



Mariners' Alerting and Reporting Scheme

MARS Report No. 312 October 2018

MARS 201862

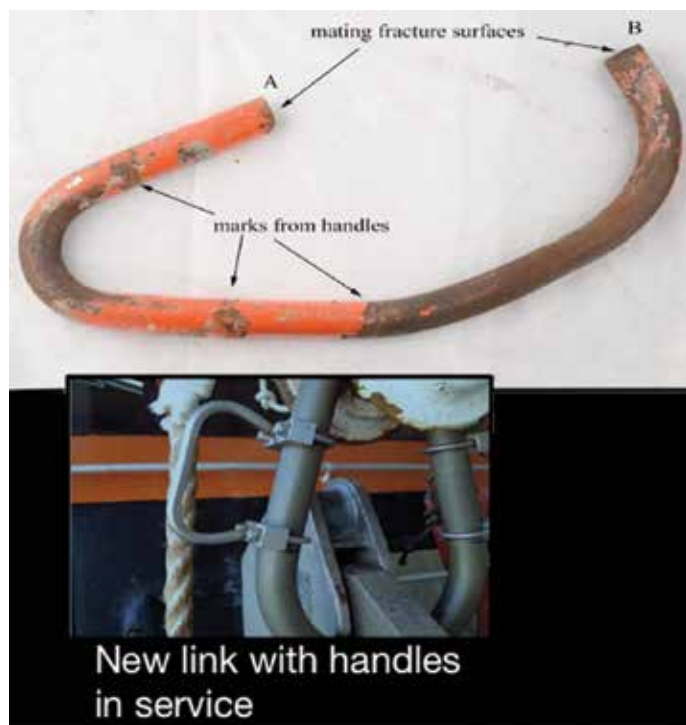
Inspection failure precedes link failure

As edited from the Bahamas Maritime Authority Safety Alert 17-07

→ A tender boat on a passenger ship fell from its stowed position into the water, without warning and without any intervention by the crew. No one was injured, but the tender itself was a total loss.

The fall was caused by the catastrophic failure of the link that connects the fall block to the release gear hook. The investigation found that, among other things, the actual measured safety factor of the link was less than 5:1. This was well below the required minimum safety factor of 6:1 as specified by the LSA Code. Notwithstanding this less than adequate condition, the immediate cause of the failure was found to be a fatigue fracture.

The initiation of the fracture was attributed to the location of the stainless steel handle which was attached to the straight part of the link. The likely mechanism for the fracture was either corrosion fatigue (galvanic corrosion) or fatigue initiated from a minor indent at the surface.



Lessons learned

- Non-destructive testing should be carried out regularly to verify the condition of gear such as links.
- Items such as bolted-on handles should be removed to ensure links can be given a full visual inspection.
- During inspections the dimensions of the connecting links should be measured to ascertain whether there has been any reduction in diameter as a result of corrosion.
- When possible, avoid connecting two metal parts that have different galvanic (sea water environment) values.

MARS 201863

Inattention leads to own goal

As edited from Marine Safety Forum Safety Alert 18-07

→ A bulk hose was being transferred between a production platform and a platform supply vessel (PSV). The platform crane landed the hose on the PSV's deck and one of the ABs approached to release the hook from the lifting sling. As the AB released the hook it slid inside the bight formed by the crotch strap on his lifejacket. Once he stood up the hook was caught, but the AB did not notice, and he signalled to the crane operator to 'hoist'.

The AB was lifted above the deck and out over the side of the vessel. His immediate, intuitive reaction was to hold on to the pennant wire to relieve the crotch strap tension. The crane operator and a second deck crew member quickly became aware of the situation and were able to land the AB safely back on deck. The duration of the incident, from the AB being lifted and then returned to deck, was about 11 seconds.



Lessons learned

- Ensure your garments and personal protective equipment (PPE) are not a hazard in and of themselves.
- Keep your situational awareness about equipment, yourself and your workmates sharp.
- Never signal to hoist unless you are sure all is clear.

