

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 MAIB: Engine room fire flashover

The Marine Accident Investigation Branch [Safety Digest 2/2022](#) includes an incident in which there was a flashover in a vessel engine room.

What happened

A high speed ferry was on passage after a period of maintenance. There were no passengers on board, just the master and two crew. During the passage, the fire alarm sounded for the starboard engine compartment; the master monitored the closed-circuit television (CCTV) and after a few moments saw smoke and then flames.

What went right

The master and crew followed the emergency procedure for an engine fire: the engine was shut down, the compartment was sealed off, and the fixed carbon dioxide (CO₂) fire extinguishing system was initiated. The master assessed that the situation was under control. He informed the port authority of his intention to continue to the intended berth and requested that the local fire brigade meet the ferry on arrival. The master continued on passage with one engine in use. The crew monitored the bulkhead and deckhead temperatures around the compartment; water hoses were prepared for boundary cooling although this was not judged necessary.

What went wrong

Once the ferry was berthed, the local fire and rescue service boarded the vessel to take charge of the situation. *Without liaising with the crew*, one of the fire officers opened the access hatch to the starboard engine, causing rapid reignition of the fire with significant flames and smoke emanating from the compartment. This forced the fire and rescue team to retreat to gather their firefighting equipment and the fire was eventually extinguished by completely flooding the compartment with water. The reignition of the fire caused severe damage to the engine and the starboard engine compartment, requiring extensive repairs.

The lessons

- The master and crew **took the appropriate actions in this situation**. The closing down of the engine compartment and timely use of the fixed firefighting system stopped the fire from spreading further and reduced the flames. Hotspot monitoring of the compartment by the crew ensured that they were prepared to react to any change to the situation. The engine



Engine room fire as seen on CCTV



Flames coming from engine room after re-ignition of fire



Fire damage

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compartment needed to remain sealed until the deckheads achieved an ambient external temperature. The master also made the appropriate calls to the local authorities, ensuring that assistance would be on hand when the ferry arrived alongside.

- **Poor communication: The local fire and rescue service inadvertently reignited the fire** by opening the access hatch. This was inappropriate as the situation was under control and the correct action would have been to leave the compartment sealed until the deckhead temperature had fallen to ambient level. The master remains responsible for the vessel and communication is vital to build a clear picture of the situation. The fire officer's actions were well meaning; however, the outcome was avoidable damage to the vessel.

IMCA can draw on no similar instances of an actual vessel fire being made worse by lack of communication or lack of co-operation between the vessel crew and the local fire brigade. However, the main issue is here is that a situation was made much worse by that lack of communication. This is in no way unique and is to be guarded against.

Work hard to maintain clear and open communications, whether between vessel crew and project crew, vessel crew and management, deck and bridge, rigging crew and crane operator, client and contractor, contractor and sub-contractor, to name but a few.

2 Clogged tumble-dryer exhaust fan - potential for fire

What happened

During a weekly inspection of the laundry room on a vessel, rags and lint twisted together were found in the exhaust fan of one of the dryers. Further investigation revealed more accumulated lint in the dryers' outlet exhaust pipe. When the end of the outlet pipe was removed to check the inside, it was found to be almost completely blocked with lint.



Our member notes that it would only have taken a small spark, short circuit or static electricity inside the drying machine for there to have been a fire.



What went wrong

There was no regular checking or cleaning of filters and exhaust ducting. Build-up of dust and residue inside the exhaust ducting could have caused the safe operational temperature limits of the dryer to be exceeded, with the possible consequence of a fire.

What needs to be done

- Ensure regular check and clean of tumble dryer exhausts and filters;
- Regular check of ventilation pipes and systems which may create lint traps where lint accumulates over a long period of time, creating a potential fire hazard;

- Ensure design and installation of tumble dryers enables easy and full access to exhaust ducting and filters.

