

# No. 134 Boat Transfers Safe Practice

(Mar  
2014)

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(cont)**1. Introduction**

These recommendations are intended to provide Societies with reference information to be used in developing Boat Transfer procedures or technical instructions for their Surveyors, according to a common reference standard of good practice. The content applies to operations affecting Boat Transfers, and is intended to enhance the safety of the manner and conditions under which such transfers are carried out.

Additionally, these recommendations are intended to serve as a reference for the maritime industry to assist operators in adequately preparing the receiving ship or offshore unit so that the transfer can be carried out in a safe manner and under safe conditions.

The recommendations are structured in four (4) Sections:

- 3. Includes Definitions
- 4. Identifies the Boat Transfer hazards and exposure to risk by the Surveyor
- 5. Gives detailed guidance for the safe Boat Transfer operations, including Training Transfer Procedures and Personal Protective Equipment
- 6. Consists of a Reference Document List

**2. Boat Transfer Safety Policy**

Boat Transfer Safety Policy is derived from the IACS Occupational Safety and Health (OSH) Policy as published on the IACS website. Boat Transfers are considered a high-risk activity and IACS Member Societies should adopt procedures that seek to reduce the risks faced by Surveyors during such transfers and to positively influence the overall safety performance of such operations through:

- Establishing effective control measures to mitigate the risks.
- Complying with applicable safety legislation.
- Providing adequate training to Surveyors.
- Providing adequate resources to allow tasks to be undertaken safely.
- Requiring that adequate resources are provided by Clients and other worksite controllers to allow work to be undertaken safely.
- Giving their Surveyors the right and responsibility to refuse to conduct work they consider to present an unacceptable risk until it is safe to do so.

### **3. Definitions**

#### **3.1 Boat Transfer**

Boat Transfer of Surveyors includes transfers from shore to vessels / offshore units at anchorage or at sea, and vice-versa, which involves embarking or disembarking between a Transfer Boat and a vessel / an offshore unit, either by ladder or crane-basket.

#### **3.2 Transfer Boat**

Boats used for transfer include pilot boats, launches, tenders, workboats, crew boats and other craft used for the transfer of personnel. Any boat used for the transfer of Surveyors should comply with applicable national and legal requirements and port State regulations for its stated purpose and / or for transfer of personnel. They should be of a suitable construction, properly equipped (including equipment designed to aid the rapid recovery of an individual from the water), properly maintained, and suitably manned.

#### **3.3 Responsible Persons**

Responsible Persons are those under whose control personnel transfer takes place. The following are all considered Responsible Persons, as relevant and appropriate:

- Ships Agent/Owners/Managers
- Master of the ship
- Offshore Installation Manager (OIM) of the offshore unit
- Captain of the Transfer Boat

#### **3.4 Surveyor**

For the purpose of this Recommendation a Surveyor is any person employed or contracted by a Classification Society undertaking a Boat Transfer on behalf of a Classification Society.

#### **3.5 Competent Harbour Authority**

Competent Harbour Authority means any harbour authority which has statutory power in relation to the regulation of shipping movements and the safety of navigation within its harbour and whose harbour falls wholly or partly within an active pilotage district.

#### **3.6 Deck Hand**

A Deck Hand means a person on board the Transfer Boat who assists the Surveyor when embarking or disembarking.

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**4. Boat Transfer Hazards and Exposures****4.1 The general hazards associated with Boat Transfer are;**

- Fall from a height, i.e. fall on hard surfaces and fall into water
- Drowning
- Impact or crushing injuries
- Impact with either the Transfer Boat or receiving vessel after a slip or fall
- Sprains, twists and/or pulls
- Cold water immersion
- Hazardous weather and/or sea conditions
- Other conditions inherent to the specific locality (e.g. Lack of visibility during foggy hours).

**4.2 Hazards associated with defective embarkation arrangements****4.2.1 Pilot ladder**

- Not against ship's hull
- Steps not of suitable material
- Badly placed retrieval line
- Steps damaged or broken / Steps dirty or slippery / Steps painted
- Spreader bars not fitted, wrongly fitted or in poor condition
- Steps not equally spaced
- Pilot ladder only for freeboard more than 9 meters
- Side ropes not of suitable material or wrongly arranged
- Pilot ladder located forward / aft, at shaped areas of the ship
- Bulwark ladder not available.

