



South African Maritime Safety Authority

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Marine Notice No. 7 of 2019

Crane Wire Incidents

TO MASTERS, SHIP OPERATORS, OWNERS, MANAGERS AND SHIPS AGENTS, STEVEDORES AND PRINCIPAL OFFICERS

Summary

This marine notice brings to the attention of the maritime industries the increase in incidents involving the parting of crane wires

1. In the past 18 months there has been an increase in the number of incidents of crane wires parting under load. It is fortunate that to date these incidents have not resulted in any injury or loss of life, however there has been extensive damage to cargo lifting equipment.
2. SAMS recognises that a thorough inspection of the crane wires at the commencement of stevedore operations may be impractical due to time constraints and that the crane wires are covered in grease and grime making it difficult to identify a defective length.
3. Wires ropes may become damaged as a result of the following:
 1. Abrasion: pulleys, sheaves and rollers being seized or damaged.
 2. Corrosion: unprotected wires being exposed to salt water and the elements
 3. Compression: uneven coiling on a drum can result in wires crossing, leading to lower layers of wire becoming compressed and effecting the breaking strain of the wire
 4. Cutting-in: when a rope buries itself, when under tension, beneath poorly coiled lower layers, it can result in jamming and kinking
 5. Fatigue: frequent bending of the wire under load due to undersized sheaves or rollers which is aggravated by poor lubrication and corrosion
 6. Stretch: result in slight differences in diameter and / or elastic properties and can lead to wire slippage on the sheaves.
 7. Handling: mishandling of the crane by the stevedores through:
 - a. Dragging cargo from the wings, ends of holds, or swinging cargo into areas difficult to access. Side forces can cause the wire to be pulled off the jib head sheaves and become jammed.
 - b. Placing the hook below and or adjacent to the coaming which may result in the hoist wire chaffing along the edge of the coaming

- c. Lowering the crane block, under load, at high speed and the shock of it landing heavily may cause the hoist wire to jump off the sheaves and become jammed
- d. Attempting to lift unlash cargo.
- e. Over-riding the limit switch

4. Stevedores are advised to take the following precautions prior to crane operations commencing:

- 1. Request documentation from the vessel's crew:
 - a. Cargo Gear Register
 - b. Wire Certificates
 - c. Planned Maintenance System for the crane wires
- 2. The crane operator should conduct a visual inspection of the crane and report any problems to the stevedore foreman
- 3. The weight of the lifting gear and cargo must not exceed the safe working load of the crane
- 4. Competent and certified crane operators to be used.
- 5. It is suggested that a test lift of the first load of the shift is conducted.
- 6. Crane operators must not mishandle the crane refer point 3.7.
- 7. Similarly, stevedore foreman should ensure that crane operators are not mishandling the crane.
- 8. Stevedores must not stand under the slew path of the crane or under suspended loads.
- 9. Should the crane operator identify a problem with the crane or its wires, the load should be lowered to a safe area as soon as possible.
- 10. The vessels crew to:
 - 1. Provide documentary proof to stevedores of the following:
 - a. Cargo Gear Register
 - b. Crane Wire Certificates
 - c. Maintenance Schedule for the Crane Wires
 - 2. At all times monitor cargo operations to ensure that the crane is not being mishandled by stevedores.
 - 3. Ensure that routine inspection and maintenance of wire-ropes take place as per the Planned Maintenance System which contains the manufacturer's requirements for inspection.

5. International Maritime Organisation (IMO)

1. Lifting appliances onboard is currently not adequately addressed in the SOLAS Convention.
2. The Sub-Committee on Ship Systems and Equipment at its 5th session re-established the Correspondence Group for onboard lifting appliances and anchor handling winches to draft regulations and guidelines for onboard lifting appliances and anchor handling winches as an amendment to SOLAS Chapter II-1 Construction – Structure, Subdivision and Stability, Machinery and Electrical Installations.
3. SAMSA will provide updates on the above amendments.

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