

Container Vessel HUA HANG 1 Major Marine Occurrence

Executive Summary

On May 20, 2024, the China-flagged container ship Hua Hang 1 with IMO No. 9388285, a gross tonnage of 6387, a length overall of 130.20 meters, a beam of 18.00 meters, and a container capacity of 664 TEU, contacted wharf No. 43 with its stern while departing from wharf No. 42 at the Port of Kaohsiung, causing damage to both the stern of the vessel and the wharf. No casualties or environmental pollution resulted from the occurrence.

In accordance with the Taiwan's Transportation Occurrence Investigation Act and the Casualty Investigation Code of the International Maritime Organization, the TTSB is an independent transportation occurrence investigation agency responsible for conducting this investigation. The investigation team also included members from the Maritime and Port Bureau of the Ministry of Transportation and Communications; the Kaohsiung Pilot Office; Fujian Huarong Marine Shipping Group Co., Ltd.; Sino Wagon Shipping Co., Ltd.; and Allegro Shipping Agency Co., Ltd.

After comprehensive investigation and analysis of the factual data, a total of 10 findings and 7 safety recommendations were obtained.

The findings related to probable causes are as follows:

1. During the unberthing and turning maneuver at the Port of Kaohsiung, the pilot and the master of Hua Hang 1 did not adequately assess the distance between the vessel and the moored naval ship ahead as well as the wharf astern, nor did they monitor changes in the vessel's dynamic status. Under these circumstances, the pilot ordered increased astern propulsion, resulting

in Hua Hang 1 contacting the wharf at an astern speed of approximately 2 knots.

2. The master and the pilot of Hua Hang 1 did not adequately conduct the Master/Pilot Information Exchange (MPX). The pilot did not proactively provide the pilotage plan, and the master did not verify key ship handling details. As a result, the pilotage was conducted without a shared understanding, affecting the accuracy of communication and decision-making during the maneuvering process.

The findings related to risk are as follows:

1. The pilot had a basic understanding of the core objectives of Bridge Resource Management for Pilot (BRM-P), but these principles were not applied in practice. During the pilotage, the pilot did not sufficiently collaborate and share information with the master and did not effectively use the bridge team to support the assessment of the vessel's dynamic status and changes in distances to surrounding objects, which affected subsequent operational decisions.
2. During this occurrence, the master of Hua Hang 1 did not sufficiently discuss the vessel's turning operation and critical details with the pilot. As a result, key anticipated risks were not clearly communicated to the bridge team and the lookouts at the bow and stern. The bridge team lacked sufficient awareness of the vessel's dynamic status during the critical phase of the operation and was unable to detect and respond to risks in a timely manner. These did not meet the Bridge Resource Management (BRM) requirements regarding the effective use of personnel and navigational equipment.
3. The master and the officer of the watch (OOW) on the bridge did not comply with the relevant provisions of the Hua Hang 1 Safety Management Manual regarding port entry and departure operations. They did not enhance

information exchange with the pilot to ensure consistency in the operational plan. When the master had doubts about the pilot's intentions or actions, he should have promptly sought clarification, and, when necessary, control of the vessel should have been decisively resumed to ensure the safety of vessel operations.

The other findings are as follows:

1. The bridge team members and the pilot of Hua Hang 1 all held valid certificates appropriate to their duties.
2. The breath alcohol test result of the pilot on duty on the day of the occurrence was 0.00 mg/L.
3. At the time of the occurrence, the steering gear, main engine, and navigational equipment of Hua Hang 1 were functioning properly.
4. At the time of the occurrence, the weather at the Port of Kaohsiung was south-southwesterly wind at Beaufort scale 3, overcast skies, and good visibility.
5. The pilot shift arrangement at the Port of Kaohsiung involved a high proportion of consecutive overnight duties, which could lead to cumulative fatigue due to insufficient restorative sleep. There was no relief or rotation control in place to ensure adequate rest opportunities following consecutive duties, increasing the risk of pilot fatigue during operations.

Safety Recommendations

To Kaohsiung Pilot Office

1. Integrate the pilot training programs provided by the competent authority with the operational needs of pilotage, such as enhancing simulation training and practical exercises, to ensure that pilots are proficient in applying acquired skills during actual pilotage operations.

To Fujian Huarong Marine Shipping Group Co., Ltd.

1. Enhance the fleet's ability to apply the principles of Bridge Resource Management (BRM), particularly during port entry and departure operations, by strengthening the procedures for the master to resume control under specific circumstances to ensure that control of the vessel can be promptly resumed in the event of a near miss or an occurrence.

Note: The final report of this occurrence investigation is published in Chinese. To facilitate understanding for non-Chinese readers, the Executive Summary has been translated into English. While every effort has been made to ensure accuracy, discrepancies may occur. In the event of any inconsistency, the Chinese version shall prevail.