

PILOT LADDER SAFETY

Training Material 164
Revised Nov 2019



Purpose

The purpose of this presentation is to remind the amendments to SOLAS Chapter V/23 and provide clarity towards pilot ladder rigging regulations and best practice.





Background

The changes to SOLAS Chapter V/23 include:

- a) Requiring pilot ladders to be certified by the manufacturer
- b) Securing the lower platform of accommodation ladders
- c) Recognising combination arrangements
- d) Banning mechanical hoists
- e) Enhancing the standards of manropes



Noteworthy points with regard to Pilot Ladder



The diameter of man-ropes shall be not less than 28 mm and not more than 32 mm. Man-ropes shall be fixed at the rope end to the ring plate fixed on deck and shall reach the height of the stanchions or bulwarks at the point of access to the deck before terminating at the ring plate on deck. This applies to all ships regardless of date of construction.

Pilot ladders shall be clearly identified with tags or other permanent marking and pilot ladder's service and repair record shall be kept onboard. This applies to all ships regardless of date of construction and basically assists in establishing the identity of the ladder against its inspection record.

Retrieval (tripping) line if used, should be attached at level of first spreader or above and should be leading forward.

Where pilot ladder winch reel is provided, the pilot ladder should be secured to a strong point, independent of the pilot ladder winch reel.

No pilot ladder shall have more than 2 replacement steps. If it is required to renew more steps, the pilot ladder shall be renewed. This regulation applies to all ships regardless of date of construction of vessel.



Noteworthy points with regard to Combination Ladder

When a combination ladder is used for pilot access, means shall be provided to secure the pilot ladder and man ropes to the shipside at a point nominally 1.5 m above the bottom platform of the accommodation ladder. In the case of a combination arrangement using an accommodation ladder with a trapdoor in the bottom platform (i.e. embarkation platform), the pilot ladder and man-ropes shall be rigged through the trapdoor extending above the platform to the height of the handrail.

Lower platform of the accommodation ladder should be in a horizontal position and at a height of minimum 5 m above sea level.

The pilot ladder should be between 0.1 to 0.2 m away from the accommodation ladder lower platform and the ladder must NEVER be secured to the platform.



Noteworthy points with regard to Combination Ladder (con't)

For ships built after 1st July 2012

In case of a combination arrangement, means shall be provided to secure the lower platform of the accommodation ladder to the ship's side.

