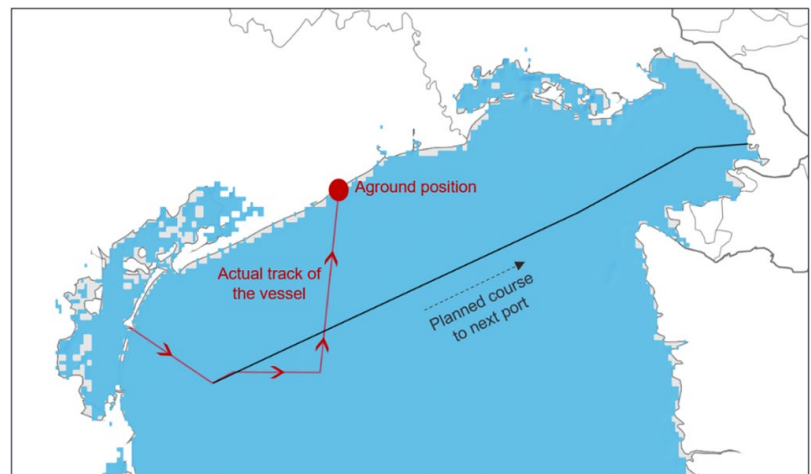


## Case study for onboard safety meeting

# Grounding incident

Please read the below description of an incident. Keeping your company's standards and vessel procedures in mind while reading to compare with the actions of the crew below. We will discuss the factors which led to the incident occurring and how to avoid it happening on our vessel.

A general cargo vessel departed from port on 3 June at 0230 hrs LT with drafts of 9.0 m forward and 9.6m aft. The vessel had a very busy port schedule with stores arriving towards the end. In addition, all deck crew were heavily involved in checking cargo lashings prior to departure. The pilot departed at 0345 hrs and soon afterwards the vessel commenced the sea passage with the engines at full ahead. By 0410, she was doing a speed of 11 knots. The bridge was manned by the Master, Chief Officer and a helmsman. At 0420, the vessel was put on auto pilot and the Master handed over the con to the Chief Officer. Traffic was light with a few small boats showing on the radar and the weather was calm with clear skies and good visibility. The Master stayed on the bridge for some time and headed down to his cabin at 0435 to send some e-mails. The AB was sent down for a few jobs by the Chief Officer at 0500. Sunrise was expected in under an hour.



At 0510 the Chief Officer altered the course to starboard to avoid a fishing boat and at 0520 he set the course in a northerly direction to come back to the planned track. He started filling in the logbook and planned the day work for the deck crew. He then shifted his focus to cargo related paperwork which the managers and charterers required the vessel to complete soon after departure from each port and to be sent to them by email. The vessel's course was not changed once it was back on the planned track and she continued in a northerly direction. The vessel ran aground at 0640. Two tugs had to be called to tow the vessel to a safe anchorage. The authorities and port state control also boarded the vessel for investigation.

Some of the observations noted during the investigation by the ship's ISM manager were:

- Interview with other crew members revealed that the chief officer was probably fatigued, both physically and mentally, due to a busy schedule in port, although his work and rest hours did not indicate so. There was a suspicion that he fell asleep on bridge, but this could not be confirmed.
- The Bridge Navigation Watch Alarm System (BNWAS) was not turned on.
- All alarms on ECDIS, such as for off-track and anti-grounding were muted and hence there was no audible alarm to alert the Chief Officer of the vessel's deviation.
- There was no lookout on the bridge.

Some of the corrective actions taken were:

- No paperwork to be done on the bridge.
- Lookout cannot be sent down from the bridge in periods of darkness and reduced visibility.
- Both audible and visual alarms on equipment such as ECDIS, GPS and Radar are to be kept 'on' when underway or at anchor.
- Ensure that BNWAS is kept on and in the correct mode. An additional point to reflect this was also included in the pre-departure checklist.
- The watchkeeper keeping the first bridge watch after departure must be well rested.
- Master given the liberty in SMS to delay departure or anchor after departure to give the crew sufficient rest.
- Crew encouraged to inform shore management if rest hours cannot be complied with and if additional resources are needed.

# How to improve by lessons learnt

Based on the case and the keywords, you should now perform an onboard risk assessment of the incident and the factors which led to it. Bear in mind your vessel's procedures. You can also discuss the keywords below in order to determine onboard areas/topics for increased awareness:

- Discuss how the dynamic shipboard environment impacted the chief officer in this case? Note that he was transitioning from activities that were physically demanding, such as handling stores, checking lashings, unmooring etc., to an activity that demands greater levels of mental alertness such as bridge watchkeeping.
- Discuss the company's guidelines to manage fatigue onboard, especially for those keeping the first bridge watch after departure from port. Also consider the possible channels that the Master can use to give practical suggestions to the shore management for improvement.
- Discuss whether there is sufficient time and resources available onboard to complete the necessary paperwork after departure from port without compromising safety.
- Discuss what are the safety management system requirements for different audible and visual alarms for various navigation equipment on the bridge, particularly the ECDIS. Also consider the level of familiarity of the watchkeepers with the equipment?
- Discuss the company's requirements for having a lookout on the bridge, i.e. the circumstances under which a lookout must be present on the bridge to assist the OOW.

Some key words that you can use to facilitate the discussion: safe navigation, fatigue, sleep, environment and behaviour, distraction, burden, paperwork, alarms, non-compliance, habits, alertness, passage plan, procedures, lookout, bridge resource management, teamwork, etc.

## 1 What factors contributed to the collision in the above case?

## 2 Risk Assessment: Could some of the risk factors be identified on board your ship? How frequent could they be present? How severe could it be if they are present?

## 3 What risk control measures would you suggest? Any additional safety barriers that could be introduced?