Fatal accident resulting from a bosun’s entry to a cargo hold under fumigation

To: Shipowners, Ship Managers, Ship Operators, Masters, Officers and Crew

Summary

When a Hong Kong registered bulk carrier loaded with timber logs was on the voyage, the Bosun entered a cargo hold under fumigation alone to check the bilge level inside and was then suffocated to death. This Note draws the attention of shipowners, ship managers, ship operators, masters, officers and crew to the lessons learnt from this accident.

The Incident

1. At the time of the incident, a Hong Kong registered bulk carrier (the vessel) transporting timber logs was on a voyage. The logs in the cargo holds were under fumigation by using aluminum phosphide tablets under the supervision of a fumigator-in-charge on board. The Bosun of the vessel identified an exceptionally high bilge level in a cargo hold under fumigation by referring to its sounding pipe reading. It was quite sure that the sounding reading was false as the bilge level alarm of that cargo hold showing no high water level, which suggested that the sounding pipe might be blocked. After multiple failed attempts to clear water from the pipe, the Bosun informed the Chief Officer that he would wear a mask respirator and enter the cargo hold through the aft access hatch to conduct physical inspection of the bilge level.

2. Later, the Chief Officer arrived at the aft access hatch, through which he saw the Bosun lying unconsciously on the upper stool shelf plate of the cargo hold. A rescue was immediately organised to pull the Bosun out from the cargo hold, but he was declared dead subsequently on board.
3. The investigation revealed that the main contributory factors of the accident were as follows:
   (a) the crew lacked safety awareness and did not follow the safety procedures of carrying out a proper risk assessment before allowing the Bosun to enter the cargo hold; and
   (b) the fumigator-in-charge was also not informed of the Bosun’s entering into the cargo hold in advance.

4. The investigation also identified a safety issue that daily measured phosphine gas readings at the accommodation and shipboard personnel working areas were not recorded in the vessel’s logbook in accordance with IMO circular MSC.1/Circ. 1264.

Lessons Learnt

5. All officers and crew on board ships should strictly follow the established procedures in shipboard safety management manual to conduct a full risk assessment before entering an enclosed space and the issuance of the entry permit. Prior advice of the fumigator-in-charge on board must be sought before opening sealed cargo holds under fumigation.

6. Crew members should be familiar with the limitation of the use of mask respirator and wear a correct type of respiratory protection in entering enclosed space. Gas concentration safety checks at the accommodation and shipboard personnel working areas must be conducted throughout the voyage at eight-hour intervals at least or more frequently with the readings recorded in the ship’s log-book in accordance with IMO circular MSC.1/Circ.1264.

7. The attention of shipowners, ship managers, ship operators, masters, officers and crew is drawn to the lessons learnt above.

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