Pilot Ladder Safety



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The club, in association with Belfast Pilots Ltd under the guidance of Captain Brian Wilson, has produced this article to outline the necessity of rigging a pilot ladder correctly. The incorrect rigging of a pilot ladder can result in severe injury and the penalties in certain jurisdictions may lead to considerable fines and/or imprisonment.

The club has seen a number of claims recently, including some that have resulted in fatalities, because the pilot ladder was not rigged correctly and/or the right equipment was not available nearby when a person fell into the water.

Together, we have created information sheets to highlight the dangers associated with the transfer of personnel by pilot ladders. The information sheets are designed to highlight common flaws and poor practices that have been witnessed in the normal course of working as harbour pilots, and it is hoped that these will be used as a guide to the correct way of rigging a pilot ladder, in an effort to prevent accidents and incidents related to the transfer of personnel at sea.



Capt Brian Wilson - Belfast Pilots

In 1993, at the age of 32, Captain Brian Wilson became a pilot in the Port of Belfast. He joined the UKMPA (United Kingdom Marine Pilots Association) Technical & Training Committee in 2000 and took over, as Chairman, in 2008. During this time, he drafted the review of the 'Code of practice for the boarding and landing of pilots' and is highly involved in pilot training standards both in the UK and Europe. He is part of the UK delegation at IMO on pilot transfers, and worked at IMO and Nav 55 on the reviews of SOLAS V/23 & A889. Captain Wilson has participated in seminars on personnel transfer for BP/Castrol Technical Managers and other interested bodies for the last three years, and is considered an expert in this field. Any questions or enquiries may be directed to him at: enquiries@belfastpilots.com or training seminar details can be viewed on: www.belfastpilots.com.



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There is a rising toll of accidents worldwide resulting in injury and death to pilots, boarding officials, superintendents, surveyors, joining crew and spouses, bunker personnel and stevedores; often this will be when the ship is at anchor, but it could also be alongside when the ship, for whatever reason, is being boarded on the outboard side. In 2009, there were serious incidents involving pilots in Turkey, France and Ireland. The intention of this article, and the associated information sheets, is to highlight poor practice and to show the dangers involved when those tasked with rigging ladder access fail to follow proper procedures and best practice.

Ship's crew

The rigging of any pilot ladder is the responsibility of the ship's staff and a responsible officer should oversee the rigging of the pilot ladder. This may be delegated to an experienced seaman, but the final responsibility should be with the duty officer. The company is responsible for training the crew to make them proficient in rigging the pilot ladder, and such operations should be treated with great importance.

Rigging the ladder

Always:

- ensure that the ladder is properly made fast (tied up) with a system that has equal, if not more, strength than the ropes used in the ladder construction. Always ensure the ladder is made fast to an appropriate ring bolt/cleat or sturdy part of the ship and that the tie ropes are free from chafe
- place the ladder in an area where the hull provides a smooth perpendicular surface that ensures the ladder rests flat against the ship's side at all times. Failure to do so will result in the pilot climbing an angled ladder with his feet inside the line of his body, thereby placing his upper body weight mostly on his arms
- have a responsible officer at the ladder to oversee the operation and maintain communications with the bridge should there be an incident
- ensure that the correct equipment is available at the rail where the ladder is affixed. If appropriate, hand stanchions and steps to the main deck should be provided. Stanchions must be secured and not free to easily move. Transferring from ladder to ship is one of the most dangerous points of the process. Steps will avoid pilots jumping down to the main deck, thereby avoiding potential injury. Ensure that the final access to the ship is safe and clear of obstructions

- at night, place the ladder in a well-illuminated area. Angle the lighting to highlight the climb without blinding either the pilot boat approaching the ladder or the pilot when climbing
- check the height required above the water with the pilots. Place the ladder at the correct height above the water level that is equal with the freeboard of the pilot boat. If it is too long it may become trapped by the pilot launch, resulting in crushing damage to the ladder. If the pilot is climbing and the ladder is trapped, it may result in the swell causing the full weight of the boat to pull down on the ladder
- if in doubt, refer to the IMO/IMPA (International Marine Pilots Association) graphic poster highlighting the correct procedures, which should be sited on the bridge of every ship

Never:

- use the ladder spreaders jammed between the ship's rails to affix the ladder
- use your feet to jam the ladder into position. The weight of any pilot will displace the ladder and cause injury to all the parties involved
- use a pilot ladder that has damaged steps, spreaders, ropes that are chafed, damaged or showing wear
- · allow an inexperienced person to rig the pilot ladder

Avoid:

- making the ladder too short. Pilots, generally, are not young men and an apparently small leg stretch can lead to pulled muscles and associated hernia problems
- rigging the ladder on or near to shipside outfalls. A pilot boat deck awash or a ladder amidst a rush of overflow is an unsafe climb. Make sure adjacent scuppers are plugged, if necessary
- rigging the ladder too close to the ship's stern or focs'le. This makes it difficult and dangerous for the pilot boat to manoeuvre as it may collide with the flare of the hull or get too close to the ship's propeller

