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## Pilot Boarding Arrangements

Notice to ship owners, managers, Masters, Approved Nautical Inspectors, Recognised Organisations and surveyors

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### 1. Purpose

- 1.1. This Information Notice provides guidance on pilot boarding arrangements, in order to comply with the provisions of Regulation 23 of Chapter V of the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS Chapter V).

### 2. Application

- 2.1. Ships engaged on voyages in the course of which pilots may be employed shall be provided with pilot transfer arrangements.
- 2.2. Equipment and arrangements for pilot transfer which are installed<sup>1</sup> on or after 01 July 2012 shall comply with the requirements of Regulation 23 of SOLAS Chapter V, and due regard shall be paid to the standards adopted by the International Maritime Organization (IMO)<sup>2</sup>.
- 2.3. Equipment and arrangements for pilot transfer which are installed prior 01 July 2012 shall comply with the requirements of Regulation 23 of SOLAS Chapter V where safety of life is concerned. Otherwise ship owner/manager shall decide the equipment and arrangements installed prior to 01 July 2012 provide equivalent safety for pilot transferring by conducting a risk assessment.

### 3. Introduction

- 3.1. Recent press releases and accident reports published by various organisations across the maritime industry reveal growing numbers of serious accidents, incidents and near misses related to incorrect pilot transfer arrangements or significant defects in associated equipment.
- 3.2. The root causes identified were mainly due to use of substandard and/or modified pilot and combination ladders, unauthorised modifications to deck access, defective

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<sup>1</sup> Refer to Unified interpretation of SOLAS regulation V/23 ([MSC.1/Circ.1375/Rev.1](#))

<sup>2</sup> Refer to Resolution [A.1045\(27\) Pilot Transfer Arrangements](#)

winch-reel arrangement, and malpractices in pilot ladder securing. Broadly, reported defects can be categorised in to three areas: design, rigging and maintenance<sup>3</sup>.

#### 4. Pilot Transfer Arrangements

- 4.1. Equipment and arrangements for pilot transfer which are installed on or after 01 July 2012, are expected to meet the pilot transfer arrangement requirements laid out in Regulation 23 of SOLAS Chapter V and International Maritime Organization (IMO) Resolution [A.1045 \(27\) Pilot Transfer Arrangements](#)<sup>4</sup>.
- 4.2. This Notice provides information and guidance on good practice for pilot transfer arrangements.

#### 5. Pilot Ladder Construction

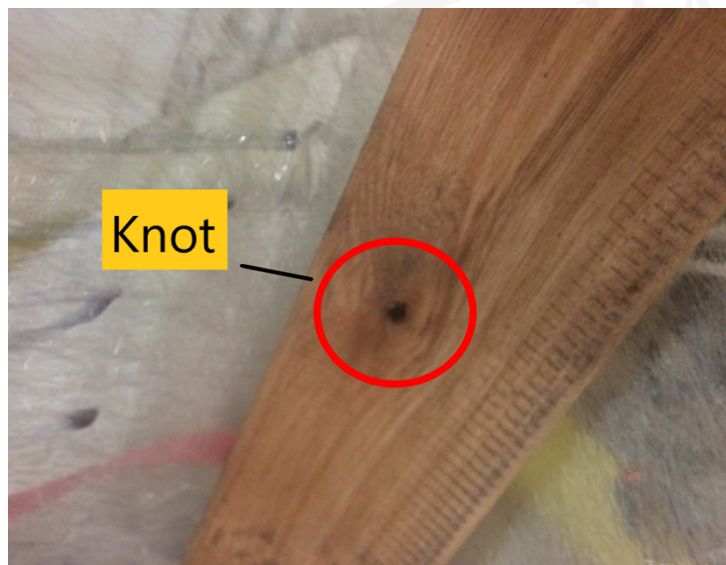
- 5.1. Pilot ladders should be constructed and maintained to the ISO 799-1:2019 standard and be provided with certification. If a ladder constructed to another standard, the manufacturer shall provide an equivalency certificate confirming compliance with Regulation 23 of SOLAS Chapter V.
- 5.2. Ladder steps, if made of hardwood, should be made in one piece and be free of knots. If the ladder steps are made of material other than hardwood, they should be of equivalent strength:



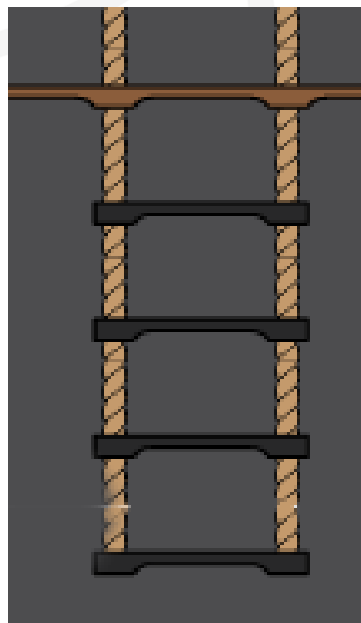
<sup>3</sup> Please also refer to BMA Safety Alert 21-01: <https://www.bahamasmaritime.com/wp-content/uploads/2021/01/BMA-Safety-Alert-21-01-Pilot-Transfer-Arrangements.pdf>

