



# Mariners' Alerting and Reporting Scheme

MARS Report No 334 August 2020

## MARS 202042

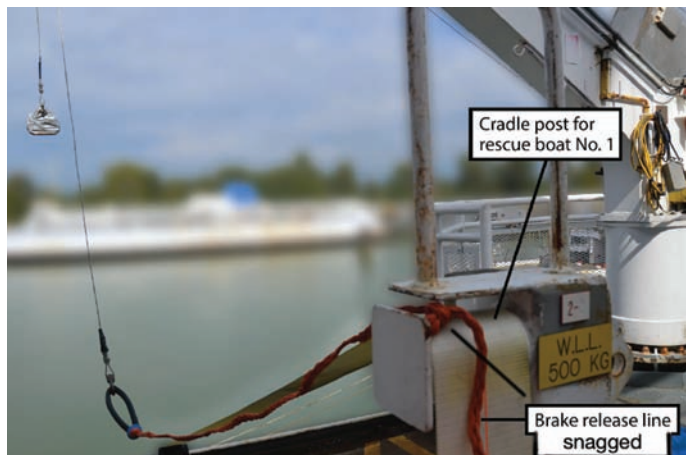
### Premature brake release spills two crew into water

Edited from official TSB (Canada) report M18P0257

→ A ro-ro ferry was at dock with no passengers embarked, and was running various planned boat and fire drills. The original rescue boats delivered with the ship had been replaced with newer models.

Two deckhands prepared rescue boat No. 1 for launch, and were shortly afterwards joined by an engineer. Because there was no deck officer present at this boat, one of the deckhands assumed duties as 'officer in charge' while also acting as coxswain. The other deckhand was the bowman and the engineer operated the davit. The deckhands completed the boat station checklist and checked the brake release line bag, which contained the extra slack of the brake release line.

The two deckhands boarded the rescue boat, placing the brake release line bag on the deck of the ferry. They then signalled the davit operator to raise the boat from its cradle. When the boat had sufficient clearance from the cradle, the coxswain pulled the self-slewing line hanging above the rescue boat to slew the davit arm outboard. Approximately 15 cm of brake release line uncoiled from the storage bag on deck as the arm slewed. Then, the brake release line snagged on a vertical section of the cradle post creating tension on the brake release line.



As the davit arm slewed further outboard, tension on the brake release line increased sufficiently to release the brake. The rescue boat dropped, its hull hitting the raised edge of the outboard deck. It then tilted outboard to such a degree that the two men in the boat fell overboard. One fell approximately 14 metres into the water below, while the other managed to grab hold of the rescue boat's painter line four metres above the water, but eventually let go and dropped approximately two metres into the water. The rescue boat reached the water level soon after.

The two men were quickly recovered from the water and received first aid before being taken to a local hospital. They were discharged later that day.

Some of the findings of the official report were:

- The new rescue boats that had been installed on the ferry were of a greater height than the original rescue boats. Some of the rescue boat crews had developed an informal practice of removing the rescue boat's brake release line bag from its on board storage container and leaving it on the deck when the rescue boat was not self-launched.
- When the crew removed the brake release line storage bag from the rescue boat, there was no one available to take the bag from the crew, so it was left unattended on the deck.
- Although the coxswain assumed the responsibility of officer in charge of the rescue boat, his ability to supervise the launching operation was limited while he was actively engaged in his duties as coxswain.

#### Lessons learned

- Any time you improvise or deviate from established procedures, risks can increase.
- Keep a keen eye for the signs of developing informal practices which insinuate themselves into established routines.

## MARS 202043

### Car carrier goes sideways

Edited from official PMA (Panama) Marine Accident Investigation Dept. report R-011-2016

→ A car carrier had been loaded, not with cars but with bundles of timber. These were stowed on decks five and seven, the only decks allowing forklifts without height restrictions. The remaining decks would remain empty. This was just the second voyage for the Chief Officer (CO) in a Pure Car Carrier. A pre-sailing calculation was made on the stability computer but the drafts as visually checked were found to be different from those calculated (actual forward draft 8.850 but calculated 8.256, actual aft draft 8.850 but calculated 8.460).

The CO went back to the stability computer and adjusted the cargo weights to see if the drafts as seen would affect the final GM. He was satisfied all was safe and the vessel sailed. During the sea passage ballast tanks five port and starboard were being used as heeling tanks; there was no ballast exchange.

During the voyage, a small heel developed. The CO decided to do a five minute transfer between the heeling tanks. The next day, the swell was increasing and coming from the stern. Over the next few hours, the weather worsened with six to seven metre swells from the port quarter. The Master ordered a reduction in engine rpm and a switch to manual steering. In the afternoon of the same day, the vessel rolled heavily to starboard, then back to port and again to starboard, a roll of about 30°-40°.

A loud noise was heard from the cargo decks. The helm was put hard to starboard but the vessel did not respond. The angle of list now made moving on the bridge almost impossible. A MAYDAY message was sent and the Master activated the GMDSS distress signals and then the abandon ship alarm. All crew were ordered to move to the port upper side deck.

