

IMCA Safety Flash 29/17

November 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

This safety flash comprises two incidents relating to vessel stability and watertight integrity, an incident relating to items falling from a crane, and then, two similar recent incidents involving water bottles that were used inappropriately as chemical containers. Only one of them was a near miss.

1 Loss of Tow and Subsequent Foundering of Two Vessels

What happened

The Danish Maritime Accident Investigation Board (DMAIB) published a Marine accident report on *Mærsk Battler's* loss of tow and the foundering of *Mærsk Searcher* and *Mærsk Shipper* in the Bay of Biscay on the night between 21 and 22 December 2016. *Mærsk Searcher* and *Mærsk Shipper* were configured in a side-by-side towing setup. During the passage, the fenders between the vessels on tow failed, and the vessels started to interact. This caused damage to the superstructure, which eventually compromised the watertight integrity of *Mærsk Searcher* and led to water ingress. She capsized and sank, and subsequently *Mærsk Shipper* was pulled under also. The crew of the towing vessel *Mærsk Battler* carried out a controlled breakage of the towing wire and came loose of the foundered towage.



The DMAIB regards the foundering of the two vessels as

... a systemic accident. This means that local and technical circumstances unfolding on board Mærsk Battler during the voyage cannot be isolated from the preceding organisational events and circumstances taking place months earlier. Thus, the investigation of the foundering of Mærsk Searcher and Mærsk Shipper is two-fold. It focuses on the technical circumstances leading to the foundering of the two ships and on the organisational circumstances facilitating these technical circumstances.

It is concluded in the report that the loss of fenders, collision and flooding of the unmanned ships under tow had been addressed in the risk assessment carried out, and that risk mitigating initiatives were in place for each risk item. However, these initiatives were ineffective. The DMAIB concludes that the risk mitigating strategies were mainly focused on preventing risk factors in isolation and left little or no contingency for acute interaction between the risk factors.

A full marine accident report has been prepared in English and is available [here](#).

Members may wish to refer to the following incidents:

- ◆ Don't lose your tow in heavy weather
- ◆ Tug capsized during operations

2 USCG: Remain Upright by Fully Understanding Vessel Stability

The United States Coast Guard (USCG) has published Safety Alert 11-17 relating to vessel stability and watertight integrity. Recently, a marine casualty involving a fishing vessel in the Bering Sea resulted in multiple fatalities and complete loss of the vessel.



The Coast Guard notes:

A Marine Board of Investigation is currently analyzing the various circumstances surrounding the casualty. Although the investigation is not complete, testimony and fact finding indicate that vessel owners, operators, and crews should give special consideration to vessel stability concerns.

The need for operators to understand their vessel's Stability Instructions (SI) cannot be overstated. It is important to understand the document. Operators and crew should seek out opportunities to further their knowledge of stability via courses, training, workshops, and visits from Naval Architects. They should also take advantage of other various initiatives, both mandatory and voluntary, to discuss and compare a vessel's current SI to the actual loaded condition prior to departing port. An independent review of a vessel's loaded condition, equipment, and operations can often provide important insights.

The Coast Guard provides guidance on:

- ◆ Steps to significantly reduce the risk of capsizing;
- ◆ Confirming the accuracy of stability instructions in the context of conversion or change;
- ◆ The risk of icing adding to dangerous instability.

The full Coastguard Safety Alert 11-17 can be found [here](#).

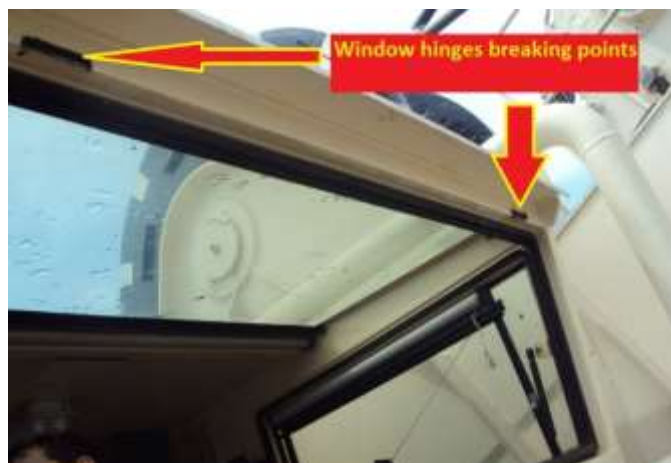
Members may wish to review the following incident:

- ◆ [Watertight doors left open at sea](#)

3 Dropped Object: Window Fell from Crane Cabin

What happened

A window came loose from the crane operator's cabin on a DSV, and fell approximately 4m to deck. No one was injured. It happened when, during a pause in crane operations, the crane boom was slewed away from personnel working on deck, and the crane operator asked to stand by for further instructions.



While waiting, he noticed a grease stain on the outside of the cabin wind shield. He opened the cabin upper window from the inside, in order to make it easier to clean the stain, when the hinges failed and the window fell out and down to the main deck. The crane operator immediately shouted to deck personnel to watch themselves as the window was falling down. Everyone got clear; no one was hurt as no one was under the crane cabin at that time. Our member held a “safety stand down” and a dropped object hazard hunt was conducted on the main deck.