<sup>4</sup>

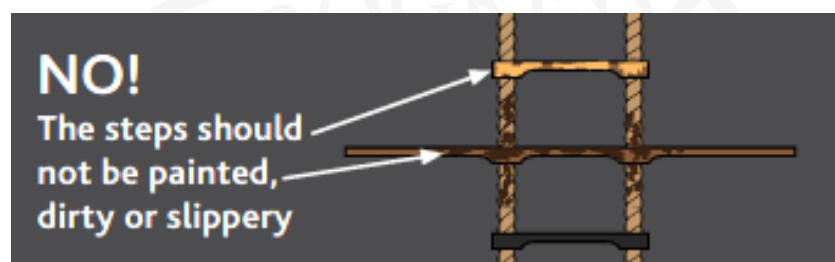
[https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/AssemblyDocuments/A.1045\(27\).pdf](https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/AssemblyDocuments/A.1045(27).pdf)



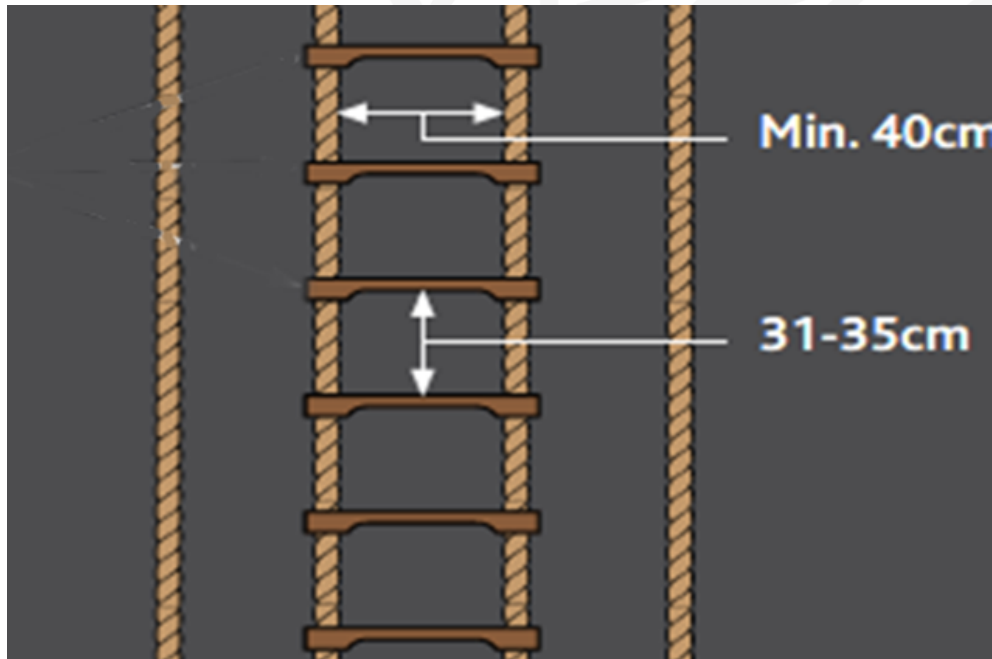
- 5.3. The four lowest steps may be of rubber of sufficient strength and stiffness:



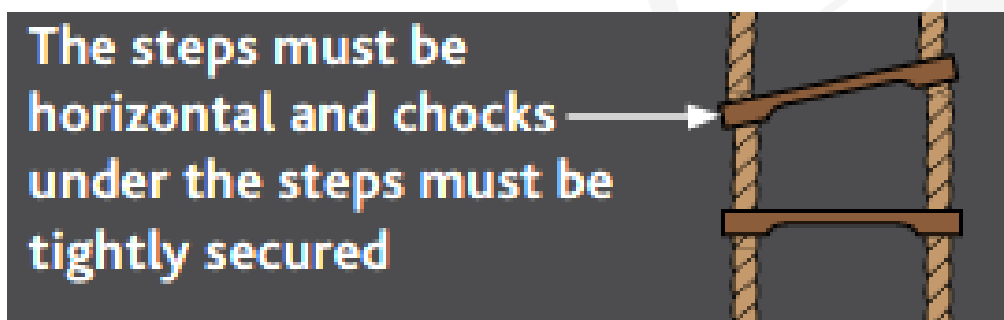
- 5.4. All steps should have an efficient non-slip surface. Steps should not be painted:



- 5.5. Steps should be not less than 400 millimetres between the side ropes, 115 millimetres wide and 25 millimetres in depth, excluding any non-slip coating or grooving.
- 5.6. Steps should be equally spaced - not less than 310 millimetres or more than 350 millimetres apart:

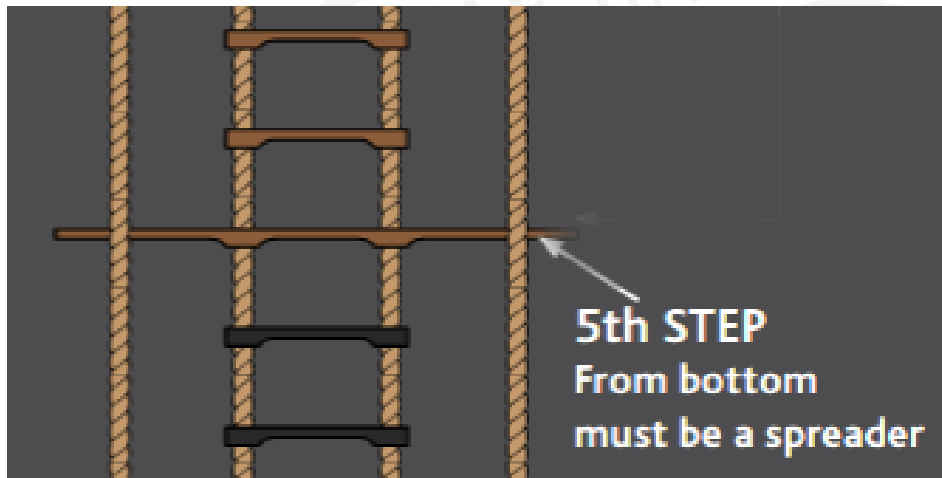


- 5.7. Steps should be secured in such a manner that each will remain horizontal:

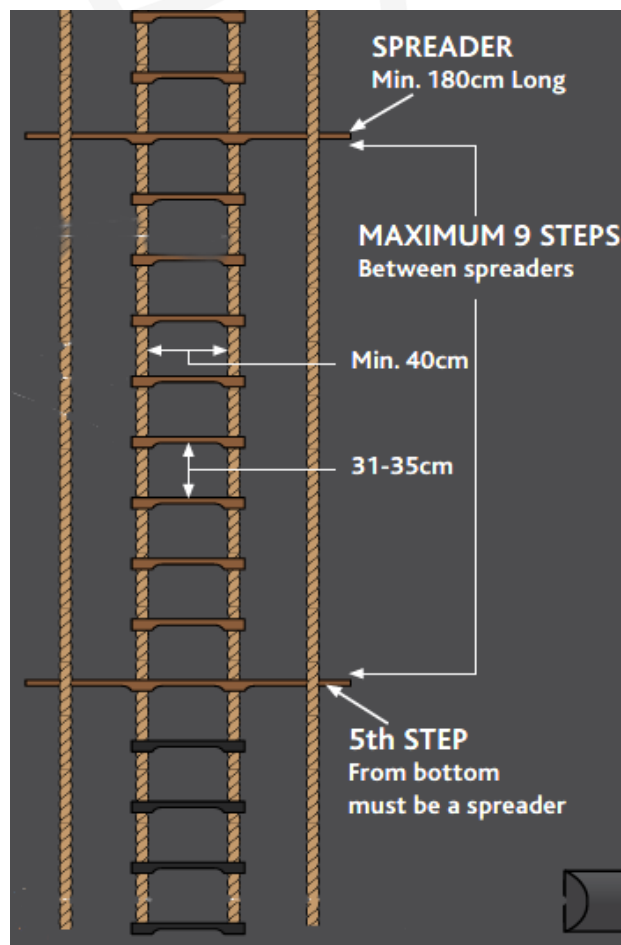


- 5.8. No pilot ladder should have more than two replacement steps and one replacement spreader.

- 5.9. Pilot ladders with more than five steps should have spreader steps of not less than 1.8 metres long installed at regular intervals to prevent the ladder from twisting.



- 5.10. The lowest spreader step should be the fifth step from the bottom of the ladder and the interval between two spreader steps should not exceed nine steps.





- 5.11. Permanent markings showing the length to the bottom step should be provided at regular intervals (e.g., 1 metre) throughout the length of the ladder, such as in the following example:



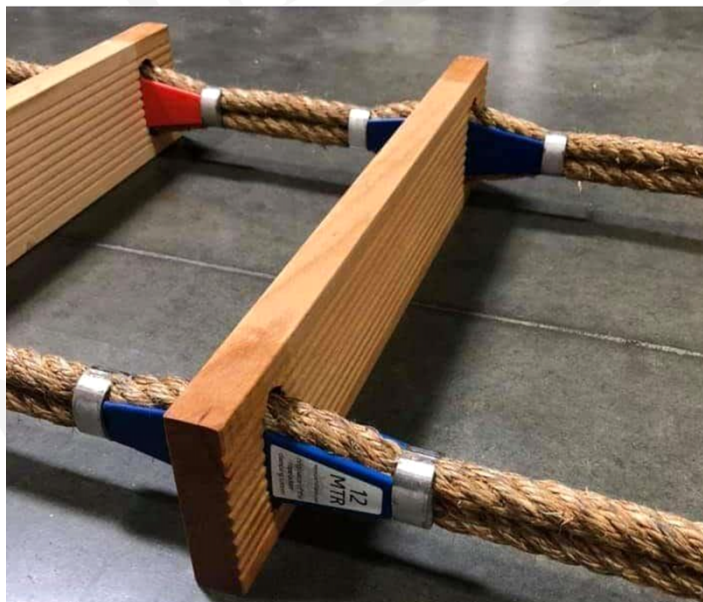
- 5.12. The side ropes of the pilot ladder should consist of two uncovered ropes not less than 18 millimetres in diameter on each side and should be continuous, with no joints and have a breaking strength of at least 24 kilonewtons (kN)<sup>5</sup> per rope:



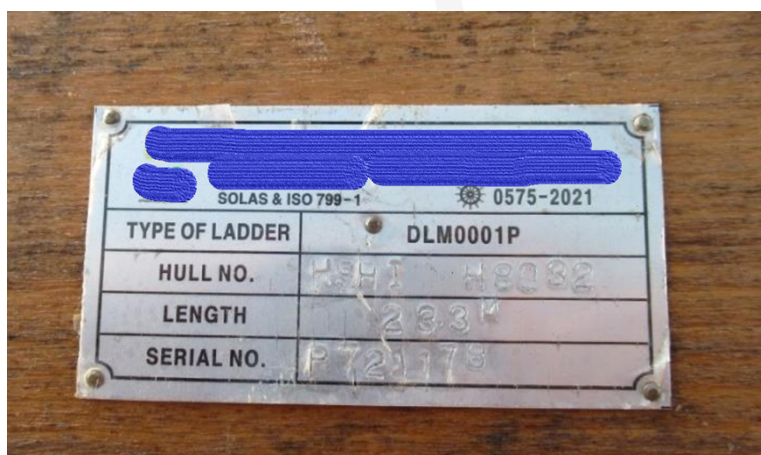
- 5.13. The two side ropes should each consist of one continuous length of rope, the midpoint half-length being located on a thimble large enough to accommodate at least two passes of side rope.
- 5.14. Side ropes should be made of manila or other material of equivalent strength, durability and elongation characteristics.

<sup>5</sup> 24 kN is approximately 2,447 kilogrammes force (kgf)/5,395 pounds force (lb)

- 5.15. Each pair of side ropes should be secured together both above and below each step with a mechanical clamping device properly designed for this purpose, or seizing method with step fixtures (chocks or widgets), which holds each step level when the ladder is hanging freely:

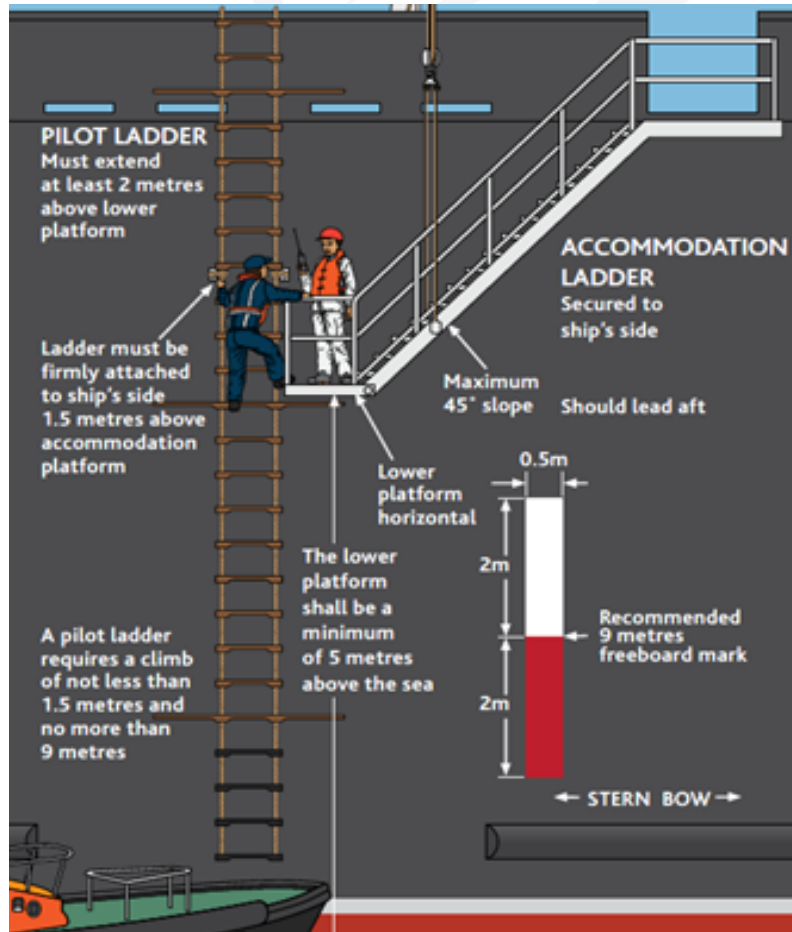


- 5.16. All pilot ladders used for pilot transfer shall be clearly identified with tags or other permanent marking so to enable identification of each appliance for the purposes of survey, inspection and record keeping:



- 5.17. A record shall be kept on board to confirm the date the ladder is placed into service and detailing any repairs effected.

- 5.18. On all ships, where the distance from sea level to the point of access to, or egress from, the ship exceeds 9 metres, and when it is intended to embark and disembark pilots by means of the accommodation ladder, or other equally safe and convenient means in conjunction with a pilot ladder, the ship shall carry such equipment on each side, unless the equipment is capable of being transferred for use on either side.



## 6. Pilot Ladder Rigging

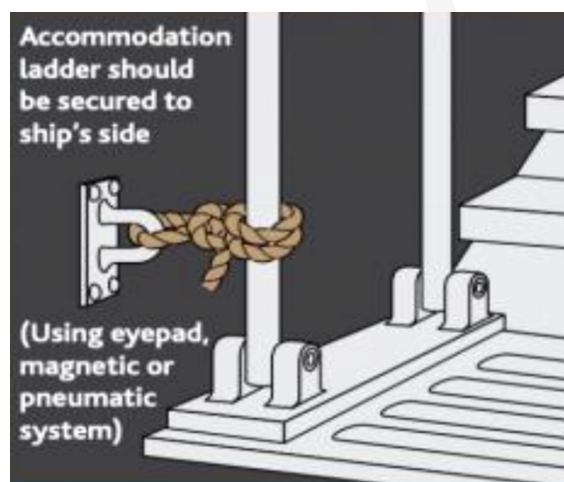
- 6.1. Personnel engaged in the rigging and operation of any mechanical equipment should receive appropriate instruction and training in the safe procedures to be adopted when using the equipment. The equipment should be tested prior to use.
- 6.2. The pilot ladder should be rigged clear of any possible discharges from the ship.
- 6.3. The pilot ladder should be within the parallel body length of the ship and, as far as is practicable, within the mid-ship half length of the ship.



