

# **PILOT TRANSFER ARRANGEMENTS: INTERNATIONAL GUIDANCE AND REGULATIONS**

1. International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS) Chapter V, Regulation 23 – Entry into force on July 1, 2012.
2. International Maritime Organization (IMO) Assembly Resolution A.1045(27), Recommendations on Pilot Transfer Arrangements – Adopted November 30, 2011
3. International Maritime Pilots Association Notice No. 849, Required Boarding Arrangements for Pilots (Poster) – Promulgated on May 22, 2012

## REGULATION 23 - Pilot transfer arrangements

2 The existing text of the regulation is replaced by the following text:

### "1 Application

1.1 Ships engaged on voyages in the course of which pilots may be employed shall be provided with pilot transfer arrangements.

1.2 Equipment and arrangements for pilot transfer which are installed on or after [entry-into-force date] shall comply with the requirements of this regulation, and due regard shall be paid to the standards adopted by the Organization<sup>1</sup>.

1.3 Except as provided otherwise, equipment and arrangements for pilot transfer which are provided on ships before [entry-into-force date] shall at least comply with the requirements of regulation 17 or 23, as applicable, of the International Convention for the Safety of Life at Sea, 1974 in force prior to that date, and due regard shall be paid to the standards adopted by the Organization prior to that date.

1.4 Equipment and arrangements which are replaced after [the date of entry into force of this regulation] shall, in so far as is reasonable and practicable, comply with the requirements of this regulation.

1.5 With respect to ships constructed before 1 January 1994, regulation 23.5 shall apply not later than the first survey<sup>2</sup> after [entry-into-force date].

1.6 Regulation 23.6 applies to all ships.

### 2 General

2.1 All arrangements used for pilot transfer shall efficiently fulfil their purpose of enabling pilots to embark and disembark safely. The appliances shall be kept clean, properly maintained and stowed and shall be regularly inspected to ensure that they are safe to use. They shall be used solely for the embarkation and disembarkation of personnel.

2.2 The rigging of the pilot transfer arrangements and the embarkation of a pilot shall be supervised by 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. Personnel engaged in rigging and operating any mechanical equipment shall be instructed in the safe procedures to be adopted and the equipment shall be tested prior to use.

2.3 A pilot ladder shall be certified by the manufacturer as complying with this regulation or with an international standard acceptable to the Organization.<sup>3</sup> Ladders shall be inspected in accordance with chapter I, regulations 6, 7 and 8.

2.4 All pilot ladders used for pilot transfer shall be clearly identified with tags or other permanent marking so as to enable identification of each appliance for the purposes of survey, inspection and record keeping. A record shall be kept on the ship as to the date the identified ladder is placed into service and any repairs effected.

2.5 Reference in this regulation to an accommodation ladder includes a sloping ladder used as part of the pilot transfer arrangements.

<sup>1</sup> Refer to resolution A... (27).

<sup>2</sup> Refer to MSC.1/Circ.1290, annex on the Unified Interpretation of the term "first survey" referred to in SOLAS regulations

### 3 Transfer arrangements

3.1 Arrangements shall be provided to enable the pilot to embark and disembark safely on either side of the ship.

3.2 In all ships where the distance from sea level to the point of access to, or egress from, the ship exceeds 9 m, and when it is intended to embark and disembark pilots by means of the accommodation ladder<sup>4</sup>, 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.

3.3 Safe and convenient access to, and egress from, the ship shall be provided by either:

- .1 a pilot ladder requiring a climb of not less than 1.5 m and not more than 9 m above the surface of the water so positioned and secured that:
  - .1.1 it is clear of any possible discharges from the ship;
  - .1.2 it is within the parallel body length of the ship and, as far as is practicable, within the mid-ship half length of the ship;
  - .1.3 each step rests firmly against the ship's side; where constructional features, such as rubbing bands, would prevent the implementation of this provision, special arrangements shall, to the satisfaction of the Administration, be made to ensure that persons are able to embark and disembark safely; and
  - .1.4 the single length of pilot ladder is capable of reaching the water from the point of access to, or egress from, the ship and due allowance is made for all conditions of loading and trim of the ship, and for an adverse list of 15°; the securing strong point, shackles and securing ropes shall be at least as strong as the side ropes; or
- .2 an accommodation ladder in conjunction with the pilot ladder (i.e. a combination arrangement), or other equally safe and convenient means, whenever the distance from the surface of the water to the point of access to the ship is more than 9 m. The accommodation ladder shall be sited leading aft. When in use, 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 and, as far as is practicable, within the mid-ship half length and clear of all discharges.

