Fishing Vessel Sheng Feng No.266 Major Marine Occurrence

Executive Summary

On March 24, 2023, at approximately 0800 hours, a Taiwanese fishing vessel Sheng Feng No. 266, registered at Kaohsiung Port, with a gross tonnage of 104.56, IMO number 8539899, was fishing on the high seas approximately 540 nautical miles northwest of Rabaul port, Papua New Guinea. An Indonesian crew member passed out on the floor of Sheng Feng's freezing room. Despite emergency treatment efforts, the crew member still passed away.

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 Fisheries Agency, Ministry of Agriculture, Maritime and Port Bureau, Ministry of Transportation and Communications, and Occupational Safety and Health Administration, Ministry of Labor.

After comprehensive investigation and analysis of the factual data, a total of 6 findings and 8 safety recommendations were obtained.

The findings related to probable causes are as follows:

1. On the day of the incident, the cooling coil on the floor of the freezing room possibly ruptured due to rust, pressure, or other factors, causing refrigerant leakage while a crew member of the Sheng Feng No. 266 fishing vessel was sorting out the catch in the freezing room.

2. The crew member passed out and died because of inhaling an excessive amount of refrigerant due to ineffective ventilation when handling the catch

in the freezing room.

The findings related to risk are as follows:

1. The freezing room of Sheng Feng No. 266 has only one entrance/exit, neither enough natural ventilation nor a forced ventilation system. A gas detector available in the freezing room or having someone outside the compartment to monitor conditions could reduce the risk of oxygen deficiency or poisoning inside the freezing room when crew members work there.

2. The cooling coil on the floor of the freezing room of the Sheng Feng No. 266 fishing vessel had no protective measures that would prevent it from rupturing at the welds due to factors such as being stepped on by personnel or the weight of the catch, leading to refrigerant leakage.

3. If the employer and crew of the Sheng Feng No. 266 fishing vessel can jointly establish an occupational safety and health code, it would help the crew better understand the safety measures on board. This would also enhance their safety awareness and reduce the risk of accidents.

The other findings are as follows:

1. Concerning the investigation and prevention of occupational accidents on fishing vessels as described in Article 31 of the International Labour Organization's Work in Fishing Convention(C188), the Executive Yuan has tasked the Ministry of Agriculture to invite the Ministry of Labor, the Ministry of Transportation and Communications, and the Ministry of Health and Welfare to jointly discuss occupational safety, health, and accident prevention measures, and establish a joint inspection mechanism.

Safety Recommendations

To Fisheries Agency, Ministry of Agriculture

1. Cooperate with the Occupational Safety and Health Administration, Ministry of Labor, and the Maritime and Port Bureau, Ministry of Transportation and Communications, to develop safety measures for the freezing compartments of fishing vessels to prevent crew members from suffering from oxygen deficiency or poisoning accidents.
2. Cooperate with the Occupational Safety and Health Administration, Ministry of Labor, to encourage the employer and crew of Taiwanese fishing vessels to jointly sign an occupational safety and health code for fishing vessels to ensure compliance with the relevant provisions of the Occupational Safety and Health Act.
3. Amend the "Occupational Safety and Health Manual for Fishing Vessels" and the "Occupational Safety and Health Work Rules for Fishing Vessels" to include safety measures for working in fish holds. This includes preventing crew members from suffering from oxygen deficiency or poisoning due to poor ventilation in the fish hold and implementing inspection and protection measures for cooling coils on the floor to prevent damage from being stepped on, heavy pressure, or corrosion. Upon completion, these guidelines would be provided and followed by the employer and crew of Taiwanese fishing vessels.

To Maritime and Port Bureau, Ministry of Transportation and Communications

1. Assist the Fisheries Agency of the Ministry of Agriculture in developing safety measures for the freezing compartments of fishing vessels to prevent crew members from suffering from oxygen deficiency or poisoning accidents.

To Occupational Safety and Health Administration, Ministry of Labor

1. Assist the Fisheries Agency of the Ministry of Agriculture in developing safety measures for the freezing compartments of fishing vessels to prevent crew

members from suffering from oxygen deficiency or poisoning accidents.

To the owner of Sheng Feng No. 266

1. Enhance the safety measures for cooling coils on the floor of fish holds. Perform regular inspections of the coils to reduce the risk of damage due to personnel stepping on them, heavy pressure, or corrosion, which could lead to refrigerant leakage.
2. Enhance safety training and awareness for crew members working in fish holds, or equip gas detectors to reduce the risk of crew members suffering from oxygen deficiency or poisoning accidents in the fish holds.
3. Accelerate the joint signing of occupational work rules for fishing vessels with crew members to implement relevant provisions of the Occupational Safety and Health Act.

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.