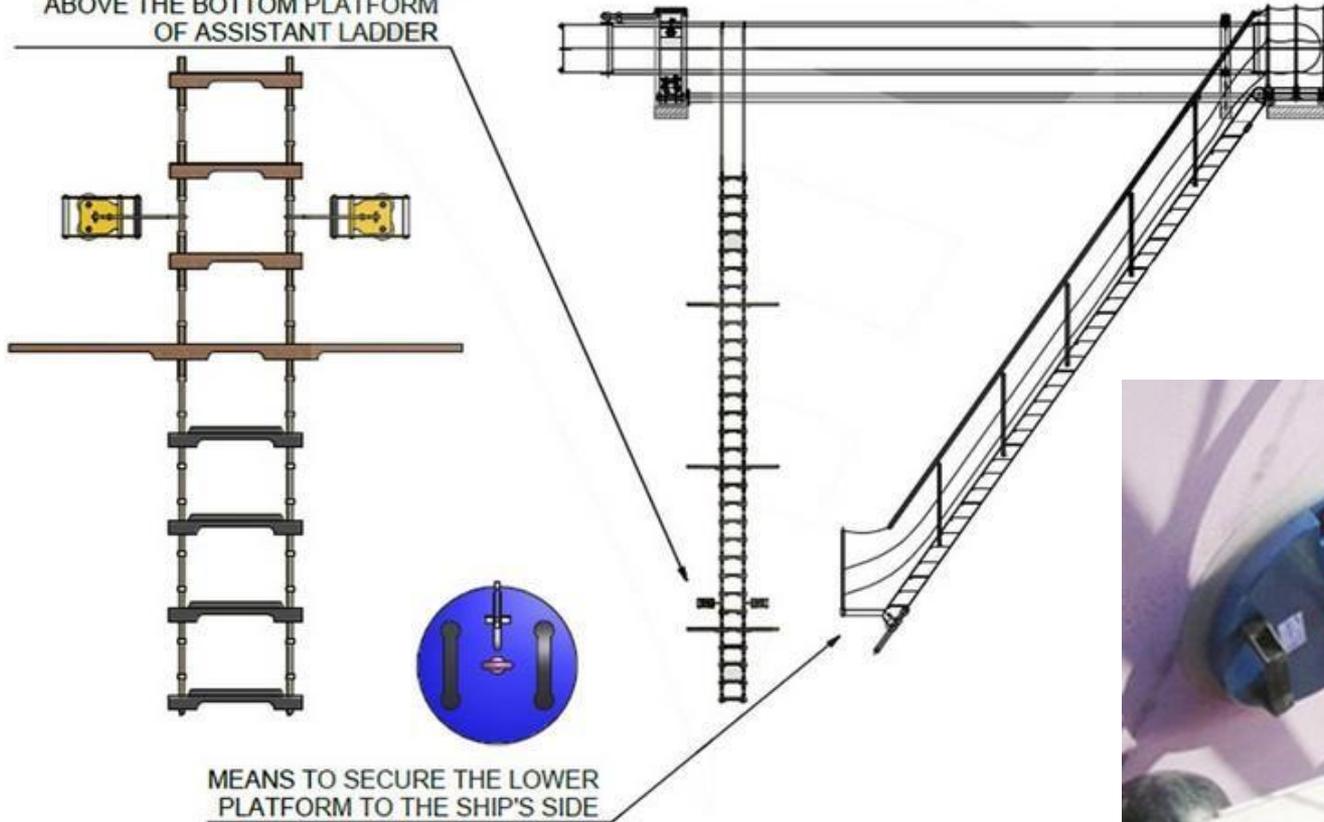
This can be done by permanent connection point (s) in the hull, or alternatively other equipment such as suction or magnetic pads that provide a sufficient holding force. Please see example on next page.

Note: Although this requirement applies to ships built after 1st July 2012, local port regulations (for example Australian ports) may be enforcing on all ships regardless of their date of construction and as such this information should be obtained/ clarified through local agents.

Means to secure Pilot & Combination Ladder



MEANS TO SECURE PILOT LADDER AND MAN ROPE TO SHIP'S SIDE AT A POINT OF NOMINALLY 1.5 m ABOVE THE BOTTOM PLATFORM OF ASSISTANT LADDER