**4.2.2 Defective Combination Arrangement (Pilot ladder/Accommodation ladder)**

Nine (9) meters or more of freeboard requires a proper combination arrangement. Hazards include:

- Accommodation ladder not leading aft
- Lower platform stanchions/rail damaged, insufficiently fixed and/or loose
- Accommodation ladder too steep (>45 degrees)

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- Pilot ladder not attached to accommodation ladder
- Lower platform not horizontal.

**4.3 Hazards associated with defective Transfer Boat**

- Unsuitable boat or boat exceeding its operating limitations
- Insufficient life-saving appliances
- Defective or insufficient means of communication
- Insufficient crew (at least one crewmember in addition to the helmsman)
- Inadequately trained crew.

For Boat Transfers during lightering ship or bunkering operations, the Transfer Boat inlet and outlet vents to the machinery spaces should be designed to prevent the ingress of flammable gases.

**4.4 Hazards associated with safety equipment defects and defects in the receiving vessel or offshore unit**

- Insufficient lighting at night (Note: Boat Transfer Operations in darkness should be discouraged.)
- No standby ladder rigged for immediate use
- No lifebuoy with self-igniting light
- No communication at the embarkation site between the bridge of the receiving vessel or unit and the Transfer Boat
- No heaving line available to board Surveyor's equipment
- No Responsible officer or Deck Hand in attendance on the receiving vessel or unit
- Inadequately trained receiving vessel crew on deck at the embarkation site.

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## **5. Training Boat Transfer Procedures and Personal Protective Equipment (PPE)**

### **5.1 Training**

5.1.1 Surveyors who may be involved in Boat Transfers should be periodically trained in safety practices for such activities according to the Society's internal procedures. This training should include but not be limited to:

5.1.1.1 Recognizing the hazards during Boat Transfers as mentioned in paragraph 4 above and managing the associated risks.

5.1.1.2 IACS, IMO, ILO and other recognized requirements for boarding arrangements, as applicable. IACS members should introduce references to applicable industry standards and regulations (e.g. IACS, IMO, ILO as listed in paragraph 6 below), at the time of developing their internal procedures.

5.1.1.3 Roles of the persons involved.

5.1.1.4 Safe embarking and disembarking procedures.

5.1.1.5 Arrangements and use of pilot ladders, accommodation ladders, or a combination of both and the use of personnel transfer devices.

5.1.1.6 Use and maintenance of personal flotation devices.

5.1.1.7 Emergency arrangements and procedures, as applicable.

### **5.2 Boat Transfer Procedures**

5.2.1 IACS Member Societies may promote and implement, within their service supplier approval program, their review, approval and certification of companies operating Transfer Boats that comply with at least but not limited to the recommendations contained in paragraphs 5.2.2.2 through 5.2.2.10.

#### **5.2.2 Before leaving the berth**

5.2.2.1 When necessary, Surveyors should seek the support of the Competent Harbour Authority to verify that the Transfer Boat meets the relevant local regulations. The appropriate certificates confirming compliance with these requirements should be available on board the Transfer Boat for inspection.

5.2.2.2 The suitability, size and type of the Transfer Boat to be used for the personnel transfer should be carefully considered and should take into account the length of the voyage and the means of transfer from the Transfer Boat to the destination vessel. The Transfer Boat intended to be used should be appropriate for the area of operations including the prevailing sea and weather conditions.

5.2.2.3 The Transfer Boat should be equipped to respond to a man-overboard situation. The crew of the Transfer Boat should have been trained to handle a man-overboard situation and alert local authorities.

5.2.2.4 A Transfer Boat should be adequately manned for the size of vessel and intended voyage and duties during this transfer operation, and should, as a minimum in addition to the helmsman, include one crewmember deployed exclusively for assisting the transfer of personnel for the entire duration of this operation.

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5.2.2.5 Boat Transfers should be planned to avoid transfer during the hours of darkness whenever possible. If Boat Transfers need to be done during darkness, the Transfer Boat should be suitably equipped, including an appropriate search lighting system. Special protective equipment should also be available when operating in cold water areas.

5.2.2.6 Before the commencement of any voyage, the master of the Transfer Boat should ensure that all persons on board are briefed, as a minimum, on the stowage location and use of personal safety equipment such as lifejackets, thermal protective aids and lifebuoys, and the procedures to be followed in cases of emergency. Lifebuoys should be located in an easily accessible position at the place of transfer in both the transport vessel and the ship.

