



Mariners' Alerting and Reporting Scheme

MARS Report No 354 April 2022

The first two reports in this issue of MARS are tragic fatalities due to falls from height that were entirely preventable. In both cases, less than adequate safety leadership and supervision could be regarded as the main contributing factors. Yet, on a vessel with a strong safety culture/leadership, every crew member would be their own best safety leader. This exposes a central paradigm of safety; strong safety leaders create safety minded crew who in turn produce bottom-up safety that complements the top-down safety of their leaders. The opposite is equally true; poor safety leadership only leads to crew improvisation and procedural slip.

'Procedural slip' can admittedly appear on any ship. Many people are hard-wired to 'get the job done' and shortcuts are an easy way to finish the job. Consistent safety leadership is needed to keep actual practice in line with procedures. Even so, procedures are not carved in stone. If you think a procedure can be improved, talk to your supervisor. Maybe there is a better way to do the job, a safer way. Often, the people who actually perform the work are best positioned to give procedural input.

MARS 202212

Lethal fall from height inside a hold

As edited from the Republic of the Marshall Islands Maritime Administrator report of 22 April 2021

→ A bulk carrier in ballast was en route to the next loading port and deck crew were cleaning the cargo hold. The weather conditions made it necessary to keep the hatches closed while cleaning was taking place, meaning that fall arresters could not be rigged. Hence, only the lower portions of the holds were to be cleaned. A work permit had been issued but it made no mention of working aloft.

The company's generic risk assessment for cargo hold cleaning was apparently reviewed prior to the work, but it did not identify falls from height as a potential hazard either when entering or exiting a hold or while performing the task.

Cleaning progressed all morning and after lunch the work was resumed. Some time after 1400, it was noticed that a portion of the forward bulkhead about 3.5 metres above the tank top had not yet been cleaned. Since the crew were unable to clean this area from the tank top, the deckhand decided to use a portable ladder that had been left in the hold from the previous day to reach the area. The deckhand climbed the ladder, which was held steady by another crewmember, and started cleaning, using both hands on the pressure washer wand.

Once the deckhand finished washing, he started to descend the ladder, with one hand on the washer wand and the other on the ladder. As he was descending, he slipped and fell to the tank top, 3.5 metres below. Although unconscious, the victim was breathing and had a pulse. The alarm was raised and within minutes first aid was being administered.

Among other injuries, the victim had a massive hematoma on the upper left side of his head and was bleeding from his left ear. About 90 minutes after the accident the victim's pupils stopped reacting to light. Meanwhile the vessel had increased speed and diverted to a port for medical aid, but this was many hours away. A request for an immediate evacuation of the victim by helicopter was sent to the local Coast Guard.

Some seven hours after the accident the victim had no vital signs and was deemed deceased.

The official report found, among other things, that a Working Aloft Permit is required by the company's SMS when work is planned more than two metres above a base level. Procedures require the use of a safety harness with a lifeline secured above the work position. The SMS also requires someone to hold the ladder base and that the top be secured when possible (if this is not possible the bottom must be secured). Additionally, the SMS states that both hands must be on the ladder rungs, and tools should never be carried when climbing portable ladders. None of these requirements were met prior to the accident.

Lessons learned

- In theory, SMS procedures are there to protect crew from known hazards. But this protection can only be useful if the actual practices employed by crew are in line with the procedures.
- Issuing work permits is a fruitless paper exercise if the requirements set out in the permit do not reflect the practices of the crew.

MARS 202213

Fatal fall into a hold

As edited from the Liberia Maritime Authority report of September 30, 2021

→ A bulk carrier in ballast was underway. The deck crew were washing the cargo holds, as clean holds were necessary for the planned arrival for loading in two days. Two teams were working at different locations.

The hatch covers of holds 1 and 2 were partially opened in order to remove the remaining corn cargo lying at the cross joint channels of the hatch covers. This resulted in a large gap at the middle cross joint. A crewmember started washing the top of hatch cover panels No.2-1 and 2-2, standing on top of the hatch covers to do so, while another crewmember controlled the length of the hose used by the washing crewmember.

