IMCA Safety Flash 03/18

January 2018

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.

1 Snapped Mooring Line

What happened?

A mooring line (stern line) was passed through the starboard chock from aft station while the vessel was entering the lock at a port. This mooring line was to be made fast to a bollard in the lock. The vessel was moving about 0.7 knots to be in position.

The line was slackened as the vessel moved forward. After about 15 meters, the line got stuck in the storage drum of the winch; this prevented it from paying out even when the winch was being turned to allow slackening of the line. Due to the forward movement of the vessel, the line was not able to carry the tension and snapped near the winch drum.

No crew were hit by the line parting. All crew were well clear from the snap back area.

What went wrong? What were the causes?

The mooring line got stuck in the storage drum of the winch.

Lessons learnt

Before any mooring operation, there should be:

- A pre-mooring tool box talk to ensure that mooring teams are aware of the potential hazards;
- A briefing of crew on mooring stations on what the rope/line configurations will be;
- A check of the condition of mooring equipment and lines before use.

Before mooring operations:

- Ensure mooring lines are laid out on the deck and remove any jammed or stuck ropes or lines in the drum or winch;
- Establish two-way communication between the mooring stations and the bridge;
- Ensure all persons involved in mooring operations wear appropriate personal protective equipment (PPE).

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

Members may wish to refer their crews to the following IMCA Safety promotional material and safety guidance:

- IMCA SEL 029 Mooring practice safety guidance for offshore vessels when alongside in ports and harbours;
- IMCA SEL 036 In the line of fire (longer video);
- IMCA SEL 038 Mooring incidents (longer video);
- Short (two minute) video Line of fire.

Members may wish to refer to the following incidents:

- High potential near-miss: mooring rope parted;
- Mooring line failure resulting in serious injury.

2 Gangway Damaged When Lifting Line Parted

What happened?

A lifting line failed whilst vessel crew were lifting the gangway to stow it in position on departure from an anchorage. The gangway was hoisted to a position 20-30 cm below the final position, when suddenly the wire parted making the gangway pivot at the top platform hinge, and it fell freely to water level. Due to this free fall and sudden jerking the gangway was severely damaged – multiple cracks, rendering it unusable. It had to be replaced. There were no injuries.

What went wrong? What were the causes?

Our member noted the following:

- The gangway hoisting mechanism was an electric motor with a remote control. Both were working well;

The **immediate cause** was found to be that the gangway lifting wire had deteriorated and was not in good condition. A causal factor was inadequate maintenance – there was inadequate and improper greasing. The wires were dry on the inside resulting in the wire deteriorating faster.

The **root causes** were determined to be

- The risk of this wire failing on this recurring task was seen as tolerable;
- There was also no proper supervision or verification of the maintenance by the supervisor.

What actions were taken?

- Ensure required checks and maintenance of the gangway are carried out;
- Monitor overall condition of the gangway *including the wire* when picking up and lowering, and report any defects noted immediately;

- Ensure crew are aware of how to effectively grease lifting wires;
- Supervise and verify the greasing of wires to ensure this is done correctly.

Members may wish to refer to the following similar incidents:

- Near miss: corrosion caused crane boom failure during heavy lifting;
- Near miss: broken chain on sling of personnel lifting basket;
- Lifting rigging on 'frog' personnel transfer capsule.

3 Fast Rescue Craft Damaged by Inappropriate Use

What happened?

A vessel was engaged in a joint offshore oil spill response exercise involving third parties. During the exercise, the client instructed the Master to use the Fast Rescue Craft (FRC) of the vessel as a towing boat for repositioning the oil booms deployed.

What went wrong? What were the causes?

The mooring bollard on the FRC broke under tension when the FRC started to tow the oil boom.

The FRC was not fit for this purpose and this was not considered while planning or risk assessing the task in preparation for the exercise. A suitable work boat should have been used for positioning of the oil boom.

Members may wish to refer to the following incident:

- High potential incident: fast rescue craft capsized.

