

IMCA Safety Flash 18/17

July 2017

These flashes summarise key safety matters and incidents, allowing wider dissemination of lessons learnt from them. The information below has been provided in good faith by members and should be reviewed individually by recipients, who will determine its relevance to their own operations.

The effectiveness of the IMCA safety flash system depends on receiving reports from members in order to pass on information and avoid repeat incidents. Please consider adding the IMCA secretariat (imca@imca-int.com) to your internal distribution list for safety alerts and/or manually submitting information on specific incidents you consider may be relevant. All information will be anonymised or sanitised, as appropriate.

A number of other organisations issue safety flashes and similar documents which may be of interest to IMCA members. Where these are particularly relevant, these may be summarised or highlighted here. Links to known relevant websites are provided at www.imca-int.com/links. Additional links should be submitted to info@imca-int.com

Any actions, lessons learnt, recommendations and suggestions in IMCA safety flashes are generated by the submitting organisation. IMCA safety flashes provide, in good faith, safety information for the benefit of members and do not necessarily constitute IMCA guidance, nor represent the official view of the Association or its members.

Summary

Some of the incidents here are related only to the extent to which rigging, lifting and mooring equipment is involved, or has failed, or has been inappropriately used. The first incident is a capsize of a small boat, wherein a root cause was found to be the prioritisation of production over safety. In the second, also a high potential near miss, we read of damage to a small boat when the painter failed during recovery. Next, two incidents relating to subsea lifting. In the first, there was an unplanned and uncontrolled ascent of lift bags to the surface. In the second, a strand of a subsea lifting wire was found damaged. The fifth incident covers the parting of a mooring line and then a fuel line during at-sea bunkering operations, and the sixth incident describes inappropriate and unsafe techniques to control hydraulic levers during mooring operations.

1 High Potential Incident: Fast Rescue Craft Capsized

What happened

A fast rescue craft (FRC) being used in a near-shore shallow water seismic survey in tropical waters, capsized causing four people to fall into the sea. There were no injuries, but most of the work equipment was either damaged or lost. Two of the personnel were not wearing lifejackets.

What went wrong/causes

The operation had been taking place in good weather; however, minutes before the incident the weather conditions deteriorated rapidly with the wind quickly changing direction. The coxswain recommended running for shelter, but was overruled by offshore vessel management.



Image: Wikipedia commons

Towed equipment became snagged on the seabed causing it to act as an anchor, turning the small boat stern towards the weather. The crew were not able to free the equipment, and the small boat, which was operating at its maximum load capacity, took on water over the stern and capsized.

What lessons were learnt?

- ◆ Never allow production pressures to take precedence over the safety of personnel. In this instance the coxswain effectively called a 'Stop the Job' and was overruled;

- ◆ Small boats should be capable of operating safely in all expected weather conditions. In this case, the FRC being used for operations was loaded to capacity and had limited deck space for efficient deployment/recovery of equipment;
- ◆ Always ensure that procedures are in place for foreseeable emergency situations. This scenario (equipment snagging) had not been adequately risk assessed and mitigations were not in place. Had a system been implemented to allow the in-water equipment to be released from the vessel then it is unlikely that the situation would have resulted in a capsize.

What were the actions?

- ◆ Reiterate to all personnel that the company will always support a **'Stop the Job'**, putting safety over production;
- ◆ Review small boat procedures and associated risk assessments to ensure all reasonable emergency situations have been considered;
- ◆ Ensure that small boats are suitable for the task and capable of working in all expected environmental conditions. Never operate to the absolute limit of the vessel.

Further small boat incidents

IMCA has received a number of further incidents involving small boats recently, which are included here:

Incident 1 - during small boat (Zodiac) operations, a boat was thrown by a long and heavy swell against the side of a boat landing on a single point mooring (SPM). As a result the Zodiac was damaged; there was an air leak to the rear end floatation collar. No one was harmed. The boat was safely recovered after operations and was examined on deck. A crack 150mm long was found on the inner face of starboard side rear floatation. Repairs were made.

Incident 2 - a small boat (Zodiac) was involved in tanker mooring operations at a single point mooring (SPM), and was dealing with attaching floating hoses. Owing to swell conditions, the rolling and pitching of the Zodiac during this operation endangered the safety of the personnel on board. The small boat was pushed under a floating hose and a rigger was hit on his shoulder with a hose chain.

IMCA reiterates the recommendations outlined by our member above, particularly encouraging members to ensure that small boats are suitable for the task and capable of working in all expected environmental conditions.

Members may wish to review the following incidents:

- ◆ [Fatality after capsize of workboat with eight persons on board \(July 2011\)](#)
- ◆ [High potential near-miss: Damage to small boat during offshore survey operations \(June 2016\)](#)

2 Painter Parted during Small Boat Operations

What happened

The Marine Safety Forum (MSF) reports an incident in which the forward painter quick release on a fast rescue craft (FRC) parted during recovery of the boat. Three crew members were in the FRC.

