

IMCA Safety Flash 04/14

April 2014

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 webmaster@imca-int.com

I LTI – Thumb Laceration

A member has reported an incident in which a crew member was injured when a can of enamel spray paint failed under pressure and parted along the seam. The crew member suffered a significant laceration to his right thumb. The incident occurred during a routine maintenance when the crew member was about to start painting.

Upon inspection of the can, there were signs of corrosion along the seam of the can, which has caused the can to part unexpectedly under pressure.



Figure 1: Aerosol Spray Paint can from same batch as ruptured can



Figure 2: Ruptured aerosol can showing evidence of corrosion along seam

Our members' investigation revealed the following:

- ◆ There was noticeable corrosion of the seam of the aerosol can;
- ◆ The vessel had been operating in humid tropical climates over the past 12 months, which may have caused more rapid corrosion and deterioration of the aerosol can;
- ◆ There was no system in place to monitor receipt of chemicals or the time the chemicals had been on board.

Our member took the following actions:

- ◆ Thorough visual inspection of all aerosol cans on board and also fleet wide globally;
- ◆ Amended procedures for dealing with chemicals and other substances hazardous to health, to record when chemicals are received on board and set a maximum usage period;
- ◆ Reviewed company list of approved chemicals and see if it was practical to reduce number of aerosols used;

Members may wish to review the following similar incidents (key words: *aerosol, corrosion, humid*):

- ◆ [IMCA SF 01/03](#) Incident 3 *Punctured Aerosol Results in Chemical Burns*;
- ◆ [IMCA SF 09/07](#) Incident 1 *Lifting Rigging on 'Frog' Personnel Transfer Capsule* (key quote: '*corrosion may have been accelerated due to the hot and humid tropical operating environment in which the equipment was deployed*').

2 Near Miss: Failure to Reconnect Fire Suppression Systems

A member has reported an incident in which it was discovered that key components of a fire suppression system had been left disconnected after a dry docking period. The omission was discovered when a crew member was undertaking a routine tour of the vessel and noticed that a cylinder from the FM200 Fire Suppression System was disconnected. This was immediately reported, and upon further investigation, 6 out of 10 FM200 cylinders were found to be disconnected. All cylinders were immediately reinstated to operational status, both the integrity and readiness of the system was also confirmed.

During the incident investigation, it was discovered that the corresponding Isolation Confirmation Certificate (ICC), which would have highlighted the system's inoperative state, could not be found. The extended period isolation register stated that the system had been reinstated, with '*Original paper work missing*' written in the comments section. It is assumed the contractor returned the cylinders to their original locations, without reconnecting them, as the vessel was still in dry dock, and it was a yard requirement that the system remained isolated during dry docking.

Our member drew the following lessons:

- ◆ There was insufficient management and control of the work task;
- ◆ There was insufficient detail in planned maintenance work orders;
- ◆ There was insufficient detail in area safety inspection checklists;
- ◆ There was insufficient management and control of the Safe System of Work.

Our member took the following actions:

- ◆ Developed and implemented a new vessel return to service procedure (for post dry dockings and maintenance periods);
- ◆ Reviewed planned maintenance routines for FM200 Fire Suppression Systems and similar systems, to ensure controls and checks are suitable and sufficient;
- ◆ Developed a Safety Officer Safety Inspections checklist.

Members may wish to review the following similar incidents (key words: *fire, suppression*):

- ◆ [IMCA SF 07/11](#) – Incident 6 *Incorrect Information in user manual for fixed fire fighting system*;
- ◆ [IMCA SF 05/13](#) – Incident 6 *Pressure Switch Location for fixed fire suppression systems*.