Incidents involving small boats, whether work boats, Fast Rescue Craft (FRC), lifeboats or Crew Transfer Vehicles (CTV), should always to be treated as having high potential for serious injury or fatality. Please visit https://www.imca-int.com/alerts/safety-flash/ where you can enter any phrase or word and search through the wording of over 1000 safety incidents. Try searching for **boat** (90 hits), **lifeboat** (34 hits) or **fast rescue craft** (10 hits).

4 Inadequate Handling and Storage of Potentially Hazardous Substances

What happened?

Two drums with unknown chemicals were observed, floating in the sea. The crew retrieved these drums onto the vessel, but they were not stored safely.

What went wrong? What were the causes?

The vessel crew retrieved the drums on board without considering the risks, i.e. they were not aware of the type of product, or the condition of the plastic drums. The drums were placed without drip trays in close vicinity to a deck area commonly accessed by the crew, potentially exposing personnel to unknown risks;

Shore side management were not informed about the collected chemicals.

Lessons learnt

- A risk assessment should be carried out before handling chemicals or unknown substances potentially hazardous to health;
- Vessels should report immediately if unidentified floating objects are observed and retrieved onboard, so that adequate collection and destination can be arranged.

Members may wish to refer to the following incidents:

- Floating ignition source drifts near to Production Platform;
- Chemical spill leads to costly deck replacement;
- Unlabelled containers: chemicals stored in drinking water bottles.

5 Near Miss: Potential Fire in The Laundry Room

What happened

A vessel was on standby when a fire alarm was activated from the laundry room. The steward was nearby and took immediate action by switching off the relevant circuit breaker. All crew members proceeded immediately to the muster station. The fire-fighting team subsequently conducted an assessment and found a dryer machine had overheated, due to prolonged use and being overloaded with clothing.

What went wrong? What were the causes?

- **Immediate cause**: Around ten days earlier, the crew had carried out repairs on the dryer and replaced its thermostat with a spare thermostat from oven, as a temporary measure;

- This allowed the dryer machine to continue to operate when overheated;
- The failure and subsequent repair of the dryer with the inappropriate part had not been reported to the company, though this was required by company procedures;

Lessons learnt

- Replacement of components should follow original specifications; any changes from the original, if approved, should have followed a management of change process. In this particular case, the change of specifications would not have been approved and the incident would not have occurred.

This was a potentially very serious incident which could easily have been prevented. Procedures were not followed; the failure and repair were not reported to management. The repair using an inappropriate part introduced a huge further risk to the safety of the vessel and its crew, and should never have been permitted.

Members may wish to refer to the following incidents:

- Tumble dryer fire onboard a vessel;
- Near Miss: Laundry Fire Hazards;
- Fire incidents.

6 Fixed CO2 Fire Extinguishing Systems - US Coast Guard Alert

What happened

The United States Coast Guard (USCG) has published Safety Alert 13-17 relating to Fixed CO2 fire extinguishing systems. This alert follows discovery of critical deficiencies in the fixed firefighting equipment on a container ship. The conditions associated with the onboard CO_2 system may have prevented the system from operating correctly or, if not discovered, the system may not have operated at all in an emergency situation.

What went wrong? What were the causes?

During the inspection, it was noted that some of the hoses which connected the large CO_2 cylinders to the manifolds were wrapped around the bottle valve handles (as shown in the accompanying photographs). The bottles could have been in place for a long period of time, in their original positions without regard to the stresses placed on the connecting hoses.

Inspectors also found significant cracking of the CO_2 discharge hoses which were under tension (see photograph). This condition is known as ozone cracking and occurs when very small amounts of ozone in the atmosphere interact with the polymers that compose rubber products and certain other elastomers when those products are under tension.

Lessons learnt

The USCG notes that IMO has published MSC.1/Cir.1318, "*Guidelines For The Maintenance and Inspections of Fixed Carbon Dioxide Fire extinguishing Systems*". This provides the minimum recommended level of maintenance and inspections for fixed carbon dioxide fire-extinguishing systems on all ships in order to demonstrate that the system is kept in good working order, as specified in SOLAS regulation II2/14.2.1.2. In addition to other important information, it provides useful maintenance and inspection guidance.