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Fire hoses were extended and attached to railings to help crew move to the port side and don their immersion suits. Both the port liferaft and the lifeboat were lowered but both were pushed to the ship side due to the heavy list, making it dangerous to embark through the vertical ladder. Finally, helicopter evacuation was arranged and crew were disembarked by air. A few days later the vessel was towed to safety.

The official investigation found, among other things, that cargo weights were about 29% greater than those declared by stevedores, contributing to a reduction in real GM. Also, more ballast was used than had been estimated, so GM was again less than calculated. Calculations were not efficiently supervised or followed up and no arrival calculations were considered. The CO and Master appeared to pay little attention to the importance of stability calculations since they were confident of the stability of the ship based on similar conditions in the past. However, conditions on this trip were not in fact similar to those in the past because this time bunkers had been kept to a minimum in anticipation of dry dock.

### Lessons learned

- Sailing without a finalised and accurately calculated GM is **not** a good idea.
- Without proper training it is likely that unsafe practices will become the norm.
- When unsafe practices become the norm, it is only a matter of time before an accident occurs.
- If you are required to carry an unusual cargo or a cargo that is not necessarily adapted to your vessel, best seek advice from Class or cargo experts before loading.

■ **Editor's note:** These are essentially the same lessons as last month's MARS 202041, which also saw a car carrier go sideways.

### MARS 202044

## Collision involving a vessel adrift

As edited from official MAIB (UK) report 07-2020

➔ A container vessel was adrift in dense fog, standing-by off a busy port waiting for berth availability. Several other vessels were detected on radar but, due to the fog, could not be observed visually. The engine remained on immediate notice and the upper deck lighting was switched on. The traffic level was assessed as moderate with at least eight other vessels underway nearby.

Meanwhile, a tanker was approaching the same port. The Master of the tanker was at the con for the approach to the pilot boarding position. A few course alterations were executed to avoid potential close quarters situations with several vessels. The tanker's Master observed a new radar contact about 2.4 nm ahead. From automatic identification system (AIS) data, he established that the new contact was the container vessel and, from the orientation of the AIS symbol, he assumed that it was heading in a south-westerly direction.

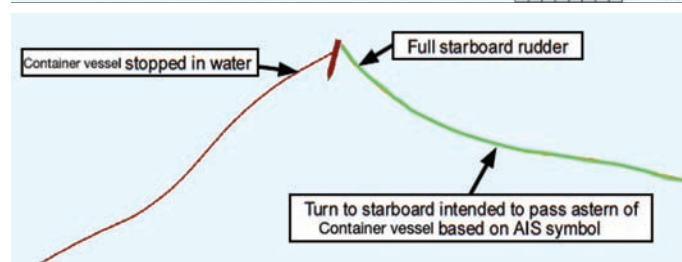
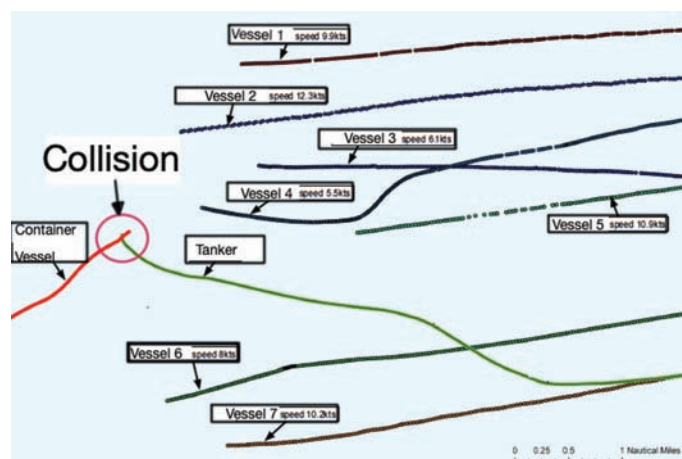
The Master also observed that the container vessel's AIS navigational status was 'underway using engine'. The tanker's OOW was monitoring the situation and noted that the container vessel's predicted closest point of approach (CPA) was 0.3 nm on the tanker's starboard side. In reality, however, the container vessel was stopped in the water on a heading of 197°. Due to the north-easterly current, its course and speed over the ground was 060° at 2.2 knots.

On the container vessel, the OOW was aware of numerous vessels approaching on the port side. Because of the poor visibility and his increasing concern about the possibility of collision he sent the deck cadet to the port bridge wing to keep lookout there. He did not, however, call the Master who was sleeping.

Back on the tanker, the Master was talking with the OOW of another vessel in the vicinity on VHF radio. The tanker had just made an alteration of course to starboard, intending to avoid the container vessel by passing its stern. This course change was also intended to increase the CPA with the vessel he was speaking to, which was approaching to port.

