

Electrocution on board the dumb steel lighter “Sun Choi Lee 18” on 8 May 2005 causing one fatality

1. The Incident

- 1.1 At about 1150 on 8 May 2005, while the dumb steel lighter "Sun Choi Lee 18" was moored alongside the berth No. 5 of Kwai Chung Container Terminal for cargo work, a lighterman was found lying unconsciously adjacent to a live, wet and poorly maintained electric extension cable at the port forward of the lighter.
- 1.2 No body witnessed how the accident happened. However, based on the available information obtained, the probable cause of this accident was due to the use of defective electric extension cable. It appeared that the deceased was in contact with the live conductors of the defective electric extension cable and was electrocuted.

2. Findings

- 2.1 It was raining heavily at time of incident. The Lighterman was found lying on an unsheltered deck (fig. 1). His body was soaked with rainwater. At time of the incident he wore a pair of gloves and slippers. When handling electric equipment, the slippers offered little protection against electric shock.
- 2.2 The electric extension cable used in the incident was about 13 metres long and made up of two rubber sheathed 2-core wires, no earthing wire was available. The general condition of the extension cord was not in a well-maintained condition. Numerous conspicuous cleavages (fig.2) were found on the cable sheath. Rainwater could get into the cable cores through the cleavages that short-circuit or electric shock would be liable to occur.
- 2.3 The electric extension cable had been extended by a similar size of cable by joining them together. The joints were made by twisting each core wiring separately and wrapped with insulation tape. Such a way of joining two cables was a malpractice as the wirings might become loosen when the cables were subject to stress. Furthermore, the power socket of the electric extension cable was of a multipurpose, non-weatherproof design. As it exposed to rainwater it became hazardous to persons working in the area.

3. The lessons

- 3.1 Workers should not be allowed to wear slippers while at work. Safety shoes should be worn.
- 3.2 Earthing wires in the electrical plugs and sockets should be properly connected using 3-core electric cable.
- 3.3 Electrical cables should be properly maintained.
- 3.4 Non-weatherproof electrical socket and wirings should not be used in a wet environment.

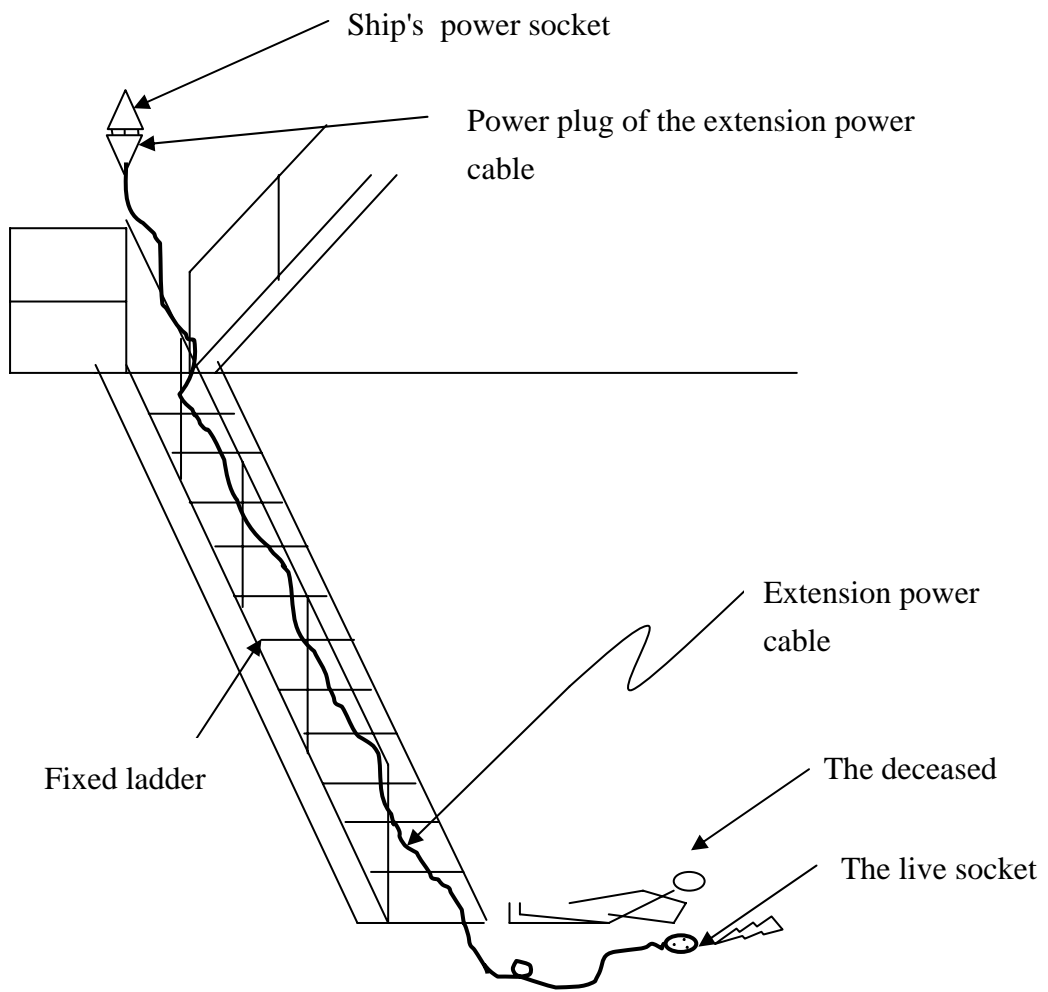


Fig. 1: The scene of the accident



Fig. 2: One of the cleavages of the cable.