After cleaning the forward panels, the washing crewmember came down on to the hatch coaming to hose down the water to the middle cross joint area of the hatch cover. Then he went up again, this time



to the aft panel No.2-3 (indicated by an arrow in the photograph), and started cleaning at the starboard side of panel No.2-3. While moving toward the port side, out of sight of the crewmember tending the hose, he slid down the incline, through the gap in the hatches, and fell at least 17 metres to the hold tank top. A cry was heard and the crewmember tending the hose began searching, only to see his colleague lying on the tank top of the hold in the middle of the hatch area.

The alarm was raised and the victim was quickly attended to, but he had no vital signs. First aid was nonetheless administered including CPR, but without success.

The official investigation found, among other things, that there was no responsible officer supervising or assessing the safety of the work. The Bosun was supposed to supervise both teams of two crew, who were working at different places. Instead, the Bosun went down to hold 1 with one of the teams. The Chief Officer was busy in the deck office preparing the loading plan for the next port, so there was no effective supervision of the team washing the hatch covers.

Additionally, crew did not use fall arrest equipment while working and climbing on top of the partially opened hatch covers.

Lessons learned

- In an environment dominated by a weak safety culture, even such a dangerous situation as standing at the top of an open inclined hatch without fall protection does not dissuade people from 'getting the job done'.

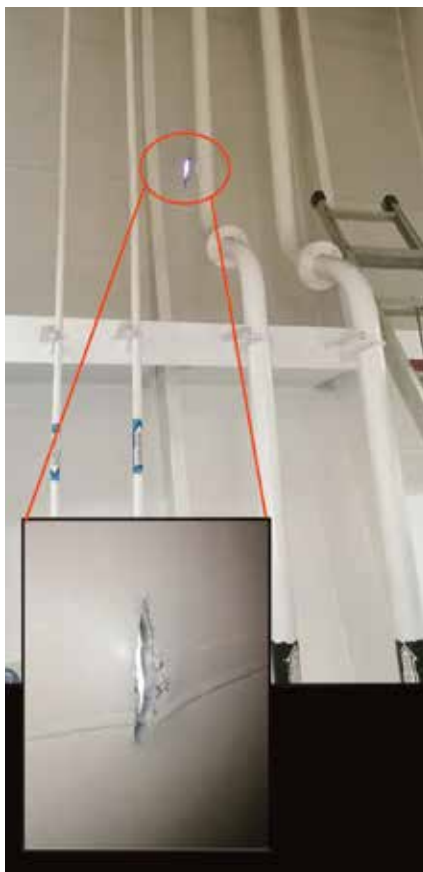
MARS 202214

Hull breached by unprotected fender

➔ A tanker discharged its cargo and left the berth without apparent incident. While drifting near the harbour and awaiting orders, routine inspections discovered a puncture in the hull above the waterline.

After investigation, it was deduced that the damage had occurred during the previous berthing and remained unnoticed since.

During that berthing, two tugs were used to push the vessel on the jetty's fenders during the mooring operation. Although everything appeared normal at the time, it was later suggested that the upper edge of the fender was unprotected. Although the impact while berthing and from the tugs pushing was so minor that no one noticed, it was still enough to pierce the hull.



Lessons learned

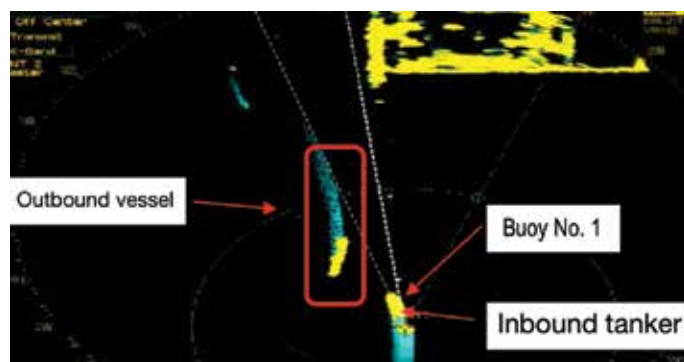
- An inspection of the fendering after berthing to ensure proper cushioning is a good practice.