3 Oil Spill Incident

A member has reported an incident in which a bunker hose parted and a 40 litre diesel oil spillage occurred onto the deck and into the water. The incident occurred during transfer of fuel to a shore-side road tanker. When the fuel transfer pump started, initially at low pressure, a knocking sound was heard followed by the bunker hose disconnecting and parting from the bunker manifold. Some 2 litres of diesel oil was sprayed into the sea owing to the wind, whilst the majority of the spill was contained on the vessel's main deck. The Chief Engineer, who was on deck, gave the order by VHF to stop the fuel transfer pump immediately and at the same time he reported to Duty Officer on the bridge. The pump was stopped and Chief Engineer on deck with duty crew secured the hose on the vessel deck to avoid the diesel oil spraying in to the water and to minimize environmental pollution.

Emergency procedures were followed and the spill was cleaned up according to the Shipboard Marine Pollution Emergency Plan (SOPEP). The diesel oil spilled on the vessel deck was contained; patches of light sheen were observed on the sea water surrounding the vessel as a result of the small amount of diesel oil spraying from the hose. No injuries were reported; slight environmental pollution resulted from this incident.

Our member's investigation revealed the following:

- ◆ All personnel involved, including the Master, Chief Officer, Chief Engineer and 2nd engineer were properly certified and qualified and extensively experienced with this vessel and the nature of operation;

- ◆ There was a risk assessment in place for bunkering and transfer of diesel fuel, as well as an environmental aspect impact register, outlining the possible risks involved in this operation, and listing the proper control measures. During interviews with the vessel's crew, it was evident that officers and ratings were familiar with these documents;
- ◆ A checklist, toolbox talk, and job hazard analysis were found to have been completed for bunkering and transfer of diesel fuel;
- ◆ Before starting delivery of diesel oil, the Chief Engineer had conducted a thorough physical inspection of the delivery line, including valves, hose and connections etc.;
- ◆ Communication between all parties was satisfactory;
- ◆ The Chief Engineer had obtained verbal confirmation from the shore truck operator that the valves were open and the truck was ready to receive bunkers. In spite of this, it is believed that the immediate cause of the incident was that the road tanker receiving valve was closed at the time the transfer pump was started and caused the sudden rise of pressure in the bunker hose which resulted in the hose connection failure.

The following lessons were learnt:

- ◆ Due to the nature of such operations, additional effort should be undertaken to ensure that the receiving party is ready 'Valves open, communication effective, prepared for emergencies', before starting the pump;
- ◆ All connections in use should be appropriately certified, including hoses, reducers, camlock connections etc, with certificates available on site /vessel at all times;
- ◆ All such connections should still be properly inspected before starting fuel transfer operations;
- ◆ The temporary plugging of all deck openings during fuel transfer operations would prevent such damage to the environment in case any spill occurs;
- ◆ Ensure remote stop for the fuel transfer pump on deck is operational and crew are familiar with how to use it.

Members may wish to review similar incidents as follows:

- ◆ [IMCA SF 11/11 Incident 6: Oil Spill in Port whilst Discharging Waste Oil](#);
- ◆ [IMCA SF 13/13 Incident 2 Bunkering hose cut by propeller](#);
- ◆ [IMCA SF 10/13 Incident 5 Fuel Oil bunkering safety](#).

4 Potential Dropped Objects Found Lodged in Holes on a Freight Container

The Marine Safety Forum has published the following safety flash regarding a potential dropped object. Two loose metal pieces were discovered in the holes for fork-lifting on a freight container. These were found to be the covers for trip hazards on securing points on main deck of the vessel. The metal pieces had a weight of 3.2 kg and 7.1 kg.

The safety flash can be downloaded from www.marinesafetyforum.org/upload-files//safetyalerts/msf-safety-flash-14.06.pdf.

Members may wish to review similar incidents as follows:

- ◆ [IMCA SF 08/11 Incident 2: Recent Near Miss Incidents Involving Potential Dropped Objects](#).

5 Lower Stairwell Step Collapses Causing Injury

The United States Department of the Interior Bureau of Safety and Environmental Enforcement (BSEE) has published the following safety flash regarding an incident in which an injury occurred when a step on a stairwell collapsed causing the worker to fall to the deck and injure his knee.

The safety flash can be downloaded from www.bsee.gov/uploadedFiles/BSEE/Regulations/Safety_Alerts/SA-307.pdf