STEAMSHIP MUTUAL

Risk Alert

Use of Plastic Sheathing on Freefall Lifeboat Recovery Strops

This Risk Alert has been written by Taslim Imad, of the Loss Prevention Team

Background

Even with increased levels of awareness amongst shipping companies and ship's staff, lifeboat related incidents continue to be an all too frequent occurrence, ranging in severity from minor incidents to serious incidents and fatalities. Marine Safety Investigation Unit (MSIU) of Transport Malta has recently published Safety Investigation Report no. 14/2020, where the recovery strop on a freefall lifeboat (FFLB) parted during a routine maintenance operation, this culminated in the FFLB being unintentionally released from its cradle and going overboard.

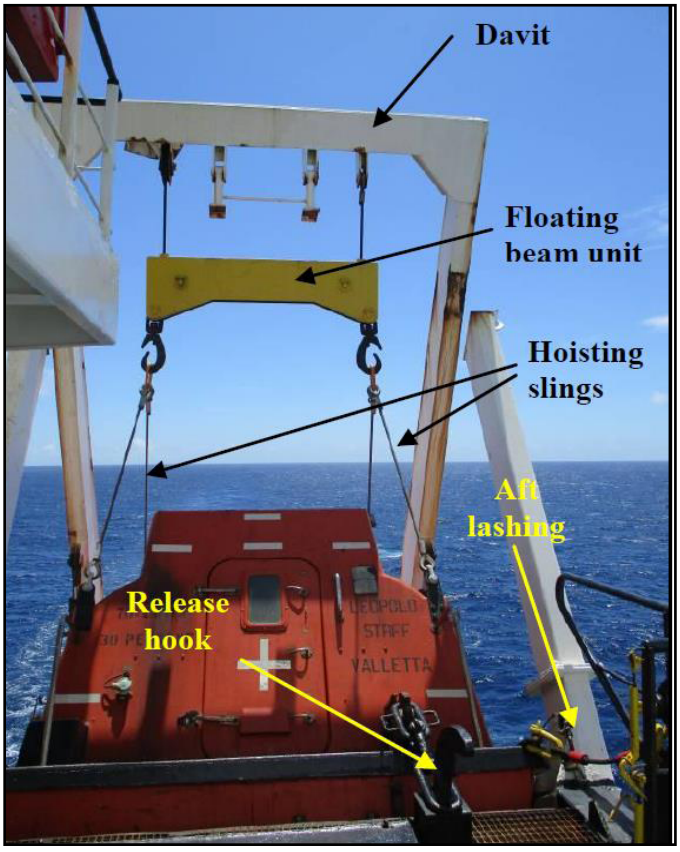
This Risk Alert is intended to highlight the risks associated with the freefall lifeboat's recovery strops and its associated equipment.

Introduction

In accordance with SOLAS regulations, at least once every three months, a FFLB shall be launched with its assigned crew or, alternatively, be lowered into the water utilising the secondary means of launching, with or without the crew members. All lifeboats are to be maintained in good working condition and be ready for immediate deployment at all times. Safety drills and routine maintenance are therefore very important in ensuring that a lifeboat is in good working condition and ready for immediate deployment in the event of an emergency.

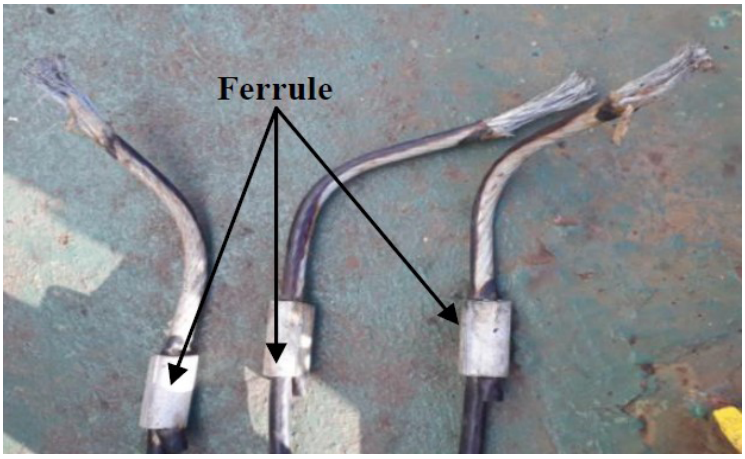
According to the report published by the MSIU of Transport Malta for *M.V. Leopold Staff*, which was sailing from Port of Spain to Durban, the crew planned to carry out monthly maintenance and test the FFLB launching arrangement.

