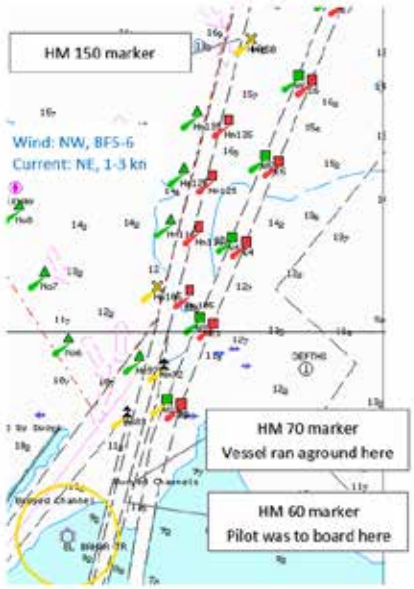
CASE STUDY FOR ONBOARD SAFETY MEETING

GROUNDING INCIDENT AND DAMAGE TO BUOY IN THE SUEZ CANAL

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.

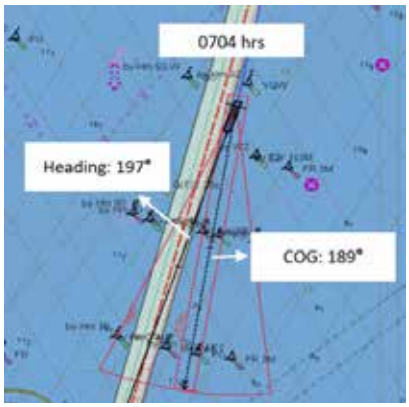
The tanker was on a laden passage from Europe to China, with a draft of 18 mtrs. She arrived at Suez Canal anchorage at 1700 hrs. Instructions by port control were to heave up anchor and have engine st'by at 0400 hrs the following day and be prepared for the pilot to board. At 0400 hrs, vessel was informed that due to bad weather pilot will board the vessel at buoy HM150, which was well inside the fairway.



Vessel entered Suez Canal at 0615 hrs and had taken her position in the convoy, while still waiting for the pilot. The engine room was manned and the deck crew were st'by on radio to pick up the pilot. When vessel was passing HM150, port control informed that pilot will instead join the vessel further inside the channel, at HM60 marker. Speed and course of the vessel at this time are mentioned in the table below. Current was setting north east at a rate of 1-3 knots and wind was from north west, BF 5-6. At 0650 hrs, vessel was instructed to proceed at a heading of 196° and reduce the speed to 8 knots so as to maintain safe distance from the vessel ahead. Other vessels in the convoy were also given the same instructions by the port control. Vessel passed HM92 at 0704 hrs and HM80 at 0711 hrs. Speed and course are mentioned below.

Local time	Location	Speed through water (STW)	Speed over ground (SOG)	Heading	Course over ground (COG)
0640 hrs	Passing HM150	10 knots	9 knots	193°	190°
0704 hrs	Passing HM92	7.5 knots	6.4 knots	197°	189°
0711 hrs	Passing HM80	5.9 knots	5.7 knots	209°	200°

At 0720 hrs, while the pilot boat was still on its way, the vessel ran aground outside the eastern limit near marker HM70. Four tugs were needed to refloat the vessel. Diving operations were undertaken to check the damage to the vessel's bottom and propeller. The chain of red buoy HM70 was found entangled around the propeller. Propeller blades were found to be cracked at the tip and a crack arrestor hole was drilled to stop the its propogation. The entangled chain had to be cut. Whole operation took 4 days.



Some of the observations noted during investigation were:

- Pilot had boarded the vessel ahead at the position given by port control, which was HM150 marker, but own vessel's pilot had delayed boarding on two occassions citing bad weather, even though she was well inside the channel.
- Master was new in rank and was transiting the Suez Canal for first time in two years. Chief Officer was also not very familiar with the Suez canal. The bridge team was thus relatively inexperienced in Suez transits.
- Master undertook all VHF communications with port control himself. This diverted his attention away from navigation.
- Master did not consider aborting passage at any stage and neither did the bridge team assertively challenge the port control's decision to delay pilot boarding for their vessel, whilst pilots were infact boarding other vessels in the convoy.
- The wind and current had a significant effect on the ship, which would have been apparent to the bridge team had they also been monitoring the ground vector (COG). A look at the historical AIS track of the vessel ahead, which had similar dimensions, shows she had given substantial counter helm for wind and current to stay in the channel. For example, when she was passing buoy HM92, her heading was 201°, whereas own ship was steering 197° when passing the same marker.
- Company had an in-house ship handling course for all deck officers and masters, but transits through Suez canal were not simulated in these courses. They were also not designed for large vessels. The investigation report and subsequent preventive actions placed a lot of emphasis on this aspect.

If you have any questions or comments please contact Gard's Loss Prevention team at lp@gard.no

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 the Suez Canal transit requirements with regards to pilot boarding position in normal and heavy weather. Refer the sailing directions and the handbook on Suez Canal rules.
- Discuss how is navigating in confined waters different from navigating in open waters, especially when there is a strong cross current and strong wind.
- Discuss how use of ground vectors can be helpful in confined waters.
- Discuss how tasks, such as position plotting, radio communications, lookout, record keeping etc., are delegated to different members of the bridge team during navigating in confined waters on your vessel? Are there any SMS guidelines for this?
- Discuss the requirements of attending ship simulator courses in your company? Did you find the last ship simulator course you had attended to be appropriate for the kind of vessel you are on currently?
- Discuss what measures would you take if the pilot does not board by a certain point. Would you continue proceeding or abort and turn the vessel around before the vessel passes the point of no return? Also discuss the commercial pressures which might affect the decision making in such a scenario, for e.g. loosing the berthing window or convoy positioning.

1 What factors contributed to the incident on board the vessel?

2 Risk Assessment: Could some of the risk factors be identified on board your vessel? What is the likelihood and severity of those risk factors?

3 What measures would you suggest in order to mitigate the risk that could lead to such incidents? Any additional barriers of safety that could be introduced?