During recovery of the FRC, the forward painter quick release parted just as the FRC was lifted out of the water. The FRC then swung to starboard causing the stern to come into contact with the mother vessel. The jet guard struck the side of the vessel and the jet itself struck the side of the vessel. The FRC bucket was cracked, as was the jet inside the bucket and the jet guard was found slightly bent. The FRC was recovered with no injuries to the crew-members.

What went wrong/causes

- ◆ The forward painter quick release mechanism used had no time limit for use nor inspection criteria, and had been in operation for two years;
- ◆ A previous near miss had been recorded where the clip had parted resulting in a visual inspection of the 'outside' of the quick release where the spring mechanism cannot be viewed.



Lessons learnt/actions taken

The incident happened in calm summer conditions. The crew were briefed and trained (irrespective of weather conditions) to brace themselves and hold on tightly when being lifted; had this not been the case then there was potential for injury or fall from the FRC.

The springs inside the quick release clip will deteriorate with weather exposure and high usage and cannot be viewed from the outside. There were no records of inspections within the planned maintenance system.

The following corrective actions were carried out:

- ◆ The quick release mechanism was replaced immediately with a G-link type, eliminating the spring mechanism;
- ◆ Planned maintenance system – 6 monthly visual inspection implemented;
- ◆ Risk assessment reviewed;
- ◆ All crew reminded to be conscious of dangers at all times – complacency is not an option!

Members may wish to review the following incident:

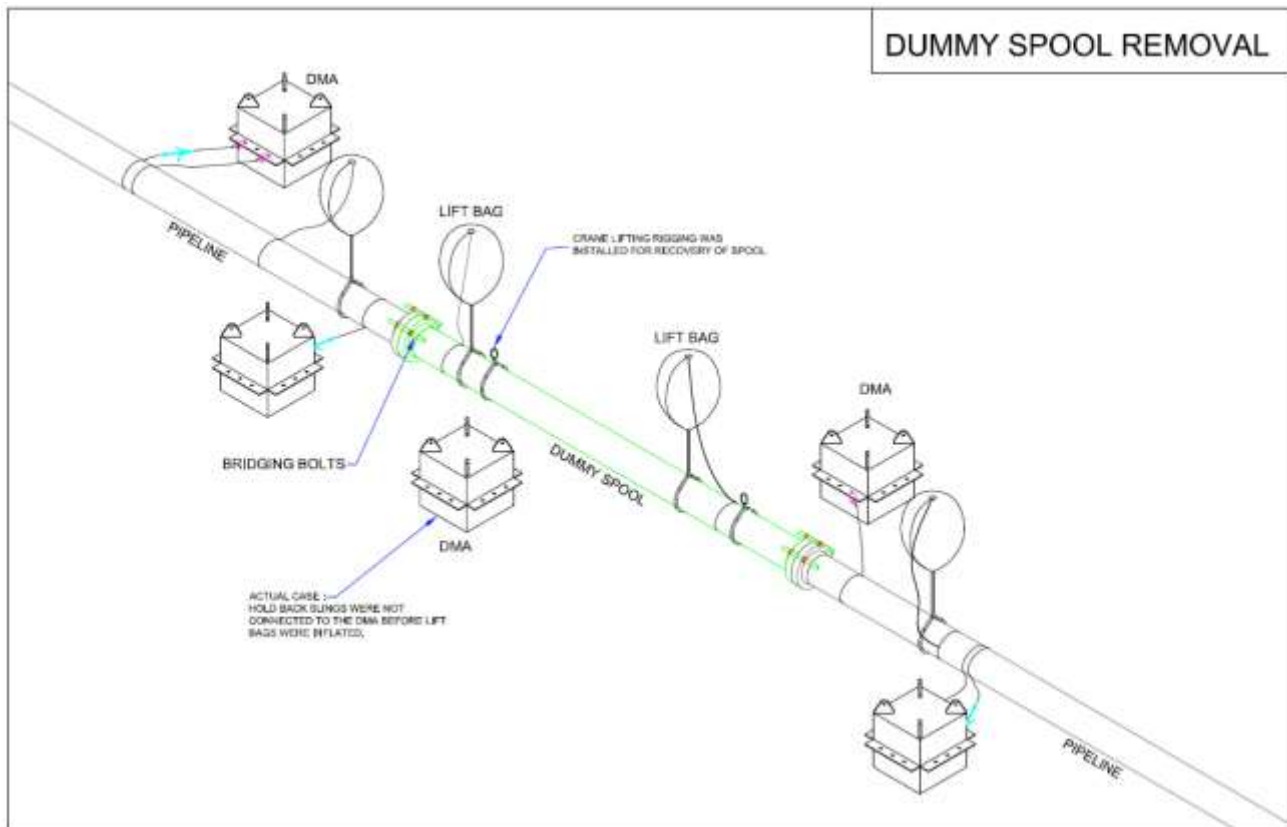
- ◆ [Failure of rescue boat release mechanism](#)

3 Near Miss: Failure of Subsea Lifting Equipment

What happened

A dummy spool connected to two lift bags made a rapid and uncontrolled ascent to the surface. The incident occurred during diving operations on a construction barge. There were no immediate consequences but the event had potential to cause serious injury to personnel and damage to assets.