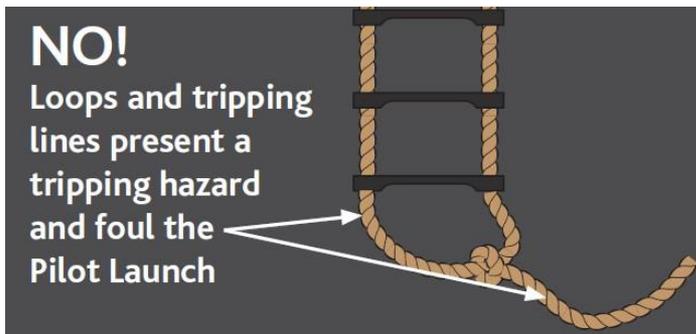
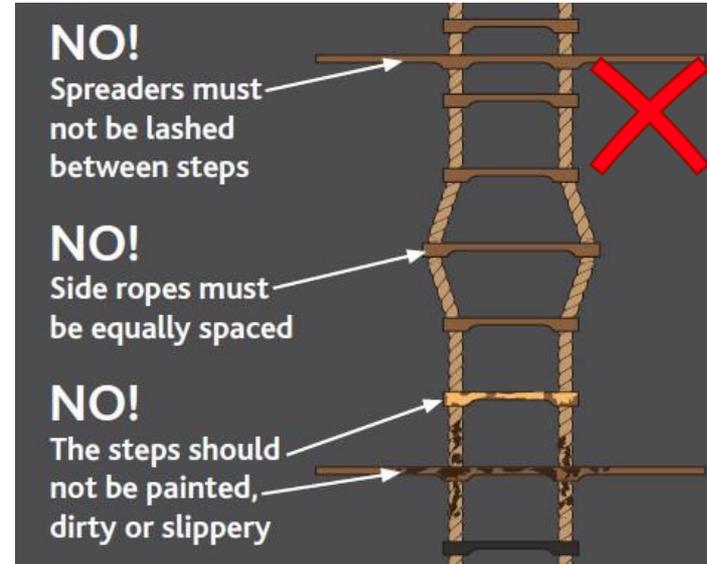
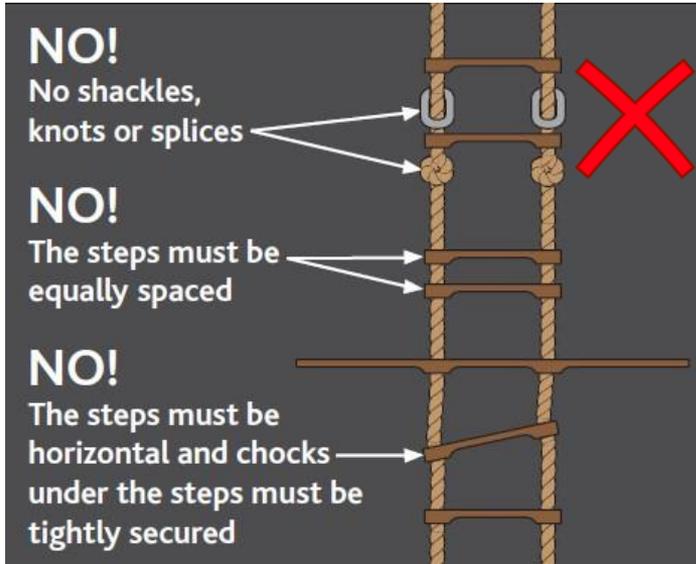


Methods of Termination of the rope below the bottom step



Ensure that the pilot ladder certificate is on board and indicates the standard the ladder is certified against.

DON't



Ensure that no ropes are attached to the bottom step.



Best Practice – Use of Pilot Ladders & Pilot Boarding

1. Pilot landing area and passage way should be painted with anti-skid paint and free of trip hazards.
2. Ropes (especially in way of terminations), steps and spreaders should be all in good condition. Pilot ladder should be ranged for this purpose. Ladder should be frequently inspected for any sign of damage and rectified as soon as possible before the next use.
3. Risk Assessment and job scope for rigging and boarding should be prepared. Toolbox meeting to be held and crew involved to be briefed properly and advised of proper PPE. All involved should wear working vests/ safety harnesses and other PPE as required.
4. Communication should be clear between all the parties involved.
5. When rigging the pilot ladder, it should be made sure that it is tied to strong points on deck and steps are horizontal & resting on the parallel length of the shipside. Length of the pilot ladder to be adjusted so it does not get entangled between the boat and the vessel. Use the markings provided on the ladder to adjust ladder height above sea level by having only required length hanging over the side. A responsible officer must confirm that the ladder has been safely rigged.