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 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.

<sup>3</sup> Refer to the recommendations by the International Organization for Standardization, in particular publication ISO 799:2004, *Ships and marine technology — Pilot ladders*.

<sup>4</sup> Refer to SOLAS regulation II-1/3-9, *Means of embarkation on and disembarkation from ships*, adopted by resolution MSC.256(84), together with the associated Guidelines.

#### **4 Access to the ship's deck**

Means shall 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 or other appliance, and the ship's deck. Where such passage is by means of:

- .1 a gateway in the rails or bulwark, adequate handholds shall be provided; and
- .2 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.

#### **5 Shipside doors**

Shipside doors used for pilot transfer shall not open outwards.

#### **6 Mechanical pilot hoists**

Mechanical pilot hoists shall not be used.

#### **7 Associated equipment**

7.1 The following associated equipment shall be kept at hand ready for immediate use when persons are being transferred:

- .1 two man-ropes of not less than 28 mm and not more than 32 mm in diameter properly secured to the ship if required by the pilot; man-ropes shall be fixed at the rope end to the ring plate fixed on deck and shall be ready for use when the pilot disembarks, or upon request from a pilot approaching to board (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);
- .2 a lifebuoy equipped with a self-igniting light; and
- .3 a heaving line.

7.2 When required by paragraph 4, stanchions and bulwark ladders shall be provided.

#### **8 Lighting**

Adequate lighting shall be provided to illuminate the transfer arrangements overside and the position on deck where a person embarks or disembarks."

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ASSEMBLY  
27th session  
Agenda item 9

A 27/Res.1045  
20 December 2011  
Original: ENGLISH

**Resolution A.1045(27)**

Adopted on 30 November 2011  
(Agenda item 9)

**PILOT TRANSFER ARRANGEMENTS**

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization regarding the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

NOTING the provisions of regulation V/23 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its eighty-seventh session,

1. ADOPTS the "Recommendation on Pilot Transfer Arrangements", as set out in the Annex to the present resolution;
2. INVITES Governments to draw the attention of all concerned to this recommendation;
3. FURTHER INVITES Governments to ensure that mechanical pilot hoists are not used;
4. REQUESTS Governments to ensure that pilot ladders and their arrangements, use and maintenance conform to standards not inferior to those set out in the annex to the present resolution;
5. REVOKES resolution A.889(21).

## Annex

**RECOMMENDATION ON PILOT TRANSFER ARRANGEMENTS****1 GENERAL**

Ship designers are encouraged to consider all aspects of pilot transfer arrangements at an early stage in design. Equipment designers and manufacturers are similarly encouraged, particularly with respect to the provisions of paragraphs 2.1.2, 3.1 and 3.3.

**2 PILOT LADDERS**

A pilot ladder should be certified by the manufacturer as complying with this section or with the requirements of an international standard acceptable to the Organization.<sup>1</sup>

**2.1 Position and construction**

2.1.1 The securing strong points, shackles and securing ropes should be at least as strong as the side ropes specified in section 2.2 below.

2.1.2 The steps of the pilot ladders should comply with the following requirements:

- .1 if made of hardwood, they should be made in one piece, free of knots;
- .2 if made of material other than hardwood, they should be of equivalent strength, stiffness and durability to the satisfaction of the Administration;
- .3 the four lowest steps may be of rubber of sufficient strength and stiffness or other material to the satisfaction of the Administration;
- .4 they should have an efficient non-slip surface;
- .5 they should be not less than 400 mm between the side ropes, 115 mm wide and 25 mm in depth, excluding any non-slip device or grooving;
- .6 they should be equally spaced not less than 310 mm or more than 350 mm apart; and
- .7 they should be secured in such a manner that each will remain horizontal.