If using the pilot ladder in tandem with an accommodation ladder, always ensure that:

- · the pilot ladder is easily accessible to the accommodation ladder
- the accommodation ladder is properly rigged, allowing the person to move from the pilot ladder to the accommodation platform safely and vice versa
- the accommodation ladder platform is at the correct angle, properly supported, free of obstructions and non-slip
- the accommodation ladder rails or hand ropes are properly secured and tight
- the accommodation ladder is properly rigged with secure stanchions, is clean, and the hand ropes or rails are oil-free

• the accommodation ladder is rigidly secured to the ship's hull

Case study 1

A ship was receiving a number of officials whilst at anchor. The weather was good but a moderate swell was running. The ship had a freeboard of about eight metres. A pilot ladder was rigged but the officials refused to climb the pilot ladder, insisting that the accommodation ladder was lowered. The ship was not rigged to use a pilot ladder in conjunction with the accommodation ladder. As the launch approached the ship, the launch driver managed to get the launch beneath the accommodation ladder platform and one of the officials was fatally crushed on the launch. Pilot ladders are generally safer to use, particularly in swell conditions. Ships with high freeboards should consider using a pilot ladder with an accommodation ladder. There often is commercial pressure on pilots, surveyors, officials and/or joining or leaving crew to embark or disembark via a pilot ladder. The master should not allow the boarding to take place if he considers it dangerous in the prevailing conditions. Pilots are experienced but often other personnel are not so experienced and aware of the potential dangers.

Never allow a person to climb a pilot ladder without a suitable lifejacket, except in emergencies.

Pilot ladder construction

It is now more common to have ladders constructed ashore and supplied directly to the ship after being made to a specified length. However, crew members should be aware that some ladders constructed ashore may not always comply with the SOLAS requirements (Chapter 5 Resolution A889/21). Manufactured pilot ladders supplied can be of varying quality and some may fall below standards. Crew members should remain vigilant and a responsible officer should inspect the ladder when it is delivered on board.

If the pilot ladder is being made on board, you should be aware of the following points:

- it should be made by an experienced seaman and checked by a responsible officer
- · it should use the correct diameter and type of rope
- seizings to hold the steps in place should be made from a natural fibre similar to the main ropes. This ensures a sympathetic bond between the materials, avoiding chaffing and any corrosive reactions, as well as being cheap and simple to replace. Avoid electrical cable ties, bulldog clips, heavy duty tape and other such shortcuts
- ensure that the spaces between the steps are equidistant. An irregular climb makes it difficult for the pilot to judge his next step, especially on the descent

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DO NOT STOW LADDERS ON OPEN DECKS

- ensure that the steps are level and horizontal. Angled steps lead to slipping and misplaced footing
- ensure that spreaders are rigged at the appropriate stages. Spreaders stop ladders twisting and thereby increase the likelihood of the ladder remaining flush against the ship's side
- keep the ladder stowed out of sunlight. Stow it off the deck and away from corrosive substances. Inspect the ladder regularly and replace as necessary. Inspections should include opening the rope splice to view the internal state of the material

Climbing the ladder – boarding or disembarking the ship

Remember the following:

- · always have both hands free to hold onto the ladder
- · always board or disembark with an approved life jacket with a light
- · always wear good non-slip boots or shoes
- · do not carry heavy bags or other items that impede a safe boarding
- ensure that the ship has provided the best possible lee for boarding
- · always ensure that the ladder is well lit at night
- · during the climb, always maintain a three-point contact with the ladder
- · climb the ladder at a sensible pace
- do not be pressurised to board or leave the ladder until you are comfortable with the situation; weather, sea state and swell, ship's speed, ship's rolling and launch movement must be considered. Always refuse to climb if you see or feel something is amiss



BROKEN LINES BETWEEN STEPS



TOP PART OF THE LADDER DAMAGED



Case study 2

As a ship was embarking a pilot when entering a major Chinese port, one of the lines supporting a ladder rung parted and the pilot fell into the sea. The pilot was rescued and taken to hospital. As a result, the ship was fined and detained by the authorities for several days. The ship was delayed and missed the next employment lay day. In different circumstances or weather, the pilot could have been severely injured or worse. The pilot ladder was inspected by the authorities and the following was found:

- the ropes between two steps were broken
- · the rope near another step was parted
- · the ladder was stored out on the open deck

Routine maintenance inspections of pilot ladders should be a part of the ship's planned maintenance system. Pilot ladders must be stored in an appropriate dry space. Do not store ladders on an open deck where the elements can degrade the ropes.

Pilot ladders with damaged ropes and/or ladder steps or spreaders must not be used. Damaged pilot ladders must be replaced. Do not use a damaged pilot ladder.



BROKEN LINES NEAR STEPS