Shoal Water and Sh Spell Doom

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It's early morning as two MCMs make their way via the Seto Inland Sea between two of the main Japanese islands. This area is filled with numerous small islands, narrow channels, complicated tidal currents, and shoal water. Even the best possible track seems to have been taken from a navigator's nightmare.

As if these hazards aren't bad enough, Sailors aboard one of the ships throw caution to the wind. They let unqualified people stand watch. They also violate the CO's standing orders and operate close to land—because "they're used to it." I ask you, though, What surface warrior ever gets comfortable operating a ship close to land? These mistakes run the ship aground, produce $500,000 in damage, and endanger the crews' lives.

Here's the sequence of events:

At 2340, the ship had stationed the modified navigation detail. At this point, the combat information center (CIC) and the bridge team stopped plotting GPS fixes and started relying solely on five-

Sailors aboard an MCM like this one learned why you shouldn't operate a ship close to land or let unqualified people stand watch.

allow Thinking

minute radar fixes. The bridge team did not take a recorded visual fix between then and the grounding. Navigators or quartermasters worth their salt would use all means available to plot the ship's position. At 0058, the quartermaster of the watch (QMOW) computed set and drift at 255 T, 1.3 knots. In violation of the navigation bill, the bridge team did not calculate set and drift again until after the grounding. CIC didn't log set and drift once during the entire watch. They should have calculated set and drift after every fix.

Both MCMs were averaging 6.5 knots. They had maintained a continuous 200-yard distance to the right of the proposed track, which allowed most of the traffic in the channel to overtake them on the port side.

The mid-watch passed uneventfully. Between 0340 and 0350, the reveille-watch team held turnover. There's usually a small lag between watch teams so the new team can adjust to the situation. Such a small margin of error in this transit plan proved disastrous.

At 0400, the QMOW plotted a fix that showed the ship 400 yards right of track. This fix placed the closest point of approach (CPA) dangerously close to the upcoming island off the starboard bow. CIC also held the ship well right of track. The watch supervisor told the OOD under instruction (U/I) and recommended coming left. The OOD and the OOD U/I made two course changes to the left, totaling 12 degrees, to open the CPA. The ordered speed was 5.5 knots.

Looking over the starboard side, the OOD saw a large, dark streak in the water and decided he should come left some more. Before he could give the order, though, the ship ran aground in 6 feet of water. He then ordered all stop and called the CO and XO to the bridge. There were reports the auxiliary-machinery space was flooding at the rate of 5 gallons per minute. Watch personnel had seen water spraying from the hull penetration for the ship's precision integrated navigation system (PINS) transducer.

Deckhands dropped the anchor and put a RHIB in the water to take soundings with a leadline. About 40 minutes later, the tide had risen enough to float the ship. In 20 minutes, damage-control personnel had slowed the flooding to a gallon per minute. Seepage in the bow-thruster machinery room and pump room caused minor flooding, which no one found until later.

What caused this mishap? One factor was poor watchstanding at nearly every station. Starting with the OOD, no one closely monitored the navigation picture. The bridge team failed to track how close the ship was to shoal water and how far right of track they were. They also didn't take

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A bridge lookout aboard the MCM in this mishap made at least four reports to the bridge that the ship was coming dangerously close to the island off the starboard bow.

appropriate action when they realized the ship might be in danger.

The OOD failed to clearly define with his U/I watchstander just what their responsibilities and relationship were. Each officer trusted that the other had the bubble, when in fact, neither did. An OOD always must maintain control of the watch team, no matter who the U/I watchstanders are or how close they are to qualifying.

This disaster could have been avoided if the OOD, QMOW or CIC watch supervisor had stopped to question where the ship was and checked the fixes at any point in the chain of events. From 0335 until 0400, the QMOW cut poor or no fixes. A good fix at 0400 placed the ship 400 yards right of track and steering close to shoal waters. The senior quartermaster sent the junior QMOW to CIC to compare fixes. The CIC watch supervisor then called the OOD on the phone and passed a recommendation to "come left."

The OOD U/I responded, "Yeah, we know, we're coming left."

Eight minutes before the ship ran aground, the conning officer computed the CPA to Futagami Island off the starboard bow at 95 yards in 5 minutes. The bridge lookout made at least four reports to the bridge that the ship was coming dangerously close to the island off the starboard bow.

Five minutes before the grounding, the PINS and shipping watchstander in CIC passed a recommendation to the bridge to come left. The status-board keeper, however, never let anyone know because "people were going back and forth, and he couldn't get the OOD's attention."

Four minutes before the grounding, CIC notified the bridge of abnormal fluctuations in the fathometer. Three minutes later, the OOD ordered the ship to come left 10 degrees. At 0403, the OOD ordered the ship another five degrees to the left, and the ship ran aground. The EOOW logged that the ship shuddered violently. Watchstanders in the main-machinery room reported that the starboard shaft "bounced."

This mishap sent the ship to the yards for three months to repair a keel that was bent upward about four inches. The starboard side of the hull had the fiberglass scraped in several places from the bow all the way aft to frame 64. The largest scrape measured 18 inches by 12 feet. The wood hull was scored three inches deep in a 4-square-foot section outboard of the sonar trunk.

Navigation is a team effort. Just because there is a navigator or a quartermaster on watch does not mean the rest of the watch team can sit back and let it ride. The ship-control stations in combat must know what the track is and whether or not the ship is on that track. Any deviation from the plan should trigger a mental alarm and cause the watchstander to find out what is happening. If you feel the bridge-watch team isn't taking what you consider the correct action, notify the OOD.

The author was assigned to the Naval Safety Center when he wrote this article.