



# MARS – Lessons Learned

MARS Report No 385 November 2024

## MARS 202456

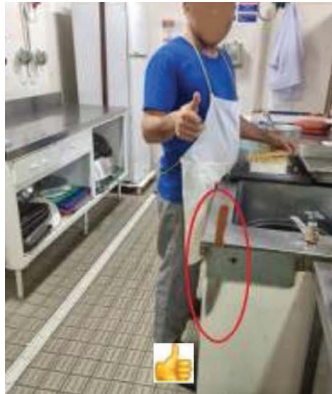
### A knife near miss

→ A vessel was underway and experiencing severe rolling and pitching due to a heavy, long swell. In the galley, personnel were preparing the next meal. While passing near the galley, another crew member observed that the chief cook had placed his chef's knife on the edge of the prep table, directly above his right foot.

The crew member intervened and reminded the chief cook that, given the vessel's movement, this could lead to an unfortunate accident. The chief cook agreed and placed the knife on the magnetic holder.



Before



After

#### Lessons learned

- Every crew member is responsible for their own safety. That said, all crew as a team should also look out for their shipmates. Anyone committing unsafe acts should be brought back on the 'Safety Train'.
- We all sometimes lose our situational awareness, become fixated on a task, and take shortcuts. Don't hesitate to intervene, in a diplomatic and tactful manner, if you see unsafe acts being committed.

## MARS 202457

### Berth contact cuts deep

→ A loaded vessel was departing a berth in very confined waters without tug assistance. Winds were NNE, almost parallel with the berth, at about 25-30 knots. Two pilots were on board but according to the company report, there were gaps in the Master/Pilot Exchange. The bridge team did not have a shared understanding of the vessel's handling characteristics and the planned manoeuvre was not held as a shared mental model.

As the vessel moved away from the berth, the stern came into heavy contact with the berth. A metal plate that had been fixed to the cement wall became lodged in the vessel's side shell. The unberthing manoeuvre continued, and the vessel left the port but went to anchorage for a damage assessment. It was found that contact with the plate had caused a hull puncture. The hole was estimated to be 250 mm high and 120 mm wide.



#### Lessons learned

- In challenging weather conditions, without tugs and in confined waters, a re-evaluation may be needed. Can the departure be postponed? In reality, any departure can be postponed if deemed too dangerous.
- A shared mental model of a manoeuvre held by the entire bridge team is usually a safer plan than a plan held by one individual.

## MARS 202458

### 'STOP work' doesn't translate well

As edited from TSIB (Singapore) report TIB/MAI/CAS.113

→ A vessel was underway in good weather. Two deck crew had been directed to paint the underside of the external stairway landings at bridge deck level. They were working from the boat deck and had been instructed to use a telescopic rod connected to a roller brush to reach the area to be painted several metres above. After starting the task, one of the crew decided to install a portable A-frame ladder (stepladder) to assist in the job. Using an A-frame ladder without a permit to work was contrary to the company SMS, but the other member of the painting party did not dispute this action.

Some time later, the vessel changed course and started rolling due to the change in angle across the swell. Suddenly, the ladder tilted towards the sea and the crew member on the ladder grabbed the drainpipe under the stairway landing with one hand to keep his balance. At the next roll, the ladder tilted again and this time both the crew member and the ladder went overboard.

The remaining crew member ran to the port side and threw the nearest lifebuoy towards the victim in the water as the vessel continued to steam ahead. He then raised the alarm with the bridge team. In short order a hard-over port turn was executed and the MOB position marked on the ECDIS. At the same time, broadcasts were made on the VHF to nearby vessels. By this time all remaining crew of the vessel had mustered and headcount was taken.

Lookouts using binoculars were posted to locate the victim and the rescue boat was readied. Within minutes, the lookouts located the victim in the water. As the vessel was manoeuvred close to the victim,

he appeared motionless, floating face-up. A nearby fishing boat quickly recovered the victim, but he had no pulse. The victim was brought back on board the cargo vessel, but further resuscitation efforts were fruitless.

The investigation found, among other things, that the victim should have consulted the CO or OOW before using the portable ladder. Had he done so, the task could have been reassessed and a Risk Assessment and a Permit To Work process initiated for the use of the portable ladder. Also, there may have been a language barrier between the two deck crew members that hindered quick and concise communication.



