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**Sent:** Thursday, February 20, 2020 9:16 AM  
**To:** Garfinkle, Allen@BOPC  
**Cc:** Port Agent; Jorge Viso  
**Subject:** Pilot Ladder Safety - APA Request  
**Attachments:** APA\_Request - dangerous trapdoors.pdf

**EXTERNAL EMAIL.** Links/attachments may not be safe.

To: pilot commissions, boards of pilotage commissioners, and other state pilotage authorities:

The American Pilots' Association is submitting for your consideration the attached statement on an important pilot safety matter, along with a request for certain actions to address a particular pilot transfer arrangement currently found on some ships.

Please don't hesitate to contact us if you have any questions.

Thank you.

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### **A Request from the American Pilots' Association to State Pilotage Authorities Regarding Pilot Safety**

This past December 30<sup>th</sup>, Captain Dennis Sherwood, a New York licensed pilot, was killed from a fall while embarking an inbound container ship. The embarkation in this instance was via a combination arrangement of an accommodation ladder and a pilot ladder. Such a combination is required whenever the distance from the surface of the water to the point of access to the ship is more than nine meters. This particular combination arrangement, however, involved a trapdoor in the platform of the accommodation ladder with the pilot ladder hanging from a cross beam near the bottom of the platform, and with the top step of the ladder significantly below the level of the platform. This requires a pilot to pull himself or herself up through the trapdoor while twisting to get a secure footing on the platform. Captain Sherwood fell while attempting to make that difficult maneuver to transfer from the pilot ladder to the platform above.



*Example of trapdoor arrangement with ladder hanging from bottom of platform*

This trapdoor arrangement is currently found on a number of ships with accommodation ladder-pilot ladder combinations, despite the facts that it has long been considered by pilots to be unsafe and that the IMO has recognized that it is unsafe by taking steps to eliminate it. Since at least 1979, IMO guidelines have recommended that pilot ladders used with a trapdoor extend to the height of the platform's handrail. The purpose of that recommended practice is to bring the ladder steps up to a level from which the pilot can step across to the platform rather than pull himself or herself up to it.

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GREAT LAKES

Nine years ago, the IMO revised the SOLAS pilot transfer regulation (SOLAS V/23) and its implementing guidelines (Res. A.1045) in response to continuing complaints about unsafe pilot transfer arrangements. The effective date for the new standards was July 1, 2012. Several of the revisions addressed the use of trapdoors in combination arrangements and were intended to eliminate pilot ladders that hang from the bottom or near-bottom of the platform, as well as other problems with such arrangements.

To address the pilot ladder-platform transition issue, Regulation 23 specifies that a pilot ladder “shall be rigged through the trapdoor and extend to the height of the handrail” (V/23.3.3.2.1) and, in addition, “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.” (V/23.3.3.2). Similarly, Resolution A.1045 provides that when a trapdoor is used in a combination arrangement, “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.” (A.1045, paragraph 3.8).

Against this background, it is frustrating, and now tragic, that pilots continue to encounter, and have to deal with, trapdoor arrangements like the one found on the ship from which Captain Sherwood fell. **BUT, it doesn’t have to be this way.** Complying with Regulation 23 and Resolution A.1045 is not an expensive proposition. Replacing or retrofitting equipment to meet the standards would not be a significant project.

**On behalf of the 1,200 pilots in the U.S. state pilotage system, we are asking for your help in bringing about a swift end to this dangerous situation by taking responsible measures, including, but not limited to, the ones proposed below, to protect the safety of the pilots under your jurisdiction.**

#### **1. Message to Pilots.**

By whatever means you normally use to communicate with your pilots and pilot association(s), remind them that a pilot may refuse to use a transfer arrangement that he or she reasonably believes is unsafe. In particular, you should note the problems with a trapdoor arrangement similar to the one from which Captain Sherwood fell, and provide a brief description of the current IMO standards for combination arrangements using a trapdoor. You should also confirm that you will support, and defer to the judgement of, a pilot who refuses to use a transfer arrangement that he or she believes is unsafe, unless that refusal is later shown to be clearly unreasonable or insincere.

#### **2. Message to the Maritime Community**

By whatever means you consider appropriate, issue a notice to pilot users and others in your local maritime community that you are aware that some ships may offer a pilot transfer arrangement consisting of an accommodation ladder/pilot ladder combination with a trapdoor that does not meet IMO standards in effect since at least 2012. Further, advise that, in response, you have reminded the pilots that they may refuse to use a pilot transfer arrangement that they reasonably believe is unsafe, particularly the offending trapdoor arrangement. Urge ships with a trapdoor arrangement to bring their arrangements into compliance with the current IMO standards as soon as possible in order to avoid potential disruptions to ship schedules and port operations. Ships can either (1) switch to the more traditional system of a pilot ladder hung from the ship’s deck, positioned adjacent to the accommodation ladder platform, and secured to the ship’s hull at a point nominally 1.5m above the platform; or (2) ensure that the trapdoor arrangement meets the following IMO standards:

- a. pilot ladder rigged through the trapdoor extending above the platform to the height of the handrail;
- b. lower platform of accommodation ladder secured to the ship's side, so as to ensure that the lower end of the accommodation and the lower platform are held firmly against the ship's side; and
- c. pilot ladder remains against the ship's side.

If you have any questions, please don't hesitate to contact us. Also, we would welcome any suggestions that you might have for alternative methods or strategies for improving this or any other situation jeopardizing pilot safety. We look forward to working with you on this important matter.

SOLAS V/23 and Resolution A.1045 (27) are available at:

[http://www.americanpilots.org/document\\_center/Activities/SOLAS%20V%20Reg%2023%20and%20Res.%201045.pdf](http://www.americanpilots.org/document_center/Activities/SOLAS%20V%20Reg%2023%20and%20Res.%201045.pdf)

## Annex I

Material from the IMO publication "SOLAS (Consolidated Edition, 2004)", is used by permission of the International Maritime Organization (IMO).

## SOLAS

### Safety of Navigation

#### Regulation 23 -- Pilot transfer arrangements

10 The existing text of regulation 23 is replaced by the following:

##### 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<sup>1</sup> on or after 1 July 2012 shall comply with the requirements of this regulation, and due regard shall be paid to the standards adopted by the Organization<sup>2</sup>.
- 1.3 Except as provided otherwise, equipment and arrangements for pilot transfer which are provided on ships before 1 July 2012 shall at least comply with the requirements of regulation 17<sup>3</sup> 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 installed on or after 1 July 2012, which are a replacement of equipment and arrangements provided on ships before 1 July 2012, 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, paragraph 5 shall apply not later than the first survey<sup>4</sup> on or after 1 July 2012.
- 1.6 Paragraph 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>5</sup>. Ladders shall be inspected in accordance with regulations 1/6, 7 and 8.

1 Refer to the Unified interpretation of SOLAS regulation V/23 (MSC.1/Circ.1375).

2 Refer to the Assembly resolution on Pilot transfer arrangements, to be adopted by the Organization.

3 Refer to resolution MSC.99(73), renumbering previous regulation 17 as regulation 23, which entered into force on 1 July 2002.

4 Refer to the Unified interpretation of the term "first survey" referred to in SOLAS regulations (MSC.1/Circ.1290).

5 Refer to the recommendations by the International Organization for Standardization, in particular publication ISO 799:2004, Ships and marine technology – Pilot ladders.

#### 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;
- .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;
- .3 a heaving line.

7.2 When required by paragraph 4 above, 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."

Annex II



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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.

<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.

<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.

<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.

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## 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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