Members may wish to refer to

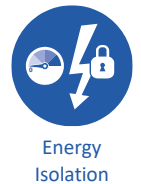
- [Auto-ignition of laundry items \(2018\)](#)
- [Near miss: potential fire in the laundry room \(2018\)](#)
- [LTI: Burn to hand while working in laundry \(2017\)](#)
- [Fire: Spontaneous combustion of towels \(two incidents, 2016\)](#)
- [Near-miss: Laundry fire hazards \(two incidents, 2016\)](#)
- [Tumble dryer fire onboard a vessel \(2009\)](#)

3 Dummy hot stab ejected during leak investigation

What happened?

A high potential near miss occurred when a dummy hot stab was ejected at 20,000psi. Personnel were out of the direct line of fire but within 1-2 meters of the skid. Issues of weeping tubing on a skid had been identified and required investigation. The required 'Blue Logic' dummy stab was not readily available, and it was decided to use a 'Seanic' dummy stab manufactured to the same design code (API 17H) and thought to be interchangeable. A maximum test pressure of 20,000psi was applied in 1,000psi increments and had been held for 30 seconds when there was a loud noise, and the hot stab was ejected from the receptacle. The hot stab was propelled 6 metres before striking the ground and then travelling another 2 metres before coming to rest. At the time of the failure personnel were not directly in line of fire but there were people less than 2 metres from the travel path of the object.

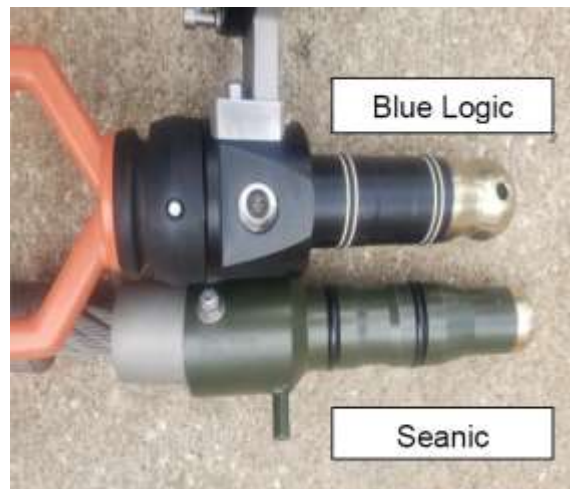
Applicable
Life Saving
Rule(s)



Energy
Isolation



Incident site (stab final position) Hot stab



Hot stab comparison

What went wrong

- The wrong hot stab was used. A misalignment of 0.75mm between the hot stab and receptacle (invisible to the naked eye) failed at 8000psi during the test. Subsequent tests confirmed the 'Seanics' dummy hot-stab and the 'Blue Logic' receptacle are incompatible;
- There was no J Lock in place to secure the hot stab;
- Procedures not followed:
 - The operation was not conducted within the expected Safe System of Work (SSoW) process;
 - There was no documented Task Risk Assessment (TRA), Permit to Work (PTW) or Toolbox Talk (TBT) for this activity;
 - A Factory Acceptance Test document which includes the test steps was not referred to.

- No Management of Change (MOC) was conducted to establish the safe application and authorization for the use of the ‘Seanics’ dummy hot stab;
- Barriers
 - Although barrier tape had been used to define an exclusion zone, this was not at sufficient distance from the test and five persons were located to the side of the test within 1-2 meters of the path of the flying object;
 - No blast barriers were used.

Recommendations

- During pressure tests, ensure that:
 - ONE single person is nominated as responsible;
 - Only essential personnel are present, that an exclusion zone is established at safe distance and that blast screens are positioned where appropriate;
 - The test procedures are clearly explained to all involved and that they all confirm their full understanding;
 - A safe system of work is fully implemented and maintained throughout the duration of the test;
 - Correct test fittings are confirmed securely attached, hoses secure, equipment has been maintained and is within the expected range of the pressure test;
 - Any monitoring during pressurization is conducted from a remote or safe position;
 - If leaks are experienced the system is fully depressurized before investigating;
 - If possible, test when there is minimum personnel or vehicle density or movement.
- Whenever possible request the supply of and use hot stabs and receptacles from the same manufacturer.