Divers were carrying out a dummy spool removal activity on the seabed at a depth of 110 fsw. As the last bolt was being removed the spool section broke free and rapidly ascended to the surface. When the bags arrived at the surface they lost some of their volume, resulting in partial deflation, and the load fell back to the seabed, away from the dive site. The load was later safely recovered to the deck of the barge.



What went wrong/causes

Investigation suggested that the **immediate cause** was the absence of hold-back lines from the spool section to suitable fixed anchoring points.

The lift bags had been inflated without appropriate 'hold-back rigging' in place and that there had been a failure to follow company procedures, handover instructions and guidance detailed in [IMCA D 016 – Open parachute type underwater air lift bags](#).

It was also noted that the dive plan had listed 'install lift bags complete with hold-back rigging to the DMA' as a specific activity requiring supervisor verification and sign-off on step completion.

The risk had also been identified in the risk analysis and appropriate mitigations defined. In addition, dedicated dead man anchors (DMAs) had been deployed to the seabed for use as anchoring points.

Lessons learnt

Post incident debriefs and 'times out for safety' were held with the dive teams, including details of the incident, review of video footage and sharing key lessons learnt, identifying the following lessons:

- ◆ Ensure the dive plan is read, understood and followed;
- ◆ Ensure mitigations identified in risk assessments are applied stringently;
- ◆ Ensure the diving task is conducted following company working procedures;
- ◆ Ensure the diving task and company procedures follow IMCA recommendations on any diving operation;
- ◆ Ensure dive supervisors fully understand their ownership and accountability for the activities with which they are tasked.

Members may wish to review the following incidents:

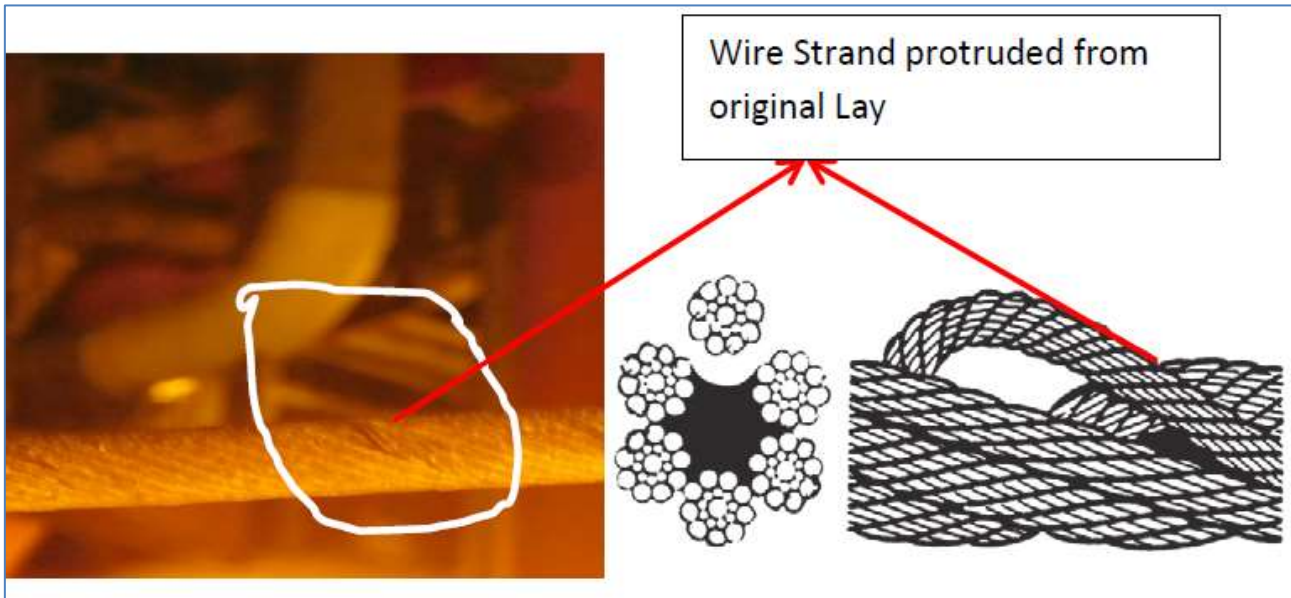
- ◆ [Uncontrolled ascent of spool and diver during a lifting bag operation](#)
- ◆ [Uncontrolled ascent of lift bag](#)

4 Near Miss: Single Wire Strand Protruded from Original Lay

What happened

During deployment of the bell and clump weight from a vessel for subsea inspection of a riser line, it was observed that a single wire strand protruded from original lay ('high stranding'). The bell was recovered, the clump weight wire visually inspected and it was determined that a 60m cut back of damaged rope take place. The damaged section was removed and the rope re-terminated.