MARS 201864

Grounding while attempting to anchor

Edited from official MAIB report 9-2018

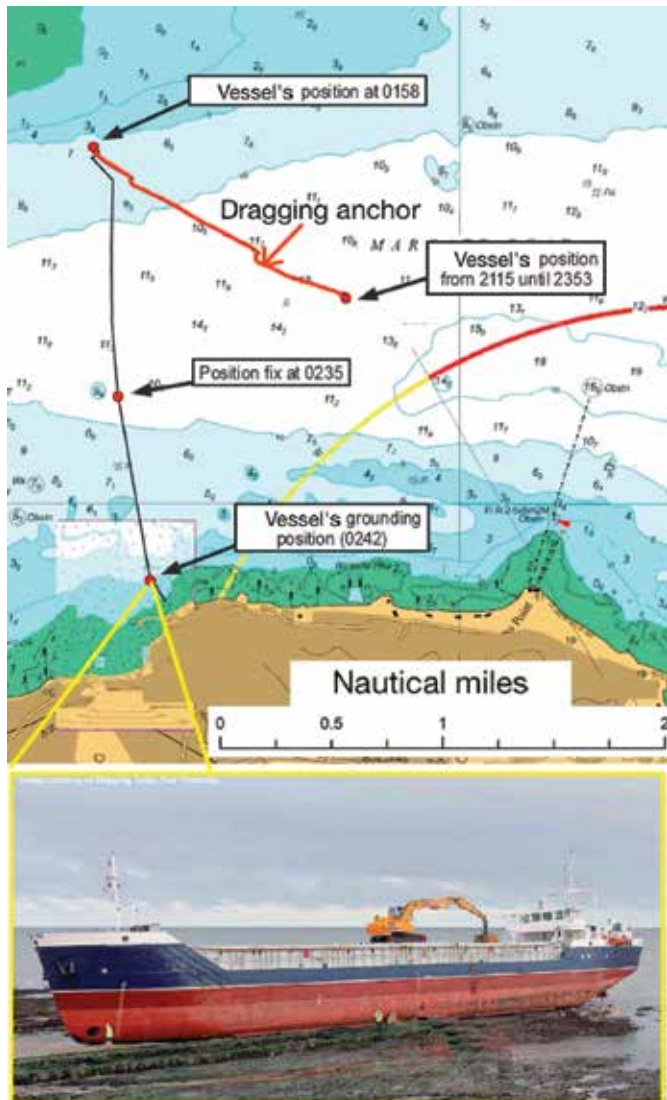
→ A small coastal trader had loaded and left port, but the Master decided to anchor for the night before continuing to the destination. The starboard anchor was let go with three shackles in the water at 21.15. At 23.00 the Master handed the anchor watch over to the OOW and retired for the night. During his watch the OOW did some chart corrections and worked on the passage plan for the voyage the next day.

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About three hours after the OOW had taken the watch a vessel traffic services officer (VTSO) called the vessel as he suspected it was dragging anchor. The OOW checked the position and confirmed they were off station, so he decided to move the vessel farther south. Two crew were sent to lift the anchor and the OOW manoeuvred the vessel south. At one point the VTSO called again because he was concerned that the vessel was now too far south and close to land.

The OOW was navigating visually, apparently without using the radar although at 02.35 he did put a position on the chart using GPS. When the OOW ordered the anchor dropped the vessel was already in trouble. At 02.42, the vessel grounded as it crossed the 0m depth contour. The vessel's Master was woken up by changes in engine noise and vibration. When the Master arrived on the bridge, he attempted to refloat the vessel by using astern propulsion, but his attempts were unsuccessful.

The wind was from the north-west at Beaufort force 6. While the vessel was at anchor, the predicted tidal stream set to the west and decreased from approximately 1.8kt at 23.50 to 0.8kt at 02.00 the following morning.



Lessons learned

- When anchoring, enough scope must be given to accommodate a rising tide.
- Anchor watch is just as important as a navigation watch. An OOW's primary duty is to keep a sharp lookout, monitor the vessel's position and maintain situational awareness.
- If your vessel is dragging anchor, call the Master.

