

Executive Summary

Final Report of the Vietnam flag bulk carrier "VIMC SUNRISE" Occurrence Investigation

1. Brief description of the marine occurrence

On October 17, 2022, a Vietnam-flagged bulk carrier named “VIMC SUNRISE”, owned by Vietnam Maritime Corporation with IMO No. 9331878 and a gross tonnage of 31236, carried on 22 crew members on board, including a captain. At 0017 hours (Taiwan local time), the “VIMC SUNRISE” was sailing northward through the Taiwan Strait and entered the southern reporting line of the Changhua Wind Farm Channel, she encountered severe weather conditions while sailing north in the Taiwan Strait, approximately 7 nautical miles west of Mailiao Township, Yunlin County. At around 1650 hours, due to the difficult northbound navigation caused by the inclement weather, the captain decided to drop anchor nearby. The crew members went to the deck to prepare for anchoring. However, in the adverse weather conditions, one chief officer fell overboard and went missing, three crew members were injured, and the main deck sustained multiple damages.

On October 9, 2022, the “VIMC SUNRISE” loaded coal at Taboneo Port in Indonesia and was scheduled to unload at Ningde Port in Fujian, China. Prior to departure, the main engine and all equipment were functioning properly. The molded depth of the ship was 17.9 meters, with a draft of 12.5 meters at the bow and 12.6 meters at the stern. At 0017 hours on October 17, the “VIMC SUNRISE” entered the southern reporting line of the Changhua Wind Farm Channel. At 1101 hours, due to the influence of the northeast monsoon, the vessel was unable to sail north and drifted southeast. At 1626 hours, the captain contacted Changhua VTS via VHF and informed the VTS controller that they would drop anchor at

23 degrees 49.9 minutes north latitude and 120 degrees 04.5 minutes east longitude. At 1635 hours, the captain assigned the chief officer, bosun, and two sailors to wear life jackets and safety helmets, and carry personal safety ropes to the bow for anchoring operations.

According to the Automatic Identification System (AIS) track and Marine Traffic website records, the “VIMC SUNRISE” passed through the warning line of the Changhua Wind Farm Channel at 0121 hours on October 17. At 0330 hours, the vessel entered the northbound lane of the Changhua Wind Farm Channel, with wind force ranging from 9 to 10 and wave heights from 4.2 to 6.1 meters. Around 1100 hours, the “VIMC SUNRISE” was approximately 15 nautical miles northwest of Mailiao Port, drifting southeast at a speed of 1 knot. From 1200 to 1604 hours, the vessel drifted southeast at a speed of 2.5 to 3 knots, with wind force ranging from 9 to 11 and wave heights from 5.2 to 6.2 meters. Please refer to Figure 1.1-1 for details.

Based on the interview records and data from the Voyage Data Recorder (VDR), between 1650 and 1700 hours, the helmsman on duty noticed that one sailor fell overboard near the port bow of the main deck due to waves. The second officer immediately threw a lifebuoy with a smoke signal attached to the port side of the helm station. The third officer and several crew members went to the port stern and tied a safety rope connected to the lifebuoy to the deck railing, throwing it towards the sailor in the water. The sailor in the water was pushed towards the side of the ship by the waves and successfully grabbed onto the lifebuoy, and was then pulled back onto the deck by 5 to 6 crew members.

At the same time, the second officer received a report from the bosun via the intercom that two crew members were injured and one was unconscious. The helmsman on the bridge was unable to establish radio communication with the crew members at the bow due to continuous waves on the main deck, making it

impossible to assess the condition of the injured crew members. Additionally, some equipment was damaged by the large waves.

At 1704 hours, the captain mistakenly believed that all four crew members involved in the anchoring operation at the bow had fallen overboard. The captain immediately contacted Changhua VTS via VHF for assistance and initiated a search and rescue operation for the missing crew members in the vicinity. After the wave conditions on the deck eased, crew members were assigned to check the bow and found that the bosun and one sailor (with a broken leg and abrasions) were hiding in the bosun's storeroom. The chief officer was not found, and another injured sailor who had fallen overboard was taken to rest in the accommodation area.

At 2203 hours, after consulting with the shipowner, the captain decided to sail south and berth at Kaohsiung Port. The injured crew members were arranged to be taken ashore for medical treatment, and vessel maintenance operations were conducted.

