

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 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 Lifeboat air cylinder explosion on an empty installation

What happened

An air bottle exploded on a lifeboat causing significant damage. The damage was discovered during a periodic inspection of an offshore platform which had been shut-in and had no crew on board. As the damage occurred on an uncrewed installation, there were no injuries or fatalities, but also no witnesses to the event or an exact date/time when it occurred.

The affected lifeboat was removed and taken ashore for further inspection. One of the bottles had exploded with a good portion of it propelling upward through the centreline seating structure and embedded itself into the overhead of the lifeboat. One bottle fell to the sea through the hole created in the hull of the boat and one bottle remained intact.

Why did it happen?

The operator coordinated with the lifeboat servicing vendor and local regulatory authorities to produce an understanding as to the probable cause of the incident. The following points were noted:

- The bottles in this boat were purchased new in 2018;
- Further inspection after the lifeboat was brought onshore revealed significant corrosion over the length of the bottles in the area where they were in contact with the bottom of the boat.
- Each of the three bottles was placed in a form fitting “saddle” built into the bottom structure of the lifeboat instead of being raised slightly above the deck in a cradle. The two brackets holding the bottles from above were made of stainless steel and there was no insulating material between this bracket and the steel bottles. It appears the installation and location of the bottles was subject to retaining moisture, especially between the bottle and the saddle. It could be that the corrosion was further exacerbated by galvanic action between the steel bottles and the uninsulated stainless-steel bracket.

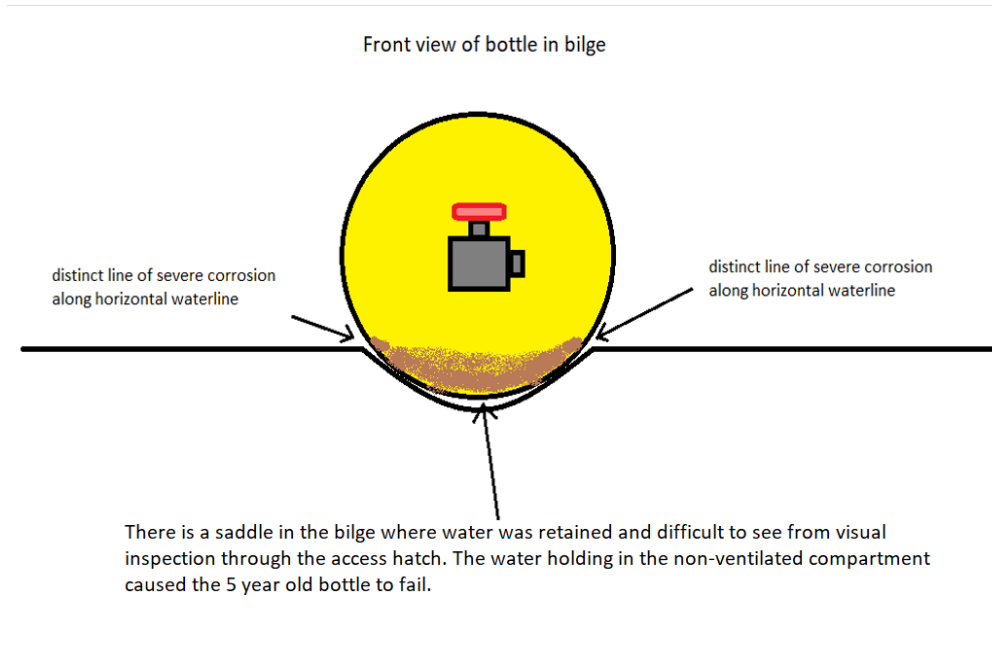
Members should be aware that this could affect **any** lifeboat with steel air cylinders installed in the same manner.

Lessons learned and recommendations

- The system ought to have been bled down after the platform was shut in and the crew taken off;



- This particular installation provided a very restricted access to these air bottles, so this greatly limited the ability to adequately inspect the bottles during regular weekly/monthly maintenance and annual servicing:
 - The access ports only allowed a view of the top (valve end) of the bottle.
 - The saddles in which the bottles rested completely obscured the section of the bottles inside the saddle.
 - The bracket holding the bottles in place was of a different material and was in direct contact with the bottle (not insulated).



- Bleed down pressurised systems when no longer needed;
- Ensure pressurised air bottles are fully and adequately inspected during weekly/monthly maintenance and annual servicing;
- Look closely at the way in which pressurised air bottles are stored – could there be moisture traps? Is there a way to avoid that?
- Ensure pressurised air bottles in lifeboats are raised above the deck to provide better ventilation around the bottle;
- Ensure any device holding pressurised air bottles in place is a similar material or suitably insulated between materials that are dissimilar – be aware of the risk of galvanic corrosion.