5.2.2.7 When boarding the Transfer Boat, when underway in harbour or at sea, the Surveyor should immediately be made familiar with the position and stowage of the safety equipment fitted on the Transfer Boat.

5.2.2.8 The transfer deck and its approaches of the Transfer Boat should be clear of all unnecessary obstructions allowing clear passage and movement to the Surveyor. They should be non-slip, free of ice, snow etc.

5.2.2.9 Equipment and procedures should be in place to allow for the establishment of radio communication between the Transfer Boat and the receiving vessel or unit.

5.2.2.10 Safe transfer and emergency recovery procedures (including alerting of shore based authorities) should be available on the Transfer Boat and agreed with the vessel/offshore unit. The Surveyor should immediately be made familiar with these equipment and procedures.

5.2.2.11 Transfer Boat master should consider whether assisting crew members should be secured by means of a safety line, in consideration of the arrangement of the working vessel, the conditions of the transfer and the conditions of weather and wind.

5.2.2.12 The boat that is being used for the transfer of Surveyors should give priority to such transfer ahead of any other functions that may have been assigned to it.

**5.2.3 On approaching the ship**

5.2.3.1 The master of the Transfer Boat should establish the position of the vessel to be served.

5.2.3.2 The master of the Transfer Boat should contact and agree with the officer of the watch of the vessel to be served as to which side to rig the pilot ladder and/or accommodation ladder in order that the best lee conditions can be created for the approaching Transfer Boat. Due allowance should be made for the close proximity of other ships or units, their intentions and their expected wash effects. The decision as to which side the Surveyor will board should be communicated to the Surveyor as early as possible.

5.2.3.3 The required distance between the lowest step of the pilot ladder or accommodation ladder and the water needs to be transmitted to the vessel to be served together with the ideal speed required for the operation.

5.2.3.4 Care should be taken to ensure that the wash created by the Transfer Boat does not interfere with the safe boarding or landing operation. This may require the Transfer Boat to remain clear of the pilot ladder or accommodation ladder until the wash created has cleared down the vessel's side. The use of the searchlight at night to check for incoming wash is prudent.

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5.2.3.5 Particular caution should be taken when serving a ship at anchor or a fixed offshore unit which is unable to manoeuvre to make a lee, particularly at slack water. A ship may need to be underway and making way in order to provide a sufficiently good shelter before embarking or disembarking the Surveyor.

5.2.3.6 During the approach to the vessel, the Surveyor should remain in the cabin of the Transfer Boat until the boat is at reduced speed, in the lee of the vessel and settled. The Surveyor should not proceed from the cabin until permission is granted by the master of the Transfer Boat.

5.2.3.7 Although Boat Transfers in darkness should be discouraged, when deemed necessary, the Transfer Boat deck should be adequately illuminated before anyone goes on deck.

5.2.3.8 During final approach at night, the Transfer Boat searchlight should be turned on to illuminate the pilot ladder or accommodation ladder and forward deck of the Transfer Boat. Care needs to be taken not to dazzle personnel on deck, or adversely affect the night vision of persons on the bridge, or on the deck of the vessel to be served.

5.2.3.9 In adverse weather conditions, where risk to personnel as well as the launch may be significant, the decision whether or not to place the Transfer Boat alongside the vessel to be served should ultimately be the responsibility of the master of the Transfer Boat. However, the Surveyor has the final word on whether it is safe to proceed with the boarding or not.

**5.2.4 Boarding Arrangements**

5.2.4.1 After establishing contact with the Transfer Boat, the vessel or offshore unit should rig a pilot ladder or accommodation ladder or combination on the side or in the location that has been agreed. Boarding arrangements should be in accordance with the requirements of SOLAS Reg. V/23 (see Annex 1) and SOLAS Reg. II-1/3-9.

5.2.4.2 The pilot ladder should be rigged and secured at the appropriate pilot ladder boarding position on the vessel's side. For ships this may be at the side door if fitted, and should be as near amidships as possible and on the parallel body of the ship, clear of all discharges which could cause flooding.

5.2.4.3 If the accommodation ladder is located at the shaped area of the receiving ship (e.g. accommodation is located aft), the use of the accommodation ladder should be given special consideration by the Surveyor, particularly if the Boat Transfer takes place when the receiving ship is in the light ballast condition such that the ladder may be rigged in a manner that axial movement cannot be avoided. In such circumstances Surveyors may insist on an alternative means of access being provided.