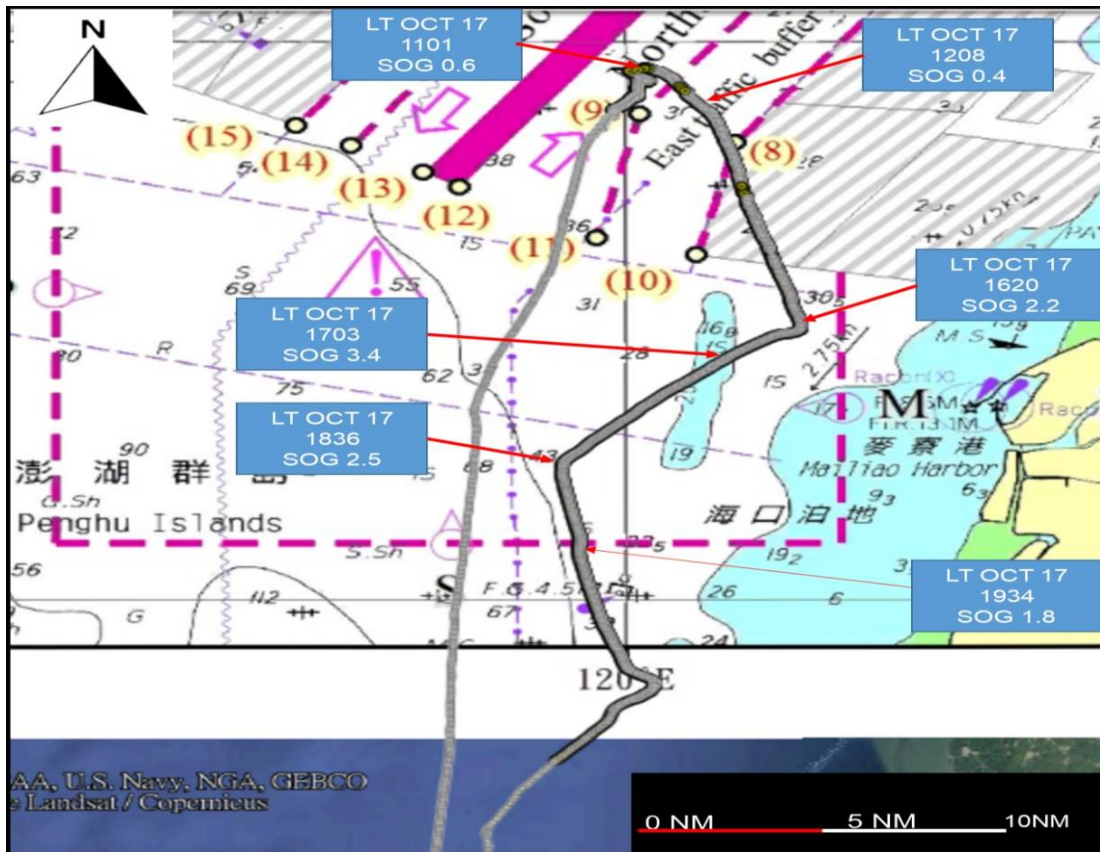


Figure 1 actual path of VIMC SUNRISE (source: AIS, VDR)

2. Findings

On the basis of comprehensive factual information and analyses, TTSB proposes nine findings and two safety recommendations to related organizations based on comprehensive factual information and analyses from the final report. The findings are presented in three categories: **findings related to probable causes**, **findings related to risk**, and **other findings**.

Findings related to probable causes

1. On the day of the occurrence, the Beaufort scale increased from 9 to 11, the wave height increased from 5.2 to 6.2 meters, and the forecandle and main deck of VIMC SUNRISE continued to surf, sailing speed was lower than 1

knot, and the captain still insisted on sailing to north bond, which made he difficult to control the ship. At about 1150 hours, when the engine power of ship was no longer able to resist the wind and waves and stabilize the ship's position, the captain did not change the course in time, and sailed the ship to a safe water area to avoid heavy weather conditions, which caused the ship sailing to a risk of being grounded.

2. Under heavy weather conditions, the captain of VIMC SUNRISE was not vigilant enough, he did not comply with the risk assessment procedure, did not actually perform additional risk measures for anchoring operations, and rashly dispatched four crew members to the forecastle to perform anchoring operation.
3. Four crew members were hit by strong winds and huge waves when they went to the forecastle to perform anchoring operations, causing two crew to fall into the sea, and the other two crew seriously injured. After the bow of the ship was hit by waves several times, the unconscious chief officer and AB no. 1 fell into the sea, and AB no. 2 was hit by waves, resulting in a concussion and fractures of the right tibia and fibula.

Findings related to risk

1. The VIMC SUNRISE was affected by a heavy weather, causing the main engine to activate the protection mechanism and reduce its load. As a result, the speed of the engine was reduced and the rudder efficiency was compromised, making the captain impossible to control the ship and sail north bond.
2. From October 16 to 18, 2011, the Taiwan Strait experienced the combined effect of the northeast monsoon and the water vapor surrounding the mild typhoon "NISA". This resulted in a strong northeast monsoon and heavy rain, making it unfavorable for ships to sail at sea.

Other findings

1. The main engine, auxiliary engine, navigation instruments, and survival equipment of VIMC SUNRISE are operating normally.
2. During the first wave surfing, the first mate's personal safety belt may not be fastened tightly to the railing in the operating area.
3. The captain and crew members of VIMC SUNRISE hold valid certificates of competency issued by the competent authority, and the rest hours and activities before the occurrence were normal.
4. At the time of the occurrence, several cargo ships had changed their passage plans in the channel waters of Changguan Wind Farm, and chose to anchor outside the port of Mailiao or sail to south bond.

3. Safety Recommendations

To VIMC Shipping Company

1. Fulfill the safety management system (SMS) and conduct an extraordinary internal audit, especially for the ship side of VIMC SUNRISE, to ensure that SMS is being properly implemented by the crew.
2. Strengthen crew safety education and training, emphasis to the crew's personal safety protection, onboard operation risk identification and preventive measures, and do not work on the main deck and forecastle when in a heavy weather conditions, to avoid crew injuries and man overboard.