

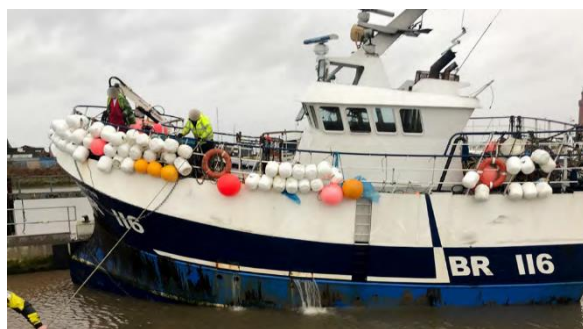
IMCA Safety Flashes summarise key safety matters and incidents, allowing lessons to be more easily learnt for the benefit of all. The effectiveness of the IMCA Safety Flash system depends on members sharing information and so avoiding repeat incidents. Please consider adding [safetyreports@imca-int.com](mailto:safetyreports@imca-int.com) to your internal distribution list for safety alerts or manually submitting information on incidents you consider may be relevant. All information is anonymised or sanitised, as appropriate.

## 1 MAIB: Unexploded ordnance - subsea explosion causes injury and damage

The UK Marine Accident Investigation Branch (MAIB) has published its [Accident Report 1/2022](#) into a subsea explosion which damaged crab potting vessel *Galwad-Y-Mor* on 15 December 2020.

### What happened?

A 15m crab potting vessel was hauling pots in the North Sea approximately 22 miles north-east of Cromer. The crabbing gear disturbed a 250kg unexploded WWII bomb, which went off on the seabed 30m below the vessel. The ensuing explosion caused a shock wave that threw the boat about, resulting in significant injuries to five of the seven crew and major damage to the vessel's hull and machinery.



When the bomb went off, three loud bangs were heard by the crew on the main deck. The vessel was thrown about. Propulsion and electrical power immediately failed. The main deck was deluged with seawater and one crew member's personal flotation device (PFD) automatically inflated. The skipper had hit his head and was dazed; four of the crew were severely injured but all remained conscious. The wheelhouse equipment was seriously damaged, water flooded onto the main deck, and into the engine room, and the vessel settled low in the water. The skipper roused the night watchman and made a distress call with a handheld VHF radio on channel 16. Unsure that the distress call had been received, he texted the skipper of another fishing vessel and requested that a distress message be relayed to the coastguard. *Galwad-Y-Mor's* skipper launched the life raft with the help of a crew member and ordered the crew to prepare to abandon ship.

The injured crew were transferred to hospital by helicopter and RNLI lifeboat and treated for head, back and knee injuries.

### What went right?

- The crew's actions after the explosion were both prompt and effective; five of the seven crew were significantly injured and yet they were able to send a distress message, launch a life raft, and evacuate to rescue boats provided by the nearby offshore support vessel *Esvagt Nord*;
- It is likely that *Galwad-Y-Mor* crew's formal training, emergency drills, and combined length of onboard service prepared them to deal with this unforeseen emergency scenario and enabled them to take swift action that, undoubtedly, saved lives;
- The emergency response and rescue that offshore support vessel *Esvagt Njord* provided was also prompt and effective. The onboard triage of the casualties was aided by the presence of a trained paramedic and increased the survivability of *Galwad-Y-Mor's* injured crew members;
- *Galwad-Y-Mor's* hull was well constructed and able to withstand the force of the nearby seabed explosion;

IMCA store terms and conditions (<https://www.imca-int.com/legal-notices/terms/>) apply to all downloads from IMCA's website, including this document.

IMCA makes every effort to ensure the accuracy and reliability of the data contained in the documents it publishes, but IMCA shall not be liable for any guidance and/or recommendation and/or statement herein contained. The information contained in this document does not fulfil or replace any individual's or Member's legal, regulatory or other duties or obligations in respect of their operations. Individuals and Members remain solely responsible for the safe, lawful and proper conduct of their operations.

- *Galwad-Y-Mor* was successfully salvaged and has been rebuilt.

Members may wish to refer to:

- [High potential near miss: unplanned handling of unexploded ordnance](#)

## 2 MAIB: Flooding, capsize and foundering of small vessel after issues with towing wires

The UK Marine Accident Investigation Branch (MAIB) has published its [Accident Report 2/2022](#) into the loss of a fishing boat in August 2020.