MARS 201865

Collision claims 18 lives

Edited from the official Hong Kong SAR Marine Department Marine Accident Investigation Section

➔ A loaded bulk carrier was inbound to its destination port with a bridge team consisting of the Master, an OOW, a helmsman and two pilots. There was a light westerly breeze and a smooth sea with visibility at about 2nm and a light drizzle. Pilot A had the con. Pilot B reported to Pilot A that he had observed a radar target fine on the starboard bow at a range of about 2.5nm. The target was a seagoing tug on a course of about 090° and was making near 10kt. The bulk carrier was heading 260° at about 13.5kt.

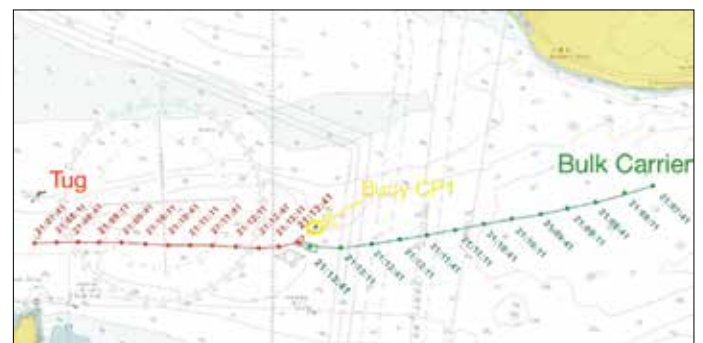
A few minutes later, pilot B tried to attract the attention of the tug by flashing the Aldis lamp in its direction. The tug was still very fine on the starboard bow and now at a range of about 1.6nm, showing a red sidelight. The pilots expected the tug to alter course to starboard, but instead it maintained course and speed.

Shortly after this, pilot A asked pilot B to contact the vessel traffic centre (VTC) to provide information on the target and to advise the tug that the two vessels should pass port to port to avoid collision. VTC called the tug and instructed them to take action to avoid collision. Although the tug responded, it was impossible to understand the response. A few minutes later pilot A instructed the helmsman to alter course slowly to starboard to 265° in order to enter the deep water channel with the CP1 buoy close on the starboard side.

A few minutes later, the tug was very fine on the port bow of the bulk carrier and at a range of about 0.5nm. Pilot A gave a helm order of starboard 10 with a view to keeping the tug on the port bow and giving it as much room as possible to pass on the port side. Pilot B gave one short blast on the whistle. Within seconds, the tug was observed to alter course rapidly to port. Pilot A ordered the helmsman to put the wheel to starboard 20, and followed by hard to starboard. Pilot B sounded five short and rapid blasts on the whistle.

As the tug continued to alter her course to port and her masthead lights opened more widely. Pilot B again sounded five short and rapid blasts on the whistle. Pilot A then gave a port 10 helm order in order to reduce the rate of turn of the bulk carrier to starboard and to allow the tug to pass clear ahead.

Pilot A then gave a helm order of starboard 10, but the bow of the bulk carrier struck the starboard quarter of the tug. The collision impact was heavy and the bulk carrier was brought to a stop. Shortly after the collision the tug listed to starboard and sank. Seven persons were rescued from the tug, but 18 crew were trapped and drowned inside the vessel.



Lessons learned

- Never make small course alterations when faced with an ambiguous meeting or crossing situation.
- Make your intentions known by using a large course alteration, preferably to starboard as per the collision regulations.
- When in doubt, slow down.

