

BAHRIA CLASSIFICATION SOCIETY



RULES BCS-R 002-E

PILOT TRANSFER ARRANGEMENTS

July 2022

This latest edition incorporates all rule changes. The latest revisions are shown with a vertical line. The section title is framed if the section is revised completely. Changes after the publication of the rule are written in red color.

Unless otherwise specified, these rules apply to ships for which the date of contract for construction is on or after July 2022.

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RULES BCS-R 002-E –PILOT TRANSFER ARRANGEMENTS – July 2022 This Publication was approved by BCS CEO on 16 June 2022 and enters into force on 1 July 2022. This Publication also applies to other BCS regulations if it is mentioned there.

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1 GENERAL

1.1 Application

1.1.1 The present Publication applies to BCS ships which are required to be provided with pilot transfer arrangements.

1.1.2 With respect to foreign flag ships, the requirements of the present Publication may be used as a set of recommendations and guidelines, unless approved as rules by the Flag State Administration.

1.1.3 The requirements of the present Publication apply to designing and manufacture of pilot transfer arrangements, as well as to installation of the said arrangements on board the ship.

1.1.4 Pilot transfer arrangements which are installed on ships on or after 1 July 2012 are to comply with the requirements of the present Publication.

1.1.5 Pilot transfer arrangements which are installed on ships before 1 July 2012 are to comply at least with the requirements of regulation 17¹ or 23 (depending on installation data) of chapter V, 1974 SOLAS Convention in force prior to that date.

1.1.6 Pilot transfer arrangements which are replaced after 1 July 2012 are to comply, as far as is reasonable and practicable, with the requirements of the present Publication.

1.1.7 With respect to ships constructed before 1 January 1994, requirement 4.5 shall apply not later than the first survey on or after 1 July 2012.

1.1.8 Mechanical pilot hoists shall not be used.

1.2 Scope of Survey

1.2.1 Pilot transfer arrangements are subject to BCS Survey during manufacture and installation on board.

1.2.2 Pilot ladder shall be type approved by BCS or have relevant certificate of conformity with the *Council Directive 96/98/EC of 20 December 1996 on marine equipment*, with amendments, so-called *MED Directive*. Please find below detailed requirements:

- .1** pilot ladder specified in *Annex A.1* to *MED Directive* intended for placing on board a convention ship or a passenger ship engaged on domestic voyages flying the BCS or other European Union Member State flag shall have relevant certificate of conformity with the *MED Directive*;
- .2** pilot ladder intended for placing on board a convention ship flying the flag of State other than European Union Member State, shall be type approved by BCS or shall have relevant certificate of conformity with the *MED Directive*;
- .3** pilot ladder intended for placing on board a ship which is not engaged on international voyages shall be type approved by BCS or shall have relevant certificate of conformity with the *MED Directive*.

1.2.3 A pilot ladder shall fulfil requirements of this publication or the standard. *ISO 799:2004, Ships and marine technology – Pilot ladders*.

1.2.4 Where the pilot transfer arrangement includes an accommodation ladder, such ladder shall fulfil requirements 9.5 of *Part III – Hull equipment, Rules for the classification and construction of sea-going ships*.

1.2.5 Prior to installation on board, the plan of the arrangement installation on board the ship is to be submitted to BCS for approval. The plan is to include the arrangement technical characteristics, its location, details of the arrangement attachment to the ship's deck and access to the deck, lighting of the arrangement, as well as the associated life-saving equipment.

¹ Previous regulation 17 has been renumbered as regulation 23, which entered into force on 1 July 2002.

2 GENERAL REQUIREMENTS (*acc. to SOLAS V/23*)

2.1 Ships engaged on voyages in the course of which pilots are likely to be employed are to be provided with one of the following pilot transfer arrangements:

- .1** a pilot ladder – where a climb of not less than 1.5 m and not more than 9 m above the surface of the water is required² *;
- .2** an accommodation ladder or other equally safe and convenient means in conjunction with the pilot ladder – where the distance from the surface of the water to the point of access to the ship is more than 9 m³ *;
- .3** mechanical pilot hoists shall not be used.

2.2 Pilot transfer arrangement is to enable the pilot to embark on and disembark from the ship safely.

2.3 Arrangements to enable the pilot to embark and disembark are to be provided on both sides of the ship. Where such arrangement is not capable of being transferred for use on either side, provision is to be made for a separate pilot transfer arrangement on each side of the ship.

3 CONSTRUCTION REQUIREMENTS (*acc. to SOLAS V/23 and Res.A.1045(27)*)

3.1 Pilot Ladder

3.1.1 Pilot Ladder Construction

3.1.1.1 The securing strongpoints, shackles and securing ropes are to be at least as strong as the side ropes specified in 3.1.2.

3.1.1.2 The steps of the pilot ladder are to comply with the following requirements:

- .1** if made of hardwood, they are to be made in one piece, free of knots;
- .2** if made of material other than hardwood, they are to be of equivalent strength, stiffness and durability, confirmed by tests performed by a laboratory approved by BCS;
- .3** the four lowest steps may be made of rubber of sufficient strength and stiffness; the rubber properties are to be confirmed by tests carried out by a laboratory approved by BCS;
- .4** they are to have an efficient non-slip surface;
- .5** they are to be not less than 400 mm between the side ropes;
- .6** the width of the steps is to be not less than 115 mm;
- .7** the depth of the steps, excluding any non-slip device or grooving, is to be not less than 25 mm;
- .8** they are to be equally spaced not less than 310 mm or not more than 350 mm apart;
- .9** they are to be secured in such a manner that each step will remain horizontal.

