were about to drive off in their vehicle. They did notice that other frames were available to secure the dolly.

CHIRP Comments

Obstructing access to essential safety equipment, such as fire extinguishers, poses a significant risk during emergencies. Due to the fuel in the vehicles, the fire hazards on Ro-Ro ferries are exceptionally high. SOLAS clearly states that fire safety equipment must remain unobstructed and ready for use.

While securing cargo equipment is critical, the wheeled dolly support arrangements should have been incorporated into the ship's design. If the supports were an additional item of cargo gear used by the company, their securing should have been planned to make alternative securing points available. This highlights the importance of regular deck inspections to ensure safety equipment remains unobstructed and accessible.

Fortunately, within 24 hours of CHIRP bringing this incident to the management company, they audited their entire fleet and confirmed that the issue had been resolved. The company's speed of response was impressive, and CHIRP wants to thank them for their proactive stance on safety.

Factors relating to this report

Situational Awareness – The individual securing the dolly did not recognise the potential danger of blocking the fire extinguisher, highlighting a failure to consider safety equipment accessibility during a fire response.

Local Practices – The dolly could have been secured using alternative frames, suggesting a lack of adherence to best practices or established procedures to ensure safety equipment remains unobstructed.

Over-confidence – There is a degree of overconfidence in securing cargo equipment without considering the potential consequences of accessing safety equipment in an emergency.

Communication – Are the crew approachable and welcoming or intimidating to passengers?

Key Takeaways

Seafarers: "If it is blocked, it is as good as broken."
Always ensure fire extinguishers and emergency gear are easy to see and reach—no exceptions. A few seconds lost in a fire can cost lives. Think before you secure anything: Will the lashing arrangements get in the way when it matters most?

Ship managers: "Securing cargo gear should never compromise use of safety equipment."
Local shortcuts can creep in over time. Reinforce clear guidelines: emergency equipment must always stay visible and accessible. Encourage crews to double-check, not just tie down and move on.

Regulators: "Passengers see things inspections can miss."
Blocked safety gear during regular sailings suggests a cultural lapse. Unannounced checks in real-world conditions could reveal issues that do not appear during formal inspections. Passenger feedback can be a valuable safety signal.

Insight

Integrating wearable tech into the maritime safety ecosystem

By Meei Wong, Founder and CEO of Circle Digital Ventures

With maritime and offshore crew working in isolation in high-risk environments where the unpredictable ocean meets the intense demands of human operations, the use of wearable technology can be a proactive approach to create a behavioural safety culture at sea.

Maritime and offshore industries have long relied on reactive safety protocols, investigating and learning from failures after incidents have already occurred. But what if we are proactive and take action to prevent such incidents from happening in the first place?

Human error, exacerbated by factors such as fatigue, health issues and situational awareness lapses, contributes to an estimated 75% to 96% of all marine accidents according to the Allianz 2025 Shipping and Safety Review report. The demanding nature of maritime and offshore work often leads to prolonged shifts, irregular sleep patterns which, when combined with high stress situations onboard, can lead to a rise in mistakes when making key decisions. Traditional safety observations and checks on crew, while valuable, often capture moments in time rather than providing continuous insights into the physiological and cognitive stages of the workers.

A truly resilient safety culture requires foresight that enables prevention. This is where wearable technology has a huge part to play, offering a continuous, real-time window into the well-being and operational readiness of individuals. Real-time monitoring of the crew's physical and psychological health and their environment can transform the vessel from a workplace of inherent risk into a closely linked system of safety and protection.

Real-time monitoring

Wearable devices ranging from smartwatches and biometric sensors to specialised helmets and smart PPE can collect vital physiological and environmental data. Unlike traditional PPE, which only provides physical protection, smart wearable technology can detect issues such as fatigue, dehydration, high body temperature, and exposure to harmful substances. This enables early intervention to prevent accidents. For example, heart rate variability monitors can detect early signs of fatigue long before a crew member consciously recognises it and will allow for timely intervention, such as mandated rest periods or adjusted task assignments. This data-driven approach moves beyond subjective self-reporting, which can be influenced by a desire to appear resilient or avoid perceived negative consequences.

Beyond fatigue, wearable technology can significantly enhance situational awareness, a critical factor in preventing accidents. Devices with integrated location positioning and proximity sensors can track the location of crew, particularly in complex or hazardous environments like engine rooms or offshore platforms. This not only aids in man-overboard situations or emergency evacuations but also prevents Log Out/Tag Out incidents or entry into unauthorised zones or simply efficient mobilisation of crew across the vessel.

Integrating wearables into safety management systems

Data collected from wearables flows into a centralised platform where it can be analysed, contextualised and acted upon. This requires a robust data infrastructure, including reliable connectivity in an often challenging maritime environment. This information can then inform risk assessments, update safety procedures and trigger alerts or interventions.

With SOL-X, Circle Digital Ventures's wearable tech solution and safety management system, a command centre (dashboard) is strategically located in areas like the bridge and engine control room, ensuring that there is always someone (e.g. master, chief officers and engineers) available to monitor crew conditions and respond to crew hazards at all times. The location of the crew and the jobs that they are working on can be easily identified at any time through the dashboard for better planning.

Through such wearable tech solutions, human behaviour can be learnt from data across the fleet to identify common risks and design a target course of action, including retraining or awareness campaigns.

Long-term health benefits

Continuous monitoring of vital signs such as heart rate, blood pressure, and even body temperature can provide early warning signs of developing health issues. For individuals with pre-existing conditions, these devices can track medication adherence or alert medical personnel to critical changes.

In remote maritime or offshore locations, where access to immediate medical care is limited, such proactive health monitoring can be life-saving. For example, detecting signs of irregular heartbeat or fatigue could reduce the operational risk by reassignment of heavy-duty tasks to lower risk crew members. In an alternate scenario, early detection and early diagnosis can also prevent costly ship diversions to port, if the medical condition is not critical.

Big Brother is not watching you

Despite the undeniable benefits, the widespread adoption of wearable technology in these industries faces legitimate hurdles, primarily concerning crew acceptance and data privacy. For wearables to be effective, workers must not only be willing to use them but also understand and trust the system. Initial resistance may stem from concerns about constant surveillance, the perception of being micromanaged, or fears that data could be used punitively.

Addressing crew acceptance requires transparent communication and a focus on the tangible benefits for the individual worker. Highlighting how these devices protect their health and safety, rather than simply monitoring their performance, is crucial. Involving workers in the selection and implementation process can foster a sense of ownership and reduce apprehension. A mindset shift by both ship managers and crew to monitoring risk exposure and not performance is required to fully reap the benefits of technology that is made available today.

Having clearly defined policies on data usage, storage, and access is essential. Crew must be assured that their personal data will be protected, anonymised where appropriate, and used solely for safety and health improvement purposes, not for disciplinary action or performance reviews in a way that creates a punitive environment. Strong data privacy regulations, aligned with international standards, must be established and rigorously enforced.

For ship managers and crewing companies, the economic implications, including the initial investment in devices and infrastructure, as well as ongoing maintenance and data management, also present a challenge. However, when weighed against the astronomical costs associated with incidents, including human casualties, environmental damage, reputation loss, and financial penalties, the investment in proactive safety technology becomes a compelling economic imperative.

Case Study: Enhancing maritime safety and efficiency

A comprehensive survey of 610 crew members across 22 MISC vessels during August and September 2025 demonstrated that the deployment of our SOL-X smartwatch solution delivered immediate, quantifiable improvements in both crew welfare and operational capability. The solution successfully fostered a proactive safety culture, with 71% of crew members reporting they felt safer using the technology, and a remarkable 97% acknowledging increased awareness of heat risks, prompting them to take appropriate cooling-off measures.

Beyond safety, the technology proved to be a critical driver of efficiency; 75% of respondents reported a distinct productivity boost, specifically citing workflow improvements related to the Permit to Work (PTW) system. High user engagement was further evidenced by strong approval ratings for key features, particularly Geofencing (4.3/5) and Crew Assist (4.2/5), validating the smartwatch as an essential tool for modernising maritime operations.

The right time is now

Ultimately, the future of maritime and offshore safety is one of foresight. The high-risk and isolated environments at sea demand a proactive approach that prioritises the physical and mental health and cognitive resilience of the industry's most valuable asset- the crew. Wearable tech is not just an optional add-on; it is an essential part of a modern data-driven and ethical safety culture, ensuring that the industry can mitigate human risk and protect lives.

3. Search and Rescue

Human factors at the sharp end of rescue

SAR operations expose crews to high-risk, high-pressure conditions where small oversights can have critical consequences. Incidents included capsize demonstrations, missed alarms, water ingress, unexpected equipment hazards, incorrect manoeuvres, collision-avoidance failures, and procedural gaps.

Across all reports, themes include situational awareness, communication quality, workload, training realism, and organisational pressure. CHIRP emphasises structured briefings, consistent operational guidance, and robust equipment design to reduce reliance on human vigilance. Effective teamwork, calm reassessment, and just-culture reporting are essential for safer search-and-rescue operations.

M2341

Lifeboat crew injured during rescue operation

Initial report

A lifeboat was assisting in a rescue operation when a large wave struck it while proceeding at slow speed, tossing one of the crew members from their chair to the opposite side of the wheelhouse and injuring them. The lifeboat crew did not have their harnesses connected.

CHIRP Comments

Search and Rescue (SAR) operations in lifeboats present unique challenges due to environmental conditions, high-stress situations, and the urgency of response. Lifeboat crews are expected to maintain heightened situational awareness, especially when responding to a distressed vessel.

In such cases, the lifeboat becomes a critical part of the rescue chain. Should it suffer a casualty or become incapacitated, the success of the overall operation — and the safety of those in distress — may be seriously compromised.

For many SAR organisations, wearing lifebelts or harnesses while en route to the rescue site remains discretionary. CHIRP proposes that organisations issue clear operational guidance on using harnesses or restraints, especially in adverse conditions.

The SAR Advisory Board emphasised that operational guidance and weather factors must be considered, and the SAR Unit Commander should be empowered to advise crew members on using seat belts or safety restraints before launching.

A safety briefing should be conducted before departure, ensuring that all crew members are briefed on the risks, prevailing conditions, and any specific safety measures to be adopted.

Factors Relating to This Report

Situational awareness – Crew members fail to anticipate possible body movement caused by wave impact until it is too late.

Communications/alerting – Internal operational communications ensuring that everyone was securely fastened during a SAR operation neglected to inform the crew about the risks of not fastening their seat belts.

Local Practices – Does your organisation prescribe limits for wearing a safety harness? Without prescriptive guidance for the crew, the risk can become normalised.

Culture – Does your organisation have a proactive reporting process for safety matters?

Key Takeaways

Rescue Crew – Stay alert, stay secure

Anticipating sudden vessel movement is critical. Please don't wait until it's too late to fasten restraints. Always speak up if something feels unsafe and use the safety briefing to clarify expectations before launching. Reporting a risk is about care, not blame.

Managers – Lead clarity and consistency

Ensure crews understand not just when, but why restraints should be worn. Provide clear operational guidance tied to weather and sea conditions. Safety briefings and post-mission reviews should be standard. A consistent approach builds safer habits.

Regulators – Support guidance and shared learning

Encourage operational standards that clarify restraint use in SAR. Promote multilingual safety communications and briefings. Empower open reporting across SAR networks and recognise organisations that nurture a just safety culture.

M2333

Lifeboat capsize during a capability demonstration

Initial report

During a capability demonstration as part of a fund-raising event, two differently sized Search and Rescue (SAR) craft carried out a series of manoeuvres very close to one another. The wake of the larger vessel caused the smaller vessel to lose steering control and it capsized.

The crew managed to right it within three minutes, with no injuries to the crew or damage to the lifeboat. All personal protective equipment operated correctly, and the kill-cord functioned as intended.

The reporter noted that the crew had recently completed an emergency procedures course, and the lessons from their training were effectively applied, particularly in fostering the confidence necessary to manage the situation safely and promptly. Another factor that aided the crew's recovery was the thorough briefing conducted before the drill.

CHIRP Comments

High-profile public events can lead experienced operators to push towards the limits of safety due to self-imposed pressure. This subconscious urge to perform can increase risk-taking behaviours that are usually avoided. At the same time, focusing on pleasing the audience can reduce situational awareness. Given the infrequency of such events, proper rehearsal and risk assessment may not have been thoroughly practised.

These factors quickly escalate risks in situations involving high-speed and close-quarters manoeuvres, where even minor errors can lead to incidents. Fortunately, the team was trained to recover from a capsize and managed to self-rescue without further problems.

This incident underscores the importance of thorough risk assessments and rehearsal drills before undertaking new or infrequent activities. It also emphasises the need to recognise and manage self-induced pressure and monitor oneself and others for increased risk appetite or risk-taking behaviours.

Factors relating to this report

Pressure – Be aware that self-induced pressure to give an impressive demonstration can lead to additional risks being inadvertently taken, resulting in such incidents.

Representative image. Credit: Shutterstock

Situational Awareness – The helm of the smaller vessel did not recognise that they had entered a potentially dangerous area concerning the other boat's wake and their dynamic stability. His vessel capsized as a result.

Capability – When undertaking new activities, extra preparation is needed.

Culture – Management is encouraged to provide additional oversight when novel or infrequently undertaken tasks are planned and performed.

Teamwork – Well-trained crews are more resilient to unexpected events and can better respond positively to rectify the situation.

M2322

Leakage into the lifeboat engine compartment

Initial report

While returning to base, the SAR Unit Commander noticed the warning light was on. The boat was safely stopped, and the engine compartment was opened to reveal significant water ingress. The source of the leak was quickly identified as a disconnected intercooler pipe, which was still allowing water flow while the engine was running.

The engine was shut down immediately, and the bilge was pumped out. The pipe was securely reattached, and after confirming the fix, the journey continued. Upon arrival at the base, the bilge and engine were thoroughly dried.

This incident emphasised the importance of real-time monitoring engines, gauges, and alarms. The system lacked an audible alarm, relying only on a visual warning light, which, if missed, could have led to serious consequences, potentially damaging the engine and complicating any rescue. It also highlighted the need for proper component installation, as the hose design made installation difficult, contributing to the failure.

CHIRP Comments

Monitoring the alarm control panel during lifeboat operations is essential, with good ergonomic design ensuring effective oversight. Activated alarms provide early warnings, while audible and visual signals are backups if a warning light is missed. A cooling system alarm is critical, as overheating can lead to engine seizure, rendering the lifeboat inoperable. Additionally, carefully designing pipes and their connections is crucial, as a poor layout can create single points of failure. Space constraints often result in tightly bent pipes and hoses, increasing their risk of failure due to stress, erosion, or vibration.

This incident underscores the necessity for improved equipment design. The SAR Unit Commander's situational awareness prevented failure, but reliance on a single indicator remains risky. Effectively communicating equipment limitations ensures crews recognise potential weaknesses. Complacency stemming from past reliability may lead to missed opportunities for proactive improvements. Fatigue or distraction could result in an overlooked critical warning, emphasising the need for more intuitive alerts.

The fundamental issue is equipment design—enhancing reliability diminishes dependence on human vigilance. Operational pressure can also discourage crews from pausing to investigate concerns, reinforcing a more resilient system requirement.

M2344

Unexpected injury – the hidden hazard of a paddle blade

Initial report

During the rescue of a kayaker, a crew member of the lifeboat reached out to grasp the kayak paddle being offered to aid in the recovery. Unknown to the crew, the paddle blade, which was made of wood, had a sharp splinter or barb on its surface. Consequently, the crew member of the lifeboat suffered a 4-inch laceration to their hand.

CHIRP Comments

In a dynamic rescue, it's easy to overlook the condition of objects used to assist recovery. However, unfamiliar or improvised equipment, such as paddles, boards, or clothing, can present unseen risks to rescuers. Gloves can help mitigate hand injuries, but don't replace the need for a momentary risk scan, even under pressure.

Where time allows, brief the casualty or the rescue team to avoid handing over sharp, damaged, or unsuitable items. Visual cues—like clear hand signals or verbal instructions—can help manage this interaction safely.

All injuries should be reported and reviewed to share learning across the team, no matter how minor.

Factors relating to this report

Situational awareness – The crew was focused on the rescue, possibly overlooking the hazards of the paddle, which were not visible to them.

Communications – Neither the rescuers nor the rescued person transmitted information concerning any hazards while pulling the kayaker alongside.

Alerting – In a high-risk and stressful situation, assertiveness and asking about all hazards during a rescue operation can help identify risks.

Culture – PPE should be worn when handling recreational equipment, particularly new equipment, where the rescuers have not fully assessed the risks of injury.

Key Takeaways

Rescue Crew – Stay alert, even in the moment
During a rescue, focus can narrow quickly. It's essential to stay aware of any hazards, even in equipment offered by those being rescued. Always take a quick visual check when handling unfamiliar objects.

Managers – Prepare crews for the unexpected
Rescue situations rarely follow the rules. Ensure crews are trained to adapt quickly and encouraged to speak up about potential risks, even under pressure. Include unfamiliar or recreational equipment in risk assessments and PPE guidance.

Regulators – Reflect real-world scenarios in guidance
Current safety frameworks should account for dynamic, real-time hazards such as those introduced by rescued persons or non-standard equipment. Encourage the development of adaptable procedures and promote assertive communication as part of good seamanship.

Factors relating to this report

Design – A review of design and ergonomics will help the owners/managers reduce the risk of failure while the lifeboat is in service.

Communications – Informing the crew of the vessel's vulnerabilities will assist in mitigating the risks of failure.

Overconfidence – Never assume that everything will be okay. Ask the what-if questions.

Key Takeaways

Rescue Crew – Stay vigilant, stay empowered
Never rely on a single alarm or indicator during critical operations — systems can fail. Know the limitations of your equipment and alarms, and don't let pressure or routine dull your awareness. Most importantly, every crew member has the right — and the responsibility — to speak up if something doesn't look or feel right. Challenge it. Question it. Safety is a shared duty, and your voice matters.

Managers – Prioritise equipment design and ergonomics
Reviewing the design and layout of critical systems, such as alarm panels and piping, can significantly reduce the risk of failure. Focus on enhancing reliability and minimising single points of failure, particularly in high-stress operational environments. Support crews with well-designed, intuitive systems to reduce human error.

Regulators – Encourage standards that enhance equipment reliability
Regulatory bodies should push for lifeboat systems and critical equipment that require minimal reliance on human vigilance. Design guidelines should focus on robust, fail-safe systems that ensure early detection of issues, with clear, intuitive warnings that can be quickly acted upon, even under pressure.

M2313

A fall into the water by a trainee crew member while mooring to a buoy

Initial report

A reporter informed CHIRP that a trainee fell overboard from a rescue vessel while attempting to secure the stern to a mooring buoy at the home port. The trainee threaded the stern rope through the buoy and notified the driver. However, the trainee did not have a firm grip on the end of the rope, which slipped away from the buoy. While attempting to rethread the rope, the vessel moved forward under power. The trainee lost balance, slipped, and fell from the pontoon into the water.

To prevent such incidents, all crew members, especially trainees, must understand and promptly respond to signals like "threaded." This includes securely holding the rope through the buoy and notifying the driver if issues arise, such as by signalling to stop forward motion. Utilising a safety line could have mitigated this risk. Trainees should always work under the supervision of experienced crew members when operating on deck.

CHIRP Comments

This incident highlights several essential safety issues. First, all crew members—especially trainees—must clearly understand operational signals such as "threaded" and what actions are expected once that signal is given. In this case, holding the rope securely and being ready to release the free end is essential.

Communication is also critical. If the threading fails, the deckhand must alert the driver immediately, for example: "Stop forward motion, buoy has escaped." A timely stop would have allowed the trainee to try again safely.

The absence of a safety line contributed significantly to the fall. Anyone working close to the water should wear a safety line or be protected against falling in.

Finally, trainees must always be supervised when working on deck. Allowing them to operate alone increases the risk of incidents like this. CHIRP recommends a review of onboard training and supervision procedures, as well as safety protocols for mooring and communication, to prevent similar events in future.

Factors Relating to This Report

Teamwork – The trainee worked independently on deck without the oversight of an experienced crew member. Given the complexity and risks of securing the mooring buoy, the absence of supervision significantly contributed to the incident.

Local Practices – The trainee attempted to rethread the rope without first stopping the vessel's forward motion and notifying the driver. Proper procedure dictates that the crew members halt the operation and inform the driver when threading fails to prevent further movement.

Communication – The trainee did not communicate effectively with the driver when the buoy escaped. Had the trainee informed the driver to stop the vessel's forward motion, the incident could have been avoided.

Capability – The trainee was not using a safety line, which could have prevented the fall into the water. The lack of a safety line was a critical factor in this incident, leaving the trainee unprotected when they lost their balance.

Key Takeaways

Rescue Crew – Supervision saves lives
Working alone increases risk—stay connected, speak up early, and always use your safety gear.

Managers – Don't leave trainees to learn by error
Hands-on tasks like mooring require guidance—review how supervision is applied on your vessels.

Regulators – Simple rules prevent serious incidents
Mandating safety lines and structured training protects those of all ranks and experience.

M2320

Sinking of a fishing vessel during a rescue operation

Initial report

The lifeboat responded to a distress call from a fishing vessel experiencing engine flooding. Upon arrival, the lifeboat crew rescued two crew members from a life raft and started to take the vessel to port. Approximately 70 minutes later, the fishing vessel's skipper reported renewed flooding, prompting an emergency release of the tow as the vessel rapidly capsized. The remaining two crew members were recovered from the water as the vessel sank.

The likely cause of the sinking was water ingress, causing a "free surface effect" in the lower compartments of the fishing vessel. This unrestricted movement of water significantly compromised its stability.

Representative image. Credit: Shutterstock

CHIRP Comments

The fishing vessel's skipper, likely distracted by the situation, may not have fully communicated the risks of the engine room flooding. The situation's stress and urgency could have made clear communication difficult, while the cold water and harsh environment further impaired decision-making. Exhaustion from efforts to save the vessel may have also affected the crew's ability to assess and relay the severity of the flooding.

The fishing skipper updated that the flooding was getting worse. The lifeboat crew recognised that the fishing vessel was about to capsize, so they released the tow just in time, preventing the lifeboat from being pulled under as the fishing vessel sank. The skipper and the remaining crew members were then rescued from the water.

This incident highlights the critical need for rescue teams to receive a thorough onsite dynamic risk assessment to make informed decisions, which can be difficult in high-risk situations. To improve safety and decision-making, the SAR organisation may need to reinforce risk assessment procedures when responding to flooded vessels.