Best Practice – Use of Pilot Ladders & Pilot Boarding

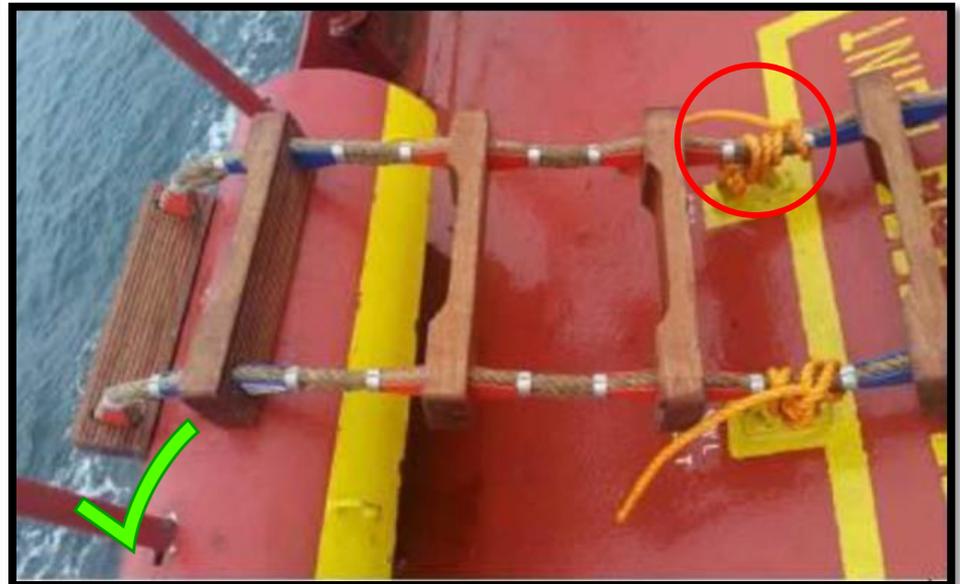
6. Combination ladder to be rigged if distance from sea surface to point of access or egress is more than 9 m or more or as requested by the pilot. Ladder to be secured against the shipside during the rigging of combination. Stanchions should be properly secured.
7. Manropes (if used) should be checked for condition and secured properly.
8. Extra lifejacket and harness to be kept ready at the location & passed onto personnel in case required. Fall arrestor blocks to be used. .
9. Shipside and deck area to be properly illuminated in case of dark hours.
10. Lifebuoy with light should be standby at the location. Extra heaving line to be kept standby to heave up bags (if any).
11. Proper lee to be provided to pilot boat.
12. Whenever combination ladder arrangements are used, an officer must be standby on the accommodation ladder to receive the pilot.