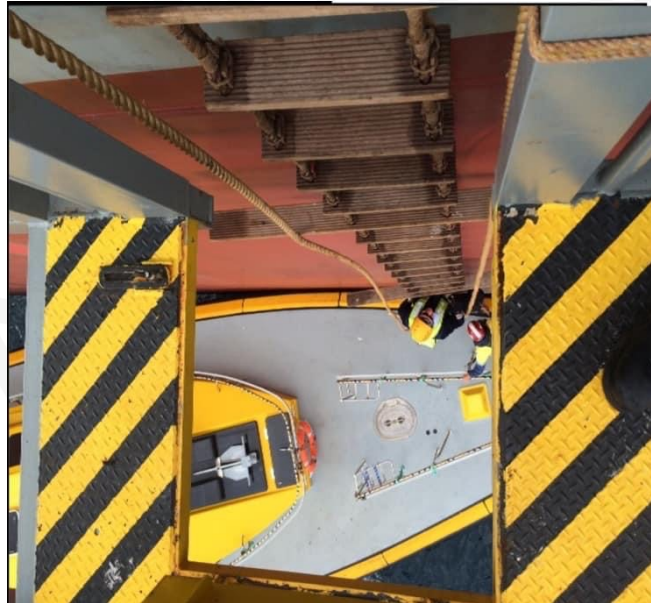
- 6.4. The single length of pilot ladder should be capable of reaching the water from the point of access to, or egress from, the ship and due allowance should be made for all conditions of loading and trim of the ship, and for an adverse list of 15°.
- 6.5. Means should be provided to ensure safe, convenient and unobstructed passage for any person embarking on, or disembarking from, the ship between the head of the pilot ladder, or of any accommodation ladder, and the ship's deck.



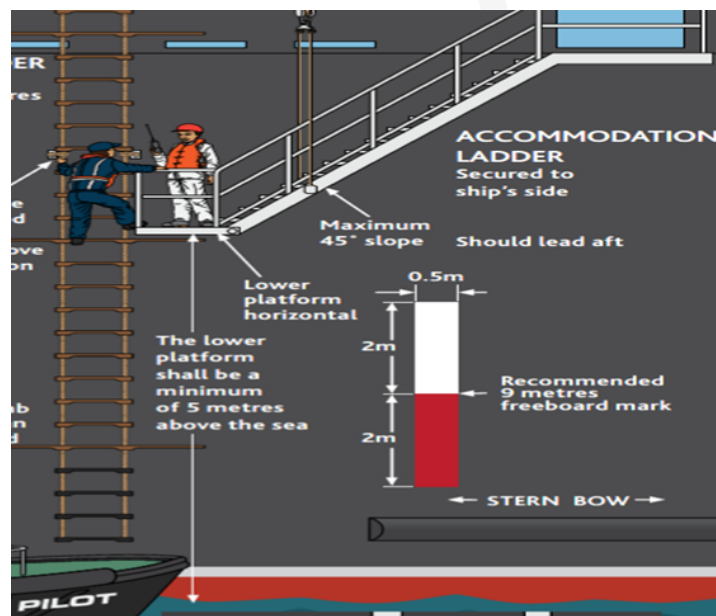
- 6.6. The accommodation ladder (i.e., a combination arrangement) shall be sited such that the ladder leads aft.
- 6.7. When a combination arrangement is used, means shall be provided to secure the lower platform of the accommodation ladder to the ship's side, so as to ensure that the lower end of the accommodation ladder and the lower platform are held firmly against the ship's side within the parallel body length of the ship:



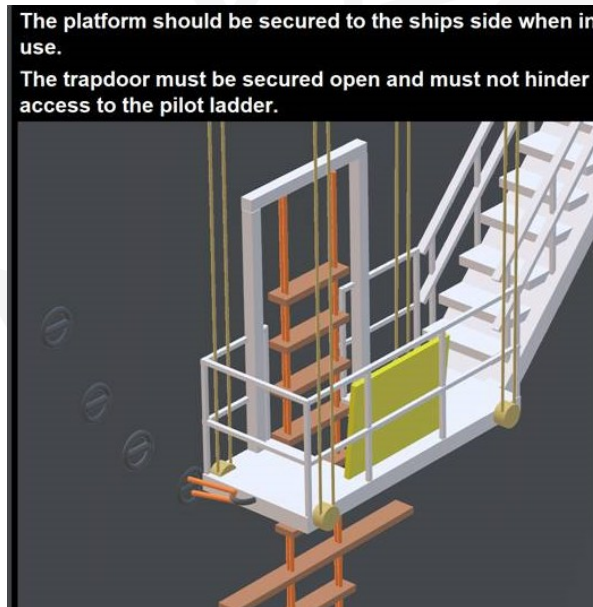
- 6.8. When a combination arrangement is used for pilot access, means shall be provided to secure the pilot ladder and manropes to the ship's side at a point of nominally 1.5 metres above the bottom platform of the accommodation ladder. In the case of a combination arrangement using an accommodation 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:



- 6.9. When a combination arrangement in use, the lower platform should be a minimum of 5 metres above sea level:



- 6.10. The Pilot ladder should be able to be rigged within the horizontal distance to the lower platform between 0.1 and 0.2 m
- 6.11. The trapdoor should open upwards and be secured either flat on the embarkation platform or against the rails at the aft end or outboard side of the platform and should not form part of the handholds:

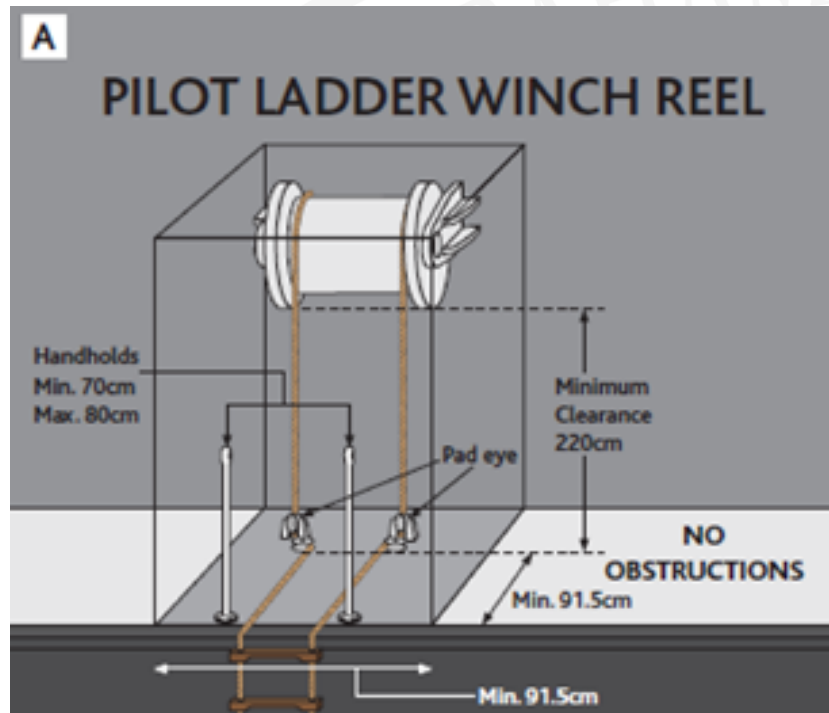


- 6.12. The pilot ladder should be secured to a strong point, independent of the pilot ladder winch reel by a rolling hitch:

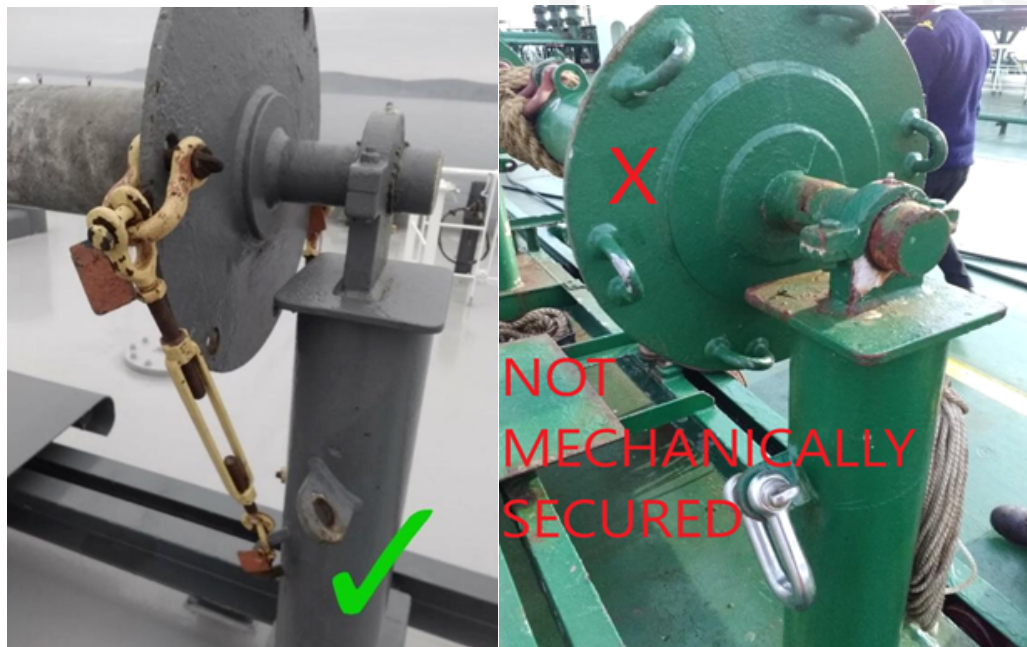


- 6.13. The pilot ladder winch reel should not be relied upon to support the pilot ladder when the pilot ladder is in use:

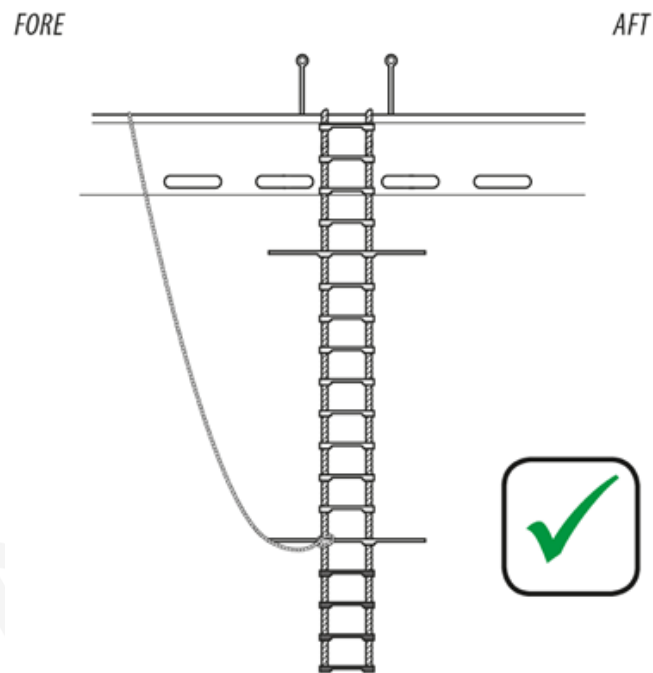




- 6.14. All pilot ladder winches should have means of preventing the reel from being accidentally operated as a result of mechanical failure or human error:

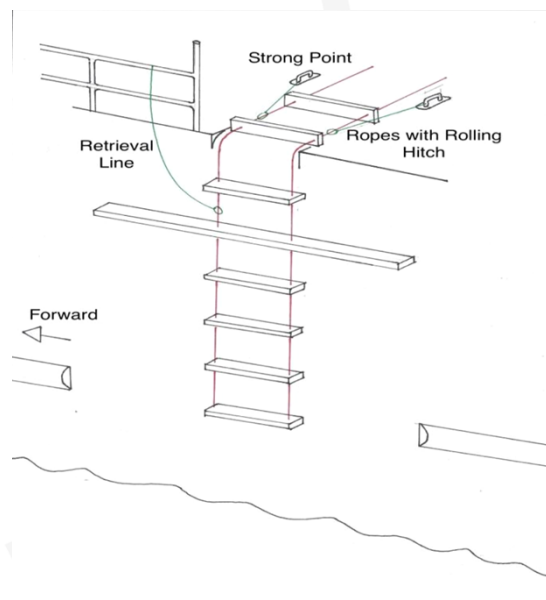


- 6.15. When a retrieval line is considered necessary to ensure the safe rigging of a pilot ladder, the line should be fastened at or above the last spreader step and should lead forward. The retrieval line should not hinder the pilot nor obstruct the safe approach of the pilot boat. (Resolution A.1045(27) para 2.1.5)



## 7. Associated equipment and access to the ship's deck

- 7.1. The securing strong points, shackles and securing ropes should be at least as strong as the side ropes:



*Note the cut in the rubbing band such that each step rests firmly against the ship's side and to allow a safe approach for pilot boat without the gunwale becoming trapped underneath the belting.*