Factors relating to this report

Situational Awareness – The fishing vessel's skipper, who may have been very distracted, may not have fully conveyed the flooding risks, affecting the crew's understanding of the situation, where focusing on salvaging the vessel diverted attention from evaluating the risk of capsize.

Communication – Stress and urgency likely impaired clear communication between the skipper, crew, and rescue team.

Fatigue – Exhaustion from efforts to save the vessel may have reduced the fishing vessel's skipper's ability to assess and relay information accurately.

Teamwork – The rescue team relied on incomplete information, which could have influenced their risk assessment and decision-making.

Pressure – The situation's urgency may have led to rushed decisions without a complete understanding of the evolving hazards.

Key Takeaways

Rescue Crew – A quick pause to reassess is often the safest action
Distress and fatigue disrupted the fishing vessel skipper's ability to assess and share the complete risk picture. Situational focus narrowed and critical risks like capsize may have been missed. Sharing even incomplete information helps the whole team. Fatigue affects judgement—recognising this early can change the outcome.

Managers – Structured debriefs help capture lessons before they're lost
The crew may be unprepared for a rapidly changing emergency under pressure. Training should reflect dynamic scenarios where priorities shift. Teams need support to speak up under pressure.

Regulators – Emergency response procedures may underestimate human factors
Clear communication under stress is a critical skill. Fatigue must be treated as a safety risk, not an afterthought.

M2545

Near miss – Incorrect passage through buoy gate at night

Initial report

While navigating at night, the SAR vessel entered the buoy gate from the wrong side at the eastern entrance to the sound. The crew unintentionally passed between a red port-hand buoy and a rock.

The navigator did not have a functioning spotlight, and they attempted to identify the gate using mooring lights instead. According to data from the VTS, the vessel was moving at 15 knots during this near miss, though they had already begun to reduce speed. The investigation found

Representative image. Credit: Shutterstock

that the radar and plotter were not being used effectively, and excessive speed was being used while entering the channel.

CHIRP Comments

This report highlights a serious navigational near miss during nighttime operations. The absence of a functioning spotlight significantly degraded the crew's ability to identify aids to navigation. Instead, mooring lights were misused as visual aids.

Despite the vessel beginning to reduce speed, it was still excessive for nighttime entry in confined areas. The radar and plotter were not effectively utilised, and thus situational awareness was impaired.

The combination of equipment flaws, insufficient use of available technology, and reliance on unsuitable visual references reflects a breakdown in both preparation and procedural compliance.

There is a clear opportunity to improve safety margins through regular checks and reminders to the crew during night navigation, as well as the effective use of radar/plotter systems. This should include better checks for the equipment, including search lights, portable lights, and their batteries.

Factors Relating to This Report

Situational awareness – The navigator misjudged the vessel's position and route, relying on mooring lights instead of better lighting and navigation aids. Loss of situational awareness was a critical factor in the incorrect entry into the channel.

Capability – The ineffective use (or non-use) of radar and plotter suggests a potential skills gap or lack of confidence in available electronic navigation systems.

Complacency – Proceeding at 15 knots at night, with a non-functioning spotlight and reliance on alternative cues, indicates a normalisation of deviance and acceptance of inadequate conditions.

Teamwork – There is no indication of effective cross-checking or shared decision-making among the bridge team. The lack of challenge or coordination likely contributed to the misjudgement.

Communication – The absence of effective bridge communication and confirmation of navigation plans or visual cues likely prevented early correction.

Key Takeaways

Rescue Crew – Don't sail blind - know your tools and limits
Ensure all vital navigation equipment, including spotlights, is fully operational before setting sail. Reduce speed appropriately in confined waters (as per COLREGs) and stay proficient in using radar and plotting devices, especially during nighttime operations or when visual cues are limited.

Managers – Prepare the crew - not just the vessel
Enforce strict pre-departure and pre-arrival checks for equipment readiness and reinforce risk-based speed management. Provide practical training on degraded visibility scenarios and ensure crews are confident using electronic navigation tools as additional references.

Regulators – Standards in darkness still apply
Review training and operational standards for night navigation and equipment readiness. Promote a safety culture that encourages reporting of near misses and verify compliance with best practices for bridge resource management and situational awareness tools.

M2551

Inverter alarm and explosion of batteries

Initial report

While switching from shore power to the auxiliary engine, an inverter alarm was triggered on a SAR vessel at its base. After returning to shore power and shutting down the systems, the alarm cleared temporarily but returned. During a subsequent power transfer, while in the neutral (O) position, one of the vessel's service batteries exploded. The situation was brought under control by disconnecting the charger and ventilating the battery fumes. The affected batteries were safely disconnected and removed from the vessel.

CHIRP Comments

From both an operational and human factors perspective, switching from shore power to auxiliary power appeared to be a routine process. It was carried out without consideration of the battery charging cycle: "It's working, so no need to check." This highlights a need for more explicit organisational guidance and a structured maintenance regime for all rescue craft batteries. Training should emphasise the risks associated with battery systems and the importance of understanding alarm indications, as these systems are inherently dangerous if not properly understood. In this case, an alarm was acknowledged and cleared, only to return later, a strong indicator of a fault that warranted further investigation. The use of appropriately designed checklists would help pay attention to relevant issues, even in such situations.

A technical review should be conducted to assess the interaction between the inverter and battery systems, particularly during transitional states, such as switching through "O." Operational procedures must be updated to include defined steps for power switching, with a focus on preventing unsafe voltage drops. Preventive maintenance schedules should be based on actual service hours, not simply battery age. Finally, crew awareness needs to be improved through the use of a company risk assessment and briefings that focus on the risks associated with transitional power states, particularly when alarms or failed transitions occur.

Factors Relating to This Report

Capability – Indicates crew possibly unaware of risks associated with power transfer when using an inverter.

Communications – Although not explicitly stated in the report, it is possible that information was not shared between team members.

Over-confidence – No action was executed as it was assumed that this was normal, and that skipping safety checks or hazard awareness was not considered. Deviance was normalised.

Key Takeaways

Rescue Crew – Do not clear alarms without understanding them
What you do not see can hurt you. Changing from shore to ship power may seem routine, but this process can hide serious risks, especially when alarms are cleared without checking the cause. Thinking "it's working, so no need to check" can lead to missing significant problems, such as battery faults. Crew must understand what alarms mean, how systems work together, and how power changes can cause dangerous voltage drops. These risks should be covered in regular training and practice.

Managers – Routine can breed risk; procedures must reflect how systems are used
This case demonstrates that systems may appear reliable but still have hidden issues. Being too confident in regular routines can cause people to miss the problems in power systems and rescue equipment. Managers need to ensure that clear steps are written for switching power safely, that the crew takes alarms seriously, and that maintenance is based on the amount of equipment used and its time in service, use, or number of operational cycles, not just its age.

Regulators – Technology alone doesn't ensure safety – training, clear procedures, and human-system understanding must keep pace
The report highlights significant concerns regarding alarm handling, clarity of procedures, and the level of training among the crew. Regulators should verify that companies have robust maintenance programmes, proper crew training on battery and power systems, and clear procedures for power transitions. It's essential to evaluate not only the technology, but also how people and systems interact in real-world situations.

M2549

Person overboard in a person overboard exercise

Initial report

During a person overboard drill at normal operating speed in an open boat, the driver executed a sharp counterturn (Williamson turn). The instructor, seated on the sponson, nearly fell overboard. A trainee sitting on the opposite side also lost balance, lightly striking one shin against a fire extinguisher and the other leg against a storage box. The incident was discussed by the crew, who decided that this manoeuvre is not recommended for jet-powered or fast open boats where craft stability cannot be controlled during a tight turn.

CHIRP Comments

During a person overboard drill the driver executed a sharp counterturn, leading to significant instability. This sudden manoeuvre caused the instructor, seated on the sponson, to nearly fall overboard. A trainee sitting on the opposite side lost balance, resulting in minor injuries from contact with onboard equipment.

The inherent instability during tight turns in these vessels presents significant safety risks, as shown during this incident. Therefore, it is advised to avoid executing sharp counterturns (Williamson turn) at high speeds, with the appropriate speed determined by assessment.

Precautionary measures aimed to enhance safety protocols during person-overboard drills and similar operational scenarios should be assessed. This includes not allowing riding on the sponsons, using harnesses when seated, and having specific command language to convey a manoeuvre action, such as 'Turning starboard-starboard / 'Turning port-port', as well as 'Crash stop-stop'.

Factors Relating to This Report

Design – The design of the SAR craft was sound; however, it has speed limitations when carrying out counterturning manoeuvres.

Capability – The vessel's design characteristics, with limitations for a fast rate of turn, were not adequately understood.

Situational Awareness – It appears that the crew did not anticipate the risk of a person overboard or crew being injured during the high-speed manoeuvre due to a lack of knowledge and experience.

Teamwork – If others observed the risky decision but did not intervene, or coordination during the drill was lacking, this indicates poor crew interaction or unclear authority roles during training.

Communications – Since a Williamson turn was to be executed by the driver, informing the rest of the crew and the instructor would have clarified what was about to occur.

Key Takeaways

Rescue Crew – Good seamanship means knowing when to speak up
Before executing any manoeuvre – especially in training – pause to consider whether it suits the vessel's handling characteristics and current conditions. If something feels unsafe or unfamiliar, speak up. Situational awareness, sound judgement, and a questioning attitude are vital, even during drills. All high-speed craft pose a risk of injury to the crew and person overboard incidents due to their inherent characteristics, particularly when underway, including sudden movement, increased G-forces on the crew, and large angles of pitch, roll, and yaw. The crew should always be prepared for this, and any manoeuvre that can be pre-planned must be notified and the crew must be prepared.

Managers – Culture is shaped by what is challenged and what is not
Ensure all crew, especially those in training roles, are adequately briefed on vessel-specific limitations and safe manoeuvring techniques. Unsafe norms often go unchallenged – embed regular reviews, encourage open dialogue, and empower teams to stop or question actions that don't feel right.

Regulators – One size doesn't fit all, realistic training must still be safe
This case highlights the need for clear, vessel-specific guidance on person overboard drills and high-speed manoeuvring. Standardised training protocols must reflect the operational reality of different craft types, ensuring safety isn't compromised in the name of realism or tradition.

Representative image. Credit: Shutterstock

M2550

Application of the collision regulations

Initial report

A recreational vessel approached the SAR vessel from its starboard side in a crossing situation. It was going to pass directly in front of the SAR vessel at speed, showing no signs of slowing or giving way. The SAR Unit Commander quickly ordered the vessel's driver to perform a crash-stop manoeuvre, which successfully brought the vessel to a rapid halt and prevented a collision.

This incident highlights the crucial importance of maintaining a proper lookout and adhering to the International COLREGs, particularly rules 5, 15, and 16. Following the event, a discussion was held with the crew to reinforce awareness of navigation regulations and the responsibility to give way.

CHIRP Comments

Good follow-up action initiated after the near miss. However, questions remain as to the level of knowledge and training provided to the crew of the rescue vessel. Given this near-miss incident, all crews should undergo periodic reassessment of their understanding of collision avoidance regulations. This incident highlights a misapplication of COLREG Rules by the SAR vessel. The immediate reactive response was suitable, but the proactive understanding and planning were insufficient. The case presents a valuable learning opportunity for correctly interpreting crossing rules, particularly in high-speed or time-sensitive operations.

Factors Relating to This Report

Situational Awareness – The rescue vessel's crew failed to recognise they were the give-way vessel in a crossing situation. This misjudgement of their navigational context was a causal factor for the near-miss.

Capability – The incident suggests a potential misunderstanding or misapplication of COLREG Rules 5, 15, and 16, which are crucial for preventing collisions.

Overconfidence – If the crew assumed priority status without verifying vessel positioning and adhering to the rules of the road, it suggests overconfidence or a reliance on assumptions.

Key Takeaways

Rescue Crew – Awareness avoids emergencies
This incident underscores the importance of maintaining situational awareness and accurately applying collision regulations at all times, regardless of the vessel's type or operational context. Being a rescue craft does not exempt a vessel from Rule 15 obligations. Understanding who the give-way vessel is and taking early action to avoid close-quarters situations is essential. Reacting effectively in an emergency is valuable, but even better is avoiding the emergency through proper planning and awareness.

Managers – Train beyond the drill
This case highlights the need for targeted training that extends beyond emergency response and drills down into everyday decision-making, particularly in the interpretation of rules in congested or mixed-traffic waters. Briefings, post-incident discussions, and scenario-based learning should routinely challenge assumptions about vessel priority and encourage crews to think critically about their navigational responsibilities, even in situations perceived as operational urgency.

Regulators – COLREGS: No exceptions
The event highlights the need to reinforce core COLREG knowledge across all vessel types, including those involved in auxiliary or specialist operations, such as rescue. Regulators should consider how training standards, examination frameworks, and inspection protocols address rule compliance in real-world scenarios.

M2547

Rescue drill – gas escape into a life raft

Initial report

During a routine life raft drill conducted by the SAR station, individuals entering the raft experienced unexpected difficulty breathing. It was later determined that inflation gas had leaked into the interior space of the raft.

Representative image. Credit: Shutterstock

The sequence of events was as follows: the raft was inflated, and after a short time, the first person entered. Two others followed shortly after. Soon after entry, the raft began to deflate. The occupants exited quickly, and all were clear within a minute or two. The gaseous smell and breathing discomfort were only noticed after leaving the raft.

CHIRP Comments

This is a very unusual case where a service provider for the life raft servicing may not have thoroughly checked out the inflation condition of the life raft. The service provider is committed to ensuring that primary life-saving equipment is thoroughly maintained and correctly serviced. All life rafts have an end-of-service time stamp, indicating when they are no longer serviceable, and must be destroyed to prevent re-entry into service. The life raft used may well have been outdated and had been used for crew training exercises. Either way, it reinforces the crew's knowledge that there is a finite limit to their use and that thorough, quality servicing is essential.

Occasionally, the quality of the life rafts may not meet the required standard, and their service life may be terminated prematurely. A visual inspection by the company manager should be part of the quality control process. Life rafts typically have a 10-year lifespan.

The crew could not have anticipated that gas would leak into the raft. This was not a procedural or behavioural failure, but likely the result of a mechanical fault in the gas inflation system or a degraded raft chamber. This raises questions around maintenance practices, servicing standards, and equipment life-cycle controls.

Factors Relating to This Report

Design – Based on the information, it is likely that a faulty gas release mechanism or raft chamber integrity allowed inflation gas to leak into the interior. The raft may have failed despite being certified, which raises concerns about the adequacy of design standards or certification protocols.

Local Practices – If servicing was performed externally, the organisation may need to examine the contractor's reliability, oversight, and certification traceability.

Key Takeaways

Rescue Crew – You can't catch what you can't see, but you can stay ready
This was not a crew error. A likely mechanical fault caused the leak. Always remain vigilant for signs of equipment degradation and report any concerns promptly. Preparedness means trusting procedures – but questioning what looks or feels wrong.

Managers – Don't just trust the stamp, take a look yourself
A service certificate isn't the whole story. Build visual checks into your routine. Some rafts may look fine on paper but be unfit in reality. Quality control starts with hands-on leadership.

Regulators – If expired rafts can return to service, that's a systemic flaw
This case suggests gaps in disposal and oversight. Stronger controls are needed to track, audit, and prevent expired or substandard life rafts from slipping back into use.

Investigations In Focus

Grounding and sinking of HMNZS MANAWANUI Location and time: Samoa, October 2024

Selected key points from the Royal New Zealand Navy Investigation Report. Full report: https://www.nzdf.mil.nz/assets/Uploads/DocumentLibrary/MAN-COI-ROP-FINAL-31-Mar-25_Redacted-v2.pdf

On Saturday, 5 October 2024, the Ship was conducting survey operations on the southern side of Upolu, Samoa. The wind was from a direction of 120° at 20-25 kts with a high sea state 3, and visibility at greater than 10 nm. At time 1815 the Ship was around half a nautical mile south of Sinalei Reef on a heading of 340° at 6 kts. The Ship ceased logging survey information in anticipation of a turn to starboard to keep it within the designated survey area. Attempts by the Ship's bridge staff to alter the course to starboard had no appreciable effect, and neither did the control orders that were made soon after in the belief they would have resulted in the Ship applying full power astern.

The direct cause of the grounding has been determined as a series of human errors in that the Ship was put on a heading towards land and the autopilot mode was not disengaged to enable the Ship to turn in an easterly direction. Remaining in autopilot resulted in the Ship maintaining a course of 340° toward land, until grounding and eventually stranding.

The investigation report includes at least the following issues of relevance to SAR:

1. **Qualification, recent relevant experience and high competence** are vital to safe operation of SAR units.
2. **Fatigue** is an issue for SAR unit operators, particularly where they make use of volunteer crew, who may have already been wake or have completed a day's work before being called out.
3. **Risk management training** should be a part of all SAR unit crew training. Management should also be trained in risk management processes so that there is a holistic and organisational approach to risk management.
4. **Procedures, instructions and processes** are critical to safe operations. SAR organisations should ensure that theirs are well designed, robust, effective, tested and well trained. They should not be ignored except where the situation is well outside the expected process.
5. **Rushing a task** often leads to mistakes or accidents. Hasty reactions or responses should be avoided. Taking the time to observe and plan a safe and effective response to a situation is better practice. SAR organisations should consider developing checklists for unit crews, particularly for emergencies as well as equipment and system failure situations.
6. **Human Element training** should be provided to all SAR unit crew and supporting personnel, including management to the highest level.
7. **Supervision** by qualified and competent people of those less experienced or competent, or where two-person oversight is deemed necessary, is an important safety procedure. Experienced and knowledgeable personnel, who can pass on their skills and experience to others, are critical components of a safety focussed organisation.
8. **Sea survival training** SAR unit boat operators should ensure that sea survival training is regular and effective, including abandon ship training, life raft operations, use of abandonment suits, and use of lifejackets, including deflating them when for instance trapped underneath a RHIB.

Investigations In Focus

IMO Marine Safety Investigation Working Group Report

IMO Working Group Report "Lessons learned and safety issues identified from the analysis of marine safety investigation reports". Full report available from the IMO website by individual registration.

Key Takeaways for SAR Vessels and Units

1. **Personnel Safety in Adverse Weather**
   - **What happened:** Multiple crew fatalities occurred when working on deck during rough weather, being washed overboard or injured by shifting equipment.
   - **SAR relevance:** SAR units often operate in the worst weather. Crew must use lifelines, life jackets, helmets, and be trained in safe deck movement during heavy seas.
   - **Action for SAR:** Reinforce weather-based go/no-go criteria. Enforce use of fall protection and personal flotation devices. Address issues related to inflatable lifejackets, including entrapment and the importance for understanding how to safely deflate and remove a lifejacket.
2. **Working Alone and Communication Failures**
   - **What happened:** Fatalities occurred when crew entered engine rooms or worked on deck alone without informing others.
   - **SAR relevance:** SAR crew may need to board casualties or vessels alone.
   - **Action for SAR:** Always inform the team when entering hazardous zones. Implement a "buddy system" or radio check-in procedure.
3. **Electrical and Fire Hazards**
   - **What happened:** Fatalities due to undetected live wires, poor maintenance, and inappropriate tools.
   - **SAR relevance:** Damaged or fire-prone vessels pose secondary hazards to rescuers.
   - **Action for SAR:** Always assume electrical and fire risk on damaged vessels. Carry insulated tools and thermal detection equipment if feasible.

4. Improper Use or Lack of PPE
- **What happened:** Deaths occurred when people worked at heights without harnesses or wore ineffective PPE.
- **SAR relevance:** SAR teams use PPE under extreme stress. Improper or damaged gear puts lives at risk.
- **Action for SAR:** Regularly inspect, train with, and enforce proper PPE use. Conduct gear drills under realistic conditions.

5. Failure of Emergency Equipment and Procedures
- **What happened:** Fires grew out of control due to malfunctioning emergency fire pumps, or inoperative water spray systems.
- **SAR relevance:** SAR units may be called into or operate near such incidents.
- **Action for SAR:** SAR units must train for fires, especially involving hazardous cargo or engine room fires. Always verify fire suppression on own and other vessels.

6. Lack of Risk Assessment and Permit Discipline
- **What happened:** Many incidents occurred where permits were issued but not enforced or followed, or where tasks were done with incomplete risk assessments.
- **SAR relevance:** SAR crews may need to perform unplanned tasks (e.g., boarding, casualty evacuation, rigging lines).
- **Action for SAR:** Even in emergencies, conduct rapid verbal risk assessments, especially for boarding or moving in damaged structures, working aloft or near water, or using tools or cutting equipment

7. Navigation Watchkeeping
- **What happened:** Several fatal collisions occurred due to poor bridge resource management, overreliance on radar, and miscommunication.
- **SAR relevance:** SAR vessels operate in traffic-heavy, low-visibility environments and often deviate from standard COLREG routes.
- **Action for SAR:** Invest in bridge team training and radar interpretation. Communicate early and clearly with all nearby traffic and MRCC. Emphasise fishing vessel collision risk, which was a recurring theme.

8. Failure During Transfer and Embarkation
- **What happened:** Crew fell overboard or were killed while transferring between vessels or adjusting gangways.
- **SAR relevance:** SAR crew transfers (to lifeboats, damaged vessels, piers, helicopters) are high-risk.
- **Action for SAR:** Reinforce safe transfer SOPs, use of floatation, harnesses, helmets, and close coordination between driver and crew.

9. Fatigue and Shift Work Errors
- **What happened:** Accidents were caused by decisions made under fatigue or during shift handovers.
- **SAR relevance:** SAR crews often work long hours in multi-day operations.
- **Action for SAR:** Ensure rest management protocols are in place, briefings include fatigue awareness, and shift handovers are properly conducted.

10. Enclosed Spaces and Hazardous Atmospheres
- **What happened:** Numerous deaths occurred during enclosed space entries from fumigants, flammable gases, or lack of oxygen.
- **SAR relevance:** SAR units may need to enter flooded compartments, hulls, or tanks.
- **Action for SAR:** Train for confined space entry, use of gas detectors and emergency escape breathing devices, and rapid extraction procedures and entry permits.

Additional Considerations for SAR Units
- **Drill frequency and realism:** Several incidents highlighted poor familiarity with emergency equipment or escape routes.
- **Command and coordination gaps:** Many reports cited lack of clear orders and response hierarchy.
- **Equipment inspection and maintenance:** Corroded floor plates, missing gaskets, and defective ladders were recurring issues.
- **Learning culture:** Many casualties stemmed from normalisation of unsafe practices or failure to speak up.
- **Gender- and size-appropriate PPE:** Anthropometric factors (e.g., ill-fitting gear) led to injuries. SAR gear must fit all users.