MARS 202215

Light touch of a buoy while inbound

➔ A tanker was inbound for a port in the early morning hours. A pilot boarded and took the con after exchanging information with the Master. The pilot advised that there was an outbound vessel approaching and that he had agreed with the outbound pilot that they would meet port to port. A slight course alteration to starboard was requested and the speed reduced. A few minutes later, the vessels met at the entrance of the channel. By now, the pilot of the outbound vessel had already disembarked, so pilot to pilot communication was not possible.

As the inbound tanker was conned more to starboard by the pilot to allow the outbound vessel to safely exit the port, it approached the righthand side of the channel and, due to weather and lack of manoeuvrability at slow speed, made soft contact with buoy number 1. The tanker continued its inbound passage and safely berthed thereafter.



Lessons learned

- When entering port, the bridge team and Master often have little time to evaluate the proposed manoeuvre suggested by the pilot. In this case, although not immediately evident as unsafe, the meeting of the two vessels at the narrow port entrance was less than optimal.
- Be aware that in some jurisdictions, pilots can disembark before the vessel has actually exited the port due to various factors such as weather conditions on the outside rendering departure there too dangerous.

MARS 202216

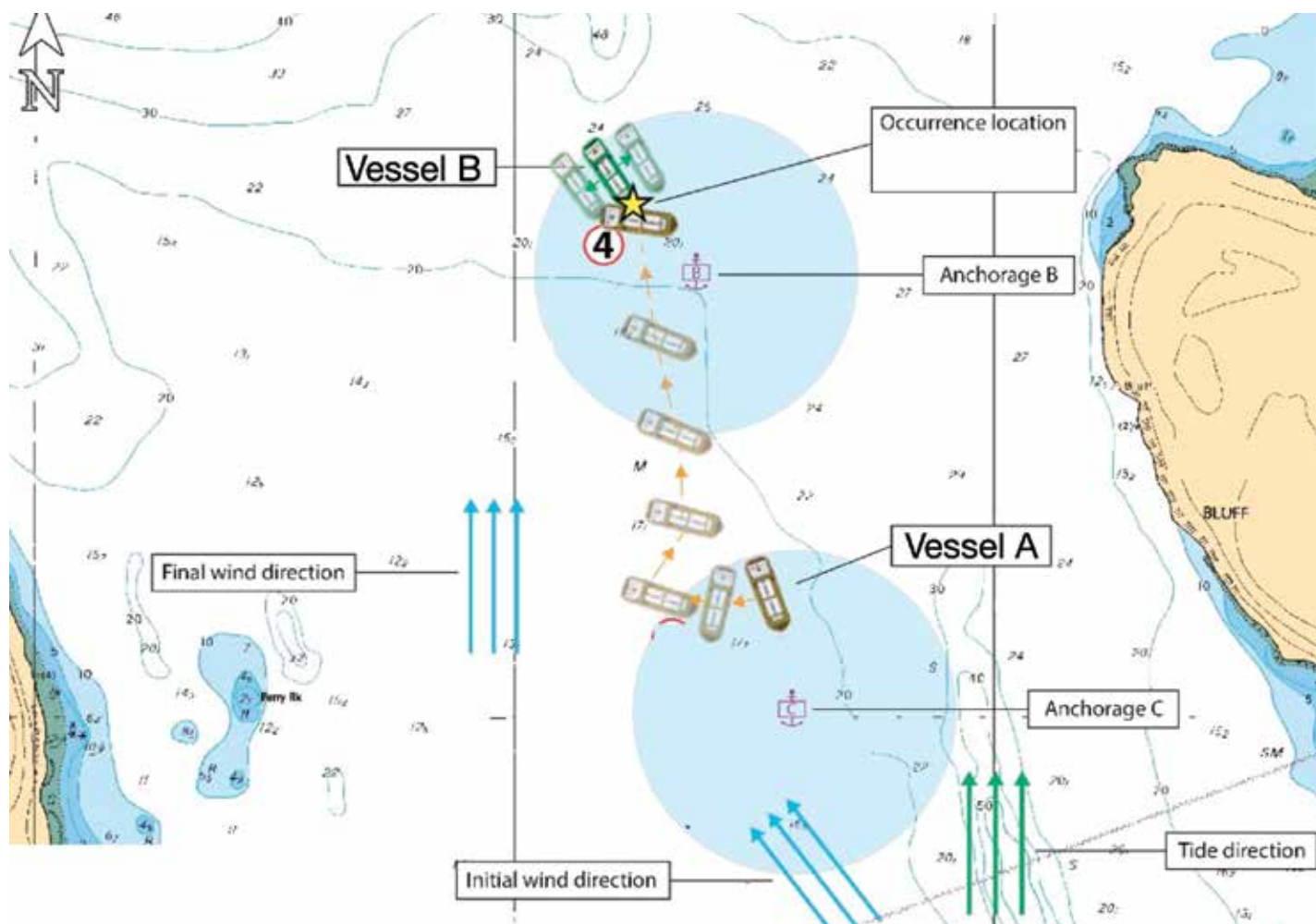
Dragging anchor due to wind ends in collision