Prior to undertaking the maintenance, the Chief Officer completed a dangerous work permit which included a risk assessment, approved by the Master. After completing a visual check of the FFLB lashing arrangements (Aft lashing) and hoisting wires, and finding them to be in good condition, the hoisting slings were attached to the davit's floating beam/ hooks to safely secure the lifeboat. Once the lifeboat was secured the Bosun was instructed to lift the lifeboat a few centimetres off the ramp after which the Third Officer boarded the lifeboat and activated the freefall releasing mechanism to test the release of the release hook. After successful activation of the release hook the Third Officer disembarked the lifeboat and disconnected the aft lashings and the power cable.



Extracted from the Marine Safety Investigation Unit of Transport Malta investigation report of *MV Leopold Staff*

At this point the full weight of the FFLB was being held on the hoisting slings. The Chief Officer then instructed the Bosun to lower the FFLB back onto the ramp and slide it down the ramp to facilitate routine maintenance works on the rollers of the lifeboat davit's ramp. As soon as the lifeboat had been lowered a few metres it was observed that the wires of hoisting slings were slipping through their ferrules one by one, and consequently the lifeboat slid down the ramp and went overboard.



Extracted from the Marine Safety Investigation Unit of Transport Malta investigation report of *MV Leopold Staff*

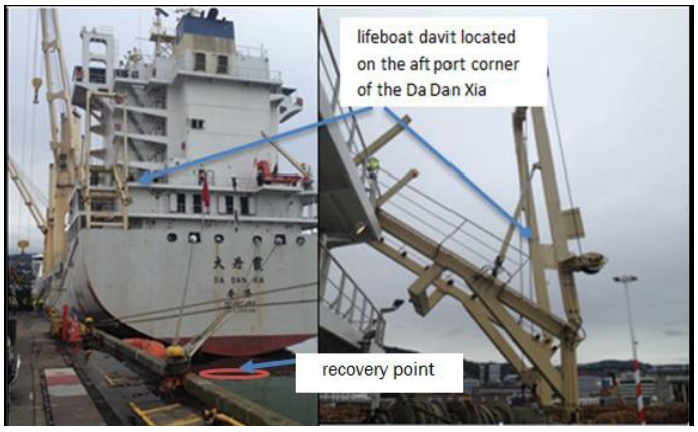
Evidence gathered by the MSIU suggested that the steel wires making up the hoisting sling had slipped through their ferrules because the steel wires passing through the ferrules were not fused together. The MSIU believes that the wires failing to fuse together could have occurred due to –

- Inadequate pressure being applied during the swaging and / or
- The presence of sheathing inside the ferrule

A similar incident was investigated by the Transport Accident Investigation Commission of New Zealand (TAIC-NZ) and took place on board M.V. Da Dan Xia at Wellington, New Zealand in April 2014. In this incident, ship's crew were carrying out a launch and retrieval drill as required by the SOLAS regulations.

The FFLB was lowered into water with no crew on board and once lowered in the water, four crew members boarded the lifeboat and manoeuvred it in the harbour. After the manoeuvring tests, the crew connected the lifeboat to the retrieval davit for recovery to the ship. During the recovery operation, at approximately deck level, and with the four crew members in the lifeboat, first one, and then the remaining hoisting sling wires parted and the lifeboat fell several metres into the sea.

The hoisting sling wires in this incident were encased in non-transparent plastic sheathing, which in this instance is believed to have facilitated and obscured the onset of corrosion of the wires.



Extracted from the Transport Accident Investigation Commission of New Zealand accident report of *M.V. Da Dan Xia*

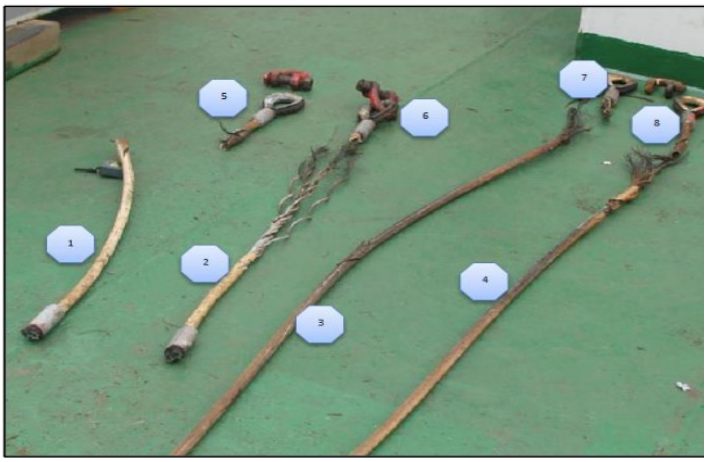
It is fortunate that no one was seriously injured in either of these incidents.