5.2.4.4 During Surveyor transfer, the supervising officer of the serviced vessel should be in direct contact with the vessel's navigating bridge from the boarding position.

5.2.4.5 If a combination of pilot ladder and accommodation ladder is being used for boarding, the latter should be rigged sufficiently high to allow the Transfer Boat to lie alongside the pilot ladder section, with sufficient allowance for swell such that no part of the upper works of the Transfer Boat can contact the accommodation ladder. This distance may be specified by the master of the Transfer Boat.

## 5.2.5 Transfer by crane or basket

5.2.5.1 Transfer by personnel basket to or from a vessel or offshore structure can be undertaken using different devices. The three main devices used are:

1. Billy Pugh – the oldest personnel transfer basket design, in which personnel are transferred whilst holding onto the outside of the lifted structure.
2. Esvagt – a rigid framed construction with buoyancy ring and fenders, in which personnel stand inside the basket.
3. Personnel transfer capsule – a rigid framed device with buoyancy panels, in which personnel sit strapped in a bucket seat.

5.2.5.2 In some situations, basket transfer may be the only feasible means of transferring personnel at sea, for example, when there is a significant height difference between the respective decks of the Transfer Boat and the receiving unit. All basket transfers should be considered a high-risk operation at all times and they should only be undertaken when transfer is essential and cannot be undertaken by other means. It would not be appropriate to use personnel baskets for routine transfers in open waters when other more appropriate methods of transfer are available, as described in the foregoing paragraphs.

5.2.5.3 Before basket transfer, it should be confirmed, by the master of the vessel or offshore unit to the Surveyor that:

1. The crane operator is competent for man-riding operations.
2. The crane is fully operational, properly maintained, certified and currently in compliance with its required inspections.
3. The transfer basket has been visually inspected for defects prior to starting the transfer.
4. Confirmation of readiness of the means for communication between banksmen<sup>1</sup> crane operator, receiving vessel master and the Transfer Boat are in place and working.
5. Environmental and vessel motion conditions are considered acceptable by all parties involved.
6. The relevant crane operator and banksmen confirm they have good visibility of the pick-up, transfer and landing area.
7. For transfers to offshore units, cranes should meet the applicable requirements for man-riding operation (e.g.: API Spec 2C; EN 13852-1).

5.2.5.4 The crane used in the transfer operation should be adequate and suitable for lifting persons and should be certified for man-riding (e.g.: for use in carrying personnel) under applicable regulations.

5.2.5.5 The transfer basket should be correctly rigged onto the crane's lifting apparatus prior to transfer and the crane hook pennant should be of sufficient length to keep the hook well clear of the personnel being transferred.

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<sup>1</sup> Banksmen: Competent person duly authorized to supervise the lowering and raising of persons or material in a conveyance at the bank and to give necessary signals.

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5.2.5.6 The transfer basket should be marked with its safe working load. It should be appropriately certified with the current certificate of test and / or inspection available on board the vessel or unit.

5.2.5.7 The certification, security and integrity of the entire lifting system, including wire ropes, rigging, shackles, safety slings and hooks, should be confirmed by the master of the receiving ship or offshore unit, as appropriate for man-riding.

**5.2.6 Surveyor boarding**

5.2.6.1 In all cases the decision as to whether or not to board the ship or offshore unit should be the responsibility of the Surveyor involved.

5.2.6.2 The Surveyor should proceed to the ladder after agreeing with the captain of the Transfer Boat on the side of the receiving vessel to be used.

5.2.6.3 Before the Surveyor steps onto the ladder he or she should establish that it is properly secured by communicating directly with the officer at the top of the ladder. If the top of the embarking site is unattended the Surveyor should not attempt to embark.

5.2.6.4 The timing of stepping from the Transfer Boat to the ladder requires adequate care, for example using the top of the wave to step onto the ladder and the roll of the ship to aid the ascent.

5.2.6.5 Surveyor's equipment and luggage needs to be transferred as a separate operation. Personnel should not carry luggage or other impediments during the transfer.

5.2.6.6 The Surveyor should wear buoyancy aids. Aids are to be of an approved type and worn in accordance with manufacturer's instructions.