As edited from TSB (Canada) report M20P0092

➔ Two bulk carriers in ballast were at anchorage awaiting berthing instructions. The two vessels were approximately 910 metres apart. Vessel A's main engine was on 20 minutes' notice.

Later that night, the NAVAREA weather forecast indicated an approaching gale 636 miles away with southeasterly winds of 25–35 knots. The local weather forecast indicated that strong winds of 20–33 knots were expected to occur in the area, but the crew on vessel A were unaware of either forecast. A few hours later the wind speed had indeed increased and was now 28–33 knots. Soon after, vessel A began yawing due to wind gusts.

Vessel A's dragging anchor alarm activated, and the officer of the watch (OOV) noticed on the radar that his vessel was drifting towards vessel B. The Master and the engine room were informed of the situation and the anchor team went forward. An additional two shackles were released on the starboard anchor chain and the team attempted to deploy the port anchor too, but it would not release.



By now, vessel A was drifting towards vessel B at a speed of about 1.4 knots under the influence of the wind on its high freeboard and the tidal flow. Meanwhile, vessel B's crew were informed of the oncoming vessel A. They paid out a total of 11 shackles on the anchor chain in order to allow more room and avoid contact between the vessels.

The anchor team on vessel A eventually managed to release the port anchor from its stowed position and deployed about 12 shackles. By now, the main engine was also available and was used in an attempt to move away from vessel B. Nonetheless, vessel A's port mid-section collided with the starboard bow area of vessel B (position 4 on diagram).

The official investigation found that, among other things, the crew of vessel A had not collected the local weather forecast for the day of occurrence from the VHF radio, weather fax, and MF broadcast, nor had they obtained an up-to-date weather warning from local authorities. As a consequence the vessel and crew were unprepared for the impending adverse weather conditions.

Lessons learned

- This is not the first MARS report where a lack of situational weather awareness has led to a vessel dragging anchor. Weather awareness should be a priority of all OOWs and Masters while at anchor.
- Even with engines and anchors, limited space in some anchorages can easily trump these options when winds are strong. Vessels are safest at sea in these circumstances.

READER'S COMMENT FROM DECEMBER 2021 EDITION

MARS report 202161

From Mr. Ron Bird, with over 50 years experience in forklift operations

→ The comments in the MARS item are very valid. The accompanying photograph shows that the 'basket' is also non compliant as it does not have the high back frame upon which the safety harness is attached. From the photograph I assume that the crew member was not wearing a harness and that the 'basket' was uncertified.

The comments made under Lessons Learned are 100% correct. The New Zealand Code of Practice states quite clearly that the following things are required:

1. A current certificate of competence (renewed every three years).
2. Certificate to state the make, model, capacity and any permanent attachment.
3. Name of person and certificate number.
4. The current employer's authority to operate the forklift.

Employers of new staff are to ensure that the certificate was issued to the person who is holding the certificate.

