MARINE ALERT

MA 02-21

PILOT LADDER SAFETY - LESSONS LEARNT FROM INCIDENTS WHERE EQUIPMENT FAILURE WAS DEEMED TO HAVE PLAYED A PART.

ALL SAMSA PERSONNEL, SHIP AGENTS, PORT AUTHORITIES, SHIP OWNERS, SHIP MANAGERS, SEAFARERS, PILOTS, PILOT BOAT SKIPPERS, SKIPPERS OF OPL LAUNCH BOATS, AND OTHER INTERESTED AND AFFECTED PARTIES.

ISSUE DATE	07 May 2021	EXPIRY DATE	Indefinitely or unless withdrawn	REFERENCE	SM6/5/2/1/MA

Marine Alert's and/or Marine Notice's and/or Marine Information Notice's affected

Cancelled or superseded:	None	*Read in conjunction with:*	MN 35 of 2014

SUMMARY

This Marine Alert provides an overview of lessons learnt from recent incidents when persons fell from a pilot ladder into water during Pilot boarding, Pilot disembarking and crew change operations, where equipment failure and lack of maintenance was partly to blame.

LESSONS LEARNED	
Casualty Event Severity	Marine Casualty.
Casualty Type	Occupational Accident.
Casualty Event	Slipping, stumbling or falling of Person over board.
Date/Time	See narrative for dates.

Incident Description

Incident 1: Occurred on a vessel leaving the Port of Durban on 28 April 2020.

Upon confirmation from the Master of the vessel that the pilot ladder was rigged, the Pilot proceeded down to the ladder. Pilot then climbed down the ladder prior to the launch coming alongside. While the Pilot was climbing down, one of the MAN ROPES parted which resulted in the Pilot losing his balance on the ladder and subsequently falling into the water.

Incident 2: Occurred on a vessel in the approached to Durban harbour on 16 September 2020.

The pilot ladder parted causing the pilot fall onto the deck of pilot boat.

Incident 3: Occurred on a vessel in the approached to Durban harbour on 26 October 2020.

One MAN ROPE parted resulting in a pilot falling onto the pilot boat deck while disembarking at the pilot station. The Pilot was taken to the hospital.

Incident 4: Occurred on a vessel at anchor in Algoa Bay at number 2 anchorage on 21 November 2020.

A group of 5 crew members were due to sign off while at anchor, using an Off Port Limits transfer Launch. The first 3 crew members disembarked without incident. The 4th crew member took his 1st step down the pilot ladder. As he did so, he fell approximately 6 meters backwards off the ladder and into the water. Fortunately, he only sustained minor injuries, which were cuts on the back of his head. These were caused by his head grazing the side of the launch as he landed in the water. Eyewitnesses to the incident reported that it appeared as if the stanchions at the top of the ladder gave way.

Potential Outcome

In all 4 cases a fall from a height occurred. 2 Out of the 4 incidents resulted in the person being hospitalised. The instance where the crew member fell backwards off the ladder his head grazing the side of the launch as he fell. Had he fell 150mm closer to the launch he may have been seriously injured.

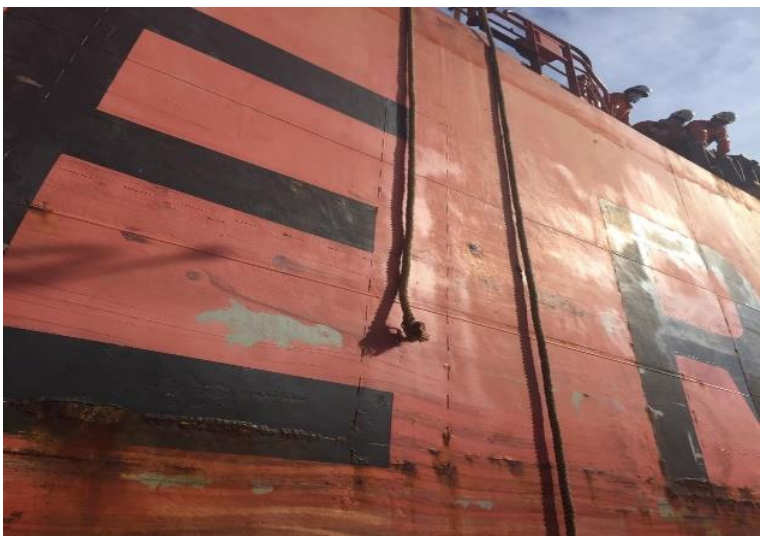
Causes (Immediate, root causes)

Incident 1: Occurred on a vessel leaving the Port of Durban on 28 April 2020.

