MARS

MARS Report 398 | December 2025

In this bulletin…

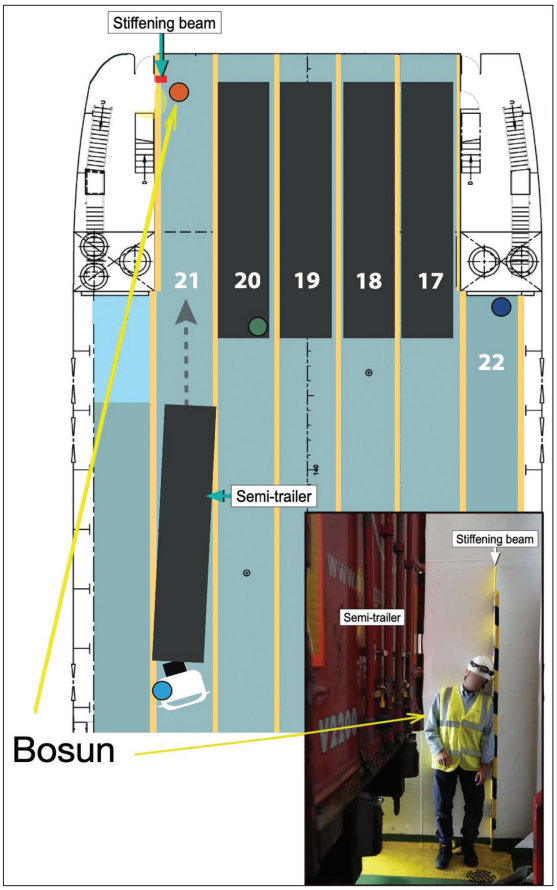
MARS 202547

Another ro-ro loading fatality

A ro-ro vessel was in port and the vessel's crew, assisted by shoreside tractor unit drivers, was loading semi-trailers onto the upper vehicle deck. The bosun, acting as a banksman [directing traffic], was marshalling a tractor unit as it pushed a semi-trailer into a tight corner stowage space. He positioned himself on a painted walkway at the rear of lane 21 to guide the trailer. The walkway was located inside the vehicle lane.

The tractor unit driver lost sight of the banksman as he was backing up, but, following a routine but unsafe workaround practice common at the port, continued the manoeuvre even after doing so. The driver assumed the bosun had moved to a safe position behind an adjacent trailer. However, the semi-trailer was at a slight angle, causing its rear to encroach upon the painted walkway where the bosun was standing. The bosun was trapped and crushed against a steel stiffening beam protruding from the vessel's superstructure.

Another crew member found the bosun unresponsive. The alarm was sounded and crew members rushed to the scene. The semi-trailer that had crushed the bosun had to be moved by another tractor unit to allow access to him. First aid and CPR was administered until paramedics arrived, but the bosun's injuries were too severe. The victim was declared deceased at the scene.



Lessons Learned

The investigation into the accident revealed several critical safety failings:

- **Dangers of unofficial workarounds:** An undocumented and unsafe procedural workaround for loading semi-trailers in difficult spaces had become routine practice, overriding official safety protocols.
- **False sense of security:** Painted walkways that are not physically segregated from vehicle lanes can create a false sense of security and do not provide adequate protection. This lesson was also highlighted in a previous fatal accident.
- **Breakdown of visual contact:** The fundamental safety principle of maintaining visual contact between the banksman and the vehicle driver was violated. The driver continued manoeuvring after losing sight of the bosun.

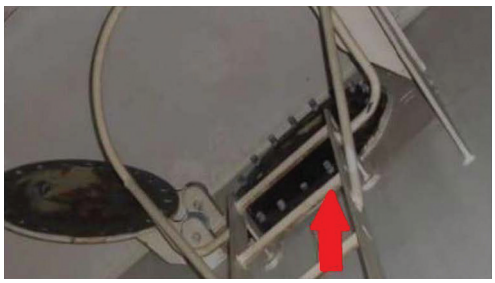
- **Inadequate supervision:** The upper vehicle deck operations were effectively unsupervised. The bosun was occupied with marshalling and lashing, and other officers were engaged in separate duties, preventing oversight of unsafe practices.
- **Organisational and procedural failures:** There was a significant gap between written procedures and actual work practices. The investigation found that the vessel operator and the port operator had not effectively aligned their safety procedures, and lessons from previous similar accidents had not been fully implemented.