### What happened?

The skipper and the vessel's owner were relocating the boat in order to carry out planned survey and maintenance work. While on route, the two crew carried out a trawl to catch fish, during which the net snagged on the seabed. The vessel took on a list as the crew attempted to recover the net by hauling it. The list worsened considerably, and the vessel sank. The crew abandoned to a life raft and activated the boat's emergency position indicating radio beacon. The two crew were subsequently rescued by the local lifeboat service.

### What went wrong?

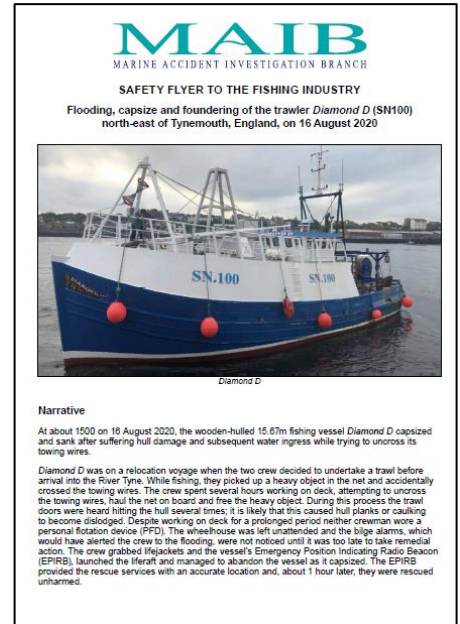
- The vessel foundered because the flooding of the hull went unnoticed until it was too late for the crew to take remedial action;
- Hull damage (this was a wooden boat) was caused by trawl doors hitting the hull as crew attempted to uncross towing wires. Flood water was able to spread through the vessel as there were no watertight bulkheads to contain it;
- While uncrossing the towing wires, the crew considered the trawl doors hitting the hull to be a **normal occurrence** (IMCA's emphasis) and did not recognise the danger of damage. Consequently, they did not verify the vessel's watertight integrity;
- The crew did not hear the bilge alarm because they left the wheelhouse unmanned and were totally focused on recovering the gear. Had there been a third crew member on board and the wheelhouse not left unmanned for seven hours, the bilge alarms may have alerted the crew to the flooding of the hull. This could have given the crew time to use the additional pumping capacity available;
- There was no evidence that any emergency training drills had been completed on board the vessel, or that the crew routinely wore personal flotation devices (PFD) while working on deck.

### What went right?

- The wearing of lifejackets undoubtedly saved lives. The two crew were fortunate that the life raft inflated correctly and that they did not end up in the water, as neither was wearing a lifejacket when the vessel capsized;
- When it became apparent that the vessel was in difficulties, a VHF call to alert the coastguard and the signal from the EPIRB assisted the rescue services in locating the crew in the life raft in a timely manner.

The MAIB has released a [Safety Flyer to the fishing industry](#) about this incident. The main principles therein are repeated here in bullet point form:

- Any change of agreed plans or deviation from a standard operation should involve a brief step back and a reassessment of the risks;
- All unattended spaces should be regularly checked;
- WEAR A LIFE-JACKET!

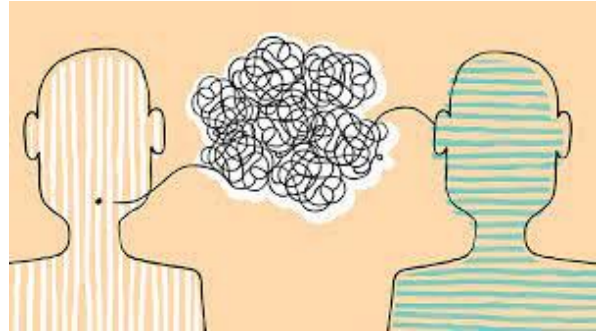


- Know how to use emergency equipment in your workplace - the crew's activation of the EPIRB led directly to their timely rescue.

### 3 Overcoming Language Barriers

Safety4Sea <https://safety4sea.com> has published an excellent article on issues with language barriers at sea. The article can be found [here](#).