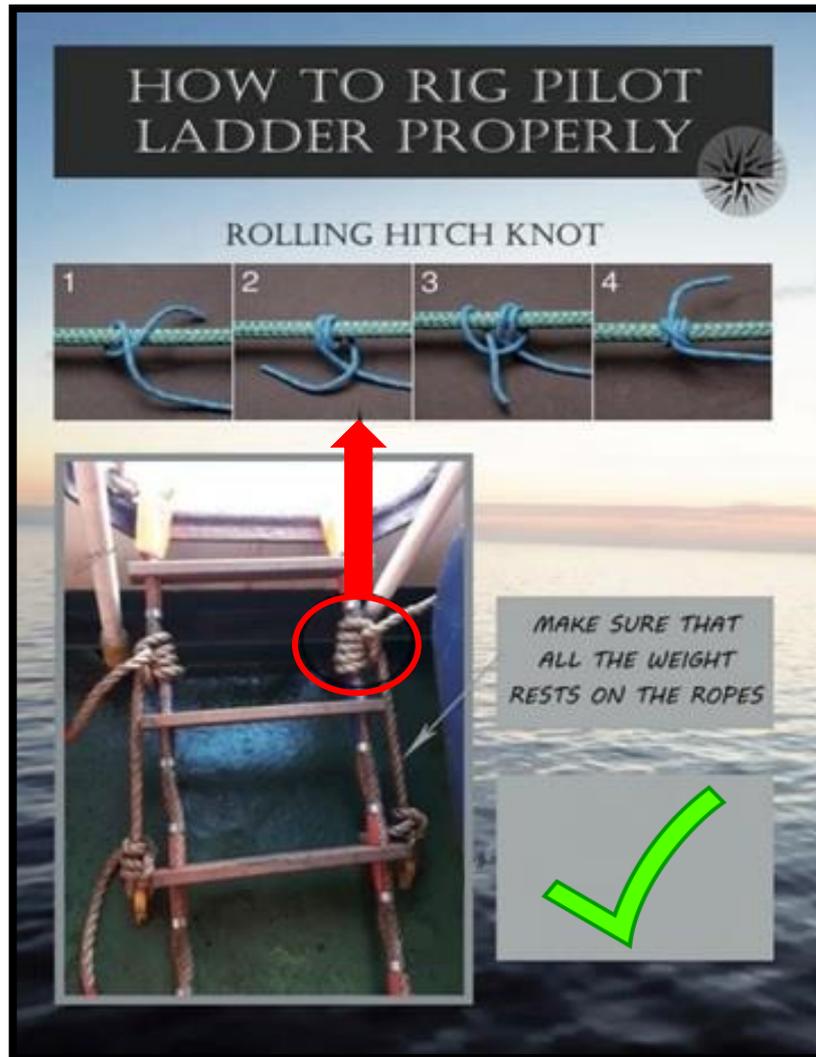
Securing of Pilot Ladders



Securing of the pilot ladder using shackles, where the load is onto a single step, is not an acceptable practice.



Best Practice – Securing of Pilot Ladders



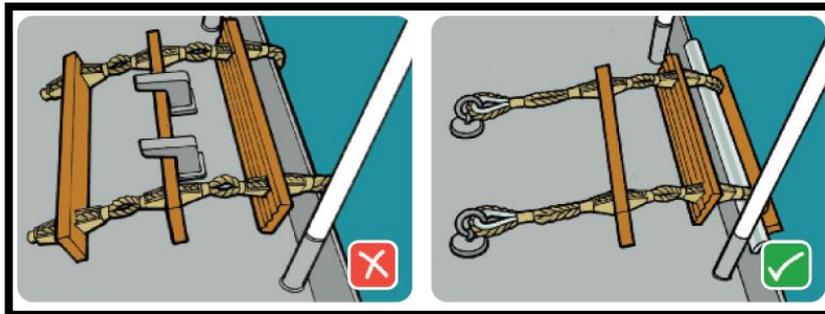
Secure the pilot ladder directly on side ropes with rolling hitch knots

All the weight should be rested on the side ropes equally.

Best Practice – Securing of Pilot Ladders



Securing pilot ladder with shackles properly on eye plates. The purpose is that the load is taken by the ropes.





Maintenance and inspection

As required, routine maintenance and inspection of pilot ladders and boarding arrangements should be carried out on board and records should be maintained. – **Reference LSM 16 / LMR 16.**



PILOT LADDERS

Monthly Inspection Items for the year _____

1. Condition of Ladder
2. Markings
3. Stanchions & Bulwark Step Ladder
4. Spares & repairs
5. Condition and Maintenance of Pilot hoist

Month	Date	Initial	Month	Date	Initial	Month	Date	Initial
Jan			May			Sept		
Feb			June			Oct		
Mar			July			Nov		
Apr			Aug			Dec		

A: PILOT LADDERS

	No. 1	No. 2	No. 3
Location			
Cert no / Identification tag			
Length of ladder			
Number of portable stanchions			
Type of bulwark ladder			
Size / length of Man ropes			
Lifbuoy with light Y/N			
Length of heaving line			
No. of spare spreaders			
No. of spare steps			
No. of step checks			

(con't)



Maintenance and inspection

In case the pilot ladder design has seizing/ whipping of the side ropes below the bottom step, same is vulnerable to impacts from pilot boat and of course constant contact with seawater when in use. Thus it requires stringent inspection and any defect to be corrected prior putting same in use.