M2554

Injury to SAR Swimmer

Initial report
During a search and rescue operation, a rescue team responded to a vessel grounded in reeds. A decision was made to deploy a surface swimmer to inspect the craft. After routine checks, a safety line was attached, and the swimmer was cleared to enter the water.

The vessel's bridge team were aware of the shallow depth but failed to pass this on. The swimmer also observed that the SAR vessel's engine was still running, which influenced their decision to enter from the side rather than via the swim platform. Using a standard entry, the swimmer stepped into the water. However, the depth was only about one metre, and their leg struck the bottom, causing knee pain. The task was aborted, and the swimmer returned to the SAR vessel. The medical assessment confirmed that the injury was minor, allowing the swimmer to continue driving duties, although not swimming.

Until the incident, the team had maintained a good level of safety awareness. During the post-operation review, it was agreed that a gradual entry would have been more suitable in such conditions. The lesson was shared across the team to reinforce communication and caution.

CHIRP Comments
This report highlights a communication breakdown that led to a preventable injury during a SAR operation. Although the vessel's bridge team knew the water was shallow, this vital information was not passed to the rescue team. The SAR driver should have been aware of potential shallows and communicated this to the swimmer, given that most SAR craft are equipped with an echo sounder. The SAR Unit Commander should have ensured that the water depth was conveyed to both the deck crew and the swimmer.

The swimmer, unaware of the actual depth, performed a rescue jump and struck the bottom, resulting in a knee injury. In any SAR scenario, especially in unfamiliar or restricted waters, careful and gradual entry into the water is essential. In this case, the swimmer opted to enter the vessel from the side rather than the designated swim platform, possibly influenced by the running engine.

Twilight conditions likely made depth judgment more difficult, and the swimmer's focus on the casualty vessel may have contributed to overlooking personal safety in the final moments before entering the water.

While safety was maintained up to the point of entry, this incident serves as a clear reminder that communication of environmental conditions must be thorough and timely. Procedures should include checking the water depth and the type of underwater ground, as well as potential obstacles, before entering the water. This could have been carried out using a boathook, especially since the water clarity was not very good and the rescue was taking place in twilight conditions. Situational awareness must always be maintained, and assumptions – especially about water depth –should always be questioned. Sharing key information and reinforcing cautious entry procedures are vital steps to avoid injuries in future operations.

Factors Relating to This Report
Communication – Vital information about the shallow water was known to the grounded vessel's crew and should have been known to the SAR vessel's driver, but was not passed to the swimmer. This communication gap directly contributed to the injury.

Situational Awareness – The swimmer assumed the water was deeper and did not anticipate the risk of injury from stepping into shallow water. Environmental cues, such as distance from shore and twilight, further reduced situational awareness.

Complacency – The swimmer and crew had maintained safety protocols up to the point of entry. Still, familiarity with SAR routines may have led to a momentary lapse in judgment when assessing the risks of water entry.

Teamwork – Choosing to enter from the side rather than the designated swim platform resulted in unsafe water entry. The decision lacked a proper risk assessment and support from other crew members.

These factors show that the incident was not simply the result of one poor choice, but rather a chain of human and organisational shortcomings. The key learning is the importance of thorough communication, constant situational awareness, and the need to resist assumptions – even under pressure.

Key Takeaways
Rescue Crew – Stay alert, even when things feel routine – even in rescue mode, pause and protect yourself first.
This incident illustrates how easily focus can shift entirely to the task at hand, overlooking personal safety. Entering unfamiliar water should never be done hastily or based on assumptions. The swimmer's injury occurred not due to lack of training, but due to incomplete information and a momentary lapse in judgment. Always ask the right questions, especially when key details, such as water depth, may impact your safety. Trust your instincts but verify your surroundings.

Managers – Sharing information enhances safety – if one person knows the risk, but others don't, your system has failed.
The gap between those with critical information (the vessel's bridge team) and those who need it (the swimmer and deck crew) was avoidable. Managers play a vital role in ensuring all crew members have the same situational awareness. A culture that promotes open, timely communication and confirms understanding is not optional – it's essential. Debriefs and pre-entry checks should include verification of all known hazards, regardless of how obvious they may seem.

Regulators – Clarity and caution must be embedded in guidance – good regulation makes caution a standard, not a suggestion.
This case highlights the importance of reinforcing practical entry standards for swimmers and SAR teams operating in uncertain environments. Regulatory frameworks should support and mandate clear operational briefings, hazard communication, and conservative entry procedures in limited visibility or unfamiliar waters.

Representative image. Credit: Shutterstock

4. Superyachts

Behind the Gloss—Hidden Hazards in Luxury Operations

This section outlines recurring safety issues on superyachts, where aesthetics and commercial pressures sometimes overshadow safety fundamentals.

Many incidents stem from complacency, weak leadership, or insufficient training. It is important to remember that superyachts are seagoing vessels and must meet the same safety standards as commercial ships. A strong culture, transparency, competent oversight, and clear risk assessments are non-negotiable.

IM2319

Fire on a large motor yacht

Initial report

After a period of maintenance in dry dock, a motor yacht was moved to a repair berth. Shore power was unavailable, and one of the yacht's generators was started. The captain was not made aware that shore power was lacking, nor told that the generator had been started.

During a pre-sail survey, the engine room (ER) ventilation dampers had been shut by the contractors. In the haste to move out of the dry-dock, the crew did not have enough time to fully check the condition of these, so failed to notice that they were still closed. This raised the temperature in the ER, and an emergency escape hatch was opened to improve ventilation. A while later, the ER fire alarm sounded. The captain briefly checked the ER, observed haziness but no strong odour or visible fire source, and closed the door.

The engineer and deckhand donned breathing apparatus and entered the ER. They discovered smoke near the running generator, which was shut down to minimise fire risk. However, this left the vessel without power. The emergency hatch was also closed.

While attempting to respond to the incident, several issues were discovered: the emergency fire pump was difficult to operate, the emergency generator was inoperative, smoke detectors and atmosphere testing equipment were unavailable, and the fire system's uninterruptible power supply battery had failed. Unable to monitor the ER, the master activated the CO_2 system, which did not operate properly because it had been incorrectly configured. The captain and crew were unaware that the CO_2 cylinder valves had to be held open until they were fully discharged.

The local emergency services intervened and made the space safe for re-entry. Subsequent investigation revealed that hot exhaust gas leaking from a malfunctioning exhaust valve caused the fire, which was made worse because the closed ventilation dampers limited air circulation in the compartment.

CHIRP Comments

Taking vessels into and out of dry dock is a complex and high-risk operation that requires very clear communications between contractors, dockyards, and vessel crews. This is particularly true when the responsibility for maintaining or operating the vessel, its fixtures, and other equipment is transferred.

It is essential that the schedule for bringing a vessel out of dry dock allows sufficient time for the crew to conduct thorough inspections of their assigned equipment and spaces. They must also be able to re-check systems if external surveyors make modifications, as with the ventilation dampers.

While owners may prefer to prioritise hotel services, safety systems must take precedence. Beneath the polished exterior of a large superyacht, it remains a seagoing vessel where safety is paramount. A significant cultural shift in management is needed to ensure safety is consistently the top priority.

Time is also needed for the crew to become familiar with the operation and maintenance of the equipment and to become proficient in routine and emergency modes of operation.

Equally important, they need time to learn how to function as a team. The fact that the captain was not informed of the power issues or the running of the generator suggests that they had not had the opportunity to work as a single, efficient crew. This includes reviewing (or developing) suitable risk assessments for every stage of the vessel's emergence from dry dock and return to seagoing operations.

Factors relating to this report

Capability – After any maintenance period, the crew need time to identify emergent defects, ensure that equipment is configured correctly, and they are correctly trained to operate it safely.

Communications – Defects and changes in operational readiness must be reported to the captain.

Teamwork – Teams need time to gel as a coherent and effective unit. Management should plan so that the drydock crew have sufficient time to establish good teamwork.

Alerting – Given the situation on board with non-operational essential safety appliances, would you have alerted your head of department.

> **Beneath the polished exterior of a large superyacht, it remains a seagoing vessel where safety is paramount**

M2352

Drug use on board superyachts

Initial report

Our reporters sought to illuminate a potentially hazardous situation aboard a sizeable superyacht. The issue reported to CHIRP pertains to the levels of drug consumption occurring among the crew and passengers, fostering a drug-fuelled environment that presents a considerable risk to everyone on board. It starts with the senior officers down, making tender operations dangerous, especially after hearing about recent incidents.

The reporters stated that it is just nerve-wracking and wrong because they know how much drug use occurs on board and how unsafe it can be. The reporters wish to raise their concerns with CHIRP.

CHIRP Comments

CHIRP wishes to thank the reporters for highlighting this serious safety issue. The situation on board has escalated and compromised safety. CHIRP has addressed this matter with the Flag State, which has taken steps to investigate. CHIRP appreciates Flag State's strong support for this issue. If you encounter similar levels of danger, please report them to CHIRP.

Factors related to this report

Culture – A dangerous level of safety is being demonstrated by the company by allowing the use of banned drugs to be used in everyday work operations involving passengers.

Local practices – Local practices have become the norm on board this large superyacht, resulting from feeble leadership from management and senior officers.

Teamwork – The reporters exhibited a shared mental model that prompted them to address the deteriorating safety situation, which is commendable. If you are facing a similar issue, please get in touch with CHIRP if you cannot express your safety concerns through the onboard leadership team or management.

> **Our reporters have offered an excellent example of active involvement in operational safety for the crews working on superyachts, and CHIRP wants to thank them**

M2358

Identification of enclosed spaces on a superyacht

Initial report

Our reporter worked on a commercial yacht under 500gt that claimed to have no enclosed spaces onboard. Therefore, it didn't have gas detection equipment, and it was impossible to determine whether bilge spaces, chain lockers, steering flats, etc., were safe to enter or work in. The reporter sent this message to CHIRP because they believe this is incorrect and that gas detection instrumentation should be supplied to all superyachts.

CHIRP Comments

Given various enclosed spaces within a superyacht, the reporter is justified in questioning the absence of gas monitoring equipment. Gas testing equipment is essential for ensuring safe entry into all enclosed spaces.

Enclosed spaces exist on all vessels—superyachts are no exception. Areas such as engine rooms, fuel and water tanks, below-deck storage compartments, hull voids, and electrical control rooms pose serious risks, including oxygen depletion, toxic gas accumulation, and the potential for fire or explosion.

Given these dangers, gas testing equipment is not optional—it is essential. Every vessel must be equipped to conduct gas tests as part of a structured permit-to-work system. Without this, there is a real and preventable risk of asphyxiation, poisoning, or catastrophic incidents.

While regulations mandate safety measures for enclosed spaces, these measures are not consistently implemented at the design stage, especially in the superyacht sector. Assertions that a vessel has "no enclosed spaces" are simply inaccurate and reveal a significant oversight in regulatory design safety management.

CHIRP urges vessel operators and regulators to ensure all enclosed spaces are appropriately identified, marked, and documented, with gas detection equipment readily available and crews trained in its correct use. Ignoring this issue puts lives at risk, and action must be taken to close this safety gap.

CHIRP and other maritime organisations are working to establish an internationally recognised enclosed space sign. This initiative aims to ensure that all seafarers, regardless of the vessel they serve on, can quickly identify these hazardous areas. Standardised signage will help remove ambiguity and reinforce safe working practices across the maritime industry.

Factors relating to this report

Communications – The company must communicate to their fleet that learning within the company will only improve if management addresses concerns from the crew or other management and adopts a bottom-up, top-down approach to safety.

Culture – The poor response by management to the use of gas measuring equipment indicates a poor safety culture within the company to crew safety.

Alerting – Alerting management of the lack of equipment to monitor an enclosed space was poorly received.

M2487

Safety concerns dismissed

Initial Report

Our reporter said "I am submitting this report anonymously because I fear retaliation. Previous safety concerns raised onboard have either been ignored or dismissed, leaving me no other option.

Several serious safety issues are currently evident on the vessel. Firstly, the crew is being issued wakeboard helmets instead of certified safety helmets for working at height. These helmets are not designed for industrial use, do not provide adequate protection against falling objects or impacts, and often do not fit properly. Informal concerns have been raised about this, but no action has been taken to supply the correct personal protective equipment.

Anchor operations are being conducted under unsafe conditions. To retrieve the port anchor, the crew must force a screwdriver into the circuit board to activate the system. This hazardous and makeshift method presents a significant risk of electrical injury and potential damage to the equipment.

These are not isolated issues. They are part of a broader safety culture problem on board. There is a noticeable disregard for proper safety standards, and crew members are actively discouraged from speaking up. This can create

an environment where hazardous practices become normalised, and there is little evidence of proactive safety management. I hope this report will lead to meaningful action to address these risks before someone gets hurt."

CHIRP Comment

Working on a vessel where safety is taken seriously, and leadership is supportive makes a real difference to morale and performance. When crew members feel trusted, respected, and empowered, they are more likely to speak up, take responsibility, and work with purpose. Sadly, our reporter did not experience this.

In this case, the vessel's on-board management reflected wider failings within the company. The crew reported feeling unsupported and unsafe. According to the report, there was little evidence of an active safety culture, and serious concerns were raised about working conditions. When safety is not prioritised, trust breaks down – and so does performance. Company leadership at all levels must recognise their role in creating a safe and positive working environment.

CHIRP encourages companies to listen to feedback, act on concerns, and support leadership behaviours that build trust and safety from the top down. Seafarers should never feel that reporting safety concerns is a last resort.

CHIRP raised the issues outlined in the report with the Flag State, which responded constructively with a plan of action. The Flag State has asked that such concerns be reported to them directly in future. However, CHIRP is mindful that not all seafarers feel confident that their identity will be protected. We remain committed to offering a trusted and confidential reporting route for those who may feel unable to raise concerns elsewhere.

Key Issues relating to this report

Culture – The dominant issue. The crew described a poor safety culture, a lack of trust, and fear of raising concerns. A culture that discourages speaking up erodes morale and increases risk.

Communication – Failures in information flow, both within the vessel and between the ship and shore, were evident. Poor communication leads to misunderstanding, confusion, and missed hazards.

Teamwork – The lack of supportive leadership undermines teamwork. A crew that does not feel united or supported is less effective and less safe.

Fatigue – While not explicitly stated, the poor working conditions likely contributed to fatigue or a high workload. Fatigue reduces alertness, reaction time, and judgment.

Alerting – the reluctance to contact the Flag State directly and the need to use CHIRP indicates a failure of systems that should enable safe, anonymous reporting. Seafarers felt they had no safe route to raise concerns internally or externally.

Key Takeaways

Seafarers: Speak up, even when it is difficult. Your voice matters. If you are working in unsafe or unsupportive conditions, reporting through trusted channels like CHIRP can help drive change. A strong safety culture begins with individuals who care enough to raise concerns, even when the system appears not to listen.

Managers: Culture is built, or broken, by leadership. Poor on-board culture and weak leadership directly harm safety, trust, and performance. Create conditions where the crew feel respected, heard, and supported. Empower teams to report concerns without fear. Safety is not just compliance — it is behaviour, values, and consistency.

Regulators: Confidential reporting needs absolute protection. Seafarers will not report concerns if they fear being exposed. Confidentiality and follow-up action are critical. Regulators must ensure that reporting systems are genuinely safe and trusted and that companies are held accountable when systemic issues are raised.

M2488

Working aloft without proper fall protection

Initial Report

The reporter saw three people working aloft on a neighbouring superyacht. One wore a full harness, one appeared to be wearing a waist belt, and one had no fall protection at all.

CHIRP Comment

CHIRP thanked the reporter and informed them that CHIRP had contacted the Flag State concerning this incident.

There are several issues with the reporter's observations regarding this report. Firstly, one of the crew was wearing a harness; why were the other two crew members not wearing the same harness for the same work activity? Was this because there were insufficient harnesses on board? Or did one crew member decide it was safe for them and not insist that the others needed protection?

The reporter saw that one of the crew members was wearing a waist belt, which is not clear in the photograph. Nevertheless, waist belt-type harnesses should not be worn as fall protection due to their lack of support during a fall, which would most likely result in permanent back injury—they are not designed for fall protection.

CHIRP would like to add that, following collaboration with the six leading Flag States which register the most superyachts, an inaugural safety flyer on working aloft has been produced. The flyer can be seen on the back page of this feedback edition. CHIRP would like to thank the Cayman Islands Registry for making the first one, along with other leading flag states and CHIRP Maritime.

Key Issues relating to this report

Culture – Inconsistent use of safety harnesses suggests either a weak safety culture or poor enforcement of safety procedures. If some crew members do not feel obliged or expected to follow basic safety practices, the culture is not functioning correctly.

Capability – The use of an inappropriate waist belt instead of proper fall protection indicates a lack of knowledge or training about the appropriate equipment for working aloft. Correct practices would be better highlighted if a Permit to Work were used.

Teamwork – If one crew member is correctly equipped but does not intervene when others are not, it suggests a lack of shared responsibility and poor team cohesion. Good teams look out for each other.

Fit for Duty – Safety covers not only the physical but also the psychological aspects.

Key Takeaways

Seafarers: If one person needs a harness, all do. Inconsistent use of safety gear puts everyone at risk. If a task requires fall protection, ensure that every crew member is adequately equipped. Don't assume someone else's risk is different from yours — safety must be a standard, not an option.

Managers: Supply the gear and set the standard. Ensure there are enough adequately certified fall protection systems on board, and make it clear that unsafe alternatives, such as waist belts, are not acceptable. A transparent, enforced safety standard prevents improvisation and protects your crew.

Regulators : Support safety with visibility and clarity. CHIRP welcomes collaboration with Flag States to raise awareness and promote consistent safety standards. Sharing best practices through initiatives like the 'Working Aloft Safety Flyer' helps turn guidance into action on board.

M2498

Crew injury while mooring

Initial Report

During routine mooring operations, while a crew member was in the process of heaving up the ground line, it appeared to be short. An attempt was made to use a messenger line, connect it to the ground line, and secure the ground line sufficiently on deck using the capstan before transferring it to the bollard. During the heaving operation, the crew member in charge at the mooring station repeatedly requested shore personnel to provide a better arrangement. Whilst they were attempting to solve this issue, the crew member operating the capstan continued to heave in the line until, unfortunately, the messenger line parted, causing the ground line to strike the crew member who was near the capstan at the time.

CHIRP Comment

CHIRP has contacted the reporter to find out how the injured crew member fared, and thankfully, they have recovered, but it was very fortunate that the injury was not more serious.

All the signs indicated that the ground line was too short, and while negotiating for a better arrangement, the operation continued, resulting in the messenger being over-tensioned and parting.

Representative image. Credit: Shutterstock

The Advisory Board commented that marina ground lines are often found in poor condition, increasing the risks to the crew during their use. Marinas should take greater responsibility for their condition and increase the frequency of their inspections and maintenance.

A risk assessment related to mooring in port should include ground lines as part of that assessment. The fact that the line was still being heaved on board despite concerns over its suitability was an excellent case for a "stop-work authority" to be enacted.

Key Issues relating to this report

Local Practices (Deviation) – The use of a short ground line and messenger workaround indicates a normalised departure from the standard procedure—a workaround that became routine under operational pressure.

Situational Awareness – There was a failure to maintain an accurate awareness of line tension and the risk of the ground line parting while negotiating with the shore.

Communication – Although concerns were raised, there was no effective closed-loop communication between the person in charge and the capstan operator.

Alerting – Repeated requests by the mooring station went unheeded, indicating a breakdown in the system of alerting and assertive challenge.

Teamwork – Lack of a shared mental model and coordination between shore personnel, the mooring leader, and the capstan operator.

Pressure – implicit in the fact that they continued the operations, potentially from schedule or routine expectations, and this overrode safety concerns.

Key Takeaways

Seafarers: If it doesn't feel safe, stop. Don't continue unsafe work—stop and speak up clearly. Know the risks, don't normalise shortcuts, and act on warning signs.

Managers: Unsafe workarounds reveal unsafe systems. Workarounds mean something's wrong. Fix procedures, empower crews to halt unsafe tasks, and learn from close calls.

Regulators: Deviations are symptoms, not root causes. Focus on systems, not just actions. Promote human factors reporting and ensure procedures align with real-world demands.

M2640

Grounding incident

Initial report

The vessel had been anchored for three days to support guest excursions. The owner requested that the vessel move closer to the dock to allow easier pick-up for a tour.

After weighing anchor, the vessel ran aground about 10 minutes later. It struck uncharted coral and was damaged, including the sacrificial rudder tip. One crew member sustained bruising after falling inside the vessel when it grounded.

The presence of uncharted coral was subsequently reported to the hydrographic office. The incident highlighted a degree of overconfidence, as the vessel had been anchored in the same bay for several days without incident.

CHIRP Comments

This report highlights the risks that can arise when a vessel changes from a prolonged period of static operations back into manoeuvring, particularly in areas where hydrographic data may be incomplete.

Short voyages decided at short notice and under time pressure can be just as hazardous as longer passages and require the same level of planning. In poorly charted areas, practical precautions may include using a tender to check depths, ensuring echo sounders are active, and avoiding assumptions that conditions will be uniform across an anchorage. The Master retains the authority to say "no" on safety grounds, and a clear explanation is often accepted.

The vessel had been safely anchored for several days, which may have reduced the perceived risk when repositioning closer to the dock. Experience shows that extended periods without incident can lead to overconfidence and assumptions about the safety of surrounding waters. The presence of uncharted coral demonstrates that hazards can exist over very short distances, even in familiar locations.

Operational or guest-driven requests can introduce subtle pressure to act quickly. This underlines the importance of pausing to re-establish situational awareness and conduct a fresh risk assessment before manoeuvring, particularly after a period of inactivity.

The injury to a crewmember during the grounding reminds us that sudden vessel movements can create secondary risks to personnel, even at low speed.

CHIRP commends the reporting of the uncharted coral to the hydrographic office. Mariners are encouraged to treat manoeuvring after extended anchoring as a new navigational task, to challenge assumptions formed during benign operations, and to adopt a conservative approach when operating close to shore or reef systems.

Factors related to this report

Situational awareness – Failure to re-assess conditions before manoeuvring; uncharted hazards not anticipated.

Teamwork/communications – Decision-making may not have been challenged; lack of cross-checks reduced safety margin.

Capability & Culture – Risk assumptions influenced by prior experience; organisational norms may have reinforced shortcut thinking

Overconfidence/Complacency – Extended anchoring without incident led to an underestimation of risk near uncharted coral.