Language barriers are a common challenge in the shipping environment with multinational, multilingual and multicultural crew. What native speakers often don't realize is that their own way of speaking the language 'correctly' can be as big a barrier as the listener's limited comprehension of the language, thus creating a barrier to effective communication. The article highlights some clear principles for overcoming language barriers.



- **Speak slowly and clearly**, don't rush through your communication;
- **If in doubt – ASK:** Ask for clarification. If you are not 100% sure you've understood what others say, politely ask for them to make it clearer. Don't assume you've understood what's been said;
- **Frequently check for understanding.** Use two-way communication and reflective listening – repeat back what you have heard;
- **Be specific.** Spell out your expectations and deadlines clearly;
- **Be patient.** Cross-cultural communication takes more time.

The full article can be found here: <https://safety4sea.com/overcoming-language-barriers/>

Members may wish to refer to:

- [Rope under tension parted on deck](#) [*language barrier: the workboat crew did not speak much English*];
- [Pipelay technician sustained cut to wrist whilst handling testing equipment](#) [*The injured person did not have clear communication or eye contact with the other technician who released the scanner belt. It was also found that language barriers between the technicians contributed to poor communication;*]
- [Fall from height during yard visit](#) [*the injured worker spoke neither English nor Norwegian. Translation was conducted by co-workers. This yard routinely employs foreign workers with limited or no skill in English, although laying down rules for sub-contractors on how such workers were to be deployed;*]

### 4 MSF: Contact between Vessel and Offshore Installation

The Marine Safety Forum (MSF) has published [Safety Alert 22-02](#) relating to a collision between a standby vessel and an offshore installation.

#### What happened

There was a shift change of deck officers at midnight and the 1<sup>st</sup> Officer took over the watch with the vessel 1.2 nautical miles from the installation. The vessel was set on a course towards the installation which allowed the incident to evolve. The 1<sup>st</sup> Officer attended to administrative work and the designated lookout was keeping lookout. At 00:20 with 0.7 nautical miles from the installation, the lookout asked the 1st Officer for permission to use the computer, leaving the lookout duties unattended. At the time the 1st Officer's attention was elsewhere on carrying out a weekly radio check on the long-range radio. Just as the check was completed the vessel was called upon by

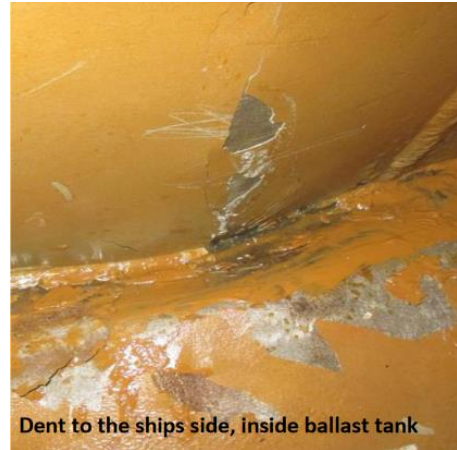
other vessels inside the safety zone notifying them that they had entered the safety zone; at the time the distance was 250 metres from the installation.

The 1st Officer rushed to the manoeuvring station attempting to stop forward movement of the vessel. The 1st Officer intended to switch steering from autopilot to hand steering. However, emergency steering was accidentally switched into instead. This caused the 1st Officer to lose control of the vessel and the forward movement was not arrested. The Master, who was called to the bridge, managed to turn the vessel to port, however the proximity to the installation and the vessel momentum resulted in the starboard side of the vessel contacting the installation. The vessel hull was dented but not holed. The installation was undamaged.

### What went wrong?

The MSF member's investigation noted that all the required and proper procedures existed but were not effectively implemented. 1st Officer was appropriately qualified for the role and had been subject to the vessel owner's induction and familiarisation procedure. The incident was caused not by lack of procedures but failure to implement/observe these procedures.

It is deemed likely that the 1st Officer would have been able to steer or stop the vessel if he had not accidentally set the vessel into emergency steering.