2.1.3 No pilot ladder should have more than two replacement steps which are secured in position by a method different from that used in the original construction of the ladder, and any steps so secured should be replaced as soon as reasonably practicable by steps secured in position by the method used in the original construction of the pilot ladder. When any replacement step is secured to the side ropes of the pilot ladder by means of grooves in the sides of the step, such grooves should be in the longer sides of the step.

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<sup>1</sup> Refer to the recommendations by the International Organization for Standardization, in particular publication ISO 799:2004, *Ships and marine technology – Pilot ladders*.

2.1.4 Pilot ladders with more than five steps should have spreader steps not less than 1.8 m long provided at such intervals as will prevent the pilot ladder from twisting. The lowest spreader step should be the fifth step from the bottom of the ladder and the interval between any spreader step and the next should not exceed nine steps.

2.1.5 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.

2.1.6 A permanent marking should be provided at regular intervals (e.g. 1 m) throughout the length of the ladder consistent with ladder design, use and maintenance in order to facilitate the rigging of the ladder to the required height.

## **2.2 Ropes**

2.2.1 The side ropes of the pilot ladder should consist of two uncovered ropes not less than 18 mm in diameter on each side and should be continuous, with no joints and have a breaking strength of at least 24 Kilo Newtons per side rope. 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.<sup>2</sup>

2.2.2 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 satisfactory to the Administration.

2.2.3 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. The preferred method is seizing.<sup>2</sup>

## **3 ACCOMMODATION LADDERS USED IN CONJUNCTION WITH PILOT LADDERS**

3.1 Arrangements which may be more suitable for special types of ships may be accepted, provided that they are equally safe.

3.2 The length of the accommodation ladder should be sufficient to ensure that its angle of slope does not exceed 45°. In ships with large draft ranges, several pilot ladder hanging positions may be provided, resulting in lesser angles of slope. The accommodation ladder should be at least 600 mm in width.

3.3 The lower platform of the accommodation ladder should be in a horizontal position and secured to the ship's side when in use. The lower platform should be a minimum of 5 m above sea level.

3.4 Intermediate platforms, if fitted, should be self-levelling. Treads and steps of the accommodation ladder should be so designed that an adequate and safe foothold is given at the operative angles.

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<sup>2</sup> Refer to the recommendations by the International Organization for Standardization, in particular publication ISO 799:2004, *Ships and marine technology — Pilot ladders*, part 4.3a and part 3, paragraph 3.2.1.

3.5 The ladder and platform should be equipped on both sides with stanchions and rigid handrails, but if handropes are used they should be tight and properly secured. The vertical space between the handrail or handrope and the stringers of the ladder should be securely fenced.

3.6 The pilot ladder should be rigged immediately adjacent to the lower platform of the accommodation ladder and the upper end should extend at least 2 m above the lower platform. The horizontal distance between the pilot ladder and the lower platform should be between 0.1 and 0.2 m.

3.7 If a trapdoor is fitted in the lower platform to allow access from and to the pilot ladder, the aperture should not be less than 750 mm x 750 mm. 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. In this case the after part of the lower platform should also be fenced as specified in paragraph 3.5 above, and the pilot ladder should extend above the lower platform to the height of the handrail and remain in alignment with and against the ship's side.

3.8 Accommodation ladders, together with any suspension arrangements or attachments fitted and intended for use in accordance with this recommendation, should be to the satisfaction of the Administration<sup>3</sup>.

#### **4 MECHANICAL PILOT HOISTS**

The use of mechanical pilot hoists is prohibited by SOLAS regulation V/23.

#### **5 ACCESS TO DECK**

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; such access should be gained directly by a platform securely guarded by handrails. Where such passage is by means of:

- .1 a gateway in the rails or bulwark, adequate handholds should be provided at the point of embarking on or disembarking from the ship on each side which should be not less than 0.7 m or more than 0.8 m apart. Each handhold should be rigidly secured to the ship's structure at or near its base and also at a higher point, not less than 32 mm in diameter and extend not less than 1.2 m above the top of the bulwarks. Stanchions or handrails should not be attached to the bulwark ladder;
- .2 a bulwark ladder should be securely attached to the ship to prevent overturning. Two handhold stanchions should be fitted at the point of embarking on or disembarking from the ship on each side which should be not less than 0.7 m or more than 0.8 m apart. Each stanchion should be rigidly secured to the ship's structure at or near its base and also at a higher point, should be not less than 32 mm in diameter and should extend not less than 1.2 m above the top of the bulwarks. Stanchions or handrails should not be attached to the bulwark ladder.