### Lessons learned

- Improvised plans can produce bad consequences. In this case the victim decided on a whim to use a step ladder, yet this tool required a permit to work (PTW) before use. The PTW, an administrative protection, would probably have ensured the proper installation of the ladder, thus saving his life.
- This company had a very innovative system to help crew initiate a 'stop work' effort; a whistle and STOP sign on a lanyard for each crew member. Yet, in this case it was not used. To facilitate a stop work initiative, not only must crew have the right tools, but they must be given proper training in their use and an environment of trust must be established.

### MARS 202459

## Procedural dysfunctions and fatigue contribute to undocking accident

As edited from MAIB (UK) report 6/2024

[https://safety4sea.com/wp-content/uploads/2024/07/UKMAIB-AliKa-Report-2024\\_07.pdf](https://safety4sea.com/wp-content/uploads/2024/07/UKMAIB-AliKa-Report-2024_07.pdf)

➔ A tanker had berthed at jetty 1 for partial unloading. There was a weak flood tide and the vessel did not use tugs. The arrival pilot discussed tug use for the vessel's departure and informed the Master that use of a tug was mandatory for vessels departing jetty 1 on an ebb tide. The pilot also made a note in the pilotage database that the vessel had weak astern power.

Unloading proceeded normally and a departure was planned for the next day. A tug was initially booked for a 05:00 departure, but about seven hours before departure the duty pilot (not the same pilot as on arrival) called the port and highlighted some concerns about the height of tide at 05:00. The pilot asked if the tanker could instead sail at 04:00, when tidal currents would be somewhat less and the height of tide would be 1.19m higher than at 05:00, but there would be no tug available. This was agreed between the pilot and the port. The agent informed the tanker's Master that departure was now confirmed for 04:00 without a tug.

At 03:40, the pilot arrived on board and discussed the departure with the Master. He had not accessed the pilotage database to review

the note entered there by the arrival pilot. With the vessel's bow in the direction of the full ebb stream, the pilot's plan was to let go all lines except a spring and then swing the vessel's stern 90 degrees to the berth before letting go the spring and going astern. The pilot reiterated the need to stay clear of the shoal water to the south-west of jetty 1 and the tanker's Master confirmed the vessel's maximum draught as 7.4m aft.

The pilot then discussed the fact that the departure had been brought forward one hour because of his concerns about the falling tide. The Master asked the pilot to check if a tug could be obtained for a 03:45 departure. Port authorities confirmed that no tug was available but the Master remained concerned about the lack of a tug, despite the pilot's reassurances. During this exchange the pilot talked through the plan to use the forward spring to control the turn off the jetty and asked that the anchor be kept on standby.

Further discussions took place between pilot and the Master about the use of fenders, transit marks and the manoeuvre off the jetty. At 03:54, the pilot used the radio to brief the line handlers about the plan for departure. Discussion about the manoeuvre off the berth then continued between the pilot and the Master. The pilot was concerned that preparations for sailing were behind schedule. At 04:00, the Master, speaking in a language not understood by the pilot, instructed mooring parties not to release the mooring lines. Then, the pilot reiterated the steadily reducing height of tide to the Master.

At 04:05, the Master called the ship's agent to highlight concerns about sailing without a tug. This call became a heated three-way conversation between the agent, the Master and the pilot, and ended with the pilot saying that 05:00 was too late to conduct a safe departure. A few minutes later, acquiescing to the pilot's pressure, the Master ordered the ship's lines to be singled up.

Soon, all lines other than the forward spring had been let go. The pilot then manoeuvred the vessel off the berth and, at 04:23, the order was given to slip all lines. The forward spring snagged briefly but was quickly cleared and the pilot continued to manoeuvre the vessel to bring it to 90 degrees with the berth. At one point the pilot ordered the Master to stop the engine and then go ahead. The tanker was going astern and then the pilot requested dead slow astern and then slow astern. About nine minutes after slipping the lines, the ebbing tidal stream of about 1.5 knots was taking the vessel bodily towards the westernmost dolphin of jetty 2.