The  
by  
clear

### Actions/lessons learned

- Review and adjust existing procedures, enhanced training sessions. The vessel owner made the following improvement suggestions:
  - Ensure that all emergency switches do not have multiple functions;
  - Update of the existing navigational audit checklist;
  - Clarification of the lookout's duties in bridge procedure;
  - Emergency scenario training sessions to be implemented.
- Suggested discussion points to accompany this safety alert:
  - Could this have happened on your vessel?
  - What do you have in place to avoid a similar incident?
  - Installations should not be used as waypoints when passage planning;
  - Don't allow yourself or others to become distracted on watch, maintain situational awareness at all times;
  - Know how to operate manual and emergency control changeovers.

Members may wish to refer to:

- [Trencher angle inadvertently altered](#) [*ROV pilot unknowingly made contact with the control joystick*]
- [Accidental activation of emergency stop during saturation diving operations](#) [*buttons were inadvertently pressed by engine room crew lacking situational awareness*]
- [Collision between vessels](#) [*potential contributory factor: The ergonomics of the bridge console layout could potentially result in an alternative identical switch in the same vicinity as the autopilot switch (in this case, the gyro selector) being operated*]
- [Vessel Near Miss with wellhead](#) [*vessel Master was preoccupied and did not notice that the vessel was drifting close to the wellhead*]

## 5 Stored energy release: Two fatalities with tyres (IOGP)

An IOGP member reports two separate incidents, both with fatal outcomes and related to maintenance/changing of tyres on vehicles. Whilst not strictly marine related, the incidents represent opportunities to highlight risk areas that we might recognize better. See [here](#) for details.

### What happened

Both incidents happened during routine maintenance of heavy trucks in a controlled logistics environments. Tyre inflation pressures were as per manufacturers' recommendations, in the order of 130 psi.

In the first incident, a contracted tyre technician was fatally struck by a heavy vehicle tyre and a tyre rim which ejected after a sudden failure. A new tyre was already mounted on the one-piece rim after having been previously inflated inside a safety cage, and it was resting outside the cage waiting installation on a truck. A maintenance technician noticed some air leaking from it and approached it. While the technician was inspecting/troubleshooting the tyre the wheel parted, releasing the rim which hit the technician on the head.

In the second incident, an employee was fatally struck by a heavy vehicle tyre rim during maintenance. A driver was loosening the lug nuts of a heavy vehicle wheel that had been reported defective by a previous shift driver, with the intention of replacing it with a spare. The rim catastrophically failed and cracked in two, releasing the tyre and part of the rim with explosive force and projecting the driver several metres away.

Following the incidents, prior damage was noted on the tyre rims in both cases. This may either have occurred through wear and tear during rough terrain driving or potentially through driving with a partially deflated tyre. Subsequent wider inspection of tyres and tyre rims revealed that such cases were not limited to the incident vehicles in isolation.

### What went wrong?

- Workers were in the Line of Fire from a pressure hazard and had not recognised this as a risk;
- The tyres were not deflated before work on the troubleshooting task began;
- In one incident, the wheel was removed from its cage without inspection of the rim seat area;
- Previous damage had been sustained and not recognised;
- Manufacturer's recommendations for inspection had not been followed;
- **Lessons were not learned from the first incident, leading to a similar fatality in the second incident.**

### Actions and recommendations

The IOGP member made the following corrective actions and recommendations:

- Reinforced Line of Fire awareness with all personnel;
- Procured and raised awareness of tools and methods that enable personnel to perform any activities related to tyres, such as inflation and deflation, away from the Line of Fire;
- Performed immediate tyre and tyre rim inspections across the fleet of vehicles and verify inclusion of both tyres and tyre rims in vehicle inspection programs;
- Raised awareness of:
  - the need to deflate tyres before removal from the vehicle;
  - the general risk of pressure release particularly from tyres;
- Reinforced the requirement to monitor for "weak signals" with respect to possible problems with tyres and tyre rim construction during driving and be ready to **stop the job** in case anomalies are noted.
- Ensure learnings from previous incidents are in fact learned.

---

Applicable  
Life Saving  
Rule(s)



Bypassing  
Safety  
Controls



Line of Fire

---

Members may wish to refer to:

- [IMCA short video “Line of Fire”](#)
- [Working with hoses and pressure](#)
- [UK HSE: fatal injury following catastrophic failure of pressure test equipment](#)
- [High potential stored energy incident: inner buoyancy module clamp failure during removal](#)
- [Lost time injury \(LTI\): Stored pressure release – Crewman lost an eye](#)