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<sup>3</sup> Refer to SOLAS regulation II-1/3-9 concerning accommodation ladders.



## **6 SAFE APPROACH OF THE PILOT BOAT**

Where rubbing bands or other constructional features might prevent the safe approach of a pilot boat, these should be cut back to provide at least 6 metres of unobstructed ship's side. Specialized offshore ships less than 90 m or other similar ships less than 90 m for which a 6 m gap in the rubbing bands would not be practicable, as determined by the Administration, do not have to comply with this requirement. In this case, other appropriate measures should be taken to ensure that persons are able to embark and disembark safely.

## **7 INSTALLATION OF PILOT LADDER WINCH REELS**

### **7.1 Point of access**

7.1.1 When a pilot ladder winch reel is provided it should be situated at a position which will ensure persons embarking on, or disembarking from, the ship between the pilot ladder and the point of access to the ship, have safe, convenient and unobstructed access to or egress from the ship.

7.1.2 The point of access to or egress from the ship may be by a ship's side opening, an accommodation ladder when a combination arrangement is provided, or a single section of pilot ladder.

7.1.3 The access position and adjacent area should be clear of obstructions, including the pilot ladder winch reel, for distances as follows:

- .1 a distance of 915 mm in width measured longitudinally;
- .2 a distance of 915 mm in depth, measured from the ship's side plating inwards; and
- .3 a distance of 2,200 mm in height, measured vertically from the access deck.

### **7.2 Physical positioning of pilot ladder winch reels**

7.2.1 Pilot ladder winch reels are generally fitted on the ship's upper (main) deck or at a ship's side opening which may include side doors, gangway locations or bunkering points. Winch reels fitted on the upper deck may result in very long pilot ladders.

7.2.2 Pilot ladder winch reels which are fitted on a ship's upper deck for the purpose of providing a pilot ladder which services a ship side opening below the upper deck or, alternatively, an accommodation ladder when a combination arrangement is provided should:

- .1 be situated at a location on the upper deck from which the pilot ladder is able to be suspended vertically, in a straight line, to a point adjacent to the ship side opening access point or the lower platform of the accommodation ladder;
- .2 be situated at a location which provides a safe, convenient and unobstructed passage for any person embarking on, or disembarking from, the ship between the pilot ladder and the place of access on the ship;

- .3 be situated so that safe and convenient access is provided between the pilot ladder and the ship's side opening by means of a platform which should extend outboard from the ship's side for a minimum distance of 750 mm, with a longitudinal length of a minimum of 750 mm. The platform should be securely guarded by handrails;
- .4 safely secure the pilot ladder and manropes to the ship's side at a point on the ship's side at a distance of 1,500 mm above the platform access point to the ship side opening or the lower platform of the accommodation ladder; and
- .5 if a combination arrangement is provided, have the accommodation ladder secured to the ship's side at or close to the lower platform so as to ensure that the accommodation ladder rests firmly against the ship's side.

7.2.3 Pilot ladder winch reels fitted inside a ship's side opening should:

- .1 be situated at a position which provides a safe, convenient and unobstructed passage for any person embarking on, or disembarking from, the ship between the pilot ladder and the place of access on the ship;
- .2 be situated at a position which provides an unobstructed clear area with a minimum length of 915 mm and minimum width of 915 mm and minimum vertical height of 2,200 mm; and
- .3 if situated at a position which necessitates a section of the pilot ladder to be partially secured in a horizontal position on the deck so as to provide a clear access as described above, then allowance should be made so that this section of the pilot ladder may be covered with a rigid platform for a minimum distance of 915 mm measured horizontally from the ship's side inwards.