3.1.1.3 The pilot ladder cannot 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. Any steps so secured are to be replaced as soon as is reasonably practicable by steps secured in position by the method used in the original construction of the ladder.

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

² In such instances when only a pilot ladder is used, “due allowance” (referred to in 4.1) for adverse list of 15° applies to an emergency condition and permits a pilot to climb more than 9 m by an additional length of pilot ladder.

³ The 15° list requirement does not apply to a combined arrangement of an accommodation ladder used in conjunction with the pilot ladder.

* This interpretation refers to ships contracted for construction on or after 1 July 2013.

3.1.1.5 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.

3.1.1.6 A permanent marking should be provided at regular intervals (e.g. 1 m) in order to facilitate the rigging of the ladder to required height.

3.1.2 Ropes

3.1.2.1 The side ropes of the pilot ladder are to consist of two uncovered ropes not less than 18 mm in diameter on each side and are to be continuous, with no joints and have a breaking strength of at least 24 kN 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 rope⁴.

3.1.2.2 Side ropes should be made of manila or other material of equivalent strength, durability, elongation characteristics and grip, protected against actinic degradation and approved by BCS.

3.1.2.3 Each part 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 widgets), which holds each step level when the ladder is hanging freely. The preferred method is seizing⁴.

3.2 Accommodation Ladder Used in Conjunction with Pilot Ladder

3.2.1 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.

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

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

3.2.4 The ladder and platform are to be equipped on both sides with stanchions and rigid handrails; if handropes are used, they are to be tight and properly secured. The vertical space between the handrails or handropes and the stringers of the ladder is to be securely fenced.

3.2.5 The pilot ladder is to be rigged immediately adjacent to the lower platform of the accommodation ladder and the upper end is to 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.

3.2.6 If a trapdoor is fitted on the lower platform to allow access from and to the pilot ladder, the aperture is not to be less than 750 mm x 750 mm. The trapdoor should be 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 is to be fenced as specified in 3.2.4 and the pilot ladder is to extend above the lower platform to the height of the handrail and remain in alignment with and against the ship's side.

3.2.7 Accommodation ladder, together with any suspension arrangements or attachments fitted and intended for use in accordance with this recommendation should be type approved by BCS.

3.2.8 Arrangements which may be more suitable for special types of ships may be accepted, provided that they are equally safe. Such arrangements are subject to special consideration of BCS.

⁴ Refer to publication ISO 799:2004, *Ships and maritime technology – Pilot ladders*, part 4.3.a and part 3, paragraph 3.2.1.

4 INSTALLATION REQUIREMENTS (*acc. to SOLAS V/23 and Res.A.1045(27)*)

4.1 The pilot ladder is to be so positioned and secured that:

- it is clear of any possible discharges from the ship;
- it is within the parallel body length of the ship and, as far as is practicable, within the mid-ship half of the length of the ship;
- 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 are to be made to ensure that persons are able to embark and disembark safely;
- the single length of pilot ladder is capable of reaching the water from the point of access to, or aggraving from, the ship and due allowance is made for all conditions of loading and trim of 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.

4.2 When accommodation ladder is used in conjunction with the pilot ladder or other equally safe and convenient means, it 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 of the ship and clear of any possible discharges from the ship.

4.3 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 a case of a combination arrangement using an accommodation ladder with the trapdoor in the bottom platform, the pilot ladder and manropes shall be rigged through the trapdoor extending above the platform to the height of the handrail.

4.4 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; 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 0.7m or more than 0.8m apart. Each handhold 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 deck to which it is fitted; and
- .2** a bulwark ladder, two separate 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 0.7m or more than 0.8m apart. The bulwark ladder should be securely attached to the ship to prevent overturning. 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 32mm in diameter and should extend not less than 1.2m above the top of the bulwarks. Stanchions or handrails should not be attached to the bulwark ladder.

4.5 Shipside doors used for pilot transfer are not to open outwards.

4.6 The following associated equipment is to be kept at hand ready for immediate use when persons are being transferred:

- .1** two manropes of not less than 28 mm and not more than 32 mm in diameter, properly secured to the ship, if required by the pilot. Manropes shall be fixed to the ring plate fixed on deck and shall be ready for use when the pilot disembarks, or upon request from the pilot approaching to board. The man ropes 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;
- .3** a heaving line.

4.7 Adequate lighting is to be provided to illuminate the transfer arrangements overside, the position on deck where a person embarks or disembarks.

5 SAFE APPROACH OF THE PILOT BOAT (*acc. to Res.A.1045(27)*)

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.

6 INSTALLATION OF PILOT LADDER WINCH REELS (*acc. to Res.A.1045(27)*)

6.1 Point of Access

6.1.1 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.

6.1.2 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.

6.1.3 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.

6.2 Physical Positioning of Pilot Ladder Winch Reels

6.2.1 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.

6.2.2 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.

6.2.3 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.

6.3 Handrails and Handgrips

Handrails and handgrips should be provided in accordance with section 4.4 to assist the pilot to safely transfer between the pilot ladder and the ship, except as noted in paragraph 6.2.2.3 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.

6.4 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.

6.5 Mechanical Securing of Pilot Ladder Winch Reel

6.5.1 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.

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

6.5.3 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.

6.5.4 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.

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

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

7 MAINTENANCE REQUIREMENTS (acc. to SOLAS V/23)

7.1 All pilot transfer arrangements are to be kept clean, ready for use, properly maintained and stowed and are to be regularly inspected.

7.2 Ladders shall be inspected during initial, annual, periodical and renewal surveys.

7.3 A record shall be kept on the ship as to the date the ladder is placed into service and any repairs effected.