Upon investigation it was found that the ladder had a white chemical residue on it. It is suspected that this residue might have contributed to the deterioration of the rope and eventual parting. It was also found that the on board records of inspection indicted that the ropes where in good condition.

Incident 2: **Occurred on a vessel in the approached to Durban harbour on 16 September 2020.**
Investigation outcome found that vessels maintenance plan and purchasing system showed the ladder was deemed not fit for use in their monthly inspection and a new pilot ladder was purchased and was to be received in Durban. It appears that the cause on the incident was the fact that the vessel did not take the defective pilot ladder out of service and failed to ensure the ladder was fit for use.

Incident 3: **Occurred on a vessel in the approached to Durban harbour on 26 October 2020**
During the Investigation it became apparent that there was no MAN ROPE specific maintenance required in the ship maintenance system. It was assumed that the person doing maintenance on a pilot ladder will also inspect the man ropes.



Incident 4: Occurred on a vessel at anchor in Algoa Bay at number 2 anchorage on 21 November 2020.

During the investigation it became apparent that the following factors contributed to the incident:

1. a) The stanchions initially appeared to be very securely located in a deck mounted roller of 200mm in diameter.
   b) On closer investigation it was found that the lower part of the stanchions was not secured but were held in place by merely fitting it over a horn welded to the deck.
   c) Due to apparent lack of maintenance of the horn below the deck mounted roller, corrosion had caused the horn to reduce in thickness making for a loose fit inside the stanchion.
2. a) The 4th crew member was reportedly nervous of the climb down the ladder. Witnesses to the incident stated that his body stiffened up when he stepped onto the ladder before he started his climb down the ladder. It appears that this stiffing up of his body might have caused him to pull the stanchions right out of the securing horns. This in turn caused the roller with the stanchions to rotate 90 degrees towards him causing him to lose his balance and falling backwards into the water.

Requirements

IMO Requirements:

IMO Res A1045 (27) paragraph 2 lists the following requirements for ropes used in the construction of pilot ladders. Paragraph 5 lists the following requirements for hand rails at the pilot boarding area:

1) The side ropes of the pilot ladder should consist of two uncovered ropes not less than18 mm in diameter on each side and should be continuous, with no joints and have a breaking strain of at least 24 Kilo Newtons per side rope.
2) Side ropes should be made of Manila or other material of equivalent strength, durability, elongation characteristics and grip which has been protected against actinic degradation and is to the satisfaction of the Administration.
3) Adequate handholds should be provided at the point of embarking or disembarking from the ship via pilot ladder.
   These hand holds should not be spaced less than 700mm and not more than 800mm apart.

These hand holds shall be rigidly secured to the ships structure at or near its base and also at higher place

These stanchions shall not be less than 32mm in diameter and extend at least 1.2m above the bulwark.

The ISM code (International Safety Management Code) paragraph 10.1 states that Vessel Operators should establish procedures to ensure that the ship is maintained in conformity with the relevant rules and regulations, Pilot Ladder transfer equipment being one of them.

Local Requirements:

1) Safety of Navigation Regulations of 1968, Specifically Regulation 64 to 67
2) Marine Occupational Safety Regulations 1994, Specifically Regulation 3, 14 and 15.
3) ISO Standard 799-1 of 2019.

What to do if the ladder and associated equipment is not as per IMO and South African requirements.

The minimum standards for the equipment related to pilot ladder boarding is contained in SOLAS Chapter V regulation 23 and IMO Resolution A.1045 (27) and IMO Resolution A.1108(29)

The responsibility for the safe boarding of persons by pilot ladder rests with each person that is involved in the transfer.

Where a Pilot or any other persons involved in the transfer operation suspects that the Pilot transfer equipment is unsafe, the operation should be stopped immediately until such time that the ladder and associated equipment has been made safe. SAMSA gives effect to the SOLAS convention via Flag State and Port State Control inspections.
It is important that the Principal Officer at the local SAMSA office is informed, so that the incident can be investigated.

--- 000 ---