**5.2.7 Surveyor disembarkation**

5.2.7.1 The Transfer Boat Deck Hand should be at the bottom of the ladder to ensure that the ladder is rigged at the correct height and clear of the water and any obstructions.

5.2.7.2 Before stepping onto the ladder, the Surveyor should check that the Transfer Boat is lying alongside and has not fouled the ladder.

5.2.7.3 During the descent process the Surveyor should seek the advice of the Deck Hand as to how many steps further to go to the deck of the Transfer Boat. In adverse weather the stepping off point may not be the lowest step, therefore communication between the Deck Hand and Surveyor will be necessary. As the Surveyor is stepping from the ladder the Deck Hand is to be on hand to provide a timely warning of danger and to give physical assistance to the Surveyor if required.

5.2.7.4 Similarly to boarding, the Surveyor should wear buoyancy aids. Aids are to be of an approved type and worn in accordance with manufacturer's instructions.

5.2.7.5 Once on board the Transfer Boat, the Surveyor should immediately make his or her way to the safety of the cabin.

5.2.7.6 The master of the Transfer Boat should not leave the lee of the ship until the Surveyor is safely in the cabin.

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5.2.7.7 The decision as to whether or not to disembark from a ship to the Transfer Boat rests entirely with the Surveyor involved.

**5.3 Personal Protective Equipment (PPE)**

5.3.1 Surveyors on board a Transfer Boat and during the Boat Transfer process should have protective clothing appropriate to the prevailing air and sea temperatures.

5.3.2 When a vessel is operating in waters with a sea surface temperature of 5°C or less, Surveyors should during the Boat Transfer process wear a dry suit or other efficient garment to reduce the likelihood of hypothermia should the Surveyor enter the sea. Sea temperature data may be found in sources such as the Admiralty Pilot for a given sea area and period.

5.3.3 During the Boat Transfer process, the Surveyor should use footwear having non-slip soles.

5.3.4 Surveyors should wear lifejackets or buoyancy aids (e.g. Personal Floatation Device, PFD) whilst outside of the Transfer Boat cabin.

5.3.5 Whilst aboard the Transfer Boat, the Surveyor should follow the instructions of the Transfer Boat crew. The Surveyor should carefully consider whether an automatic or manual PFD is preferable for the transfer procedure being undertaken. Consideration should be given to the level of hindrance to escape from flooded internal boat spaces should an automatic device inflate before escape.

**6. Reference Document List**

The International Maritime Organization (IMO)  
SOLAS Chapter V, Regulation 23 – Pilot transfer arrangements  
IMO Resolution A.1045(27)  
SOLAS Chapter II-1, Regulation 3-9 – Means of embarkation and disembarkation from ships  
IMO Circular MSC/Circ. 1331.

The International Marine Contractors Association (IMCA)  
IMCA SEL 025, IMCA M 202 – Guidance on the Transfer of Personnel to and from Offshore Vessels  
IMCA S 004/M 189 – Marine inspection checklist for small workboats  
IMCA SEL 36/04 – Personnel transfer by basket  
IMCA SEL 019 – Guidelines of lifting operations