MARS 201866

A challenge too little too late

As edited from official ATSB report 325-MO-2016-003

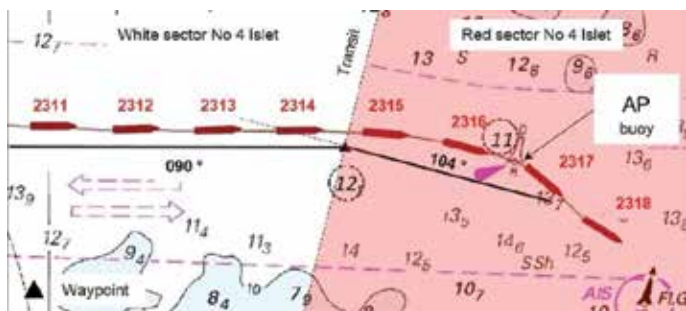
➔ A pilot and trainee pilot boarded a bulk carrier in darkness. Courses and positions had previously been sent to the ship for the express purpose of planning the passage. The pilots completed the Master/pilot exchange with the bridge team, establishing that the OOW would inform the pilot when the ship was 7 cables from each course alteration position (waypoint). They proceeded through the reef-infested passage at about 8kt. The electronic navigational chart (ENC) was continuously displayed on the pilot's portable pilotage unit (PPU), which had been set up near the bridge front windows on the port side.

The OOW was plotting the vessel's position on the paper navigational chart at five-minute intervals. He also followed the pilot's standing instruction by informing him when the ship was 7 cables from the next waypoint.

The pilot was positioned by the S-band radar, near the ship's centreline and was using the radar to determine the distance to the AP buoy. The OOW then advised 7 cables to go to the next waypoint and the pilot acknowledged the information.

The pilot ordered 10° starboard rudder. The bridge of ship was now a little more than 6 cables from the AP buoy. Shortly afterwards, the pilot ordered 5° starboard rudder, but he was unable to find the buoy's echo return on the radar's display. His usual practice was to use a 7 cable distance from the buoy as his wheel-over position. He became fixated on regaining the lost echo. For the next two minutes the rudder angle remained at starboard 5°.

The position plotted on the chart indicated that ship was about half a cable (100m) north of the charted track and the Master observed aloud that the AP buoy was right ahead. About 10 seconds later, the Master asked how the buoy was, followed 11 seconds later with 'will we touch the buoy?' The pilot said 'no' and shortly after ordered starboard 10°, followed 16 seconds later by starboard 20° and then 'hard a starboard'. In spite of some more helm applications the port quarter of the ship's hull contacted the buoy.



Lessons learned

- Even though the OOW was somewhat integrated into the pilot's operations by informing him at 7 cables to each waypoint, neither he nor the rest of the bridge team possessed the same mental model as the pilot for the transit.
- There was a PPU on the bridge showing the vessel's position in real time, but the bridge team were not using this tool and were preoccupied with other aspects of the pilotage.
- In darkness a person's visual perception is not the same as in daylight, so objects may appear closer than they actually are. Because accurate depth perception is very difficult, especially at night, it is important that human abilities are always supplemented by the use of all other navigational and electronic aids.
- The Master's comments were too little too late. He was not in a position to challenge the pilot properly as he was using only his visual acuity to sight the buoy.

MARS 201867

Near accident caught by 'the challenge'

➔ A tanker was mooring to a single-point buoy mooring (SPM). A line had been secured forward and the current started moving the vessel ahead, approaching very close to the SPM. The aft tug was not yet made fast, so the vessel was using its own engine to remain in position.

As the vessel was moving forward and was getting closer to the SPM, the Mooring Master ordered dead slow ahead. If the order had been followed the vessel would have collided with the SPM. The OOW, being aware of the situation, did not immediately follow the order and asked the Mooring Master about the appropriateness of his order. The Mooring Master apologised as his order was meant to be dead slow *astern*.

Lessons learned

- Unintentional errors of this kind, classified as 'slips', are common. The principal of BRM, where each member of the team is actively involved and has the same mental model of the operation, is a good defence against slips of this nature.
- Keep your situational awareness about a process as keen as possible, even if you are not in charge. You may save the day.

MARS 201868

Keep your lines tight and balanced

➔ This photograph was sent to us by a mariner. Is this an accident waiting to happen? The mooring lines visible in the photo are quite slack and of unequal tension.

Lessons learned

- Keep an eye on your lines and, when securing, equalise the tension in all lines.



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