Key Takeaways

"Even after safe anchoring, familiar waters can turn into hazards—pause, reassess, and navigate cautiously."

Regulators – Embed human factors such as complacency, fatigue, and communication in regulations and inspections—safety isn't just about charts and machinery.

Managers – Encourage a safety culture where crew pause, reassess, and speak up; operational convenience should never override risk awareness. Management companies could greatly assist vessels by developing a 'quick plan' procedure for short passages that retains all the key elements required for any passage.

Crew – Treat every manoeuvre after inactivity as a new navigational task—assume nothing, verify everything, and safeguard yourself and others.

M2638

Yacht's anchor damages hull

Initial report

Approaching an anchorage, the first mate rushed to prepare the anchor but accidentally released it while the vessel was doing 10 knots. With sufficient water, it didn't hit the bottom; however, when the mate engaged the brake, the anchor swung and struck the hull, causing minor damage that was repaired during the next haul-out.

CHIRP Comments

Apart from emergencies, never carry out anchoring procedures hurriedly. Heavy gear and high kinetic energy leave little room for error. Preparing the anchor to be let go is a deliberate process and should not be rushed, nor undertaken while the vessel is navigating at speed. Did the first mate experience real or self-perceived time pressure to rush?

Keep clear, closed-loop communications on the bridge, and always confirm brake engagement before releasing. Anchors should be held on the brake, plus guillotine or chain stopper, until vessel speed is reduced and the vessel is close to the anchorage. Ensure the vessel is at a safe speed and in suitable water depth before handling the anchor. Releasing the anchor while moving at 10 knots carries a high risk of damage to crew, anchor, machinery, and hull.

This incident highlights the importance of controlled anchoring methods and strict compliance with standard operating procedures to avoid unnecessary risks.

Factors related to this report

Pressure - The approach to an anchorage often creates time pressure. The first mate may have felt rushed to "get the anchor ready" before the vessel reached the drop position, increasing the likelihood of an error.

Complacency - Anchor preparation is a routine task. Familiarity with the operation can reduce vigilance, particularly regarding the risk of premature release while the vessel is still making way.

Lack of Communication - There appears to have been no clear confirmation between the bridge and forecastle on vessel speed, readiness, or the command to let go. This is a critical barrier that failed.

Lack of Teamwork - Safe anchoring depends on coordinated actions between the bridge and the deck. The incident suggests the operation was not being managed as a shared task with clearly defined roles and checks.

Distraction - The premature release may indicate the first mate's attention was divided, possibly by concurrent tasks, environmental factors, or monitoring the vessel's approach.

Lack of Situational Awareness - Releasing the anchor while the vessel was still making 10 knots shows a breakdown in awareness of vessel speed and the consequences of letting go at that moment.

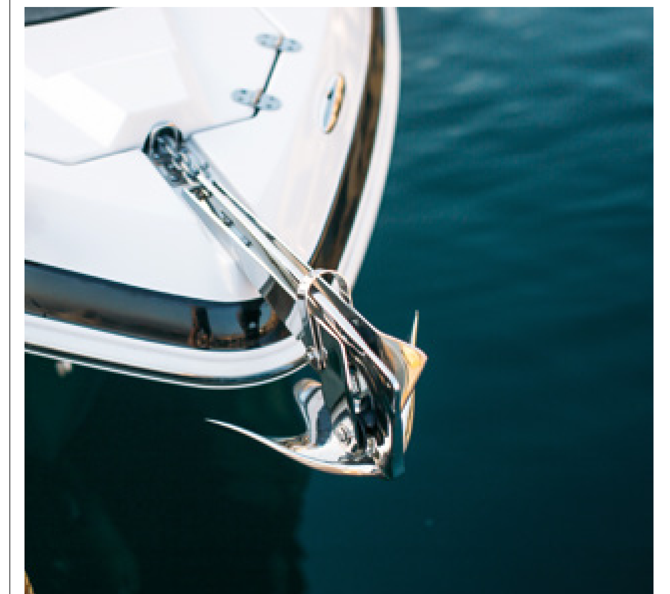
Key Takeaways

"Rushing routine work leads to accidents—slow down, focus, and follow the steps."

Regulators - This incident demonstrates how routine anchoring operations can become dangerous when workload and time pressure are poorly managed. It emphasises the need for regulatory focus on how procedures are practically applied during arrival phases, not just their existence.

Managers - The event highlights the risk of starting safety-critical tasks too early under perceived time pressure. Managers should ensure anchoring procedures, training, and supervision clearly align with vessel speed, task sequencing, and workload during approaches.

Crew - This incident shows how rushing and distraction during routine tasks can cause unintended outcomes. It highlights the importance of avoiding time pressure, staying aware, and ensuring conditions are safe before handling.



Representative image. Credit: Shutterstock

5. Engineering and Technical

Equipment, procedures, and the consequences of deviation

Engineering incidents often stem from procedural lapses, inadequate PPE, poor communication, or overconfidence during routine tasks. Cases outlined below include chemical burns, machinery-space fires, hazardous waste mismanagement, illegal discharges, structural compromise during a refit, oxygen-displacing solvents in confined spaces, and improper fuel handling leading to a blackout.

Many hazards arose where paperwork existed but was not followed or understood. CHIRP highlights the need for disciplined procedural compliance, competent supervision, correct equipment labelling, and a safety culture that prioritises alerting and corrective action over convenience.

M2310

Eye injury

Initial report

The ship's cook used an oven cleaner containing sodium hydroxide while cleaning the galley after a mealtime. The cleaner was sprayed onto all greasy areas, including the extractor hood over the cooker (which was above head height) and left for some time to dissolve the grease.

When the cook returned to inspect the sprayed area, the chemical cleaner dripped from the cooker hood into the cook's eye, causing severe irritation and a burning sensation to the eyeball.

A crewmember called the master who irrigated the eye with a sterile eye wash to flush the chemical from the cook's eye. The coastguard doctor was contacted as a precautionary measure; they advised that the crewmember be airlifted to a local hospital for further treatment.

CHIRP Comments

The correct PPE must be worn when working with caustic or other hazardous materials, especially above head height, as risks of personal injury significantly increase. The PPE should cover the entire body to prevent caustic burns. A full-face shield is better than eye goggles as it protects the whole face from caustic burns.

It was also inadvisable to leave the area unattended after the chemical had been sprayed onto the galley surfaces because another crewmember might have entered and suffered a severe injury.

Factors related to this incident

Communications – The head of the department needed to be informed about this hazardous work so that proper safety precautions could be taken.

Overconfidence – Because cleaning the galley is a routine task and has been done many times before without incident, the risk of the chemical cleaner has been overlooked. If you routinely work with chemicals, be alert to any signs of complacency in yourself or others.

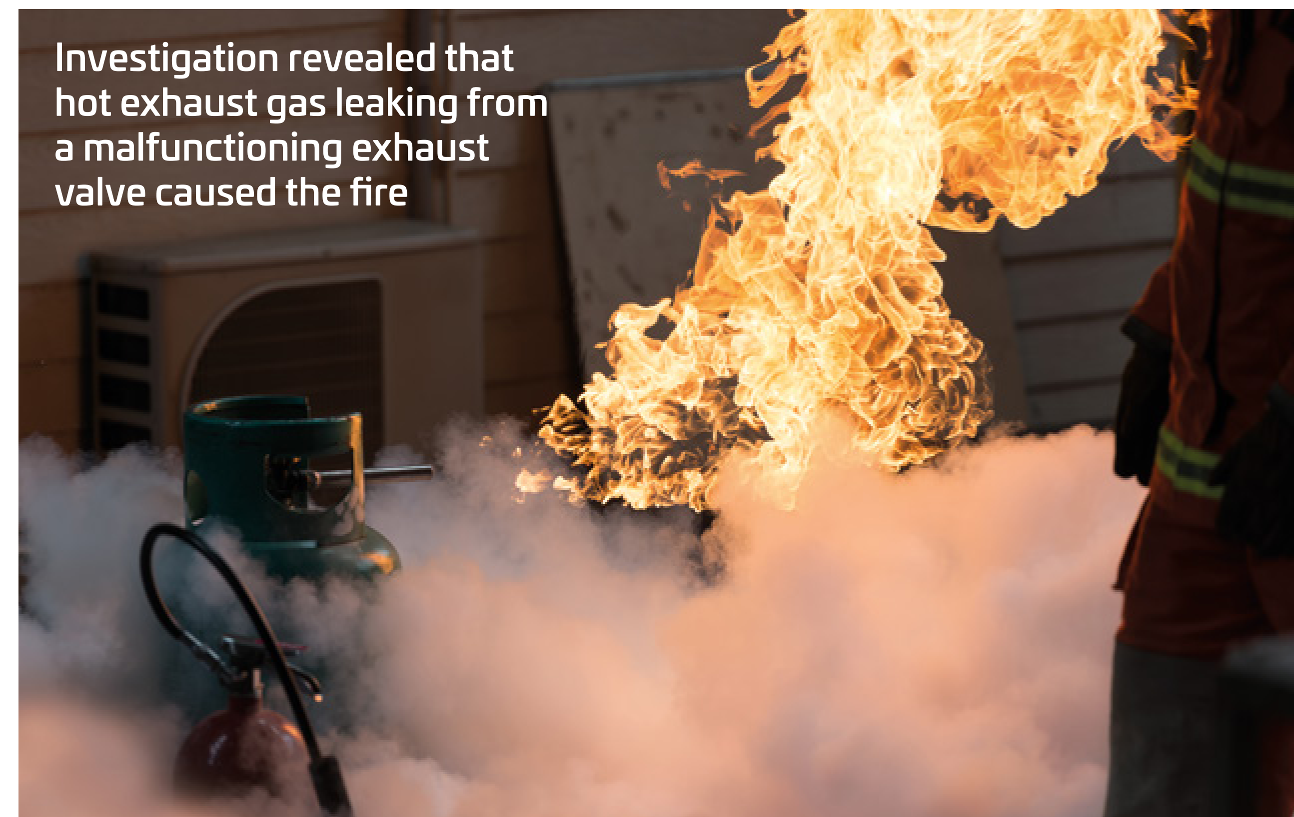
M2319

Fire on a large motor yacht

Initial report

After a period of maintenance in dry dock, a motor yacht was moved to a repair berth. Shore power was unavailable, and one of the yacht's generators was started. The captain was not made aware that shore power was lacking, nor told that the generator had been started.

During a pre-sail survey, the engine room (ER) ventilation dampers had been shut by the contractors. In the haste to move out of the dry-dock, the crew did not have enough time to fully check the condition of these, so failed to notice that they were still closed. This raised the temperature in the ER, and an emergency escape hatch was opened to improve ventilation. A while later, the ER fire alarm sounded. The captain briefly checked the ER, observed haziness but no strong odour or visible fire source, and closed the door.



Representative image. Credit: Shutterstock

The engineer and deckhand donned breathing apparatus and entered the ER. They discovered smoke near the running generator, which was shut down to minimise fire risk. However, this left the vessel without power. The emergency hatch was also closed.

While attempting to respond to the incident, several issues were discovered: the emergency fire pump was difficult to operate, the emergency generator was inoperative, smoke detectors and atmosphere testing equipment were unavailable, and the fire system's uninterruptible power supply battery had failed. Unable to monitor the ER, the master activated the CO_2 system, which did not operate properly because it had been incorrectly configured. The captain and crew were unaware that the CO_2 cylinder valves had to be held open until they were fully discharged.

The local emergency services intervened and made the space safe for re-entry. Subsequent investigation revealed that hot exhaust gas leaking from a malfunctioning exhaust valve caused the fire, which was made worse because the closed ventilation dampers limited air circulation in the compartment.

CHIRP Comments

Taking vessels into and out of dry dock is a complex and high-risk operation that requires very clear communications between contractors, dockyards, and vessel crews. This is particularly true when the responsibility for maintaining or operating the vessel, its fixtures, and other equipment is transferred.

It is essential that the schedule for bringing a vessel out of dry dock allows sufficient time for the crew to conduct thorough inspections of their assigned equipment and spaces. They must also be able to re-check systems if external surveyors make modifications, as with the ventilation dampers.

While owners may prefer to prioritise hotel services, safety systems must take precedence. Beneath the polished exterior of a large superyacht, it remains a seagoing vessel where safety is paramount. A significant cultural shift in management is needed to ensure safety is consistently the top priority.

Time is also needed for the crew to become familiar with the operation and maintenance of the equipment and to become proficient in routine and emergency modes of operation.

Equally important, they need time to learn how to function as a team. The fact that the captain was not informed of the power issues or the running of the generator suggests that they had not had the opportunity to work as a single, efficient crew. This includes reviewing (or developing) suitable risk assessments for every stage of the vessel's emergence from dry dock and return to seagoing operations.

Factors relating to this report

Capability – After any maintenance period, the crew need time to identify emergent defects, ensure that equipment is configured correctly, and they are correctly trained to operate it safely.

Communications – Defects and changes in operational readiness must be reported to the captain.

Teamwork – Teams need time to gel as a coherent and effective unit. Management should plan so that the drydock crew have sufficient time to establish good teamwork.

Alerting – Given the situation on board with non-operational essential safety appliances, would you have alerted your head of department.

> **Beneath the polished exterior of a large superyacht, it remains a seagoing vessel where safety is paramount**

M2496

Chemical injury to the crew

Initial report

An engineer was changing the chemical additive for the sewage treatment plant. While completing the operation, the chemical spilt, causing chemical burns to the crewmember. The crew member was not wearing any protective clothing and had not considered the risks involved in this operation. The crewmember immediately left the area and went to their cabin to remove the contaminated clothes and take a shower to wash off any chemicals.

A procedure was in place for handling hazardous substances and conducting a risk assessment.

The procedure required PPE, including a face visor, gloves, overalls and a chemical apron. Material Data Sheets need to be consulted before commencing the task, including briefing the crew on their contents and which instructions to follow. The engineer did not follow the procedure. They received refresher training following the event.

CHIRP Comment

This report highlights a breakdown in procedural compliance during a task involving hazardous chemicals. Although procedures and a risk assessment were in place, the crew member failed to wear the required personal protective equipment (PPE) or consult the relevant safety data before commencing the task. This underscores a critical point: safety documentation alone does not prevent harm—it must be understood and actively applied.

The engineer's prompt and appropriate response following the exposure likely mitigated the severity of the injury.

Familiarity with routine tasks can lead to an underestimation of risks, particularly when hazardous substances are involved. Complacency in such cases can have serious consequences. This report serves as a clear reminder that safety procedures are not optional.

Familiarisation training must fully address the risks associated with chemical handling, including the personal, physical, and psychological safety aspects. The correct use of PPE is not a procedural formality—it is a critical safeguard. It must be consistently applied with the same seriousness as any other essential safety measure.

It is encouraging that refresher training was conducted after the event. However, further reflection is warranted to understand why the procedures were not followed in the first place. Was there time pressure? Were the instructions unclear? Did assumptions override caution? Effective

learning from this incident should go beyond retraining and seek to identify and address the underlying conditions that contributed to the lapse. Doing so will help strengthen a proactive and resilient safety culture.

Key Issues relating to this report

Local practices – unless cases like this are highlighted, they can become the norm.

Complacency – the risk of underestimating liquid chemicals is potentially very hazardous.

Capability – training in the safe use of chemicals should be part of all crew familiarisation. Until familiarised, the crew should not be handling them.

Key Takeaways

For Seafarers, Shortcuts hurt; safety is part of the job. Follow the procedures, wear the PPE, and don't guess with chemicals. If in doubt, ask. Reporting protects everyone, including you.

For Managers, What gets supervised gets done safely. Embed procedures into daily practice, not just paperwork. Reinforce safety behaviour through presence, guidance, and learning from incidents.

For Regulators, Policy is potential, practice is protection. Focus on how rules work onboard, not just in manuals. Support training, reporting, and visible follow-through to keep learning alive.

Representative image. Credit: Shutterstock

M2561

Illegal disposal of waste at sea

Initial report

A reporter informed CHIRP about the illegal disposal of oily waste and plastic while the vessel was en route to its next port. They provided photographs and videos showing oily waste from the engine room being discharged into the sea under the instruction of senior officers.

CHIRP alerted the flag state and, soon after, a flag state inspector arrived on board to conduct an inspection. The reporter and CHIRP maintained close communication throughout. The reporter's primary motivation was simple: to stop environmental pollution and ensure accountability.

CHIRP Comment

The reporter initially raised the issue internally, with other crew members supporting concerns about the environmental impact. When no action followed, they contacted CHIRP to ensure the matter was adequately addressed. Their moral courage and sense of responsibility are commendable.

Although the experience left the reporter feeling isolated at times, they remained convinced that protecting the marine environment was the right thing to do. CHIRP shared the evidence with the flag state, the company's designated person ashore (DPA), their insurers, and the classification society to understand why oily waste and sediment had accumulated and to help prevent similar incidents in the future.

CHIRP encourages readers to report concerns, even if feedback from authorities appears limited. Every submission helps reveal systemic issues and promotes positive change.

This case also illustrates that protection for those who speak up is not only a shipboard issue; it reflects the company's safety culture ashore. The DPA, with both the authority and the moral duty to act, plays a key role in ensuring that those who raise concerns are supported, not silenced.

CHIRP commends the reporter's moral courage. This incident reinforces why CHIRP exists: to provide a safe, independent route for seafarers to speak up when something is wrong, and to drive learning that protects people and the environment.

Key Issues relating to this report

Culture – The vessel's safety and environmental culture was weak, and it took significant moral courage from the crew to speak up and challenge harmful environmental practices.

Alerting – Alerting is a crucial skill, and it takes courage to speak up when there is a risk of emotional or professional retaliation.

Local Practices – Illegal dumping at sea had become normalised on board until someone spoke out and reported it to the authorities.

Key takeaways

Regulators: Protect the sea, and those who also attempt to protect it. Flags and authorities should respond promptly to reports of illegal discharges and investigate thoroughly. Visible action, including meaningful sanctions, helps prevent recurrence and strengthens compliance culture. Guidance and enforcement must emphasise both environmental protection and protection for reporters.

Managers: Protecting reporters ensures safety for everyone. When seafarers feel safe enough to raise safety and environmental reports confidently, it leads to positive safety changes. Managers have an obligation to champion a positive reporting culture. Clear procedures should ensure swift action and strong support for those raising concerns.

Seafarers: CHIRP is here to help you. Reporting environmental violations is vital to protecting the marine environment. When you don't feel safe reporting through your company's normal channels, CHIRP is here to listen and help.

M2454

Chemical exposure in the engine room

Initial report

While tidying up the engine room, an engineer placed several empty chemical drums in the workshop for disposal. The engineer used blue tape across the drums to indicate they were empty and wrote "Empty" on them. However, one drum still contained a small amount of residual acid.

Later that afternoon, a motorman entered the workshop to dispose of the drums. Unsure of the contents since the safety data sheet was covered in blue tape, he opened the cap and attempted to identify the contents by smell. The fumes caused severe inhalation exposure, leading to his hospitalisation for the remainder of the day.

The vessel had purchased several chemicals from the same supplier, including engine room detergents, acids, bases, and defoamers, all stored in identical containers. These were typically distinguished by safety data sheets attached to each drum. However, the labelling was obscured, creating a hazardous situation.

Representative image. Credit: iStock

CHIRP Comments

Proper labelling of chemical drums is essential. Original labels must remain visible until containers are thoroughly cleaned and decontaminated. Never cover or remove safety data sheets. Use standardised "Empty" labels that don't obscure critical information.

Even small residues can pose serious risks. Drums must be drained, cleaned, and vented before being marked as empty. A designated "chemical residue area" can help manage partially emptied containers safely.

Safe handling is vital. Never try to identify chemicals by smell. If in doubt, check the safety data sheet or ask a senior officer. A "Stop and Check" policy should verify contents before handling or disposal.

Always wear appropriate PPE—gloves, eye protection, and respirators—and use portable gas detectors when necessary, especially around unknown substances.

Suppliers should simplify identification with colour-coded drums or clear hazard markings. Drums for disposal should include decontamination instructions.

To improve safety, review procedures regularly, enhance crew training on hazard awareness and PPE, and consider improved labelling systems. Work with your supplier to ensure better identification.

Factors relating to this report:

Complacency – The label marked "empty" led to assumptions that it was safe without verifying its contents. The operator could not confirm the chemical type or contents but proceeded regardless.

Communication – There may have been no clear briefing or shared understanding of what was in the drum. There may have been a reluctance to question or challenge due to rank.

Lack of Situational Awareness – The leader did not foresee the impact of leaving chemical residues in "empty" drums. No thought was given to downstream risk (throughout the disposal process), showing a lack of hazard anticipation.

Culture – The need for better chemical handling procedures and awareness training points to systemic issues in how safety is embedded. In this case, the processes allowed hazardous residues to be overlooked or poorly identified.

Key Takeaways

Seafarers: "Do not trust the makeshift label – know what is inside." Just because a drum says "empty" does not mean it is safe. Never use smell to guess what is in a container—check and confirm. If something does not feel right, speak up.

Ship managers: "A chemical near-miss is a system failure." Training and procedures fail if the crew relies on labels or their noses. Reinforce clear communication about hazardous substances. Regardless of rank, ensure everyone feels confident raising a hand before risk becomes harm.

Regulators: "Risk doesn't stop at the worksite – it travels downstream." Chemical residues left in so-called "empty" drums pose serious disposal risks. Review how hazardous waste is labelled, handled, and signed off. Operational spot checks should test actual practices.

Representative image. Credit: Shutterstock

M2612

Hull integrity compromised during refit

Initial report

During routine paint and corrosion repair on the bow, a hole was discovered in the hull plating approximately 0.5 meters above the waterline. Inspection revealed that the anchor pockets had not been properly sealed, allowing water ingress and corrosion to spread beneath the coating system over multiple seasons. This represented a clear compromise of hull integrity. Upon discovery, the defect was documented and reported to the permanent Masters, who were on leave at the time. The Chief Officer recommended formally notifying management, the class, and the flag authorities and following standard hot work procedures, including obtaining a permit.

The master instructed that the matter be handled internally and ordered a weld repair without a hot work permit, safety oversight, or post-repair testing. The repair was completed without verifying watertight integrity, hull thickness, or class approval. Despite these actions, the vessel was scheduled for an Atlantic crossing, with no assurance that the repair had restored the hull to safe operational standards.

Several factors contributed to this incident. The absence of the permanent command structure during the refit period resulted in poor oversight of shipyard activities. A culture of concealment and avoidance of reporting undermined procedural compliance and safety integrity. Conducting hot work without a permit exposed the vessel and personnel to serious fire and safety risks. Finally, the deliberate instruction to bypass reporting channels demonstrated a significant breach of professional and ethical standards.

