

## ECDIS Over-Reliance and Poor Bridge Resource Management (BRM) Lead to a Vessel Grounding



### Description

A 500 ft (152 meters) long vessel was delayed from entering an unfamiliar port shortly before arrival when the berth was unexpectedly not available. The Master slowed down and thereafter decided to drift offshore until the berth was available.

While drifting, the Master took the conn. The 2nd Mate was on watch along with a deck cadet and an AB. The 2nd Mate was monitoring the ECDIS while the cadet was plotting positions on the paper chart. The Master allowed the vessel to drift intermittently and proceed slowly at other times.

Outbound traffic included a cruise ship, a bulk carrier, and a large motor yacht and there was considerable radio discussion with these vessels to coordinate safe passing arrangements. Since the cruise ship was behind schedule, the Master was further delayed before beginning his approach to the port to pick up a pilot. At one point, the Master asked the Mate on watch to plot the vessel's position in relation to a charted underwater hazard. While in the process of taking that fix, the vessel grounded on that very hazard.

The investigation revealed the following:

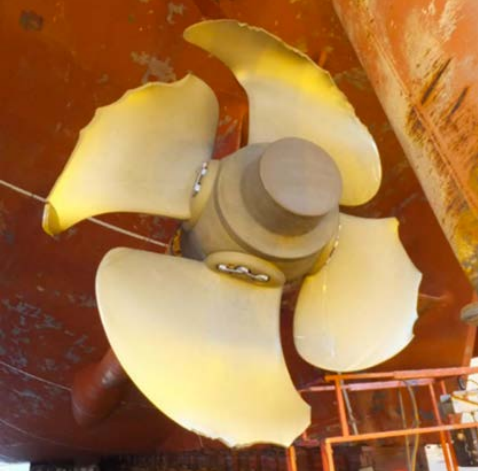
- The passage plan was not conducted as per the SMS, lacked substantial detail and was not updated when the vessel was delayed.
- No pre-arrival brief was held as required by the SMS despite being the vessel's first arrival to the port.
- The 2nd Mate on watch relied almost exclusively on ECDIS for navigation contrary to the requirements of the SMS which required the use of paper charts as the primary navigation tool.
- The cadet was left to plot fixes on the paper chart and his work was never monitored. Had it been monitored, the vessel's proximity to the hazard would have been noticed.
- The ECDIS safety contour had been appropriately set to 26 ft (8 m), but the alarm had been turned off as well as the "look ahead" feature and "predicted movement" feature.
- The Master allowed the entire bridge team to get distracted by other traffic without ensuring the vessel's position was being monitored. Additionally, there was very little communication and coordination between the members of the bridge team.

### Actual Damages

The port propeller was seriously damaged and the port shaft was bent. The rudder stock was displaced and the hull and internal structure was damaged on the port side from midships all the way aft. The vessel was out of service for three months for extensive repairs that exceeded \$1 million in cost.

### Potential Risks

The vessel was fortunate that the hull was not breached and that there was no pollution. They were also fortunate that the vessel could still sail, albeit at reduced speed, and did not have to be towed hundreds of miles to the repair facility.



Damage to propeller and bottom of the hull due to grounding

## Prevention

- ★ Bridge resource management is essential to safe navigation and is the Master's responsibility.
- ★ It is critical that the entire bridge team share the same mental model of both the passage plan and assignment of responsibilities on the bridge are communicated and understood.
- ★ It is equally important that the bridge team feels empowered to communicate and share information so they work as a team.
- ★ It is recommended that ECDIS and all its features be used as navigation aids but not as the sole source for navigating a vessel.
- ★ Good passage planning should be a point of emphasis, especially when entering an unfamiliar port.

When you identify a hazard before something goes wrong...

**it's a Good Catch.**

When you stop an operation before something bad happens...

**it's a Good Catch.**

When you speak up regarding your vessel's safe navigation... **that's a Good Catch, too!**



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