



Grounding and Coral Reef Damage

Description

A handysize bulk carrier was anchored offshore awaiting orders. The weather was mild, but a cold front was expected to arrive overnight. The Master left standing

orders instructions for the Officer on the anchor watch to pay particular attention to the changing weather and alert him if a problem occurs.

Shortly after 0200, the wind speed increased to 30 knots with gusts to 38 knots. With no cargo onboard and riding high in the water, the vessel began to drag its anchor. The Officer on the anchor watch observed the increase in wind speed and logged it but did not take any additional position fixes to verify if the anchor was holding. In addition, he

did not inspect the anchor chain for any indication that the anchor was dragging. The Officer on anchor watch did not notice this for over an hour. By that time, the vessel was dangerously close to a reef. As soon as the Officer on anchor watch recognized that the vessel was dragging anchor and at risk of grounding, he called the Master. The Master instructed him to immediately notify the engine room to start the main engine. However, by the time the engine was ready for orders, the ship had grounded on the reef.

The weather subsided quickly, assist tugs were called and the vessel was successfully refloated after 18 hours.

The investigation determined that the Master's standing orders were inadequate and should have included standing instructions with more specific parameters than "if a problem occurs." The Master could have required both an increase in the frequency of position fixes and earlier notification of the Master based on a specific wind speed or in response to any indication the anchor was dragging. With the predicted weather, the risk of dragging anchor should have been recognized and mitigation measures put into action.

The investigation also noted that the decision to anchor in that location near a coral reef was ill-advised, especially with the Master's full awareness of the expected weather.



Actual Injuries and Damage

The vessel sustained puncture and indentation damage to the hull in the vicinity of a ballast tank. The vessel had to drydock for repairs. Actual costs to refloat the vessel and to make repairs to the hull exceeded \$385,000.

The country where the grounding occurred filed a claim for damage to their coral reef. That claim exceeded \$1.25M for repair and restoration work. The claim was based partly on damage from the hull's contact with the coral reef but also on the damage created by the anchor chain as it dragged across the coral reef. It was estimated that over 400 square meters of the coral reef had been damaged by the anchor chain. An additional part of the claim was for damage to the coral reef from the tugs and their propeller wash in their efforts to free the vessel from the reef.

Potential Damages

This vessel could easily have sustained more damage and was fortunate that damage was limited to just one ballast tank. Although the damage to the coral reef was extensive, it could have been significantly worse. If the bad weather had continued, the vessel would likely have remained aground longer on the coral reef, repeatedly slamming against the coral and with the anchor chain dragging across the coral reef resulting in further damage.

Prevention

- ★ Decisions about where to anchor must consider the expected weather and risks associated with the possibility of the vessel dragging its anchor.
- ★ Masters should draft standing orders for the anchor watch should include clearly defined thresholds for when specific actions should be taken. Those actions could include calling the Master, notifying the engine room, having the engines started, and/or increasing the frequency of position fixes.
- ★ The Officers on anchor watch should understand fully their responsibilities and duties and expect to be held accountable.

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 recognize the risks with anchoring near a coral reef and mitigate those risks...

that's a Good Catch, too!



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American Steamship Owners Mutual Protection & Indemnity Association, Inc.

Shipowners Claims Bureau, Inc., Manager

New York

tel +1 212 847 4500 fax +1 212 847 4599
email info@american-club.com web www.american-club.com

Houston

tel +1 346 223 9900
email claims@american-club.com

Shipowners Claims Bureau (UK) Ltd.

London

tel +44 20 7709 1390
email claims@scb-uk.com

Shipowners Claims Bureau (Hellas), Inc.

Piraeus

tel +30 210 429 4990 fax +30 210 429 4187
email claims@scb-hellas.com

SCB Management Consulting Services, Ltd.

Hong Kong

tel +852 3905 2150
email hkinfo@scbmcs.com

SCB Management Consulting (China) Co., Ltd.

Shanghai

tel +86 21 3366 5000 fax +86 21 3366 6100
email claims@scbmcs.com