The outcome of these events was a repaired hull with no formal verification or documentation, leaving uncertainty over the vessel's seaworthiness. The failure to follow ISM Code reporting requirements, the lack of class involvement, and the avoidance of established safety procedures exposed both the crew and the shipyard personnel to unnecessary risk. This incident highlights the need for vigilance, transparency, and adherence to reporting protocols, especially during periods when temporary command arrangements are in place.

CHIRP Comments

Undermining a vessel's safety culture is **not acceptable**. Creating situations where individuals carry responsibility without the authority to act, especially when they are deliberately undermined, significantly increases risk.

This report reinforces the importance of transparency and strict adherence to procedures, particularly during repair or yard periods when normal command structures may be disrupted. Bypassing reporting requirements and permit-to-work systems removes essential safety barriers designed to protect personnel and maintain hull integrity.

Treating yard periods as "low risk" is a dangerous assumption. During repairs, a vessel may be effectively out of class and uninsured if unrepaired or unreported damage later causes an incident. This risk is often poorly understood on board.

When vessels are under refit or managed by temporary personnel, obligations under the ISM Code remain unchanged. Any damage affecting watertight integrity must be formally reported, assessed, and verified by Class and Flag through established channels.

Unpermitted hot work remains a recurring concern in CHIRP reports. Regardless of intent, welding without a valid permit exposes crew and yard personnel to serious fire and explosion risk. It may also invalidate insurance cover should an incident occur. How hot work can be conducted in a yard environment without proper documentation should be questioned by all involved.

CHIRP encourages all mariners to maintain an open and professional safety culture, one where hazards are reported, not concealed. The integrity of the hull and the effectiveness of the safety management system depend on openness, accountability, and procedural discipline.

Factors relating to this report

Situational Awareness – The defect in the hull plating was not recognised as a serious threat to seaworthiness at the time. The absence of permanent command and limited oversight during refit reduced collective awareness of the vessel's true condition and the associated risks.

Communication – Although the Chief Officer raised a valid safety concern, the information was not passed beyond the ship. Communication became one-way, with no opportunity for open discussion or escalation. This breakdown prevented essential parties, management, class, and flag, from providing oversight, and led to them unknowingly carrying undefined risks in the long term.

Teamwork – The team dynamic was weakened by the absence of the permanent Masters and unclear authority among temporary officers.

This created uncertainty over roles and responsibilities, allowing unsafe decisions to go unchallenged.

Capability – There was an apparent lack of competence in assessing the structural implications of hull corrosion and repair requirements.

Performing a weld repair without verification or class input demonstrated a limited understanding of safety standards and statutory obligations.

Alerting – Early warning signs—such as the discovered corrosion and the Chief Officer's recommendation- were ignored. This indicates a breakdown in the alerting process where individuals either did not recognise or did not act upon safety signals.

Local Practices – Poor repair yard practices were carried out, leading to fragmented refit and supervision and unevenly distributed workloads. Without the permanent Masters, key safety oversight functions were lost. Shipyard work continued without consistent monitoring or clear interface management.

Culture – A "keep it quiet" attitude discouraged transparency and reporting. This culture of concealment undermined safety management and trust and placed both personnel and the vessel at risk.

Key Takeaways

Regulators – Culture is as important as compliance.
Regulators should look beyond paperwork and evaluate the culture that influences behaviour. When reporting systems are bypassed, the ISM Code becomes just a formality. Oversight during refits and temporary command periods should ensure that safety reporting, hot-work control, and class notifications are being adhered to. Promoting transparency and supporting confidential reporting will help uncover risks before they lead to incidents.

Managers – Leadership shapes the safety climate.
Management must set clear expectations that defects and safety issues are always reported, regardless of operational pressure. Temporary command arrangements require strict supervision and documented accountability. A culture that values honesty over convenience safeguards both reputation and personnel. Repairs impacting hull integrity must always involve class and flag—taking shortcuts risks far more than delays.

Crew – Speak out, even when it feels uncomfortable.
Every seafarer has a responsibility to protect the safety of the vessel, the crew, and the environment by questioning unsafe decisions and ensuring procedures are properly followed. If you find yourself in a difficult situation, take practical steps to protect both safety and yourself. Keep a written record of your concerns, either in an official logbook or by sharing them with a trusted person using email or another method that provides a clear time stamp. This creates an objective record if the situation later escalates. You can also contact CHIRP for confidential advice and support.

Raising concerns through the correct channels, even when they are not welcomed, is a mark of professionalism. Maintaining situational awareness, using the permit-to-work system correctly, and verifying that repairs are properly completed all help prevent a "temporary fix" from becoming a long-term hazard.

While speaking up can be morally uncomfortable, the potential safety and legal consequences of staying silent can be far more serious.

M2642

Near miss - potential poisoning and asphyxiation of a crew member using a chemical for cleaning a confined space

Initial report

"I was on a MY during an extensive refit, responsible for cleaning and painting the engine room bilges. The main bilge sump was 6ft deep, just barely enough to crouch in, and I was at the bottom, using acetone to degrease the surfaces in preparation for painting. Unbeknownst to anyone on the crew, acetone expands to over 300% of its original volume and is heavier than air. Therefore, as I was down there, oxygen was rapidly being displaced, and the vapour had nowhere to escape. I was wearing a

VOC (Volatile Organic Compound) mask, per SOPs, so I had no way to sense what was happening. I didn't have a ventilation system set up, a body-worn gas detector, or a lookout posted. The first sign of trouble was not light-headedness or nausea, but a deep sense of 'fight or flight' in my chest, and I managed to scramble out of the bilge sump and just caught my breath enough to call on the radio. Luckily, I escaped without needing medical treatment, but it could have been much worse. It's a lesson I've carried throughout my career."

CHIRP Comments

Bilges are enclosed spaces as defined in CoSWP Section 15, MGN 659, and MSC A.1050(27). Vessels should clearly identify and record which compartments onboard are considered enclosed spaces (ES), and ensure this information is reflected in the SMS and risk assessments. While the reporter was following the vessel's SMS, the VOC mask used was not suitable for the hazard encountered.

This report highlights an important and often under-appreciated chemical hazard associated with routine tasks such as bilge cleaning. The reporter was working during a refit period, when ventilation arrangements and system configurations may differ from normal operations. The use of acetone in the confined geometry of a bilge sump, combined with poor ventilation and no atmospheric monitoring, created a potentially life-threatening situation. It is commendable that the reporter recognised the symptoms early and exited the space promptly, thereby preventing a more serious outcome.

A key learning point is that many common solvents produce vapours that can rapidly displace oxygen due to having a higher vapour density, particularly in enclosed or poorly ventilated spaces. VOC masks protect against inhalation of certain substances but do not supply oxygen and may give a false sense of security where oxygen depletion is occurring. Carrying gas-detection equipment is essential, not only for formally designated enclosed spaces but also when using oxygen-displacing chemicals in any restricted area.

Task risk assessments should explicitly consider the chemical properties of substances being used, their vapour behaviour, ventilation arrangements, and the need for atmospheric monitoring. Standard enclosed-space precautions — including portable gas detectors, effective mechanical ventilation, and a designated standby person — should be applied whenever there is a risk of vapour accumulation. This is particularly important during refit or maintenance periods, when non-routine tasks are undertaken.

This report also underlines the importance of crews having access to, and understanding, Safety Data Sheets (SDS). Pre-task planning should ensure that all personnel are aware of the risks of vapour expansion, oxygen displacement, and the limitations of PPE.

CHIRP strongly recommends that solvent cleaners such as acetone are **not** used for bilge cleaning.

> **Pre-task planning should ensure that all personnel are aware of the risks of vapour expansion, oxygen displacement, and the limitations of PPE**

Factors relating to this report

Safety Culture – The organisation had not fully identified or communicated the atmospheric risks linked to solvent cleaning during refits.

Capability – The task lacked a specific assessment that considered chemical behaviour, confined-space characteristics, and the required controls. Knowledge of solvent-related oxygen displacement was not part of regular training or toolbox talks.

Communication – The crewmember was isolated from other crew members, so no communication could take place.

Teamwork – No designated standby person or two-way check-in process for potentially hazardous work. The crew is working independently without support.

Design and engineering control – Lack of integrated ventilation/gas detection for small, confined compartments.

Local Practice – Procedures and work-as-done did not align with the real risks and relied heavily on PPE rather than higher-order controls.

Key Takeaways

"You can't smell missing oxygen—so plan for the hazard you can't sense."

Regulators – this report reinforces the need to ensure that guidance on confined-space entry and hazardous-substance use explicitly covers the oxygen-displacement risks of common solvents such as acetone. Regulatory frameworks may already mandate atmospheric testing and ventilation for enclosed-space work, but this incident shows how everyday maintenance tasks can fall outside formal definitions while presenting identical hazards. Clearer expectations around gas detection, task-specific risk assessments and solvent-handling protocols during refit periods would help close this gap.

Managers – the key takeaway is that work planning must account for both the environment and the chemical properties of the substances being used. Procedures that rely solely on PPE, without ventilation or atmospheric monitoring, create a false sense of security. Ensuring that Safety Data Sheets are incorporated into pre-task briefings, making gas detectors readily available and verifying that confined-space precautions are applied even in small spaces like bilge sumps are essential steps. Refit periods require heightened vigilance because non-routine work often involves equipment isolation, restricted access and chemical hazards that may not be part of everyday operations.

Crew - the lesson is that familiarity with a product does not guarantee safety. Solvents can behave unpredictably in confined areas, and symptoms of oxygen depletion may be subtle until they become dangerous. Relying on PPE alone is not enough; ventilation, monitoring and having someone aware of the task are critical safeguards. Trusting instinct and acting early, as the reporter did, can prevent severe outcomes.

M2639

Poor fuel handling causes blackout

Initial report

The vessel received poor-quality fuel during bunkering, which was not detected in the supplied samples. After departure, the ship lost propulsion in the middle of the night. This occurred because the fuel oil was supplied directly to the fuel oil service tank (FOST/day tank), bypassing the bunker, settling tanks, and purifier.

As a result, several fuel injectors required replacement, and all fuel had to be processed through the purifiers. This caused five hours of downtime during which the vessel was unable to manoeuvre. Fortunately, the vessel had ample sea room and calm conditions; under different circumstances, the situation could have led to serious consequences.

CHIRP Comments

This incident was not primarily a fuel quality issue but a fuel-handling failure. Fuel was delivered directly to the service tank, bypassing the bunker, settling, and purification systems, resulting in a complete loss of propulsion. Several injectors had to be replaced, and all fuel had to be processed through purifiers, causing five hours of downtime. Fortunately, calm conditions and ample sea room prevented more serious consequences. The event highlights the critical importance of following proper fuel-handling procedures, taking representative samples throughout the bunkering process rather than relying solely on supplier-provided samples, and maintaining readiness to respond promptly to engine issues. Even small deviations from standard routines can escalate quickly, underscoring the need for vigilance and strict procedural compliance to ensure safe operations.

Human Factors related to this report

Communications - Fuel quality issues were not communicated effectively to relevant personnel. This can vary significantly from port to port, where supplier quality can vary.

Teamwork - Decisions appear to have been made without cross-checking or consultation.

Capability - There was a lack of training for those handling the fuel.

Key Takeaways

"Check, comply, communicate—every hand matters for safe fuel at sea."

Regulators - Ensure comprehensive fuel quality checks, standardised procedures, and vigilant oversight of vessel monitoring and risk management systems.

Managers / Operations Leaders - Enforce strict fuel-handling compliance, thoroughly train crews, conduct risk assessments before deviations, and maintain supervision and feedback to prevent unsafe practices.

Crew / Engineers - Follow fuel handling and purification procedures strictly, communicate clearly, double-check work, and report anomalies promptly to prevent operational disruptions and safety risks. Raise a Letter of Protest if the supplied fuel is sub-standard.

Representative image. Credit: Shutterstock

6. Deck and Cargo Operations

Routine tasks with life threatening potential

Deck operations remain high-risk, especially when heavy weather, time pressure, fatigue, or incomplete preparation are present. Reports describe fatalities in heavy seas, container fires, near misses involving lifting gear, unsafe enclosed-space inspections, hazardous anchoring errors, and entanglement during crane operations.

Common contributors include complacency, weak communication, unclear role allocation, and inadequate supervision of junior staff. This highlights the need for dynamic risk assessment, adherence to heavy-weather procedures, strong teamwork, and genuine "stop-work authority" when conditions become unsafe.

M2256

Fatalities during heavy weather

Initial report

The weather forecast indicated an approaching low-pressure system with strong winds and increased swell activity.

At 0500 the pilot disembarked, and the master instructed the crew to secure all lines and deck equipment. The aft station was reported secure, but the crew left the forward station unfinished, planning to return later. The master handed over the con to the third officer and left the bridge.

During the passage, heavy swell caused the vessel to slam against waves, waking the master, who ordered a speed reduction and course adjustment. By midday, the second officer took over the watch, with increasing wind and three-meter waves.

After lunch, the chief officer went on deck to check that the containers were still secure. Around the same time, the bosun and deck crew returned to complete securing the forward station. A short while later, a large wave breached the forecastle, washing crew members off their feet.

The chief officer found four injured crew members and raised the alarm. The master altered course towards the nearest port, and the injured crew were transferred to the ship's hospital. A medevac request was considered, but it was not possible, and the vessel proceeded to port, where paramedics boarded that evening. Two crew members later died due to their injuries; another required emergency surgery, and one was treated onboard.

The pre-departure safety meeting addressed weather conditions and crew responsibilities. Nevertheless, access to the deck remained unrestricted. The company's heavy weather checklist was not utilised, as it lacked clearly defined thresholds for heavy weather.

Representative image. Credit: Shutterstock

CHIRP Comments

Several key opportunities to prevent this incident were missed: crew members at the forward station should have remained until the area was secure; the master should not have proceeded to sea until they were satisfied the vessel was secure; and the handover to the third officer should have included the status of the forward station.

As the weather deteriorated, the master and OOW should have dynamically assessed whether the upper deck remained safe for personnel. The lack of guidance regarding upper deck operations in the company's heavy-weather checklist was also an indirect causal factor.

The chief officer's swift response to the alarm and the master's decision to alter course toward the nearest port were appropriate actions. However, being unable to carry out a medivac underscores seafarers' ongoing challenges in accessing timely medical support. This highlights the need for improved coordination between vessels and shore-based emergency services, especially in remote areas.

Despite the pre-departure safety meeting addressing the weather conditions, access to the deck remained unrestricted. This raises concerns about how effectively safety briefings are implemented in practice. Furthermore, the company's deck access code procedures and heavy weather checklist lacked clear thresholds to guide the crew's decision-making, leaving room for ambiguity in assessing the risks of worsening sea conditions.

This incident is a powerful reminder that risk checks, clear communication, and adherence to heavy-weather procedures must never be overlooked. Lives were lost—needlessly. If this report encourages even one crew member to stop, think, and act more safely, then something meaningful can emerge from this tragedy. Please don't wait until it's too late. Choose safety—every time.

Factors relating to this report

Local Practices – Accepting local practices which are not in accordance with best seamanship practices creates an unnecessary hazard.

Culture – There appears to have been a laissez-faire attitude toward securing a vessel for the sea. Does your vessel have a deck access code when encountering heavy weather?

Teamwork – By working as a team, they could have secured the forecastle quickly and efficiently. There appears to have been no challenge to leaving it unsecured.

Overconfidence – Weather may be unpredictable, but poor preparation isn't.

Key takeaways

Seafarers – "Your actions shape the safety culture onboard." Local habits that ignore best practices put everyone at risk. Speak up, challenge unsafe norms, and work together—especially in heavy weather. If something feels wrong, it probably is. You are the first and strongest line of defence.

Ship managers – "What you walk past, you accept." A culture of overconfidence or casual preparation starts ashore. Managers must set clear expectations for securing the ship for sea and adverse weather and ensure crews are trained and supported to follow them. Audits should not just check boxes—they should test real-world readiness.

Regulators – "Standards mean nothing if they are not applied." There is a vital difference between compliance and safety. A vessel can tick all the regulatory boxes and still be unsafe. Regulators must recognise when local practices undermine global standards regarding paperwork and real-world safety outcomes. Intervention should go beyond audits, including proactive oversight, education, and follow-up. The goal is not just compliance—it is genuine safety. That cannot be left to chance.

M2329

Container fire

Initial report

While on passage, a container full of charcoal spontaneously ignited and a severe fire ensued.

A special exemption existed at the time of the incident, meaning that the cargo did not need to be declared dangerous goods. This significantly delayed efforts to identify the location of other charcoal-filled containers when the fire erupted.

Thanks to the crew's swift and decisive actions and exceptional teamwork during the emergency, personal injuries were prevented, and the ship sustained no structural damage. The crew's coordinated efforts in boundary cooling and fire suppression were critical despite the challenges posed by the fully enclosed containers, which made firefighting operations more difficult.

CHIRP Comments

This report echoes a similar incident (M2253) published by CHIRP in 2024. CINS (the Cargo Incident Notification System) has published their Guidelines for the Safe Carriage of Charcoal in Containers which is available online.

Charcoal is categorised as *'UN1361 CARBON animal or vegetable origin'* and presents unique risks because it can spontaneously ignite if not stored or packed correctly.

From 1 January 2026, charcoal must always be labelled as dangerous goods, and transitional arrangements commenced from 1 January 2025. It is worth noting that 68 container fires were reported from 2015 to 2022, highlighting the potential risk to all carriers.

While this new requirement will promote the safer carriage of charcoal in containers, shippers must still exercise due diligence to ensure that all requirements are fulfilled before loading. Carriers are encouraged to review their cargo management and know-your-customer procedures. Ship management and chartering departments are crucial in ensuring that shippers comply with the new regulations.

The crew's ability to prevent this fire from escalating largely depended on strong onboard emergency preparedness, which is founded on a robust safety culture within the company. This report highlights the outcomes of practical training provided both on board and by the company.

Factors relating to this report

Local Practices – When packing charcoal into containers, strong local oversight and supervision is required to ensure that the risks of oxidisation and spontaneous ignition are minimised.

Alerting – Charcoal must now be declared a dangerous good. The local exemption has been revoked.

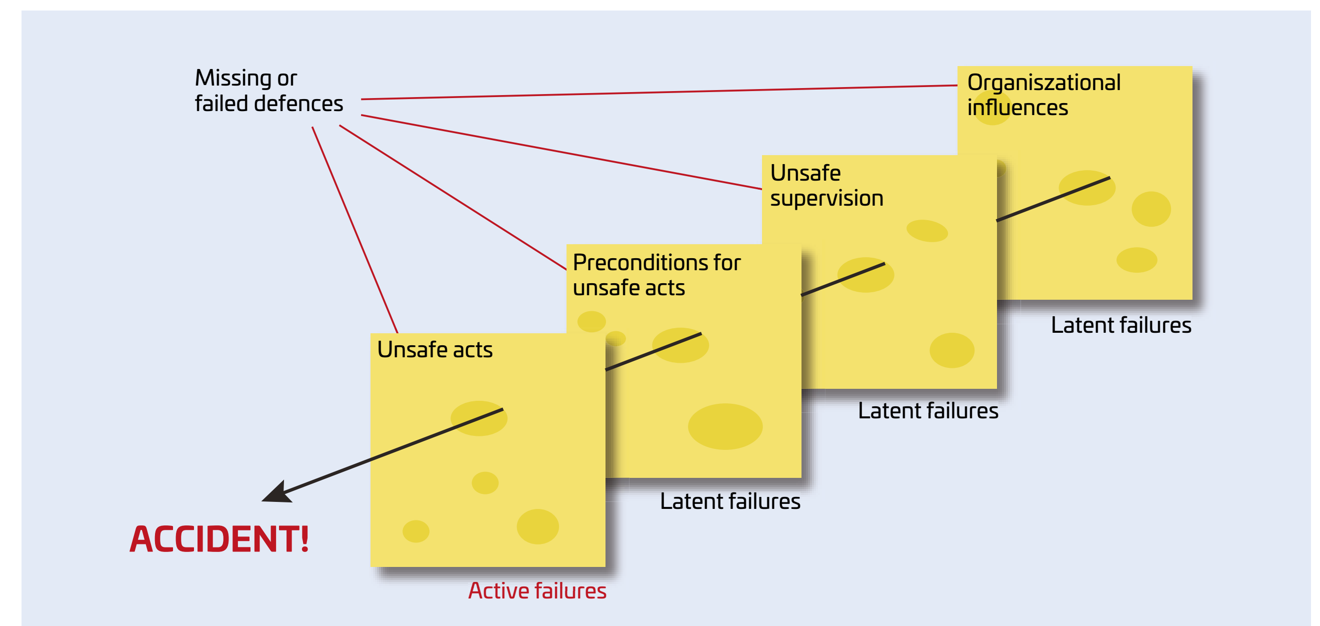
Situational Awareness – Packers are encouraged to provide photographs of loaded containers to shipping companies to improve their situational awareness of container contents in the event of an emergency.

M2362

Near miss: fatality avoided

Initial report

Two crew members were onboard during a routine launch of a crew tender in port while the bosun operated the crane from the bridge deck. Following standard procedures, he lowered the tender with the crane fully extended and lifted the hook clear to stow it.



However, the bosun became distracted and inadvertently increased the hoisting speed. The hook struck its stop-stowed position with excessive force, breaking free from its clamped arrangement. The 10kg hook then fell 12 metres, narrowly missing a deckhand by just 20cm before striking the inside of the sponson. The impact sent the hook flying to the side of the boat, causing significant damage to the fairing.

Fortunately, no injuries occurred. The captain's investigation revealed that the crane's safety sensor—designed to stop the hook from contacting the job head—was missing. While the crane's wire remained intact, the lack of this critical safety feature contributed to the incident.

The deck crew received a full debrief to address the near miss, review proper crane operation protocols, and emphasise the importance of functional safety systems. Immediate corrective actions include verifying all safety sensors before operations and reinforcing strict adherence to controlled hoisting speeds.

His Swiss Cheese Model is a potent reminder that accidents are seldom caused by a single error but rather by multiple weaknesses in a system aligning to create the perfect storm

CHIRP Comments

The late Professor James Reason devoted his life's work to understanding how such failures occur. His Swiss Cheese Model is a potent reminder that accidents are seldom caused by a single error but rather by multiple weaknesses in a system aligning to create the perfect storm. His contributions to safety and human factors will continue to guide industries in preventing incidents like this, ensuring that every barrier is reinforced before disaster strikes.

