Mariners’ Alerting and Reporting Scheme

MARS Report No. 319 May 2019

This May edition of MARS might well be called the ‘Man Overboard’ (MOB) Issue. Falling overboard, whether while underway or docked in port, can be a traumatic and dangerous event. Mariners are often wearing heavy boots and clothing, so staying afloat is anything but easy. Work over the side is sometimes performed without the proper elementary precautions being taken such as wearing a personal flotation device (PFD) and using a fall prevention device. In any event, a MOB event requires quick action that does not come automatically unless appropriate exercises are practised regularly. Practice makes perfect and for a MOB incident you have only minutes to save a life.

MARS 201930

Taking vessel draughts – a dangerous task?

The following photographs were sent to MARS by one of our readers. For the aft draughts, the crew member can be seen being lowered over the side in a barrel via the ship’s stores crane. To take the draughts amidships, he has climbed down the pilot ladder and, now near the end of the ladder, is struggling to view the draughts below.

Taking the outboard draughts on large vessels may seem a daunting task, and can be dangerous. But need it be? Although the crew member in these photographs appears to have a lifejacket on, what is wrong with this situation? Is there a safer way to take your draughts?

Lesson learned

• Every task should be analysed for associated hazards. The work method adopted should be the one that decreases the associated risks to persons to the ‘as low as reasonably practicable’ (ALARP) level.

• What is the safest way to take your outboard draughts? Think about it, and continue reading below!

MARS 201931

Crew member dies while taking draughts

Edited from official TSB (Canada) report M17C0232

A small general cargo vessel docked starboard side to in a river port was preparing to load nickel concentrate. Before loading began, port state authorities inspected the vessel as per regulations for loading concentrates. An independent draught surveyor also boarded to conduct an initial draught survey before loading began. Under his supervision, some crew descended the rope ‘Jacob’s ladder’ to take the draughts amidships. (A Jacob’s ladder or monkey ladder is a flexible hanging ladder composed of vertical rope or chain and horizontal wooden or metal rungs of lightweight construction. In this case, the crew descended the ladder to take the draught because the draught surveyor was not permitted by his employer to use such a ladder.) Soon after the survey the loading of the concentrate began.

After about 14 hours of loading, and now in darkness, the duty deck officer was tasked with taking the draughts. He disembarked on the dock and took the three inboard draughts, reporting these via VHF radio to the vessel’s cargo officer. He then proceeded to take the outboard midship draughts, descending the same Jacob’s ladder, which was still rigged amidships on the port side from the morning’s draught survey. The vessel’s cargo officer tried to contact the deck officer several
Fatal fall overboard between the berth and the vessel

Edited from the Dutch Safety Board investigation report published May 2014

In the early morning a general cargo vessel came starboard side to the berth to load steel and project cargo. To prepare the holds for loading the crew needed to remove the stored pontoons and place supports so that the tweendecks could be positioned inside the hold later on. The supervising officer stood on a hatch coaming ladder to guide the operation using hand signals and portable VHF.

As the pontoon was positioned above the hatch coaming, the supervising officer instructed the crane operator to swing the pontoon to the left and then slowly lower it. A short time later the seaman near the gangway noticed someone had fallen overboard amidships, between the quay and the vessel. The seaman raised the alarm on his VHF, grabbed a lifebuoy and ran to the position where he presumed the victim – the supervising officer – had fallen into the water.

The victim remained afloat even though he was not wearing a lifejacket. The seaman who had rushed to help was unable to bring him to safety from the quay with a lifebuoy. The victim appeared to lose consciousness shortly afterwards. Using a rope ladder, a crew member climbed down and, with half of his body submerged in the water, attempted to get the victim into the lifebuoy. However, he soon had to cease his rescue attempt due to the cold.

A second attempt succeeded in placing the victim on to a stretcher and he was lifted out of the water by the shore crane. Unfortunately, he was later pronounced dead and the autopsy found that he had died as a result of internal bleeding.

Lessons learned

- The ILO’s Code of Practice ‘Accident prevention on board ship at sea and in port’ states that persons working overboard should observe the following safety precautions:
  - Fall protection system and PFD to be worn
  - Another crew member should supervise and assist as needed
  - Lifebuoy with a safety line readily available
  - Risk assessment conducted and work permit issued

- Although it is common practice to read the outboard draught marks from a rope ladder, a launch or small boat is more stable and brings the observer to a safer position closer to the water line.