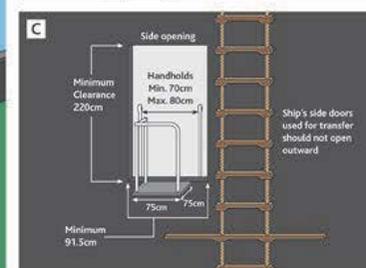
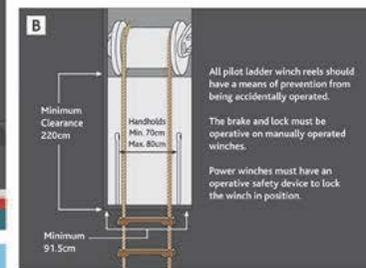
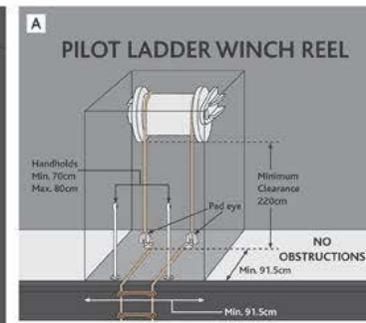
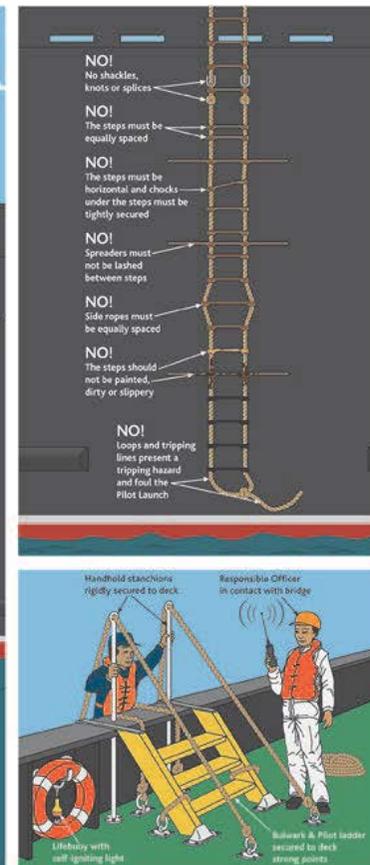
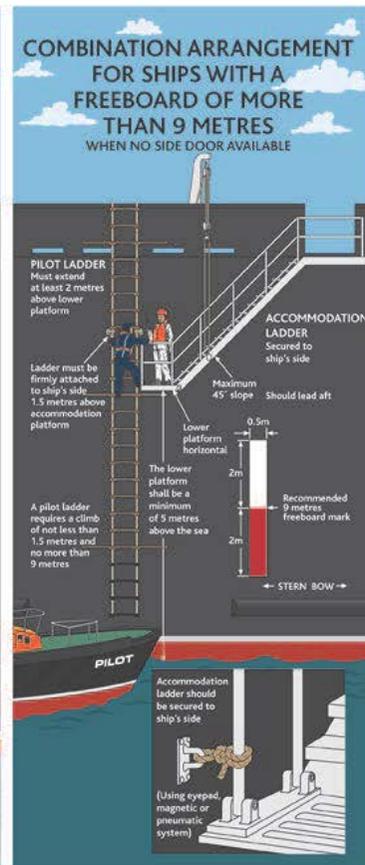
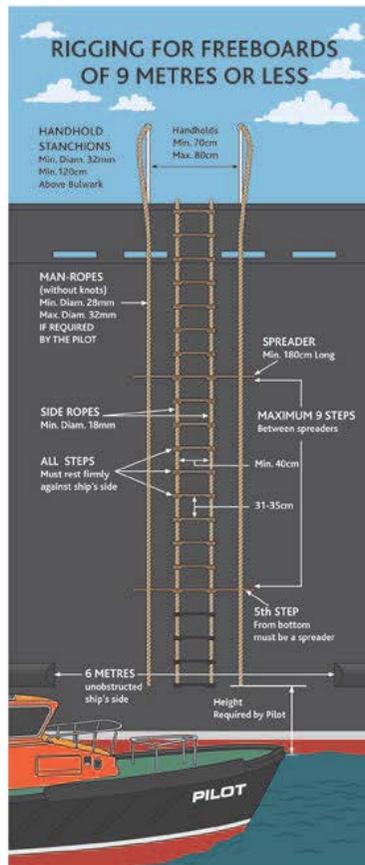
Marine/Pilotage Working Group of the British Ports Association (BPA) and the UK Major Ports Group (UKMPG) and the Technical & Training Committee of the United Kingdom Maritime Pilots Association (UKMPA)  
The Embarkation and Disembarkation of Pilots Code of Safe Practice

Maritime and Coastguard Agency (MCA)  
Small Vessels in Commercial Use for Sport or Pleasure, Workboats and Pilot Boats – Alternative Construction Standards

International Maritime Pilots' Association (IMPA)  
Poster - Required boarding arrangements for pilot prepared in accordance with SOLAS Regulation V/23 and IMO Resolution A.1045(27).

**Annex 1 - Required Boarding Arrangements for Pilot**  
 Prepared in accordance with SOLAS Regulation V/23 and IMO Resolution A.1045(27) by the International Maritime Pilots' Association

**REQUIRED BOARDING ARRANGEMENTS FOR PILOT**  
 In accordance with SOLAS Regulation V/23 & IMO Resolution A.1045(27)  
**INTERNATIONAL MARITIME PILOTS' ASSOCIATION**  
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 This document and all IMO Pilot-related documents are available for download at: <http://www.impahq.org>



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