Factors relating to this report

Communication – A replacement was urgently required when the sensor failed or was missing. To prevent its further use, an out-of-service label was also needed. How well do you deal with a critical safety equipment failure?

Distraction – A significant issue in many incident reports. Given the crane's missing sensor, heightened awareness was demanded while the crane's hook was stowed. The bosun's distraction allowed the hook to be stowed in a non-controlled manner, resulting in a situation where a crew member was nearly killed and damage was sustained.

Situational awareness – Everybody involved in the lifting operation should be focused on what is happening. This was a routine tender lifting operation, but the same applies to all lifting operations. Maintaining heightened situational awareness, where you constantly evaluate your status, is demanding and requires teamwork.

Teamwork – Effective teamwork serves as a strong barrier and can prevent the alignment of errors when everyone collaborates.

M2518

Injury to a crew member during an enclosed space periodic inspection

Initial report

The vessel's crew scheduled routine 6-monthly inspections of void spaces A, B, and C, including testing bilge suctions and alarms. Due to the vessel's operational timetable (0600 to 2100), inspections were planned after service completion or before the first service of the day.

As part of the inspection, the company's technical manager arrived on board to inspect a series of void spaces as part of the planned maintenance system. Complete enclosed entry procedures were followed, and a thorough permit-to-work system was completed. The entry teams consisted of the supervising officer, the company technical manager, the duty AB covering the night shift, the leading AB, and the assistant AB, each with a designated specific role for tank guarding and watch.

Entries into void tanks A and B proceeded without incident, following the standard practice of entering through the port-side access. After completing the inspection with the technical manager, the supervising officer and the technical manager exited void space C. At the same time, the night duty AB continued testing the bilge alarms and suction systems, communicating with the engine room. To reduce the amount of radio chatter, the night duty AB switched to another channel to communicate with the engine room. The supervising officer informed the night duty AB that they would close the starboard access lid and that the AB should exit through the port side on completion of the bilge testing, as previously carried out on void tanks A and B. The night duty AB did not hear this information as they had switched to another channel.

The night duty AB's multi-gas detector then signalled a low battery alarm, which was mistaken for a gas alarm. He donned an Emergency Escape Breathing Device (EEBD) to exit the void space, and whilst donning the hood, dropped the radio. The EEBD hood started to mist/fog up.

Confused, the night duty AB attempted to exit via the starboard hatch, which was closed. He struck his head on the closed cover upon ascending the ladder, requiring immediate removal of the cover for his exit.

Four days later, the night duty AB reported feeling unwell with a sore head, attributing symptoms to the impact on the tank lid.

CHIRP Comments:

This incident demonstrates how a single missed communication, resulting from a radio channel change, can undermine even well-planned procedures for enclosed spaces. A critical instruction about the designated exit route was not received by the lone crew member still inside the void space. This led to confusion and a dangerous attempt to exit.

The AB acted sensibly when their multi-gas detector issued a low battery warning, thinking it might be a gas alert. However, a Permit to Work and toolbox talk could have helped clarify the types of alarms, ensured the device was fully charged, and confirmed that the correct PPE, such as a hard hat, was worn.

The unexpected alarm caused a moment of panic, a "startled effect". While putting on an escape hood, the AB's visibility was reduced, and they dropped their radio, leaving them disoriented and unable to communicate.

Meanwhile, the team outside began closing one of the exit hatches, while someone was still inside. This action should never happen during entry operations. It delayed the AB's escape and caused a head injury when they struck the closed hatch.

The root issue appears to be a lack of a shared mental model among the team. Other activities, such as bilge testing and ongoing engine room communications, added to the distraction, as a conflicting work activity was taking place, thereby increasing the AB's cognitive workload.

Although procedures and permits were in place, this case shows why they must be supported by clear, confirmed communication and effective task coordination. Most importantly, exit routes must never be blocked while anyone remains inside an enclosed space.

Factors relating to this report:

Communication – A critical verbal instruction about the exit route was missed due to a radio channel change, with no confirmation sought or given.

Capability – Conflicting tasks (void inspection, bilge testing, and engine room communication) were scheduled simultaneously, increasing the risk and complexity in a confined space.

Situational Awareness – The AB became disoriented due to misinterpreting an alarm, impaired visibility from the EEBD, and a dropped radio, leading to an attempted exit through a sealed hatch.

Teamwork – The AB was left alone inside the void space while others topside began securing an exit, demonstrating a lack of active team coordination and monitoring.

Key Takeaways

Seafarers: Never assume—close the loop when communicating Ensure that all safety-critical communications are confirmed and understood, especially during entries into enclosed spaces. Don't rely solely on assumptions or past patterns—situational awareness can be the difference between safety and serious harm..

Managers: Effective planning involves the human element Task planning must consider human-system interactions, equipment limitations, and communication redundancy, especially under time or operational pressure. Even well-trained teams need safeguards against miscommunication and confusion. Good planning includes the human factor.

Regulators: Regulations must reflect reality Standards should mandate fail-safes for communication, equipment functionality, and emergency egress in enclosed spaces. Procedures must reflect real-world conditions, not just ideal ones.

M2361

Anchor operations compromised by unfamiliarity and tiredness create a hazardous situation

Initial report

In the month leading up to the incident, the deck crew, including the reporter, had been extremely busy, often exceeding the required hours of rest. Fatigue was a persistent issue. The reporter, a relatively new deckhand on the vessel, had only dropped anchor once or twice.

On this occasion, the crew hurried to anchor. Due to inexperience with the vessel's anchor markings, the reporter misjudged the length of the deployed chain, thinking that four shackles had been dropped when, in fact, there were five. The final warning markings were very short and close to the chain's end, making them unclear. As a result, the bitter end unexpectedly emerged from the chain locker. At that moment, the reporter was positioned near the brake wheel, and their hand was nearly crushed as the chain ran out. It was later discovered that the bitter-end shackle lacked a safety pin for securing it—this was on a brand-new vessel.

CHIRP Comments

This incident raises several safety concerns—not just regarding the equipment itself but also in how we manage fatigue, training, and supervision during critical operations like anchoring. The crew member's unfamiliarity with the vessel's anchor markings significantly contributed to the misjudgement, serving as a reminder of the importance of proper familiarisation training—especially when handling essential equipment.

Securing the bitter end of the anchor should be a part of the mindset for any anchor operation — it's the last line of defence to prevent it from running free if something goes wrong. Therefore, discovering that a brand-new vessel was delivered without a safety pin raises serious questions about quality control and oversight during the building and commissioning process.

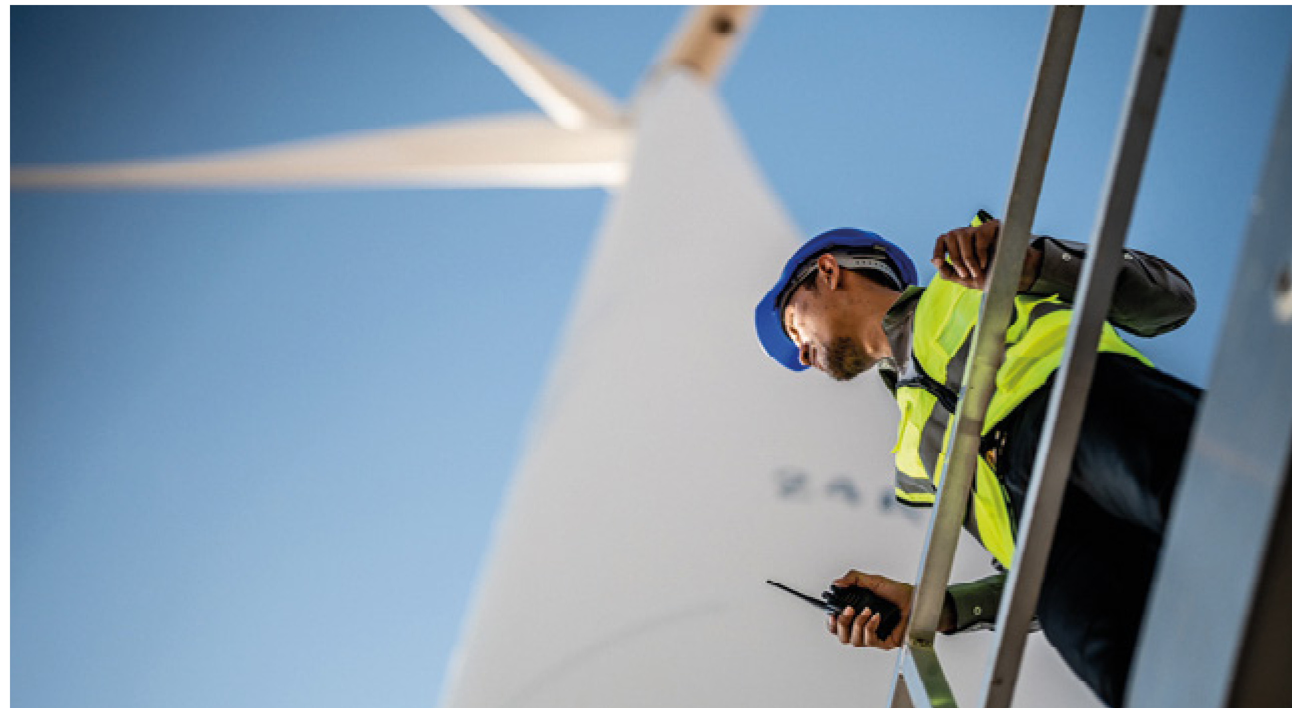
Supervision is crucial, especially during high-risk tasks like anchoring, where even a moment's inattention or confusion can result in significant consequences. CHIRP strongly encourages vessel operators to prioritise thorough familiarisation for all crew, ensure clear and consistent marking systems, and maintain robust oversight of critical procedures.

It's not about assigning blame; it's about learning and improving. These issues are preventable, and with the proper focus, they can be resolved.

Factors relating to this report.

Fatigue – Long hours and pressurised work can lead to a loss of clear thinking, as cognitive ability is lessened and risk-taking increases.

Situational awareness – Standing near anchor equipment during an anchor operation is hazardous, and the risk of injury can be severe. This was a close call for the operator and should alert management to current working practices.



Representative image. Credit: Shutterstock

Alerting – Given the inexperience and fatigued operator, having another crew member available for the anchoring would provide a cross-check.

M2257

Entanglement and fall from height during lifting operations

Initial report

A crew transfer vessel was performing lifting operations at an offshore wind turbine. A deckhand and a trainee deckhand were assigned to receive four lifting bags attached to a three-legged wire sling. The trainee lowered the load, detached it from the slings, and signalled the crane operator to raise the hook.

As the hook and wire sling were raised, they became entangled with the trainee's work restraint lanyard. The trainee immediately signalled an emergency stop, but the crane operator neither saw nor heard the signal. As a result, the trainee was lifted off the deck. While suspended, the trainee's weight caused the entanglement to release, leading to a fall of approximately one to two metres onto a pile of bags on the deck.

The trainee's lanyard was worn loosely, increasing the risk of snagging. Additionally, the trainee was too close to the lifting equipment and did not use a tagline or maintain control of the equipment to prevent entanglement. The crane operator's failure to respond to the emergency stop signal further exacerbated the situation.

CHIRP Comments

While lifting operations can be undertaken by only two people, ideally, three people should be involved: a crane operator, a rigger, and a banksman/supervisor. In this incident, the trainee deckhand was acting as the rigger, and the more experienced deckhand was the banksman, who should have ensured that the trainee was correctly dressed (with no snagging hazards) before the work commenced.

To be safe, all persons should remain in sight of one another, and operations should stop automatically if line of sight is lost.

Factors relating to this report

Situational Awareness—Before starting any lifting operation, assess your position and that of the other crew members. Never begin the lift if you are uncertain.

Capability—Rigorous and reinforcement training should be given to the crew working in these high-pressure environments. How often do you carry out lifting operations training?

Communications—Clear verbal and visual communication is essential for safe lifting operations. Crane operators should not start lifting until they communicate with the deckhand.

Alerting- The crane operator and the deckhand were not alone, and other crew could have assisted by advising that safe lifting operations had not been established. If you saw this situation, would you step in to stop the job if you saw this happening?

Pressure- There can be pressure when there is a deadline to meet. Even if no one says it out loud, you feel it. But pressure should never override your training. The job is important, but so are you.

Key Takeaways

Seafarers, "If you are unsure, stop the lift." Before any lift, check your position and where your crewmates are. If something does not feel right, speak up. You are not alone—support each other and stop the job if needed. No task is worth a life.

Ship managers, "Good training keeps crews safe under pressure." High-pressure operations need high-quality, regular training. Focus on real-life scenarios, not just checklists. Reinforce what good looks like—and give crews the confidence to act when things feel wrong.

Regulators, "Look beyond the paperwork—watch how people work." Safe lifting depends on clear communication, awareness, and confidence to speak up. Check if procedures work in practice. Support systems where stopping a job is seen as good seamanship, not failure.

Insight by Captain James Foong

Why seafarers don't report — and what actually makes them speak up

Most accidents at sea are investigated. Most near misses are not. This gap does not exist because seafarers do not care about safety. More often, it exists because of culture, habit, and the subtle pressures of life at sea. This article explores why near misses go unreported and what genuinely encourages seafarers to speak up.

From early in my sailing career, I learned that shipboard life values competence, reliability, and getting the job done. When something almost went wrong but did not result in injury or damage, the instinct was often to move on quickly. If nothing serious happened, it was easy to believe there was nothing worth reporting.

When seafarers explain why near misses go unreported, the reasons are rarely technical. They are human. Fear of blame, the fear of being misunderstood, and the fatigue of paperwork. A belief that reporting will not change anything. In hierarchical environments, junior officers may hesitate to speak up, while senior officers may feel uncomfortable highlighting issues that could reflect poorly on their command.

One factor that consistently suppresses reporting is the use of threatening or punitive language. Statements such as:

"Failure to comply will result in disciplinary action"

May appear firm on paper, but in practice, they erode trust. When such language is issued without curiosity or dialogue, it sends a clear signal that compliance matters more than understanding.

For experienced seafarers, including masters with decades of command, this approach is not only dismissive but also counterproductive. Safety events rarely occur because someone deliberately chooses not to comply. They happen because of operational pressure, conflicting priorities, poorly designed procedures, fatigue, or conditions that were never anticipated ashore. When organisations skip the question of *why* and move straight to discipline, reporting becomes an act of self-risk.

Once fear enters a safety reporting system, behaviour changes, reports become filtered, delayed, or quietly abandoned. Crews may still "comply" on paper, but valuable safety information never reaches those who need it. A system designed to learn slowly becomes a system that hides.

The uncomfortable truth is that a vessel can appear fully compliant while carrying significant unspoken risk. Manuals are in place, drills are conducted, and audits are passed, yet shortcuts and workarounds gradually become normal. This is rarely due to bad intent. It is the natural outcome of environments where speaking up feels unsafe or pointless.

From experience, seafarers are far more willing to report when three conditions exist.

First: trust.

People must believe that reporting will not automatically result in blame or punishment. This trust is built through consistent responses, not policy statements.

Second: purpose.

Reporting feels meaningful when feedback is shared, and learning is visible. When reports disappear into a system with no response, motivation quickly fades.

Third: psychological safety.

When senior officers and managers are willing to acknowledge imperfection, including their own, it sends a powerful signal that honesty is valued over appearances.

Confidential reporting systems play a vital role in supporting these conditions. They enable safety concerns to be raised without fear of identification or repercussions, particularly in hierarchical and multicultural environments. By focusing on *why* situations occur rather than on *who* to blame, confidential reporting helps organisations identify patterns and address systemic risk. Used effectively, such systems complement onboard reporting and strengthen learning across the industry.

Smaller, unreported events precede many serious accidents. These near misses are early warnings. Ignoring them does not eliminate risk; it only delays the moment when consequences become unavoidable.

Reporting a near miss is not an admission of failure. It is an act of professionalism. Effective safety leadership listens before it judges, asks better questions, and treats reports as opportunities to learn.

Without trust, safety reporting systems lose credibility. Without honest reporting, the industry loses its most valuable defence, experienced seafarers willing to speak openly from the front line.

About the Author

Capt. James Foong is a Master Mariner currently serving on global container trades, with extensive command and bridge management experience. In addition to ship command, he works as an independent maritime safety auditor and condition surveyor, conducting ISM, ISPS, MLC, ISO audits, and navigational assessments.

A Fellow of The Nautical Institute and a CHIRP Maritime Ambassador, he is a strong advocate for confidential reporting, just culture, and learning from near misses, with a focus on bridging the gap between written procedures and real operational practice.

7. Bridge, Pilotage and Navigation

Navigational safety depends on people, practice, and preparedness

This section covers navigation-related hazards, including non-compliant pilot ladders, poor use of VDR/radar, unsafe pilot transfer arrangements, close-quarters errors, USV near misses, capsizes, and conflicting COLREG interpretations. These incidents stem from entrenched shortcuts, poor communication between bridge teams and pilots, inadequate training, and weak safety oversight.

It is of utmost importance to ensure rigorous passage planning, correct ladder rigging, dynamic risk assessment, shared mental models, and resistance to schedule-driven pressure. Safe navigation requires vigilance, clear communication, and a culture that refuses to normalise unsafe practices.

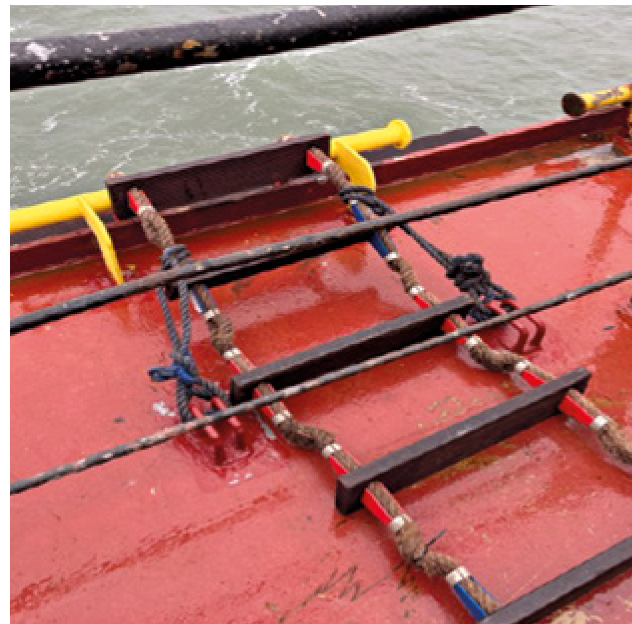
M2354

Non-compliant pilot ladder

Initial report

Our reporter sent pictures of a pilot ladder that did not meet SOLAS regulations. No handholds were securely fastened to the ship's bulwarks, preventing the pilot from stepping safely and comfortably from the top of the ladder onto the ship's deck. The accommodation ladder platform did not have stanchions, and the ropework and securing hitches were substandard. The pilot ladder was not correctly secured at deck level.

This was reported to the master when the pilot boarded the vessel. The master was informed about the proper securing of the combination rig and has given assurances that corrective action will be taken. Port state authorities were alerted to this incident.



CHIRP Comments

The quickest way to motivate the industry to address this common issue properly is to refuse to board. This also ensures pilots' safety. Do not take chances – there is no such thing as a 'safe' non-compliant ladder.

SOLAS requires that a responsible deck officer supervises the rigging of ladders. Unfortunately, there is some ambiguity in using the word 'officer' because ISO 799 says that a deck officer can be any suitably trained deck crew, and many companies thus delegate the role to a deck hand rather than a ship's officer. This has obvious safety implications.

CHIRP calls on Flag States to mandate that ladder rigging be supervised by a ship's officer and that this activity be included within the Permit to Work system because of the potential risk to life.

Factors relating to this report

Culture – A poor safety culture is evident, which is shown by the lack of care to a pilot boarding the vessel. Management must provide guidance and practical training to the crew.

Situational Awareness – There is a false sense of safety that the pilot can manage this transfer safely when it is clearly dangerous.

Capability –There are clear procedures for rigging a pilot ladder combination rig, but they were not followed in this incident.

M2450

Voyage data recorder issues

Initial report

During a company fleet-wide navigational audit, several discrepancies and procedural gaps were identified after comparing the passage plans, bridge logbooks, and Voyage Data Recorder (VDR) data. A significant observation was that passage plans lacked an anchor plan, which is required by the Bridge Procedures Guide (BPG). Additionally, there was no objective evidence to verify the frequency of position fixing or proof that radar was used to plot the ship's position to ensure secure anchorage.

Although supported by radar recordings, parallel indexing was not observable during critical wheel-over manoeuvres. There was also no indication of regular checks at frequent intervals to confirm that the vessel remained securely anchored by taking bearings of fixed navigational marks. In several instances, only the X-band radar was operational during anchorage, and essential data points such as the actual date and time were absent from the passage plan.

The method of obtaining the ship's position was not specified, and parallel indexing was not utilised while the vessel was underway in coastal waters. Although connected to the VDR, the echo sounder was not monitored, and the rudder angle indicator was absent from the VDR live player. The passage plan was not updated to reflect changes in circumstances, such as drifting, and the anemometer, despite being connected to the VDR, displayed data only on the radar screen.

The X-band radar was found to be switched off at a critical point during anchorage, and the depth indicator was not visible on the VDR live player, even though the Echo Sounder was connected. Furthermore, the ECDIS voyage log contained an incorrect year, and the master approved the standing orders and passage plan. However, despite the SMS checklist indicating that the ship's position was verified through bearings of fixed navigational marks, the VDR data provided no supporting evidence.

During the voyage, radar playback identified nearby vessels, with the closest point of approach breaching the master's requirement in the standing orders. Not all targets were acquired, and only radar trails were monitored throughout the passage.

CHIRP Comments

The significant discrepancies in passage planning procedures raised serious concerns about the vessel's navigational safety. These issues were uncovered during an internal audit rather than by external authorities.

Key failures included the lack of parallel indexing, the absence of position verification, no anchor plan, and inadequate use of radar plotting during critical stages of the voyage and at anchorage. Additionally, the master who approved the passage plan did not directly oversee the planning process. This highlights a fundamental breakdown in compliance that requires immediate corrective action to maintain safety standards.

A fleet-wide audit by the company found similar issues across all vessels, suggesting that this was a systemic issue rather than isolated non-compliance.

CHIRP cautions all companies to take a closer look at their navigational procedures to ensure that they meet the requirements of the company SMS and the bridge procedures guide (BPG).

Factors relating to this report

Culture – Unsafe norms have developed, making non-compliance routine and accepted. Complacency, norms, and lack of knowledge create a dangerous environment. Training, leadership, and culture play critical roles, indicating systemic issues beyond individual lapses.

