A fatal electrocution accident on the main deck

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

Summary

An assistant electrician suffered an electric shock and died as a result. When he was investigating a faulty electric cable of a welding machine on the main deck in drizzly weather, he did not confirm whether the welding machine had been isolated from the source of electricity. 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. When a Hong Kong registered bulk carrier (the vessel) berthed alongside the pier of a shipyard for repair work, the assistant officer on watch noticed that there were smoke and sparks emitted from the electric cable of the welding machine on the port side of the main deck adjacent to No. 2 cargo hold. He reported the incident to the chief officer and the assistant electrician. The assistant electrician proceeded to the scene to investigate the fault upon informed. Subsequently, he mistakenly isolated the power source of the ship cranes as of the welding machine, not knowing that the machine’s power source was provided by the shipyard. Unfortunately, the assistant electrician who was only wearing a pair of cotton gloves in drizzly weather, touched the electric cable and suffered an electric shock during checking as the electric supply of the welding machine had not been isolated. After hearing a scream, the third officer nearby rushed to the scene. He immediately snatched the electric cable out of the hands of the assistant electrician with insulated gloves and applied cardiopulmonary resuscitation to him. The assistant electrician was then conveyed to a local hospital for emergency treatment. However, he was declared dead a few hours later.
2. The investigation revealed that the contributory factors of the accident were the electrical equipment on board provided by the shipyard were not in a safe condition and the electric cables insulation sheathing were damaged; the vessel’s crew failed to respond to the hazards by informing the shipyard and isolating the hazardous area; the assistant electrician did not work safely and exposed himself to the danger of live electrical equipment.

3. The investigation also identified that implementing of the safety management system (SMS) was ineffective when the required risk assessment, permit to work system under SMS failed to be completed before commencing electrical work as found in the accident.

**Lessons Learnt**

4. In order to avoid the recurrence of similar accidents in the future, masters, officers, and crew of vessels should enhance the electrical safety awareness and the safe practice to respond to hazards or crises.

5. The management company should ensure that the crew on board strictly follow the safe working procedures of the SMS, including the risk assessment and permit to work system.

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

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