Third party mandatory load test and certification of the item was carried out and certified as fit for purpose and diving operations resumed.



What lessons were learnt?

- ◆ The clump weight should not remain subsea during periods of increased tidal current above the limit recommended for diving operations;
- ◆ There should be thorough visual inspection of all the ropes and sockets during recovery and deployment of clump weight;
- ◆ Ensure frequent monitoring for the ropes and sockets, and any findings recorded;
- ◆ Any small defects, damage or abnormality on ropes should be brought to the attention of the Competent Person;
- ◆ Precautions should be in place to avoid stress on ropes caused by adverse weather conditions.

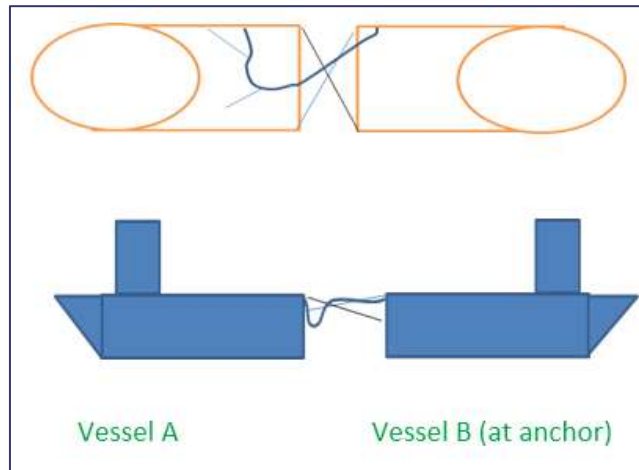
Members may wish to review the following incidents:

- ◆ [Near miss: Fault spotted in subsea lifting wire](#)

5 Parting of Hawser and Bulk Cargo Hose during Tandem Mooring

What happened

During at-sea bunkering operations between two vessels, a mooring line parted and then a fuel hose parted also. There was no spillage of fuel. The incident occurred when one vessel (Vessel A) arrived to deliver fuel to another vessel (Vessel B), which was at anchor with thrusters running.



It was decided to moor both vessels in tandem. Vessel B would maintain heading and control yaw using thrusters. Both vessels were moored to each other using one rope in a criss-cross fashion.

Vessel B could not start its fuel pump and thus the fuel transfer could not be started. The two vessels stayed connected in tandem.

The mooring rope from Vessel A parted due to jerking and continuous yawing. Crew on Vessel B were told to close the deck fuel valve and disconnect the hose for retrieval. The hose was disconnected and crew on Vessel A started retrieval using the port tugger winch. While they were retrieving the hose, it got entangled with the remaining single mooring rope and the vessel structure, and the hose parted on deck. No spillage was noticed as hose was empty.

The parted mooring rope and bulk cargo hose were retrieved by Vessel A.

What went wrong/causes

- ◆ There were 1.5m seas and wind of approx. 14 knots. Both vessels were yawing – the mooring ropes was getting intermittent jerks which resulted in one of them parting. The uncontrolled heaving of the bulk cargo hose resulted in it parting;
- ◆ Both vessels could have decided to call off or postpone the operation until the fuel pump was operational and/or weather would improve.

Members may wish to review the following incident:

- ◆ [Near miss: Hose parted](#)

6 Unsafe Mooring Practices

What happened

During a routine marine inspection of a vessel it was observed that rope lines had been attached to the mooring winch control levers to facilitate 'remote' operation of the winches.

This is an inappropriate and unsafe practice. There are a number of very good reasons why, including:

- ◆ Accidentally pulling on the wrong line and performing an unintended action;
- ◆ Crew member getting entangled in the lines and inadvertently operating the winch;
- ◆ Lack of proper control of winches.

Mooring and unmooring a vessel is inherently a potentially dangerous operation and requires crews to be in full control of all associated equipment.



Recommendations included:

- ◆ Adequate personnel under the supervision of a certified officer should be available for:
 - handling of equipment and gear
 - communications
 - directing the winchman.

Members are recommended to the following IMCA publications:

- ◆ [IMCA SEL 029](#) – *Mooring practice safety guidance for offshore vessels when alongside in ports and harbours*
- ◆ [IMCA SEL 038](#) – *Mooring incidents* (DVD).