Communication – Insufficient communication between the bridge team members and the master led to gaps in the execution and understanding of the approved passage plan.

Complacency – Repeated non-compliance across the fleet suggests unsafe norms have become accepted, such as not updating the VDR or omitting radar plotting. This indicates a dangerous level of complacency.

Deck officers lacked the training and knowledge to properly maintain the VDR and conduct thorough passage planning, including anchor plans and radar usage.

Alerting – Junior officers may not feel empowered to question inadequate plans or voice concerns, perpetuating unsafe practices due to a culture of silence.

Situational Awareness – Poor understanding of critical navigational steps, from radar use to anchoring procedures, indicates a broader issue of a lack of situational awareness and risk appreciation.

Teamwork: The bridge team's lack of coordination, proper monitoring, verification, and shared responsibility in navigation and data logging points to systemic failures in internal communication and a culture discouraging speaking up.

Key Takeaways

Seafarers, "Feeling normal doesn't mean it is safe." Just because something feels routine, like skipping radar checks or not updating the VDR, does not mean it is safe. Speak up. You are the eyes and ears of safety onboard. Do not stay silent. Raise concerns, look out for each other, and practice solid seamanship. Your voice matters and can save lives.

Ship managers, "A large number of ships, same problems? That is a management issue." If crews repeatedly cut corners, look at the training, leadership, and support they are getting. Make sure crews know what is expected and feel confident speaking up. Safety culture starts ashore, and it is your responsibility to build it.

Regulators, "Administrative compliance cannot mask operational risk." When critical tasks like radar plotting or passage plan checks are skipped across a fleet, it is a sign that the system, not the sailor, may be broken. Regulators must look beyond paperwork and into practice. Targeted SMS audits, anonymous crew feedback, and follow-up visits can reveal where safety culture fails.

M2262

Pilot falls into the water while boarding

Initial report

While boarding a small tanker moored in port, a trainee pilot fell into the water when the bulwark ladder tipped over. The pilot boarded from the stern of the pilot boat onto the bulwark ladder platform without using a pilot ladder. This occurred because the tanker was fully loaded and had very little freeboard, and the shape of the hull made it difficult for the pilot boat to come alongside parallel.

To climb onto the ship, the pilot held onto one of the ladder's stanchions. The ladder was not fixed to the deck, something that only became clear after the fall. As the pilot pulled on the stanchion, the ladder swung out over the side, unbalancing him and causing him to fall backwards into the water. The ship's crew reacted quickly, helping the pilot back onto the deck. From there, he could return to the pilot boat sitting higher in the water than the loaded tanker.

CHIRP Comment

This report highlights the risks of using non-standard or non-compliant pilot boarding arrangements. Unless this was a training evolution for the trainee pilot, one wonders why they did not board from ashore using the ship's gangway since the tanker was alongside.

In this case, the pilot stepped from the stern of the pilot boat onto a bulwark ladder platform, which was not secured to the deck. This suggests a lack of supervision when the

platform was rigged. The ladder moved as the pilot grabbed a stanchion, causing him to lose balance and fall.

Fortunately, the crew responded quickly and helped the pilot recover safely.

Factors relating to this report

Communication—The pilot was not informed that the bulwark ladder was unsecured. This is a systemic issue that operators and owners should address.

Situational Awareness- The pilot did not visually identify the unsecured ladder. The simplicity of the arrangement may have led to a false sense of safety.

Complacency- The absence of a pilot ladder may have led to underestimating the risk. Any deviation from standard practice should warrant a dynamic risk assessment before boarding the vessel.

Teamwork—The ship's crew and pilot coordination was limited. Shared mental models and clear roles are essential, particularly during high-risk transfers.

Key Takeaways

Seafarers, "If it is not secured, it is not safe." Always check that pilot ladders and transfer gear are correctly rigged and secure—every time. Unusual arrangements or last-minute changes must be clearly explained. When in doubt, pause and verify. Shared safety starts with shared understanding.

Ship managers, "Non-standard should not mean unsafe." If a vessel routinely uses non-standard pilot arrangements, you must ensure that proper equipment and procedures are in place. Do not rely on workarounds. High-risk transfers need leadership, training, and the right gear, not assumptions.

Regulators, "Pilot transfer safety is a systemic issue." Recurring failures in pilot transfer arrangements show a gap between regulation and reality. Strengthen oversight on compliance and equipment. Encourage audits that include transfer observations and act where unsafe norms have developed.

M2392

The welfare of the pilot while boarding

Initial report

CHIRP received a report from a pilot concerning a non-compliant boarding arrangement and an apparent lack of care from the vessel's crew.

The pilot ladder was suspended from the deckhead and failed to rest flush against the ship's side due to hull belting – a setup that did not meet safe boarding standards.

Although a small shell door was available for safer access, large fenders had been rigged on either side. When the pilot requested that these be removed to facilitate safe boarding, the master refused, citing concerns about damage to the paintwork.

The pilot assessed the situation and stated that boarding would not proceed unless the obstructions were cleared. Eventually, the fenders were removed, and boarding took place via the shell door.

The event was filmed from the bridge wing and by crew members, which contributed to the pressure and unease the pilot felt.

During boarding, the duty pilot struck his head, sustaining a minor injury (see attached image). The crew did not inquire about the pilot's welfare or offer first aid. Instead, he was handed a pair of overshoes to protect the deck from being dirtied.

CHIRP Comments

Safety regulations around pilot boarding exist because failure to follow them can and does result in injury or worse.

Here again is a common design problem often reported to CHIRP. There appears to be a lack of integrated thinking when designing superyachts. Crews should not be placed in unsafe situations due to poor design decisions made remotely by those who will not operate the vessels. Collaboration is essential during the design phase for new builds, involving input from all stakeholders, including designers, owners, flag authorities, class societies, crew, contractors, and pilots.

This report reminds us that pilots are contractors and guests, yet they remain vital maritime professionals. The safe transfer of the pilot is not optional; it is compulsory, and their physical safety and well-being must be taken seriously. The revision to ISO 799, which specifies new requirements for ship's pilot ladders, comes into force in 2028.

Currently, owners are accepting vessels from builders that are not compliant, which places a greater burden on flag states and classification societies to ensure that they comply with SOLAS. CHIRP will raise these concerns with the flag states.

Factors related to this report

Culture – The dismissive attitude toward the pilot's safety — prioritising paintwork over people — reflects a poor on-board safety culture. A culture that does not respect external personnel or reporting lines weakens trust and increases risk.

Communication – The Master's refusal to remove the fenders and the failure to explain or resolve the issue collaboratively suggest a lack of effective communication between the ship and the pilot. Effective communication is crucial for achieving shared situational awareness and making informed, coordinated decisions.

Alerting – The pilot raised a safety concern, which was initially ignored; this constitutes a failure to act on an alert. Ignoring or dismissing raised concerns discourages others from speaking up and undermines the effectiveness of safety systems.

Teamwork – Boarding a vessel is a collaborative effort between the ship and the pilot. Filming the event and failing to help shows a breakdown in cooperative behaviour and mutual respect, key elements of effective teamwork.

Situational Awareness – The lack of recognition that the pilot had been injured, combined with the absence of any first aid or welfare check, indicates poor situational awareness. The crew was not entirely focused on what was happening around them or the seriousness of the event.

Key Takeaways

Seafarers – Every visitor is your responsibility Pilots and contractors are part of your extended team. They deserve the same duty of care as your crew. Ensure safe boarding arrangements, treat visitors with respect, and help without hesitation. A clean deck is no excuse for a dirty attitude.

Managers – Safe access is not optional – it's the law Boarding arrangements must meet SOLAS requirements — every time. Pressure to protect paintwork cannot outweigh the safety of personnel. Set clear expectations with your crews: all visitors, especially pilots, must be welcomed safely and professionally.

Regulators – Standards must protect people, not paint Incidents like this show how operational decisions can put reputations — and lives — at risk. Regulators must reinforce the message that the *duty of care extends to all personnel boarding a vessel* and that non-compliant setups or dismissive behaviour are unacceptable.

M2591

Severe injury cased by a fall from pilot ladder

Initial report

While descending a pilot ladder, a pilot fell approximately 5m onto the pilot launch and was severely injured. The standard operating procedure for this pilotage authority was for the pilot vessel to position itself at the foot of the ladder and remain there while the pilot or other personnel descended.

Our reporter was concerned that this procedure may conflict with best practice, as falls from even moderate heights onto a pilot vessel can be fatal. They prefer to be partway down a ladder before the pilot vessel approaches alongside.

CHIRP Comment

Pilot Transfer Arrangement (PTA) incidents often reflect broader systemic issues, such as inconsistent onboard training, insufficient supervision, or a lack of shared understanding of procedures. Ensuring all parties know what to expect and when is crucial for safety.

An educational video by the *Federation Francaise des Pilotes Maritimes* highlights that a fall from 3m onto a pilot vessel can cause serious injury, a fall from 5m can cause permanent disability, and a fall from 8m can be fatal.[1] This underscores the importance of clear communication and coordination between the ship's bridge team, the pilot, and the pilot launch crew.

When a pilot is embarking, it is generally safer for the launch to move away from the vessel once the pilot is secure on the ladder and has started to climb. However, when the pilot is disembarking and still at the top of the ladder, the risk of fatal injury should they fall onto the pilot vessel is at its greatest.

This creates a conflict between 2 competing risks: that of falling from height onto a pilot vessel already at the bottom of the ladder, and the chance that the pilot vessel could snag the bottom of the ladder as it manoeuvres alongside, causing the pilot to be thrown off the ladder by the violent motion.

There is no 'best' answer that can be universally applied. However, the Standard Operating Procedures (SOPs) of many pilot authorities will favour the positioning of the pilot vessel at the bottom of the ladder before the pilot arrives at the top of the pilot ladder and begins their descent. CHIRP suggests that pilot authorities augment their SOPs by permitting the pilot some discretion if their dynamic risk assessment (conducted in coordination with the ship and the pilot vessel) indicates that, in that specific circumstance, the balance of risk favours the pilot descending partway down the ladder before the pilot vessel approaches the bottom of the ladder.

In all instances, the IMO guidance posters (MSC.1/Circ 1428) can reinforce good coordination and shared expectations. Clear communication, mutual awareness, and precise timing remain the most effective ways to ensure every pilot transfer ends safely.

Key Issues relating to this report

Situational Awareness – Be aware of the factors that can cause a pilot to fall. These include the weather and sea state, the relative movement of the two vessels, the height of climb and the efficacy of the 'lee' created by the larger vessel, among other factors.

Local Practices (Shortcuts/Deviation) – The operating procedures of this pilotage authority are contrary to global best practice. However, as written, this pilot's descent of the ladder before the pilot vessel is at the foot of the ladder is also a deviation from documented practice. The pilotage authority is encouraged to reconcile these different perspectives to ensure that risks are as low as reasonably practicable (ALARP).

Communication/Alerting – The pilotage authority did not address the reporter's concerns.

Pressure – There was implicit pressure from the pilotage authority for the pilots to adhere to a rigid operating procedure, despite this being contrary to industry best practice.

Key Takeaways

Regulators: Enforce best practice before tradition becomes a hazard.

Strengthen oversight to ensure disembarkation practices comply with international guidance and address cultural tolerance of unsafe methods.

Managers: Are risks "As Low As Reasonably Practicable" (ALARP)?

Review and align local procedures with international best practice to prevent normalisation of unsafe shortcuts.

Pilots/Contractors/Seafarers: Your safety comes first – don't ascend or descend the ladder until agreed safety practices are in place.

Always verify the launch's safe positioning before committing to the ladder, and challenge unsafe instructions if necessary.

M2590

Near miss between an uncrewed surface vessel (USV) and a large number of yachts

Initial report

While departing from a fuelling jetty within a harbour, a USV and its support vessel were surrounded by a large number of sailing vessels entering the harbour. Due to the high density of traffic, both vessels were unable to manoeuvre safely, resulting in a near miss. The situation posed a significant risk to life and property, as several vessels were at risk of collision or damage..

CHIRP Comment

This near miss highlights the challenges of operating uncrewed surface vessels (USVs) in busy ports alongside conventional craft. Even well-planned operations can create risk when there is limited room to manoeuvre and many other vessels are present.

All vessels, whether crewed or uncrewed, must comply fully with the COLREGs. USVs are to be treated the same as any other craft, and other water users have an equal responsibility to maintain lookout and take early, effective action to avoid collision (Rules 2, 5 and 6). Likewise, USV operators must comply with Rules 8(e) and 8(f), as well as all other applicable regulations.

The master and remote operator of a USV must be formally nominated and are usually ashore. On small vessels, one person may hold both roles, but a remote operator can control only one vessel at a time, while a master may have several under command.

Seafarers should anticipate congested areas and maintain heightened awareness, particularly during arrival and departure. Port operators and vessel managers should ensure clear traffic management and communication plans are in place whenever USVs are active.

Port authorities may wish to review local regulations and consider guidance for USV operations in areas of dense leisure or commercial traffic, including requirements for signalling, monitoring, and coordination with port control.

Key Issues relating to this report

Situational Awareness – The traffic density overwhelmed the USV/support team's ability to maintain a clear mental picture of all contacts and their intentions.

Communications – With multiple vessels, tight spacing, and perhaps different operators (yachts, marina control), miscommunication or ambiguity in intentions could lead to misunderstandings.

Complacency – Because departures are routine, operators may have underestimated collision risk, assuming that vessels would "give way" or that traffic would self-resolve.

Local practices – In some ports, it is common practice to depart into busy traffic without clear sequencing or control. This local habit can reduce safety margins and increase the risk of incidents.

Key Takeaways

Regulators and Authorities: Regulate for future vessel types, not just the existing ones. Mixed crewed and uncrewed vessel operations demand updated procedures and oversight. Integrating USVs into port and VTS systems, strengthening coordination requirements, and refining training and guidance are essential steps to manage future traffic safely.

Managers and Operators: Plan for the crowd — not for the calm. The event underlines the need for realistic risk assessment and pre-departure coordination that reflect actual traffic conditions, not just the operational plan. Human oversight remains vital, and effective workload management between USV control teams and support craft is key. Safety should never be compromised by schedule or commercial pressure.

Seafarers: If the picture isn't clear, don't move. This incident highlights the importance of maintaining situational awareness when operating in congested waters and recognising that uncrewed systems may have limitations in perception and manoeuvrability. Clear, early communication remains essential, and it is always safer to delay departure than to risk escalation in confusion or congestion.

M2517

Unmanned survey vessel (USV) capsize

Initial report

An unmanned survey vessel capsized while returning to its home port. Despite concerns from the marine team about worsening weather, the mission at sea was extended due to commercial pressure. This extension pushed the operation beyond the vessel's planned limits, and while returning to port the USV capsized in a busy area of navigable water.

The USV was eventually recovered.

CHIRP Comments

This capsize highlights the dangers of operational decisions that override environmental limits, particularly under commercial pressure. Weather risks were known, but the operation was continued despite this, pushing the vessel beyond safe operating parameters.

As USVs and MASS become more common, there must be clear lines of responsibility. It is essential to identify who has ultimate authority over their deployment and recovery. Without this clarity, confusion or misjudgement could have serious consequences.

Both the owner and operator are legally responsible for the safety of their vessel and any other vessels nearby. Going beyond documented operational limits could make them legally liable. Moreover, a recent IMO decision confirms that state-funded rescue services are not required to recover unmanned vessels. This raises important questions about the environmental damage and navigational risks posed by disabled or capsized USVs left adrift.

Damaged USVs may also present a physical hazard. They can behave unpredictably, may have moving parts, or contain active electrical systems. Without specific knowledge of the vessel, approaching it could be dangerous. This incident also raises the question of whether the owners and decision-makers accepted a higher risk of an incident simply because the vessel was uncrewed. While there may be no immediate human risk, the broader operational, legal, and environmental consequences remain significant.

Current training and certification standards are struggling to keep pace with technological advancements. Remote operations teams often consist of highly experienced professionals with qualifications such as OOW Unlimited, Chief Mate, Master, and Yachtmaster. However, there is an urgent need to revise STCW and related regulatory frameworks to reflect the operational realities of USVs and MASS. Regulations also vary considerably between countries, which adds further complexity when these vessels operate across borders or in international waters.

This event acts as a warning to the maritime industry: as autonomy advances, so must foresight, training, and responsibility. Commercial pressure must never outweigh safety. The maritime community, regulators, and operators must collaborate to ensure that safety standards evolve in tandem with innovation.

Factors relating to this report

Pressure – The decision to extend the mission, despite known weather risks, was driven by commercial considerations rather than operational safety.

Situational awareness – Going beyond the USV's operational limits exposed the vessel to unnecessary risks. This was understood by the operations team but not by the commercial team.

Communications – Transmitting to the entire team the risks associated with this operation should have made the dangers apparent to everyone.

Key Takeaways

Seafarers – Speak up, even when no one is on board
This incident shows the value of professional judgement, even in remote operations. Seafarers and marine teams must remain confident in raising concerns, especially about weather and risk. The absence of crew does not mean the absence of responsibility.

Managers – Commercial pressure sinks safety
Management's decision to extend operations beyond safe limits - despite the marine team's input - was a direct contributor to the capsize. Safety decisions must be based on risk, not revenue, with operational teams empowered to act without interference.

Regulators – Remote vessels still need rules
The growing use of USVs and MASS demands a clear legal framework and updated training requirements. STCW must evolve to include remote operations, and accountability for the safety of these vessels must be unambiguous and enforceable.

Representative image. Credit: Shutterstock

M2576

Close quarters situation

Initial Report

"We are a large sailing yacht under power, motoring on a south-westerly course at 9 knots and around 1.5nm from a navigational strait/passage. I noted the ferry steaming almost north, clearly visible, showing her starboard bow. Visibility was very good, and both radars were operating with a lookout on the bridge.

The CPA was causing concern, and it was a clear crossing situation (R15 COLREGs).

In this situation, my vessel was the stand-on vessel, as confirmed by the lookout. I maintained my course and speed. I expected the ferry to turn slightly to starboard (about 10-15 degrees) as there was plenty of sea-room and no immediate traffic, and the ferry had cleared the strait, so there were no depth restrictions. Then both vessels would have passed port to port.

The ferry maintained her course and speed, crossing my bow at a range of less than 2 cables. We then passed starboard to starboard, close enough (about 70 metres) that I could clearly see the master/watchkeeper on the bridge, who gestured that I was in the wrong, which surprised me, as there was no doubt about the situation, or which vessel should take what action.

Although ferries operate on regular routes, they must still comply with the COLREGs. This potentially close-quarters situation could have been avoided with better application of the COLREGs."

CHIRP Comment

CHIRP followed up with the master of the motor yacht to clarify and obtain additional information.

The account suggests that both vessels failed to follow the appropriate rules (2, 7, 8, 16, and 17) of the COLREGs, leading to a close-quarters situation. Expectancy bias may have influenced their actions, as the ferry assumed the large motor yacht would give way, which is sometimes the norm in busy coastal waters.

A further factor may have been commercial pressure. Tight schedules and repetitive crossings can subtly influence decisions, sometimes leading mariners to prioritise efficiency over compliance. However, passing at only 70 metres is clearly hazardous, regardless of vessel type or familiarity with the route.

This event serves as a reminder that the COLREGs exist to remove uncertainty. Expecting other vessels to deviate from them introduces unnecessary risk. Challenging assumptions and maintaining situational awareness are critical, as is early and unambiguous communication; a timely signal of five short light flashes/sound blasts can often break the chain of misunderstanding before it leads to danger.

For ferry operators, there is also an essential organisational lesson. Companies operating to tight schedules should ensure that management regularly reviews passage plans, either through marine manager visits or independent navigational audits, to confirm that bridge practices remain compliant with the COLREGs. Encouraging crews to report and discuss near misses openly and without blame helps to identify patterns and reinforce safe behaviour before incidents occur.

While both vessels had clear obligations to act to avoid collision, this case reinforces a simple truth: being righteous and right is not the same as being safe and compliant.

Challenging assumptions and maintaining situational awareness are critical

Key Issues relating to this report

Local Practices – The ferry's failure to alter course reflects a potentially ingrained local practice of prioritising routes and schedules over safe crossing protocols.

Communication – No VHF call or signal exchange occurred, even when intentions were unclear, which denotes a breakdown in clear communication.

Situational Awareness – No/wrong/late visual detection: The close crossing suggests the ferry didn't adequately gauge the yacht's trajectory in time. Even though radars were operating, the impending crossing wasn't detected or acted upon sufficiently early.

Complacency – Familiarity with regular route traffic may have led to underestimating the risk, assuming no deviation or hazard would arise, and failing to challenge the crossing scenario.

Alerting – Despite the yacht's clear expectation of port-to-port passing, there was no challenge or signal to the ferry indicating concern, nor was there any cross-check or speaking up.

Pressure – Operational pressures, such as maintaining schedules, could have influenced the ferry crew's decision-making; insufficient personnel or workload management may have contributed.

Key Takeaways

Regulators: Spot the patterns, close the gaps, enforce the COLREGs. Track recurring close-quarters incidents involving scheduled ferries and other vessels. Apply human factors frameworks (MGN 520 Deadly Dozen, SHIELD taxonomy) to identify systemic issues. Strengthen oversight to address shortcuts or local habits that undermine COLREGs compliance, and promote clearer guidance on proactive VHF use and bridge team management in congested waters.

Managers: Culture and training must take precedence over schedule pressure. Ensure bridge teams are empowered to follow the COLREGs, even under time pressure or on familiar routes. Build a culture that values challenge and open communication. Reinforce that safety decisions are supported, even when they delay schedules.

Seafarers: Don't assume, check, communicate, and act early. Use every available tool, radar, AIS, and visual bearings, to confirm other vessels' intentions. If in doubt, clarify via VHF before the situation escalates. Never rely on what "should" happen; anticipate, question, and take early action to stay clear and stay safe.

M2558

Pilot transfer arrangement (PTA) – significant safety concerns

Initial Report

A pilot raised serious concerns about non-compliant pilot ladder arrangements on board. When attempting to embark, the pilot found that the ladder was not rigged in accordance with SOLAS requirements. Specifically, no heaving line was readily available, a tripping line had been incorrectly fitted, and the embarkation point on deck was obstructed. Most worryingly, the ladder itself was poorly secured. It had been fastened outside the vessel using improvised knots and was not secured to strong points on deck. Instead, crew members were standing on the bitter end of the ladder to stop it from slipping.