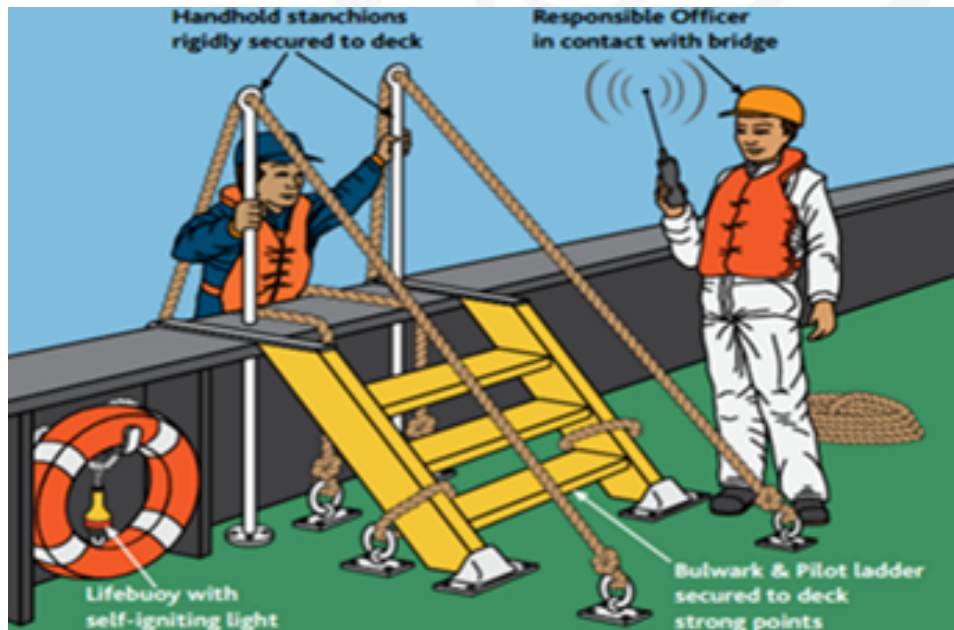




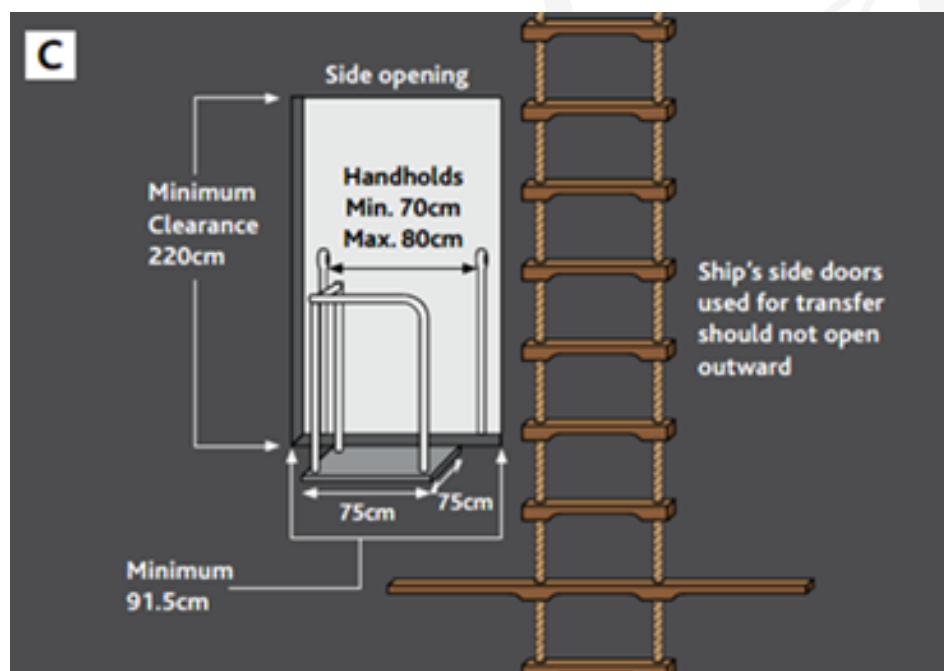
- 7.2. Two man ropes of not less than 28 millimetres and not more than 32 millimetres in diameter, properly secured to the ship, should be available if required by the pilot.
- 7.3. The manropes shall reach the height of the stanchions or bulwarks at the point of access to the deck before terminating at the ring plate on deck.
- 7.4. A lifebuoy equipped with a self-igniting light and a heaving line should be available at hand and ready for immediate use.
- 7.5. Adequate forward-shining lighting shall be provided to illuminate the transfer arrangements overside and the position on deck where a person embarks or disembarks.
- 7.6. A responsible officer, having means of communication with the navigation bridge and who shall also arrange for the escort of the pilot by a safe route to and from the

navigation bridge. A responsible officer should give careful attention to the rigging and condition of the ladder before each use, and regularly inspect the ladder during its life.

- 7.7. A bulwark ladder, two handhold stanchions rigidly secured to the ship's structure at or near their bases and at higher points shall be fitted. The bulwark ladder shall be securely attached to the ship to prevent overturning.



- 7.8. Shiplside doors used for pilot transfer should not open outwards:



- 7.9. Mechanical pilot hoists should not be used. (SOLAS V/23.6). This applies to all ships
- 7.10. Proactive companies are:
- i. Including best practice as a reference in their SOLAS training manuals.
  - ii. Carrying out pilot ladder rigging training drills.
  - iii. Testing deck strong points and replacing as required.
  - iv. Assessing safe access in way of the trap door arrangements.
  - v. Engaging with the [International Maritime Pilots Association \(IMPA\)](https://www.impahq.org/)<sup>6</sup>.
  - vi. Ensuring that step attachment strength tests for embarkation ladders are also carried out in 30 month intervals. Reference should be made to ISO 5489:2008 (E).

## 8. Periodical Strength Testing Procedure

- 8.1. Each ladder shall be subjected to the ladder and step attachment strength test as described in the ISO 799-1:2019 at not more than 30-month in use. A record shall be maintained for each ladder showing the date the ladder was put in service.
- 8.2. Test procedure on the ISO 799-1:2019 states as follows.  
“Suspend the ladder vertically hanging to its full length, or extend the ladder to its full length on a horizontal surface, with the top end of the ladder secured using its own attachments. Apply a static load of 8,8 kN widely distributed over the bottom step for a period of at least 1 min, so that the load is applied evenly between the side ropes through the step attachment fittings. Repeat the procedure at five different steps, except that the ladder is not required to be hanging at full length and only the step under test, its side rope attachments, and the side ropes immediately above the step attachment fittings are required to be subjected to the load.”
- 8.3. Steps shall not break or crack. Attachments between any step and a side rope shall not loosen or break. Side ropes shall not sustain any observable damage, elongation, or deformation that remains after the test load is removed.
- 8.4. Each ladder which fails the test shall be rebuilt by the original manufacturer or an organization or person authorized by the original manufacturer, or scrapped. The ladder shall be marked with the date of the test and the identification of the person or company performing the test. This marking shall be placed on the same where original markings are.
- 8.5. The ladder and step attachment strength test can be performed by the crew members by following the above test procedure in 8.2 and properly document the test with photographic evidence.

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<sup>6</sup> <https://www.impahq.org/>

## 9. Queries

- 9.1. Any queries relating to pilot boarding arrangements should be made to the Inspections & Surveys Department by emailing [tech@bahamasmaritime.com](mailto:tech@bahamasmaritime.com) or contacting any BMA office.

## Revision History

[illegible]