

LP BULLETIN

Friday 13 June 2008

Bulletin 584 - 6/08 - Case study: grounding - Worldwide

The Australian Transport Safety Bureau (ATSB) recently published an investigation report into the grounding of a bulk carrier at Newcastle, Australia. This bulletin highlights findings and recommendations contained in the report, in order that lessons can be learned and future incidents prevented.

The grounding occurred an hour after the ship departed from an anchorage where her anchor was dragging in heavy weather. A gale warning had been issued forecasting winds of 45 knots gusting to 63 knots with high seas and a heavy swell. The anchorage is only suitable in good weather and nautical publications contain warnings about the local weather conditions, recommending that masters put to sea before conditions become severe. The gale warning should have prompted the master to ballast the ship for heavy weather and take it to sea.

The master got the ship underway after winds were gusting to nearly 50 knots and her anchor was dragging. For more than an hour the ship moved, in ballast, in a direction parallel to the coast about one mile away with an onshore wind. The grounding occurred when the master decided to alter course to put the wind on the other bow. The course change in the extreme weather was poorly controlled and put the ship on a heading whereby she was approaching the beach. Inevitably the vessel grounded with both anchors in their hawse pipes.



Contributing safety factors

- The master had an inadequate understanding of heavy weather ballast, the holding power of the ship's anchor, local weather conditions or the limitations of the anchorage in adverse weather. Consequently, when adverse weather was forecast for the area, he failed to ballast the ship for heavy weather and decided to leave the anchorage too late and after the anchor had dragged.
- The master's early and unwise decision to remain at anchor unless the anchor dragged was based on his assumption that the ship's anchor would hold in the prevailing conditions and his expectation that the port would, if required, issue instructions for ships in the anchorage to put to sea. A number of masters at the anchorage at the time did not understand that Newcastle Vessel Traffic Information Centre performed purely an advisory role.
- The master continued to ignore signs that a dangerous situation was developing and subsequently became affected, to varying degrees, by fatigue, anxiety, overload and panic. This was evidenced by his inappropriate control of the ship at critical times after the anchor was finally weighed, the fact that the anchors were not prepared, or deployed, as the emergency unfolded and by the final high risk turn towards the dangerous lee shore which had little prospect of success.
- The master's management of the available bridge resources was poor. There was no effective planning and little communication between the master and the mates on the bridge. Consequently, once the decision was made to leave the anchorage, the ship's progress and its response to the master's helm orders, were inadequately monitored. The state of the bridge meant that it was highly likely that single person errors would occur once the master became overloaded and then not be detected and corrected.

- The safety management system on board did not provide the master with specific guidance about safely putting to sea in adverse weather. Neither the master's standing orders nor the passage plan form prescribed in the safety management system contained any guidance with regard to bridge resource or team management or encouraged its use.

The masters of the seven ships that put to sea before the onset of gale force winds demonstrated the highest levels of seamanship. They ensured that their ships, crew and the environment were not exposed to unnecessary risks in the accurately forecast adverse weather later.

The full report provides a detailed account of the incident and the many factors to be considered, all of which are not mentioned here. The report is available on the ATSB website and can be viewed using the following link http://www.atsb.gov.au/publications/investigation_reports/2007/MAIR/mair243.aspx

This bulletin highlights the importance of taking proper action in advance of and during adverse conditions. A vessel should not find itself purposely steaming one mile off and parallel to the coast-line in heavy weather.

Taking on ballast into cargo holds after the onset of heavy weather exposes a ship not only to manoeuvring difficulties but also structural damage caused by the water ballast sloshing in partly filled cargo holds. A number of ships at the anchorage in this incident were inappropriately ballasted for the forecast weather and were forced to take on board additional ballast after departing the anchorage.

Members should ensure their safety management systems and company policies address the concerns raised in this bulletin.

Source of information: Australian Transport Safety Bureau (ATSB)
www.atsb.gov.au