When challenged, crewmembers stated, "There is no problem, pilot, this is how we always rig it." The pilot requested that the ladder be re-rigged. On making a second attempt to board, the ladder dropped while the pilot was on it. A third attempt, supervised by the vessel's chief officer, resulted in the ladder being rigged correctly and the boarding being completed safely.

The pilot was unable to confirm the presence of lifesaving appliances such as a lifebuoy at the embarkation point due to the time and circumstances.

No heaving line was readily available, a tripping line had been incorrectly fitted, and the embarkation point on deck was obstructed

CHIRP Comment

This report emphasises the importance of maintaining full compliance with SOLAS and IMO requirements for pilot transfer arrangements. Even when PTAs are rarely used, for example, when the master has a pilotage exemption certificate (PEC), crews must stay competent and confident in rigging and checking pilot ladders correctly. Regular training, drills, and supervision are essential to keeping this competence, especially on vessels operating under a PEC. Masters and senior officers should actively ensure that all personnel understand the correct rigging procedures and recognise the safety implications of any deviation. A proactive safety culture – where concerns are raised, discussed, and promptly addressed – remains the most effective safeguard against recurrence.

This report raises significant concerns about the safety of PTAs on board the vessel. The ladder rigging was non-compliant with SOLAS and IMO Resolution A.1045(27), creating a serious risk to pilot safety. Unsafe improvisations and a lack of procedural understanding indicate weaknesses in training, supervision, and compliance oversight. CHIRP contacted the pilotage authority to understand how such poor practices had developed and persisted. Following receipt of the pilot's report, the ferry's master took prompt action to rectify the failings, and other pilots have since noted improvements in PTA safety. While this response is positive, CHIRP questions how such deficiencies went undetected for so long and whether similar issues reported elsewhere have led to effective corrective action.

The national maritime authority was notified, but it is unclear if any follow-up occurred at the management level. CHIRP has raised the matter with the Flag State and requested that management be informed of these failings.

It is to the pilot's credit that they persisted in their attempts to board safely. The fact that the master and chief officer appeared aware of the correct method of rigging, while the deck crew were not, highlights a gap in competence assurance and supervision. This incident underlines the need for regular training, active oversight, and verification of crew competence – particularly on vessels operating under a PEC, where pilot ladders may not be rigged frequently. Ensuring full compliance with SOLAS and IMO standards, supported by an open and proactive safety culture, remains essential to prevent recurrence and safeguard pilot boarding operations.

Key Issues relating to this report

Local Practices – Deviations and shortcuts become the norm. "This is how we always rig it": noncompliance institutionalised.

Culture – Culture erodes when leadership fails to challenge deviations.

Alerting – No speaking up or challenging unsafe practices. Only the pilot challenged; the crew did not.

Communications – Communications were unclear and did not provide a closed loop of information. It was dismissive: "No problem, pilot".

Complacency – The crew assumed that nothing would go wrong with an unsecured pilot ladder.

Key Takeaways

Regulators: Paper safety does not save lives. Rules on paper mean nothing without verification—oversight must ensure that the work done matches the work as imagined.

Managers: What you permit becomes the standard. Unsafe shortcuts become habits—leaders must enforce standards, strengthen training, and build a culture where compliance is standard.

Seafarers: Your safety depends on how you act today. Complacency kills. Know the procedures, speak up, and never accept unsafe practices as "the way we do it around here."

This incident underlines the need for regular training, active oversight, and verification of crew competence

Insight

Mastering the Lee

Representative image. Credit: Shutterstock

Why the Lee matters

Creating a Lee for a pilot transfer is one of the most safety-critical operations in navigation. It's a moment where timing, teamwork, and clear communication must align, under pressure, in changing conditions, and often in confined waters. A poorly executed Lee can expose both the pilot and the pilot vessel to significant hazards, including unpredictable and often violent motion caused by wind and sea, compounded by the dynamic interaction.

While physical rigging and the pilot transfer arrangement (PTA) are covered extensively elsewhere, this guide focuses on navigational decisions and bridge team coordination involved in creating a Lee. However, we emphasise that for all PTA arrangements, a responsible officer must be present at the pilot boarding access.

Understanding the risks

Like any manoeuvre, creating a Lee carries inherent risks that must be anticipated and managed with precision. The following hazards represent the most critical threats to vessel safety, pilot welfare and operational control:

1. **Turning toward danger**
   Temporarily altering course to create a Lee may bring the vessel closer to navigational hazards such as shallow water or other obstacles. This risk must be managed through precise timing, accurate distance assessment and continuous situational awareness.
2. **Misinterpretation by other vessels**
   Nearby traffic may wrongly misread your turn as a collision avoidance measure, leading to unexpected and hazardous reactions. The master remains fully responsible for compliance with all applicable COLREGS and must ensure intentions are clear and predictable.
3. **Bridge team disruption**
   When the master steps onto the bridge wing, collective situational awareness can degrade. Clearly defined roles and robust closed-loop communication protocols must be clearly defined.
4. **CPA/TCPA changes**
   Alterations in course or speed will affect your Closest Point of Approach (CPA) and Time to CPA with nearby traffic or other navigational hazards. These must be continuously monitored and reassessed, particularly where room to manoeuvre is limited.
5. **Weather exposure**
   Creating a Lee may increase your vessel's exposure to wind and sea, which may introduce new risks including increased drift, reduced manoeuvrability and greater motion on deck – all of which may compromise safety.
6. **Increased rolling**
   Holding a steady course in a beam or quartering sea for too long may induce rolling, making pilot boarding unsafe. Ideally, the Lee is created immediately before the pilot vessel is ready to make its approach alongside. This requires careful timing and good communication between the vessels.
7. **Reduced steering control**
   Low speeds degrade helm response, especially in swell or current. Maintaining steerage may require proactive use of engine power and larger steering inputs to keep the vessel steady and responsive during the pilot transder.
8. **Single-point communication risk**
   Relying on a single person or communication channel – especially via radio – can lead to missed or misunderstood instructions. A closed-loop communication system with redundancy is essential in dynamic situations.

Key Takeaway: These risk factors can combine in unpredictable ways. Every Lee must be treated as a high-stakes manoeuvre requiring full team coordination.

Planning the transfer

Pilot boarding areas (PBAs)

PBAs are charted and selected for their shelter, sea room, and separation from traffic.

- Always aim to complete transfers within designated areas unless conditions require otherwise.
- If requested to board outside a PBA, pause and assess, seek confirmation from VTS or pilotage authorities.

Be aware: Time spent creating a Lee consumes space quickly. Stay alert to positional drift while manoeuvring.

Timing is critical

Creating a good Lee is as much about timing as it is about heading and shelter.

VTS coordination

- VTS should allocate boarding windows and advise optimum speeds to prevent congestion.
- Use this quiet window to execute the manoeuvre without distractions.

Speed and ETA management

- Aim for steady, mid-range speeds. Avoid rushing or arriving too early.
- Maintain predictable movements in the vicinity of the pilot station.

Pilot vessel boarding speed

- Confirm the correct boarding speed early. It will depend on the pilot boat's capability and sea conditions.
- Don't over-commit to a final approach if the pilot boat is delayed. This is especially dangerous on a flood tide.

Executing the plan

Creating the Lee

Creating a Lee is usually requested by the coxswain of the pilot boat. The heading requested can sometimes be more than necessary to create a lee, and this can cause difficulties for the master in regaining steerage when at slow speed. If this occurs, the master must reject the request and state what is safe for the vessel.

- Turn so that wind, swell, or sea strikes the hull from roughly two points off the bow opposite the ladder side.
- While a wind from ahead is ideal, sometimes a quartering wind is necessary; this increases rolling and reduces helm response, so caution is vital.
- Maintain visual contact with the pilot boat and continuously monitor its position.

Tip: Creating the lee is the culmination of the approach, not the beginning. It should feel like a coordinated, final step - not an improvised action.

Communication: A two-way system

Once steady on the Lee heading, inform the pilot boat immediately.

The responsible officer at the pilot boarding area should report back to the bridge as each of the following occurs:

- pilot boat is alongside
- pilot is on the ladder
- pilot boat is clear
- pilot is safely aboard

Only then should the master return to the original heading and adjust RPM as needed.

Situational awareness during the transfer

The master should stay on the leeward bridge wing from the time the pilot boat approaches until the pilot is safely on board.

Because this limits the master's full navigational overview, the bridge team must:

- Report distance and time "off track"
- Continuously monitor traffic (CPA/TCPA)
- Plot nearby targets — especially at or near the end of fairways
- Use flags (e.g., Hotel or Golf) to indicate to other ships what is happening, but never relax active monitoring of nearby traffic.

Contingencies and team culture

Share the plan

- Before arrival or departure, communicate your Lee-making intentions to the pilot station or VTS.
- A shared understanding supports quicker adjustments if something changes mid-manoeuvre.

Abort early if unsure

- If weather, traffic, or timing compromise safety, abort early.
- Notify the pilot boat immediately and outline an alternative plan.
- A transfer can always be reattempted under better conditions.

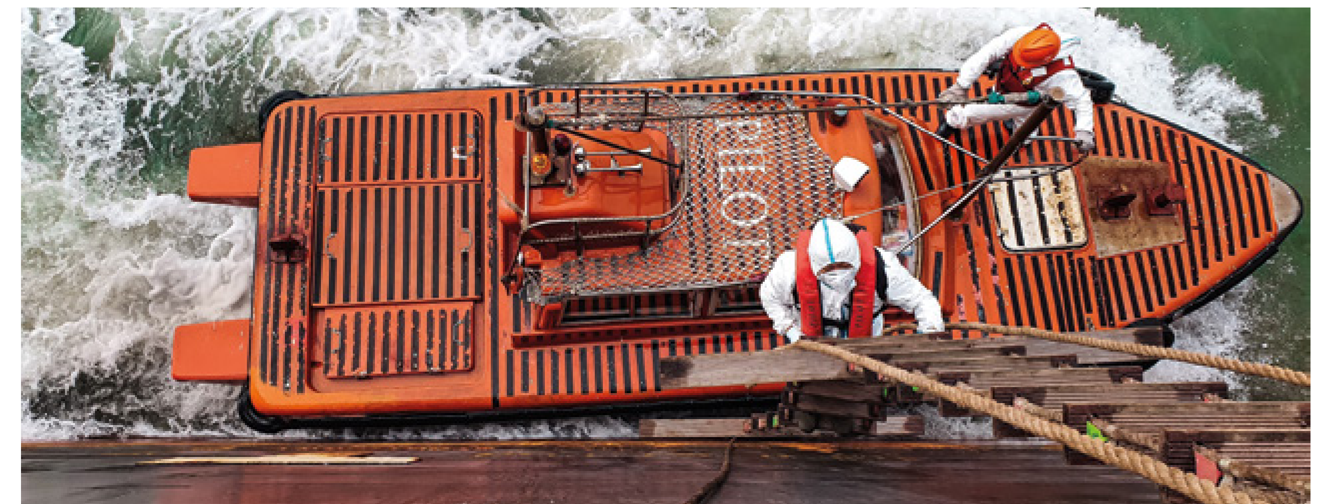
Aborting is not failure — it is professionalism.

Summary

Creating a Lee is a moment of intense focus, where multiple risks converge and decisions must be made with precision. When done right, it is seamless. When misjudged, it quickly becomes hazardous.

Key Takeaways:

- Respect the risks — plan with care.
- Coordinate with VTS and pilot services early.
- Manage timing, speed, and space deliberately.
- Keep communication constant and structured.
- Never hesitate to abort if safety margins are eroded.
- A good lee is brief, safe, and controlled. It protects the pilot, the vessel, and everyone involved.



Representative image. Credit: Shutterstock

8. Appendices

Appendix I: Acronyms

AB	Able Bodied Seaman
ACGIH	American Conference of Governmental Industrial Hygienists
ADA	American Disabilities Act
AIS	Automatic identification system
ARPA	Automatic Rader Plotting Aid
BA	Breathing Apparatus
BRM	Bridge Resource Management
BS	British Standards
CBM	Conventional Buoy Mooring
CD	Compact Disc
CHIRP	Confidential Human Factors and Incident Reporting Programme
CNIS	Channel Navigation Information System
COLREGS	The International Regulations for Preventing Collisions at Sea
COG	Course Over the Ground
COT	Cargo Oil Tank
CPA	Closest Point of Approach
DGPS	Differential Global Positioning System
DPA	Designated Person Ashore
ECDIS	Electronic chart data information system
EEBD	Emergency Escape Breathing Device
EMSA	European Maritime Safety Agency
ER	Engine Room
ERM	Engine Room Resource Management
EU	European Union
FRC	Fast Rescue Craft
GISIS	The International Maritime Organization's Global Information System
GPS	Global Positioning System
H_2S	Hydrogen Sulphide
HE	(The) Human Element
HELM	Human Element Leadership and Management
HRO	High Reliability Organisation(s)
HSE	Health, Safety and Environment
IG	Inert Gas
IMO	International Maritime Organization
IMCA	International Marine Contractors Association
IMPA	International Maritime Pilots Association
ISM	International Safety Management Code.
ISGOTT	International Safety Guide for Oil Tankers and Terminals
ISO	International Organization for Standardization
ISWAN	International Seafarers Welfare and Assistance Network
IT	Information Technology
ITF	International Transport Worker's Federation
LOP	Letter of Protest
MAB	CHIRP Maritime Advisory Board
MAIB	Marine Accident Investigation Branch
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
MASS	Maritime Autonomous Surface Ships
MCA	The United Kingdom Maritime and Coastguard Agency
MEPC	The Marine Environment Protection Committee – IMO
MFB	Maritime FEEDBACK
MGN	Marine Guidance Note
MLC	Maritime Labour Convention
mmwg	millimetres of water gauge
MNM	Merchant Navy Medal
MOU	Memorandum of Understanding
MPX	Master / Pilot Information Exchange
MSC	Maritime Safety Committee (IMO)
MSF	Marine Safety Forum
NB	Nota Bene
NM	Nautical Mile
NOx	Nitrous Oxides
OOW	Officer of the Watch
OS	Ordinary Seaman
PACE	Probe, Alert, Challenge, Emergency
PDF	Portable Document Format
PEC	Pilot Exemption Certificate
PM	Particulate Matter (Nox and Sox)
PM	Planned Maintenance (System)
PPE	Personal Protective Equipment
Ppm	parts per million
PPU	Portable Pilot Unit
PSC	Port State Control
QA	quality Assurance
RHIB	Rigid Hulled Inflatable Boat
RIB	Rigid Inflatable Boat
RN	Royal Navy
RPM	Revolutions per Minute
SCABA	Self-Contained Breathing Apparatus
SI	Statutory Instrument
SMS	Safety Management System
SOG	Speed Over the Ground
SOLAS	International Convention for the Safety of Life at Sea (SOLAS), 1974 as amended
SOx	Oxides of Sulphur
STCW	The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978 as amended
STEL	Short Term Exposure Limit
SWL	Safe Working Load
TCPA	Time to Closest Point of Approach
TDG's	Tactical Decision Groups
TLV	Threshold Limit Value
TSS	Traffic Separation Scheme
TWA	Time Weighted Average
UCL	University College London
UK	United Kingdom
UKHO	United Kingdom Hydrographic Office
UKMPA	United Kingdom Maritime Pilots Association
US	United States
USCG	United Sates Coast Guard
VHF	Very High Frequency (radio)
VLCC	Very Large Crude oil Carrier
VTS	Vessel Traffic Services

Appendix II: The Maritime Programme – How it works

CHIRP receives reports from commercial and recreational seafarers, passengers, port workers and members of the public who have either experienced a near-miss or incident, or who have concerns about safety that they wish to report. Reports can be submitted online (http://www.chirp.co.uk/maritime), through our app, or by email (reports@chirp.co.uk).

We do not accept anonymous reports, because they cannot be validated. All validated reports are acknowledged and investigated.

We encourage reporters to use official reporting channels if they feel safe and confident to do so. We are also able to do so on their behalf, and thereafter advocate for them if they wish, while protecting their identity.

Where necessary, we will contact 3rd parties (eg the company concerned, port or flag state etc) to get more information about an incident or to seek resolution of an issue. In such discussions, the reporters identity is never revealed.

To further protect the identity of reporters, we delete identifying information from our database and other electronic systems once we have gathered sufficient information about a report. After a maximum of 63 days, this is also removed from all back-up systems, and the information is irretrievably deleted. At this point, CHIRP cannot make contact with the reporter. The reporter is, however, able to contact CHIRP if they wish to provide more information.

Once our investigations are complete, we will remove all identifying data such as the name of people, ports, places etc and then present it to our Maritime Advisory Board (MAB). This is a body of maritime subject matter experts who apply their expertise and experience to provide industry context and to help identify underlying causal human factors and to make recommendations to prevent incident recurrence.

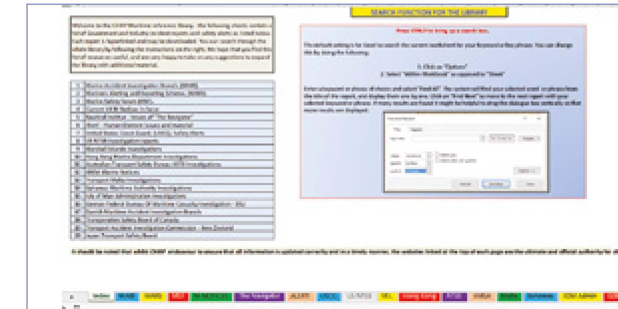
A selection of reports are considered by the MAB for publication in our FEEDBACK newsletters. These are further scrutinised for identifying information and this is removed prior to publication. The aim is to learn how an incident occurred, not to identify those concerned.

All of our published material is freely available for reproduction and use by other parties so long as they credit CHIRP as original authors.

Director (Maritime)
December 2022

Appendix III: Our Publications

Reference Library



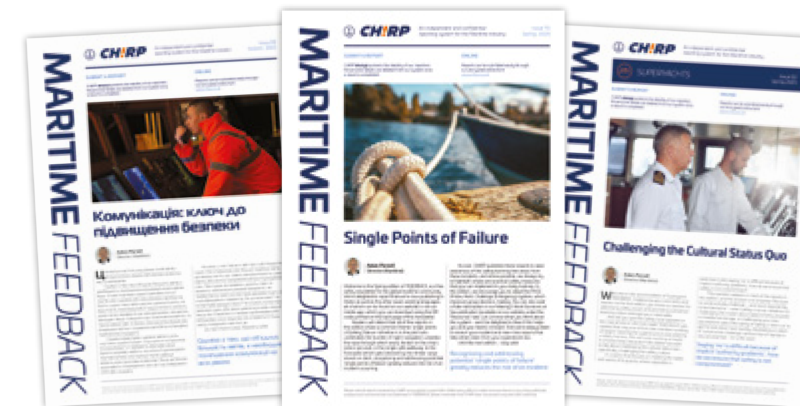
The link below will take you to the reference library page on the CHIRP website. From there you can download an Excel workbook which contains links to a comprehensive list of incident investigations, near miss reports and safety alerts issued by a selection of government maritime agencies and shipping industry sources around the world.

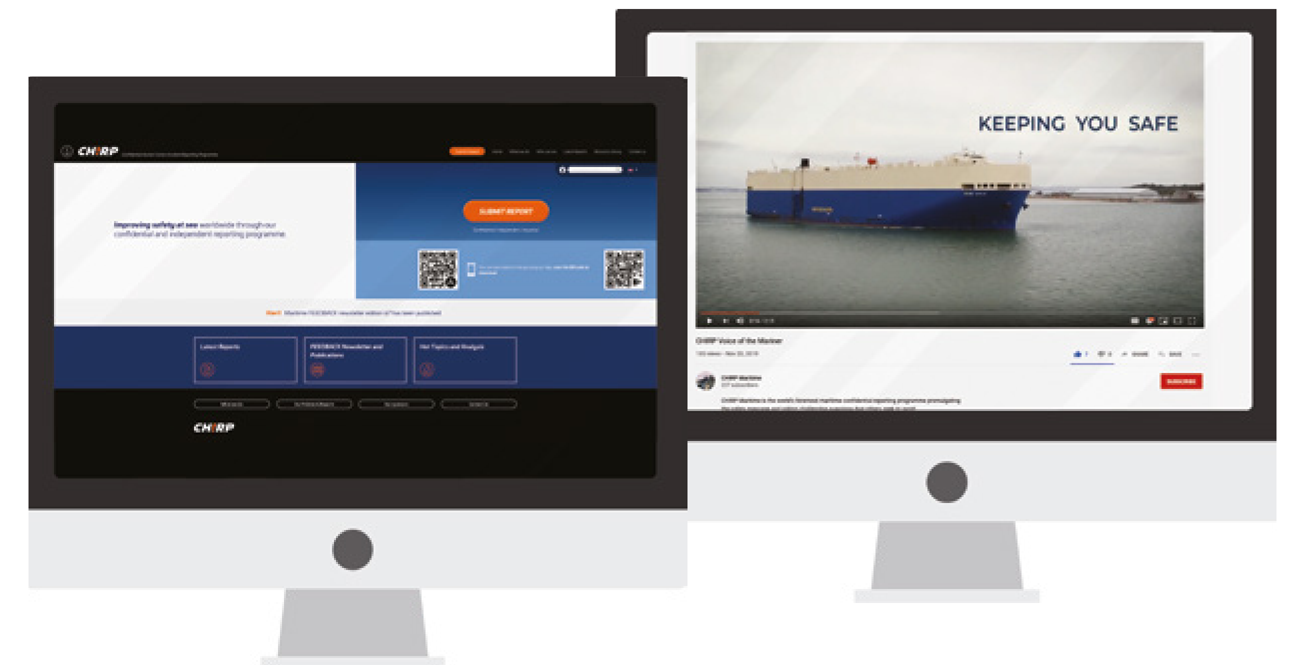
The library has been written in Microsoft Excel on a Windows 10 operating system – the browser used for links was Google Chrome. With these in place, all links should open automatically. It has been found that when viewing the files on an Apple Macintosh, that links to the internet tend to open correctly, but links to a specific PDF file do not open. If this is the case, then copy and paste the link into your browser – the requested file should then open.

We should emphasise that that the official source of information is the actual web sites of the Agencies included in the workbook. The links to these sites may be found at the top of each sheet of the workbook and should be consulted for the most current data.

The library is updated on a regular basis – any suggestions for further enhancements of the library will be very much welcomed.

www.chirp.co.uk/maritime/external-resources/





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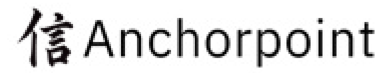

167-169 Great Portland Street, 5th Floor, London, W1W 5PF
www.chirp.co.uk/maritime/ | reports@chirp.co.uk | +44 (0) 20 4534 2881

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