Appropriate step thickness for pilot ladders

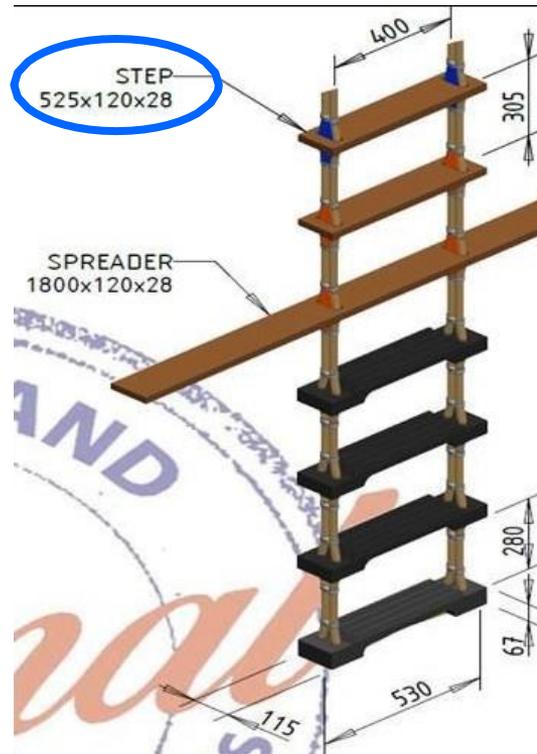
Ensure that the maker's guidance is followed while ordering spares / new ladder.

Here is an example where the difference between the step thickness requirement for both types of rigging arrangements is illustrated in the maker's manual of the ladder.

With winching arrangement
(with thicker step)



With manual rigging arrangement





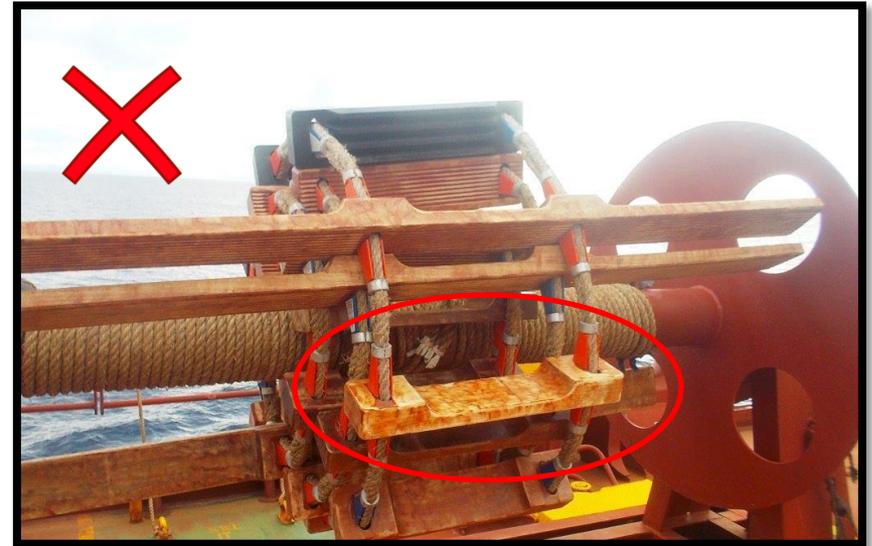
Pilot ladder steps

AMSA during a recent inspection, observed that the steps of the pilot ladder were coated with varnish for protection of the wood. This was applied by the manufacturer.

Ensure that **NO** varnish, preservatives should be applied on the ladder steps by ship.

New ladder received from suppliers should be checked for above and avoid taking the ladder with a coating.

Due diligence should be exercised when ordering for a new ladder.





Reference

SOLAS Regulation V/23

- ✓ Addresses the statutory requirements for Pilot transfer & transfer equipment and arrangements.

IMO Resolution A.1045 (27)

- ✓ Provides recommendations from the IMO for technical detail of Pilot transfer arrangements and equipment. Previous resolution A.889 (21) revoked.

ISO 799:2004

- ✓ Provides technical information on the construction of pilot ladders only and is now referred to in the resolution A.1045 (27).

North of England P&I Association/ CHIRP Maritime Advisory Board

- ✓ Provides technical information on the securing of pilot ladders and possible errors made when rigging