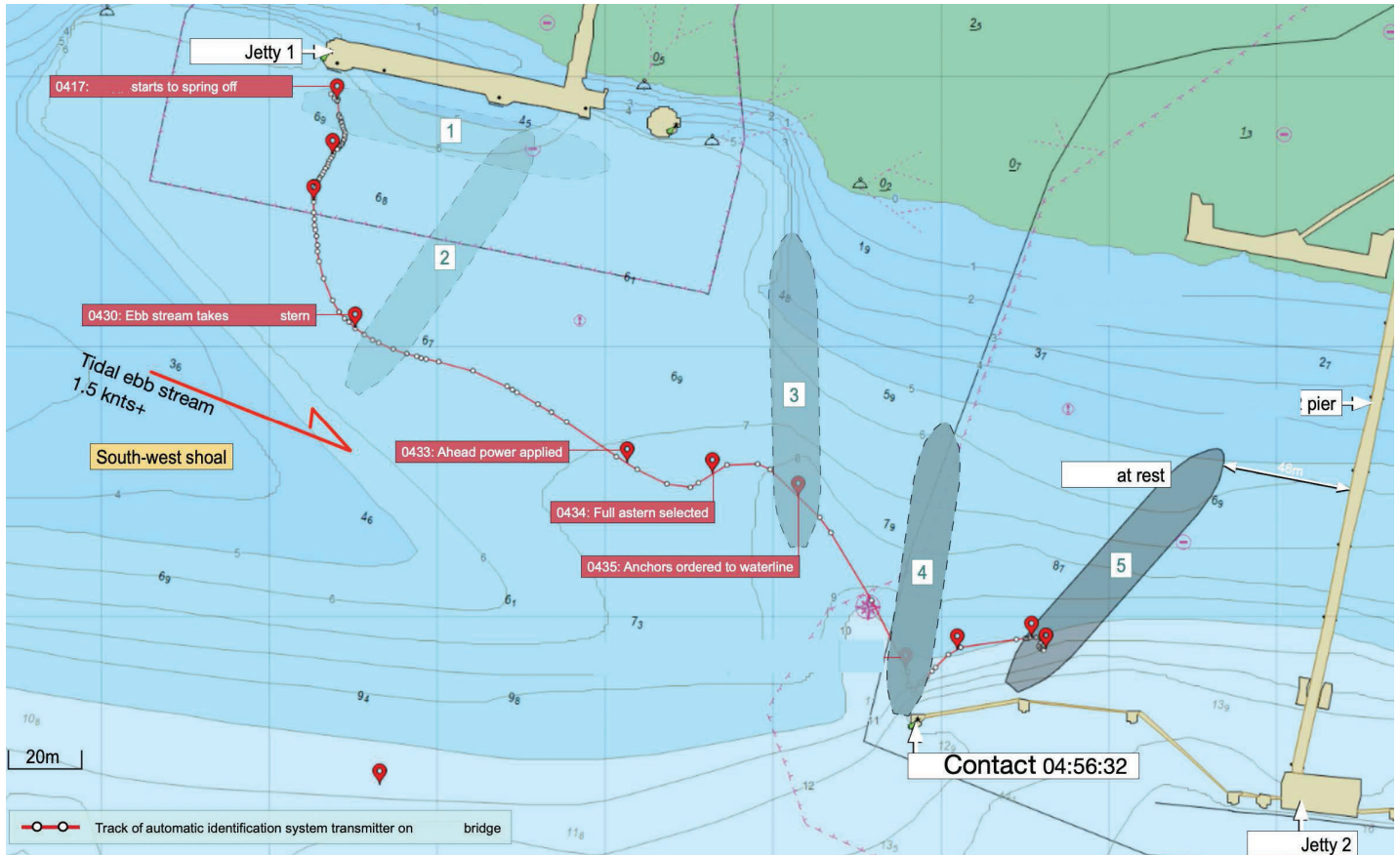
About one minute later, the pilot attempted a kick to starboard by ordering ahead power and full starboard rudder. Then, the pilot ordered the engine to full astern. Meanwhile, the duty VTS officer observed on radar that the vessel was nearing jetty 2 and called twice in quick succession to check if all was okay; but the calls were not heard on the bridge.

Starting at 04:35, and for the next 90 seconds, the Master and the pilot both shouted a series of orders about the anchors. At the end of this it was stated that the anchors were just to be lowered to the waterline.