### 7.3 Handrails and handgrips

Handrails and handgrips should be provided in accordance with section 5 to assist the pilot to safely transfer between the pilot ladder and the ship, except as noted in paragraph 7.2.2.3 for arrangements with platforms extending outboard. The horizontal distance between the handrails and/or the handgrips should be not less than 0.7 m or more than 0.8 m apart.

### 7.4 Securing of the pilot ladder

Where the pilot ladder is stowed on a pilot ladder winch reel which is located either within the ship's side opening or on the upper deck:

- .1 the pilot ladder winch reel should not be relied upon to support the pilot ladder when the pilot ladder is in use;
- .2 the pilot ladder should be secured to a strong point, independent of the pilot ladder winch reel; and
- .3 the pilot ladder should be secured at deck level inside the ship side opening or, when located on the ship's upper deck, at a distance of not less than 915 mm measured horizontally from the ship's side inwards.

## **7.5 Mechanical securing of pilot ladder winch reel**

7.5.1 All pilot ladder winch reels should have means of preventing the winch reel from being accidentally operated as a result of mechanical failure or human error.

7.5.2 Pilot ladder winch reels may be manually operated or, alternatively, powered by either electrical, hydraulic or pneumatic means.

7.5.3 Manually operated pilot ladder winch reels should be provided with a brake or other suitable arrangements to control the lowering of the pilot ladder and to lock the winch reel in position once the pilot ladder is lowered into position.

7.5.4 Electrical, hydraulic or pneumatically driven pilot ladder winch reels should be fitted with safety devices which are capable of cutting off the power supply to the winch reel and thus locking the winch reel in position.

7.5.5 Powered winch reels should have clearly marked control levers or handles which may be locked in a neutral position.

7.5.6 A mechanical device or locking pin should also be utilized to lock powered winch reels.

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Our Ref: Required Boarding Arrangements for Pilots

22 May 2012

IMPA NOTICE NO 849

Dear Colleagues

**Required Boarding Arrangements for Pilots**

This morning at IMO MSC 90 the new "Required Boarding Arrangements for Pilot" poster was approved. A copy is attached to this circular. The poster will be put on the IMPA website as soon as possibly and will be downloadable.

It must be remembered that the arrangements shown on the poster are for ships constructed after 1<sup>st</sup> July 2012, so change will take time. It must also be remembered that the poster only summarises the main points of SOLAS V r23 and Resolution A 1045. IMPA will produce a new guidance booklet for Naval Architects and Shipyards very shortly. This will contain all the relevant requirements and will also be put on the IMPA website.

Yours sincerely

Nick Cutmore  
Secretary General



# REQUIRED BOARDING ARRANGEMENTS FOR PILOT



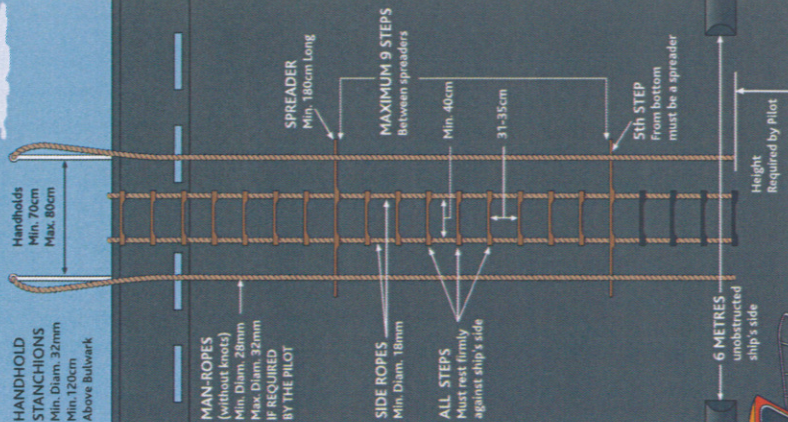
In accordance with SOLAS Regulation V/23 & IMO Resolution A.1045(27)

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## RIGGING FOR FREEBOARDS OF 9 METRES OR LESS



## COMBINATION ARRANGEMENT FOR SHIPS WITH A FREEBOARD OF MORE THAN 9 METRES WHEN NO SIDE DOOR AVAILABLE