Members may wish to refer to:

- [Electrolytic corrosion: failure of fire hose couplings](#)
- [Failure of self-righting frame on Fast Rescue Craft \(FRC\)](#)
- [Galvanic corrosion causes dropped object – satellite dome fell from mast](#)
- [A list of 14 safety flash incidents in which galvanic corrosion is a causal factor](#)

2 Dropped object during cable trans-spooling

What happened?

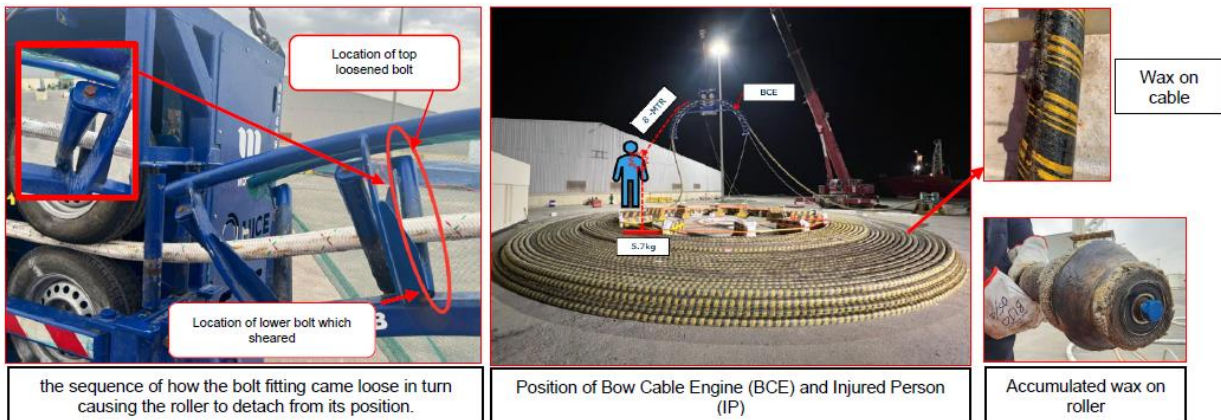
A roller weighing 5.7kg fell 8m and hit someone on the shoulder. This high potential incident occurred during alongside when a 69kV electrical cable was being trans-spooled ashore from a third party vessel. A connection bolt failed, allowing the roller to fall from a suspended Bow Cable Engine (BCE). On disconnection it dropped, first striking and being deflected by the BCE,

Applicable
Life Saving
Rule(s)



Line of Fire

before hitting the right shoulder of one of the subcontractor’s workers. The worker was underneath and close to the BCE as their task was to guide the cable as part of coiling it for storage. Work was stopped and the person injured was taken transported to external medical facility for assessment and X-rays. The X-rays revealed no breaks and the person injured was fortunately able to return to work.



What went wrong

- The injured person was working under a suspended load;
- The company had a Safe Use of Work Equipment assessment process, which was not applied;
- Existing risk assessments were inadequate. Additional measures to prevent dropped objects, such as secondary retention or cargo nets on the BCE, were not taken into account;
- The cable had to be offloaded to shore because of last minute unavailability of a cable laying vessel (third party). This introduced the additional risks of double handling and a new work site scenario;
- There was wax on the cable (this was a requirement from the client.)
 - The fact that there was wax on the cable had not been adequately communicated by the manufacturer. As a result the process and relevant task plans were inadequate to deal with the additional risks introduced by the wax;
 - The high ambient temperature at the work site caused the wax to melt;
 - The friction on the cable was affected by the wax. The melted wax prevented the BCE and its rollers from functioning properly.
- There had been potential windows of opportunity to raise a “Management of Change” before the incident which may have identified further controls to address the excessive wax. These opportunities were missed.

Actions taken

- Ensure effective application of the Management of Change (MoC) process to assess and manage the identified changes including identification and assessment of risks;
- **Be curious** - keep questioning all aspects of what may go wrong. Take the time to go through all potential risks to consider and implement adequate mitigation controls;
- Everyone should feel able to **stop the job**, ask questions, assess, and only then, act.
- Guard against becoming **complacent** by continually asking the question “*what if ...?*”
- Remember the wax that no-one had taken into account? Ensure better communications with relevant parties to ensure everyone involved understands what is being delivered before it arrives.

Members may wish to refer to:

- [Focus on third-party dropped objects](#)
- [Dropped object during lifting operations](#)
- [Dropped Object – Steel deck plate falls from pipelay tower](#)

3 Parted tag line caused damage during lifting operations

What happened

A tagline parted under excess tension when moving a LiDAR buoy weighing 2.4 tonnes, causing the buoy to move in an unexpected way. The incident occurred when the buoy controlled by two tag lines was being recovered to deck using the vessel crane. A worker on deck, who had been positioned to support the landing of the buoy onto its landing cradle, was struck when the buoy moved. Additionally, the uncontrolled movement of the buoy caused damage to the vessel and the buoy itself. The worker was not harmed.