The pilot again ordered 'Hard starboard, kick ahead, kick ahead'. Twelve seconds later, the tanker's starboard aft quarter collided with the westernmost dolphin of jetty 2. With the engine now full ahead and the wheel hard to starboard, the vessel scraped along the dolphin. Soon, both anchors were down and the engine was set to stop. The vessel's stern cleared the westernmost dolphin, but as the bows pushed into the soft mud of the riverbank the stern hit the walkway on jetty 2, dislodging a section of the jetty. The vessel was now stuck, the vessel's bows partly held by the anchors lying to port and by the mud of the riverbank. The vessel's bows were approximately 48m away from the pier of jetty 2 and the stern was resting on the jetty. Some time later, the tanker was re-berthed with the assistance of two tugs.

The investigation analysis and findings shed light on certain



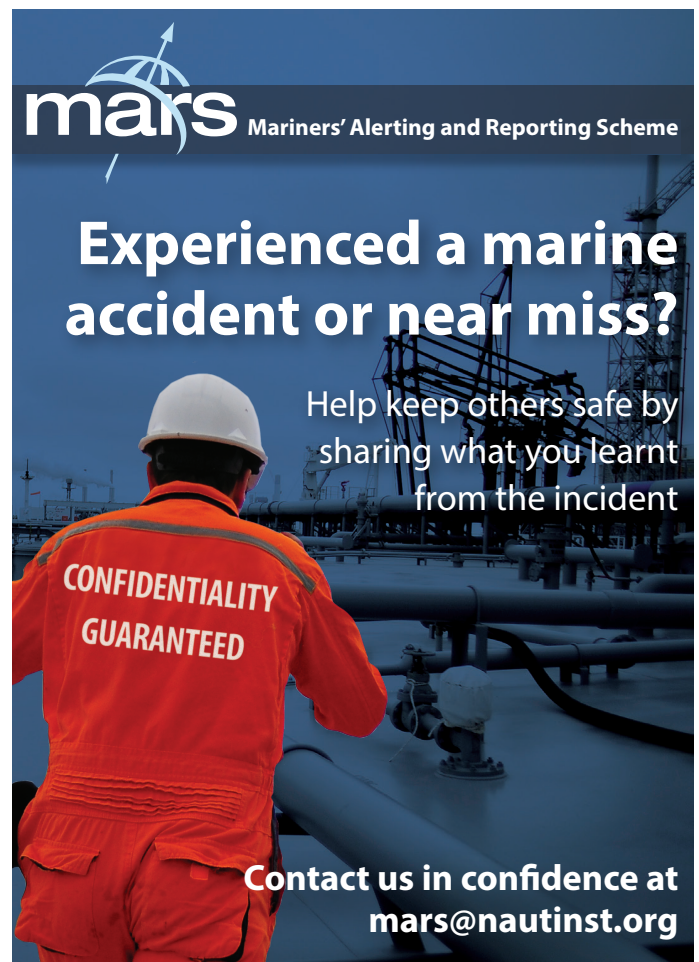


contributing factors, among others things:

- The pilot was probably fatigued when boarding the tanker and during the departure manoeuvre. Judgement and reaction time are adversely affected by fatigue.
- The pilot had not visited jetty 1 for more than four years so he had not encountered the new extension to jetty 2. He was therefore unfamiliar with how much this new berth extension constrained the available navigable water, especially for a departure when docked in the easterly direction with a strong ebb tide.
- The pilot was not informed of the mandatory tug requirement for such ebb tide departures from jetty 1. He was not alone in this lack of local knowledge; the port controller and the VTS officer on duty at the time of the accident were also unaware of the requirement. This was a recently implanted risk mitigation measure that had been poorly disseminated to persons of interest.

### Lessons learned

- In this instance we can observe the near total collapse of Bridge Resource Management (BRM). On the one hand, the pilot was not properly supported in the manoeuvre by the bridge team. No one was assigned specific tasks. On the other hand, the Master, notwithstanding his misgivings about not employing a tug, acquiesced to the pilot's misinformed judgement, although the pilot's abilities were undermined by fatigue. Lesson for Masters – trust your experience, and delay departure if you have doubts.
- Incredibly, neither the pilot, the port duty officer, the VTS officer, nor the agent knew that an east-facing vessel in an ebb tide was required to have tug assistance for departure. How could we expect the Master to know? However, given the very restricted waters and strong ebb tide, normal seaman-like precautions would have dictated the presence of a tug.



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