

CASE STUDY FOR ONBOARD SAFETY MEETING

LOSS OF CONTAINERS AND HATCH COVER IN HEAVY WEATHER

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 from happening on our vessel.

A 1,100 TEU vessel departed Yantian, China on the evening of 25 September for a voyage to Keelung, Taiwan. Her calculated GM for open sea conditions was 3.5m. At that time a typhoon was developing in the western Pacific and its intended track was towards the north west, passing over the northern parts of the Taiwan Straits. This information was known onboard.

Upon departure, the Master contacted the local agent in Keelung by email for berthing instructions. The agent advised that the port was closed due to the approaching typhoon but advised the vessel to proceed within VHF range so that Port Control could be contacted by radio, as this would enable the vessel to book-in and be first in line when the port reopened. The Master, being aware of the approaching typhoon, sent an email to the charterers seeking their confirmation if vessel should continue proceeding to Keelung port to make radio contact with the port control. Charterers replied in the affirmative.

The Master then decided to proceed full ahead to Keelung. His plan was to book-in with port control via VHF and thereafter head north into the South China sea to increase the distance between the vessel and typhoon. Tightening of all lashings and other precautions as per the company's heavy weather procedures were taken on 26 September in the evening.

On 27 September in the morning the weather deteriorated further. Wave height was nearly 8 mtrs and winds in excess of 45 knots. No crew was allowed on deck, and the Master continuously adjusted the course and speed to improve the vessel's behaviour. The Master made contact with Keelung Port Control at 0900 on 27 September, at which point the vessel was approximately 150 nm NW of the typhoon's center. As per plan, the Master continued heading north, to increase the distance from the typhoon center but the vessel was able to make good a speed of only 3-4 knots due to strong winds and heavy seas. During the evening of 27 September, the vessel experienced very heavy rolling which lasted several minutes. Next morning when the weather had improved, the crew went on deck for routine checks and noticed that twelve containers together with the 4P hatch cover were missing. Some broken lashing material and twistlocks could be found lying on deck. There were also some dents in the ship side.



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:

- Where can procedures for (a) avoidance of typhoon, and (b) navigation in heavy weather be found in company's SMS? Discussion centered on these procedures is recommended.
- What are the limiting weather factors (sea, swell and wind force) for your vessel? What are your actions if the weather factors exceed the limits?
- Discuss scenarios where there may be a conflict between safety and commercial needs. Identify SMS procedures which aim to resolve these conflicts.
- How are commercial pressures addressed ashore and onboard? Discuss along the lines of:
 - o communication between vessel – ISM Manager - commercial operator
 - o team leadership
 - o behavior of people onboard and ashore
- Impact of metacentric height (GM) on the vessel's behavior in heavy seas and consequent effect on lashings.
- Limitations (if any) of the securing arrangements for containers and hatch covers.

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?