Members may wish to refer to

- [Stored pressure: Corrosion coupon plug ejected from pressurised pipeline](#)
- [High potential near miss: working on pressurised pipeline](#)
- [Fatality: Stored pressure release](#)

4 Near miss: load lifted without notice putting crew in the line of fire

What happened

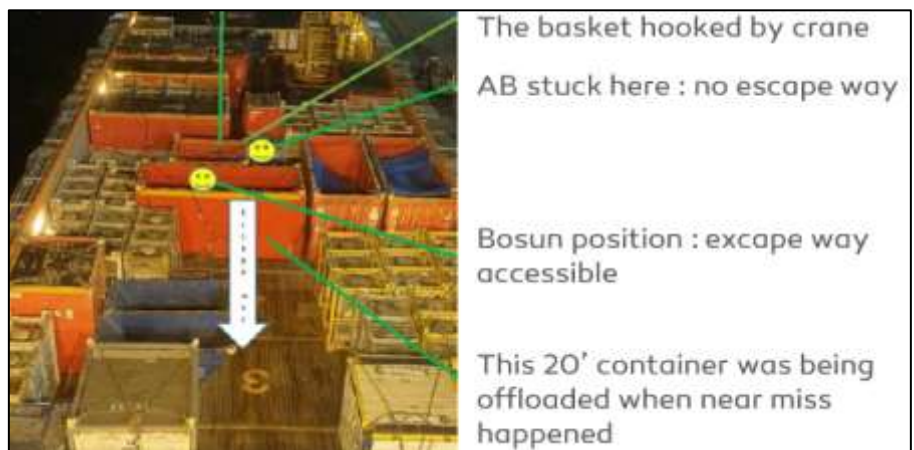
During cargo operation at an offshore installation, the deck foreman on the installation noticed that a sling was twisted while starting to heave up a cargo. An AB on deck was asked to remove the twist, when the crane operator started lifting the load without proper notice, which placed the AB between the cargo and a 20’ container. This could have resulted in a fatality or severe injury. The operation was stopped immediately; there were no injuries.

Applicable Life Saving Rule(s)

Bypassing Safety Controls Line of Fire

What went wrong

- The crane operator had poor visibility on deck;
- Poor communication:
 - The deck foreman on the offshore installation rejected the officer of the watch’s request to disconnect the crane before sending the AB;



- Nothing was done to secure the safety of the AB in charge of untwisting the sling;
- The crane operator started to lift with no instructions nor signal.

Lessons learned

- When the situation deteriorates, STOP. Become extra vigilant, remain aware of what is going on around you, ensure good communication between all stakeholders;
- Ensure clear deck policies and stop work policies are followed;
- Don't take short cuts, don't hurry, don't assume that everything is OK.

Members may wish to refer to

- [LTI Incident – Crew Struck by Cargo During Lifting Operations](#)
- [Uncontrolled movement of crane block and pennant during lifting operations at sea](#)

5 Open toed shoes on an escalator (not work related)

What happened

A member reports an incident in which someone got their leisure footwear (sandals) caught in an escalator and narrowly escaped a serious injury to their foot. Someone's right sandal was caught in the escalator. The person managed to get their foot out before their toes were trapped.

Applicable
Life Saving
Rule(s)



Line of Fire



What went wrong

The footwear was not on tightly enough and the wearer's foot position allowed the point of the sandal to enter the gap between the escalator tread and the chute.

What was the cause?

Lack of situational awareness – the sandal wearer was either not watching the gap where the escalator treads were disappearing, or did not know the gap was large enough to snag the sandal, or most likely both. In any scenario he clearly had his foot in the line of fire, and was lucky not to sustain an injury;

Lessons Learned

- Remain aware of your surroundings at all times, especially around moving or rotating equipment and fixtures;
- "Task seen as routine" – beware of ignoring or becoming hardened against risks that are present, because you have seen them hundreds of times before, and nothing has happened;
- Ensure that clothing and footwear, particularly PPE, is correctly sized, fitting properly and worn correctly.

Members may wish to refer to

- [LTI: Feet trapped in motion compensated telescopic gangway](#)
- [How PPE works – a reminder](#)
- [High potential incident – Foot trapped under ram cylinder](#)
- [Trip and fall down hotel stairs causing serious wrist injury](#)