What went wrong/causes

The hinges on the crane window failed, and the window fell out. Causal factors include:

- ◆ Inadequate design/construction of window/crane cabin;
- ◆ Inadequate maintenance/inspection of the crane window/crane cabin;
- ◆ Awareness of working at height, or of dropped object risks, may not extend to commonly unnoticed parts of the infrastructure of the vessel, platform or even of buildings, for example, windows.

Actions taken:

- ◆ Review, design and propose a new upper window hinge connection. This will apply to any other window hinge connections that are identical or similar;
- ◆ Develop checklist to address the inspection of windows, doors and hinge connections elsewhere;
- ◆ Correspond with the window/hinge manufacturer on the deeper causes of the hinges failing.

Parts, pieces, or debris falling from cranes – for whatever reason – remains a significant cause of dropped object reports amongst IMCA members.

Browse to <https://www.imca-int.com/alerts/search-safety-flash/?swpquery=crane+dropped> for a list of IMCA safety flash incidents relating to objects dropped from cranes.

4 Unlabelled Containers: Chemicals Stored in Drinking Water Bottles

What happened

One of our members has noted a trend of chemicals being decanted into unlabelled clear plastic water bottles of the sort commonly used for drinking water, and persons have assumed the chemicals to be water and taken a drink from the bottle. Our member noted two recent cases; in one case, a person ingested a small amount of the chemical; in the other, a person took a sip from the bottle but did not swallow any chemical.



Water bottle in the position at the time of incident (NB there was no red tag on it at the time)



Close up of the bottle showing that the contents (Loctite SF7063) looked like water



Examples of appropriate containers for decanting chemicals

What went wrong/causes

- ◆ Poor hazard awareness;
- ◆ Inappropriate and inadequate management of chemicals, putting the health and safety of employees at risk.

Storing chemicals in unlabelled containers presents an avoidable risk, especially when chemicals are placed into containers such as water bottles or soft drinks bottles. Accidental poisoning could result in serious harm. If unidentified chemicals are accidentally ingested, medical staff may not be able to administer the appropriate treatment in a timely manner, with potentially fatal consequences.

Lessons learnt

- ◆ Chemicals are often ordered in bulk quantities and may arrive in containers that are too large or heavy for everyday use. Subsequently the chemicals may be transferred to smaller containers that are easier to manage;
- ◆ If it is necessary to decant chemicals from their original containers:
 - Always decant the chemicals in the chemical storage area
 - Use a container in good condition, of type appropriate for the chemical
 - Ensure that both containers are clearly labelled. The labels should be clean and legible and should include:
 - full product name
 - Manufacturer name
 - safety data sheet (SDS) reference
 - **Do not use bottles normally used for, or associated with, drinking water**
 - Wear the correct personal protective equipment including gloves and protective eyewear;
- ◆ Storage of chemicals should be in accordance with the SDS and in a designated and properly controlled storage location;
- ◆ Persons dealing with chemicals should be fully aware of relevant SDS information and local regulatory requirements such as the Control of Substances Hazardous to Health (COSHH (UK)).

Members may wish to refer to the following similar incident:

- ◆ [Person accidentally drank hazardous substance](#)
- ◆ [Person accidentally drank hazardous substance: Unmarked bottle](#)

5 Near Miss: Water Bottles Reused for Fuel Storage

What happened

During a vessel inspection, plastic water bottles were discovered being reused to store diesel on board a fast rescue craft (FRC). There was no proper labelling or means of substance identification. The bottles were emptied subsequently and discarded accordingly. A safety stand down was held with the crew.



What went wrong/causes

- ◆ Inappropriate management and handling of flammable liquid – water bottles used not for their intended purpose, but for storage of diesel fuel without any proper labelling;
- ◆ The storage of fuel oil or other chemical substances in drinking water containers was a ‘usual’ practice for the crew due to alleged unavailability of special containers on board;
- ◆ Lack of safety awareness: the potential risks of fire or spill, and the possible consequences to the crew members, environment and to the vessel, were not identified, nor properly assessed.

Lessons learnt/Actions taken

- ◆ All flammable and combustible liquids should be stored in a designated storage area in special containers with sufficient ventilation means in line with SDS indicated storage requirements;

- ◆ **Water bottles should not be reused.** There have been and are incidents in the industry of accidental consumption of fuel, thinners and other substances, due to water bottles being reused for other substances;
- ◆ Vessel management should identify requirements for appropriate and suitable containers for chemical storage, observing regulatory and operational requirements, and arrange delivery as necessary;
- ◆ Full crew discussion and review of risks associated with inadequate handling/storage of flammable and hazardous substances.

Members may wish to refer to the following similar incidents:

- ◆ [Person accidentally drank hazardous substance](#)
- ◆ [Person accidentally drank hazardous substance: Unmarked bottle](#)