- Even when taking the inboard (dockside) draughts, always wear a PFD, as dock edges can be slippery.

- Editor’s note: For another unfortunate draught reading accident, see MARS 201822.

Visit www.nautinst.org/MARS for online database
Suddenly, a loud bang was heard followed by a whirring sound as the ladder fell rapidly towards the sea. The lower ladder broke away and fell into the water, taking the attending crew member with it. The upper section of the ladder was left hanging vertically down from its upper platform hinges with the hoist wire dangling from the davit.

A crew member alerted the bridge via VHF radio and then ran aft to look for the victim over the stern. A tug was close by, but there was no sign of the victim. The vessel was in the relatively confined waters of the port and making between 5 and 6 knots through the water. One of the attending tugs and the pilot boat were assigned to look for the victim, as the vessel was constrained by the restricted water. The victim was spotted about half a metre below the surface of the water and recovered by the pilot boat crew some 10 to 15 minutes after the event, but there were no signs of life.

The subsequent autopsy determined the cause of death to be ‘drowning with blunt force injuries’. The victim had suffered blunt force injuries to his head, neck, chest, back, abdomen and legs, resulting in a broken right femur, fractured ribs, multiple bruising and abrasions. These injuries were not considered to be fatal.

Lessons learned

- Accommodation ladder failures, although rare, are certainly not unheard of and numerous lives have been lost as a result. Risks involved in rigging and securing accommodation ladders should be duly accounted for.
- As in several of the MARS reports in this issue, the attending crew did not take basic precautions such as using fall protection and donning a PFD. The lack of these precautions cannot be solely attributed to the crew. The company and vessel leadership must also bear responsibility.
- The failure in this case to release the lifebuoys and smoke floats once the victim was in the water was particularly significant. It denied the ships involved in the search a visible reference, and also potentially denied the victim the buoyancy he required to remain afloat.

If in doubt, always opt for more safety rather than less. In this case the safety line was not used because it was thought unnecessary. Two men paid with their lives.

- One of the principal tasks for a MOB incident is getting the ship around and back to the incident area in the shortest possible time. If sea room allows, hard helm should immediately be applied (to the side of the fall) and one of several well known turning methods used, as below.

Editor’s note: The Williamson turn is especially useful in reduced visibility as it brings the vessel back on a reciprocal course and into its own wake. However, with good visibility the Anderson turn should be employed as it is a quicker turn.

Williamson Turn

Anderson Turn

MARS 201934

Deadly fall into water while rigging accommodation ladder

Edited from the official MAIB (UK) report Report 8/2010

An inbound container vessel had just picked up the pilot. Two crew were on the upper deck preparing the port accommodation ladder prior to mustering at their mooring stations. Although they had brought two life vests on deck with them, these floatation devices stayed on the deck as they went about their work.

The hoist winch was tested by lowering the accommodation ladder approximately 1 metre and then slightly raising it. It was then lowered approximately 3 metres to allow a crew member to walk under the davit frame. A crew member stepped on to the upper platform and proceeded to the lower end where he rigged a section of collapsible handrails. He then went to the lower platform to make the rails secure while another crew member secured the safety ropes around the upper platform.

If in doubt, always opt for more safety rather than less. In this case the safety line was not used because it was thought unnecessary. Two men paid with their lives.

- One of the principal tasks for a MOB incident is getting the ship turned around and back to the incident area in the shortest possible time. If sea room allows, hard helm should immediately be applied (to the side of the fall) and one of several well known turning methods used, as below.

Editor’s note: The Williamson turn is especially useful in reduced visibility as it brings the vessel back on a reciprocal course and into its own wake. However, with good visibility the Anderson turn should be employed as it is a quicker turn.

Williamson Turn

Anderson Turn

MARS 201934

Deadly fall into water while rigging accommodation ladder

Edited from the official MAIB (UK) report Report 8/2010

An inbound container vessel had just picked up the pilot. Two crew were on the upper deck preparing the port accommodation ladder prior to mustering at their mooring stations. Although they had brought two life vests on deck with them, these floatation devices stayed on the deck as they went about their work.

The hoist winch was tested by lowering the accommodation ladder approximately 1 metre and then slightly raising it. It was then lowered approximately 3 metres to allow a crew member to walk under the davit frame. A crew member stepped on to the upper platform and proceeded to the lower end where he rigged a section of collapsible handrails. He then went to the lower platform to make the rails secure while another crew member secured the safety ropes around the upper platform.