As edited from MAIB (UK) report 16-2024

MARS 202548

Fire pump flooded

A vessel had just departed drydock. The Master decided to take additional ballast in the after-peak tank to better immerse the propeller. Shortly after starting to fill the after-peak tank, a 440V low insulation (ground) alarm was activated. Crew were sent to investigate and found that ballast water was flowing down from the after-peak tank access hole. Water was collecting in the trunk containing the emergency fire pump, which was now fully submerged.



After-peak tank access manhole 5m above steering gear compartment deck

Flooded trunk containing emergency fire pump

The after-peak access manhole is about 4.5 metres above the deck. The manhole cover was in place, but the cover's securing nuts were not fully tightened, allowing major leakage.

The company investigation found that the manhole covers of the various tanks had been undone for inspections during drydock. After the inspections were complete, they should have been fully secured for operations. However, the cover of the after-peak access, situated at a height, was forgotten. Also, the bilge level alarm for the space was found defective.

Lessons learned

- Alarms should never be turned off and should be verified at regular intervals. Bilge level alarms should be rectified as soon as a fault is detected.
- Post drydock checks and verifications are critical. What sailor does not have a story about minor or even major deficiencies left uncorrected after leaving drydock?

MARS 202549

How do you install your roll?

A general cargo vessel was in port and discharging rolls of paper. The rolls were chocked with polystyrene packing, and at one point during the discharge one of the rolls toppled. The roll was 1.4 metres in diameter, 2.2 metres high and weighed 2.6 tonnes. Fortunately, no one was injured in the incident.

It is likely that the polystyrene chocking was used to raise the height of the roll in the layer, allowing another layer of rolls to be stacked on top.

Lessons learned

- Polystyrene is not a suitable material to be used as weight bearing dunnage. Only robust weight bearing materials should be used for dunnage.
- Good awareness from the stevedores prevented a more serious incident. Awareness of dangers is everyone's responsibility.

As stowed

After the collapse

As edited from Port Skills & Safety Alert No: SA-006-2024

MARS 202550

A sitting target

A tanker in ballast was at anchor in a congested anchorage with a depth of around 90–100 metres.

The OOW noticed a vessel underway approaching ahead at about 3 knots and on what appeared to be a collision course (see diagram). The Master came to the bridge and together with the OOW they attempted to communicate with the approaching vessel. The engines were ordered, and the ship's horn was used to attract attention but to no avail. The approaching vessel did not respond and continued its manoeuvre, coming ever closer.

The vessel had 10 shackles on deck, but options were limited. Paying out more anchor cable would have caused the vessel to move aft, thereby closing with another vessel at anchor.

Port traffic control also tried to contact the moving vessel, but to no avail. Some 18 minutes after being identified as on a collision course, the moving vessel struck the anchored vessel on its port bow. Minor damage was sustained at the port forward bulwarks and associated brackets connected to the forecastle deck.

Lessons learned

- An attentive anchor watch is just as important as a watch underway. In this case, however, it still could not prevent the turn of events that was beyond the control of the anchored vessel.
- Information from the moving vessel was unavailable to the contributor – it is assumed the team on the bridge wished to anchor to port and behind the already anchored vessel.
- When in a crowded anchorage or other situations that require delicate manoeuvring, call tugs to assist.

MARS 202551

Fatigue claims another victory

A towing vessel in a river waterway was pushing a barge loaded with aggregate when the lone operator in the wheelhouse fell asleep at the helm. The barge struck a bulk liquid transfer terminal, resulting in more than $1.5 million in property damage to the barge, handling equipment, and the facility.

The investigation identified the failure of the Wheelhouse Alerter System (equivalent to a BNWAS) to detect the lack of motion from the operator as a key contributing factor. The system relied on passive infrared (PIR) detectors to monitor motion in the wheelhouse, and was set to sound an alert if no motion had been detected for ten minutes. However, the PIR sensors were tripped by non-human movements such as swinging cables and oscillating fans, causing the system to continually reset the timer – and thus failing to detect the operator's inactivity. Additionally, the system used was not designed by a marine equipment manufacturer, which raises concerns about its reliability in marine environments.

Lessons learned

- Although the Wheelhouse Alerter System did not function as required, neither did the operator. He fell asleep. Why? Crew work schedules, minimum safe manning numbers, company policies, crew practices…just a few of the possible upstream underlying factors.
- A single operator in the wheelhouse is a classic example of potential 'single point failure'.

As edited from USCG Safety Alert Safety Alert 02-25

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