With the tanker making 13 knots, and noticing that the CPA of the container vessel had not increased as expected, the tanker's Master put the helm hard to starboard. At the same time, the OOW of the container vessel noticed that the CPA of the tanker was reducing, so he used the VHF radio to attempt to establish communications with the tanker's bridge team, but it was already too late.

Just moments prior to collision, both the Master and the OOW of the tanker saw the superstructure deck lights of the container ship emerging from the foggy darkness ahead; the lights were spotted very close on the port bow. The tanker's port bow struck the container vessel's port quarter. None of the container vessel's bridge team saw the tanker, including the deck cadet, who was on the port bridge wing.



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**Tanker's Damage**

### Lessons learned

- Whether you are at anchor or drifting, don't assume other vessels will stay clear of you.
- Always keep your AIS navigational status up to date to reflect your vessel's actual condition.
- It would appear that many of the vessels in the vicinity of the collision, including the tanker, were proceeding at speeds that were arguably not really safe given near zero visibility and the density of the traffic.
- Paradoxically, even the container ship, which was drifting, could be considered as not proceeding at a safe speed because this gives very limited options for manoeuvring at a moment's notice.
- While AIS data can certainly enhance situational awareness, radar target and ARPA data should always be used in preference to AIS to determine if risk of collision exists.
- As OOW, if you perceive danger or have concerns, always call the Master regardless of the hour.

### MARS 202045

## A few drops of oil show the way to improvement

→ A tanker was in port and discharging oil product. During the discharge, deck crew noticed a small leak coming from the manifold reducer. The shore installation was advised and discharging was immediately stopped. The manifold reducer was removed and replaced with another. A pressure test was carried out and discharging was recommenced.

The company investigation found that there was a small groove in the manifold reducer which had caused the leak. It was concluded that the reducer had been installed without proper inspection before use.

**Metal-to-metal storage of manifold reducers**



Furthermore, it was now understood that by storing the various reducers on a metal rack the reducers were exposed to continuous metal-to-metal contact, thus accelerating rust and associated damage. A wood backing plate or rubber gaskets would reduce these risks.



**Small groove allowed oil leak**

### Lessons learned

- Often, repeated operations become so commonplace that certain basic precautions can be overlooked, like in this instance inspecting the reducer for damage before installation and use on the manifold.
- Hazards in plain view! The reducers had always been stored on a metal rack but no one had thought about improving this arrangement until an incident occurred.

### MARS 202046

## Ship-to-ship transfer ends in tragedy

As edited from official Ministry of Transport (Singapore) report MIB/MAI/CAS.023

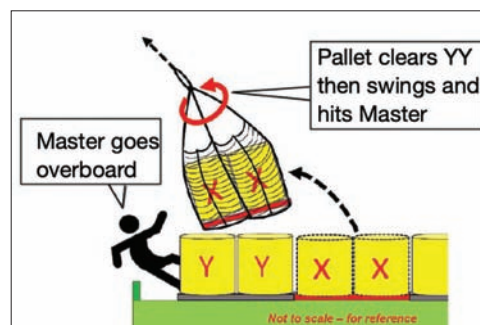
→ A chemical tanker planned to take on stores while underway via a small re-supply boat. The weather was fine with a slight sea and swell and light winds. The Masters of the two vessels had agreed a rendezvous point and to undertake the ship-to-ship transfer operation on a heading of about 305° and at a speed of about four to five knots. The tanker's crane would be used to bring the stores on board.

The re-supply boat came alongside the tanker and, without any lines attached, the tanker's crane's hook was lowered and the first pallet (XX in the diagram) was hooked on and the lift started. As the lift started, the re-supply boat began to veer away from the side of the tanker. The pallet, now partially lifted, was caught by another pallet (YY) on the deck of the re-supply boat. A crew member ran to the re-supply boat's wheelhouse to inform the Master to put more helm towards the tanker. The Master said he had done that, and suggested that the sheer was due to the lift coming clear of the boat's deck.

The Master then left the wheelhouse to try and help the deck crew clear the lift. The re-supply boat was still moving away from the tanker and the Master realised they needed to abort the lift. Before the lift could be lowered to the deck, it came free from the YY pallet, swinging toward the tanker and knocking the Master overboard.

Life buoys were thrown to the Master but he was unable to reach any of them. Search and rescue operations were initiated but the Master was not found. His body was recovered four days later.

The investigation found, among other things, that neither the deck crew nor the Master were wearing personal flotation devices, even though the gunwale was only 0.5 metres high meaning there was a considerable risk of falling overboard.



### Lessons learned

- The decision to transfer stores while making way at four knots was questionable. It certainly comprised more risks than stopping and allowing the re-supply boat to secure lines fore and aft to the tanker before the lifts began.
- Leaving the wheelhouse unattended to help on deck was another questionable decision. The vessel was underway at four knots and in close proximity to the tanker.
- Working on the deck of the re-supply boat, which had very low gunwales, without personal flotation devices was a clear oversight in risk appreciation – another example of 'risk in plain sight'.

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