Applicable
Life Saving
Rule(s)



Line of Fire



Safe
Mechanical
Lifting

What went wrong

Our members' investigation established that:

- The worker who was struck was in the wrong place at the wrong time – they were improperly positioned on deck;
- There was no documented process detailing the recovery of buoys;
- The lift plan was not compliant with existing company procedures;
- The Tool Box Talk (TBT) lacked detail and was too generic;
- There was insufficient supervision and training in place, as the person in charge of the lift was not trained as a lift supervisor, and was busy working a tag line at the time of the event.

Lessons

- Ensure lift activities are properly planned and approved using a lift plan which identifies all the risks and helps to communicate the task at the worksite during the Toolbox talk;
- Lift supervisors should supervise effectively and monitor a lifting operation without distraction. Don't get involved with actually doing the job yourself – take a step back and keep an overview of the situation;
- **Stop the job** if a Life Saving Rule is not being followed - Stop, reposition and start again when it is safe to do so;
- Dynamic risk assessments are crucial. All the time, be asking yourself questions such as:
 - Where are you in relation to the load?
 - Where is the load going?
 - Where is your exit route?

Actions taken

- Lift Plans for this task were updated and approved by a qualified person;
- Relevant crew completed lift supervisor training to comply with company and local regulatory requirements;
- Re-iterated the importance and usage of standard lift plans;
- Re-assessed training plans to ensure sufficiently trained crew are available for future lifting operations.

Members may wish to refer to:

- [MSF: Near-miss – trapped tagline pins banksman against stanchion](#)
- [Communications: LTI finger injury during lifting operations](#)
- [Line of fire LTI: Finger injury during lifting operations](#)

4 LTI – person fell from step ladder

What happened

A worker fell off a 2-step ladder/hop up and was injured resulting in an LTI. A tool required some maintenance before going into storage after use. To gain access to the tool and comfortably carry out the task, the worker needed to stand on a 2-step ladder/hop up.

While the worker was on the 2-step ladder/hop up, the vessel hit a wave and pitched, and this caused the worker to lose balance and fall. The step ladder/hop up went to the right and the person fell to the left struck their ribs on the frame of the tool and then fell to deck. In pain, the worker went to see the vessel medic, who after assessing the situation, transferred the worker ashore for further assessment and treatment. The diagnosis was a fractured rib. The worker was unable to return to work and went on sick leave.

The height from deck to the tool was 1.6m and the step ladder was 0.5m in height to the top step. At the time of the incident, the sea state was 2 m significant wave height, and the deck planks were wet.

What went wrong

- The ladder/hop up was not secured to a fixed point as required in procedures;
- The hazard/risk of using the two-step ladder had been identified in the risk assessment, but the mitigating actions were not satisfactory. The equipment was not robust enough.

Lessons and actions

- Even falls from low heights can result in serious injuries;
- Could the work have been done when the sea was calmer?
- Ensure such equipment is properly secured before use;
- An engineered solution was to be prepared, for a fabricated access point on the tool frame, to negate the use of a temporary step ladder.

Members may wish to refer to:

- [Falls from step ladders](#)
- [Serious LTI – Crew member slipped on deck breaking his leg](#)

5 Non-fatal man overboard: worker fell from height into the sea

What happened

A worker fell 3m from a new jacket into the sea. The worker was uninjured and successfully recovered without harm. The incident occurred during the installation of a new jacket. During the operations, a worker accessed an area on the jacket which did not have any grating or scaffolding. Whilst exposed to the hazard (Working at height) but trying to secure himself to the guide rope, the worker fell from the jacket into the water from a height of almost 3m.

What went wrong

- The minimum requirements set out by the end client in their permit to work (temporary platform and handrails) were not met;

Applicable
Life Saving
Rule(s)



Bypassing
Safety
Controls



Step ladder/hop-up

Applicable
Life Saving
Rule(s)



Bypassing
Safety
Controls



Working at
Height

- The team did not stop the job, but tried to finish it, despite the missing required temporary platform and handrails;
- Some of the documentation for the job – task risk assessment, method statement etc – did not reflect the situation and needed updating.

Actions taken

Following a full safety stand down and discussion by all involved:

- The client was asked to install temporary platform and handrails as per the original requirement;
- The TRA and method statement were updated, discussed and agreed with all parties.

Members may wish to refer to:

- [Man overboard incident \(not fatal\)](#)
- [Man overboard from stinger](#)
- [MAIB: Man overboard – unguarded opening](#)