Possible Causes

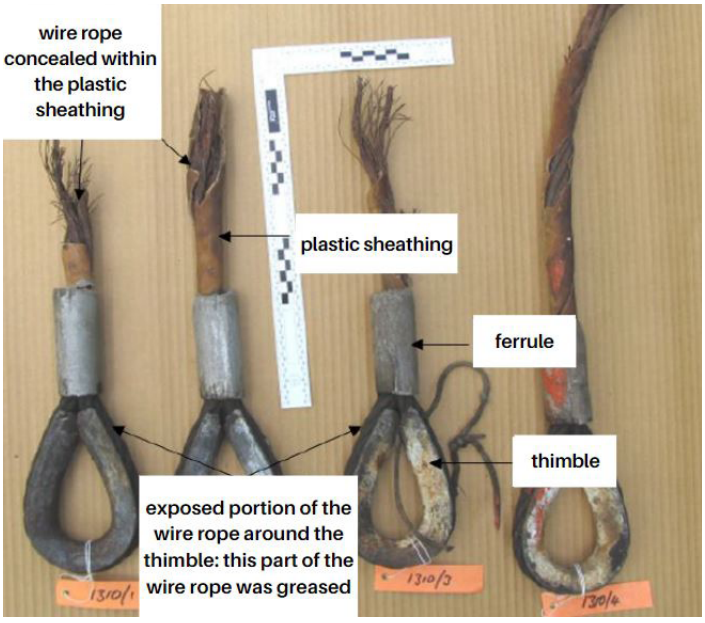
In both incidents the hoisting sling wires of the recovery strop were encased in a plastic sheathing, the reported intention of the sheathing being to protect the lifeboat canopy from damage by the wires, but in both instances the sheathing appears to have contributed to the incident.

During the ship's working life, ingress of rain and seawater through the plastic sheathing can cause severe corrosion to the core of hoisting sling wires and prevent crew members from physically inspecting the condition of wires inside plastic sheathing.

At the same time it can also provide a false sense of security to the crew that wires within plastic sheathing would not become corroded.



Extracted from the Transport Accident Investigation Commission of New Zealand accident report of *M.V. Da Dan Xia*



Extracted from the Transport Accident Investigation Commission of New Zealand accident report of *M.V. Da Dan Xia*

Both the MSIU of Transport Malta and TAIC of New Zealand concluded that plastic sheathing around hoisting wire slings contributed to these incidents.

Preventive Actions

The Club cannot over emphasise the importance of carrying out regular inspections and surveys of lifeboats and all associated equipment, including wires, as is required by the regulations. Members with similar recovery arrangements fitted to their ships are requested to consult with their Flag Administration and the Classification Society of their vessel and explore alternative arrangements.

In the meantime, it is recommended that Members check the condition of all wires associated with LSA equipment, and replace immediately with equivalent type approved wires, where the wires are found to be or suspected of being corroded or deteriorated to the extent that their strength is or may be compromised.

It is important to remember that the presence of plastic sheathing encasing a wire rope means that it is not physically possible to inspect and maintain that wire rope as is required by SOLAS.

Documentation & Reporting

MSIU Report No. 14/2020 of Transport Malta
https://mtip.gov.mt/en/msiu/Documents/MV%20Leopold%20Staff_Final%20Safety%20Investigation%20Report.pdf

The Transport Accident Investigation Commission, New Zealand report MO-2014-202
https://www.taic.org.nz/inquiry/mo-2014-202
https://www.taic.org.nz/sites/default/files/inquiry/documents/14-202%20Final.pdf

Suggested References

IMO MSC.1/Circ.1205/Rev.1
IMO MSC.1/Circ.1206/Rev.1
IMO MSC.1/Circ.1327
IMO MSC.1/Circ.1578
IMO MSC.402(96) + Corr.1
UK MCGA MGN 560 Amendment 1(M)