

19 May 2021, Ref: 2122009

## Accident Advisory: Worker fell off pilot ladder into sea

Ref: [2021094](#) WSH Alert Accident Notification dated 26 February 2021

On 16 February 2021, a worker was disembarking a vessel to board a passenger launch via a pilot ladder. While descending the pilot ladder, the worker fell into the sea. The worker was rescued and conveyed to the hospital where he was subsequently pronounced dead.

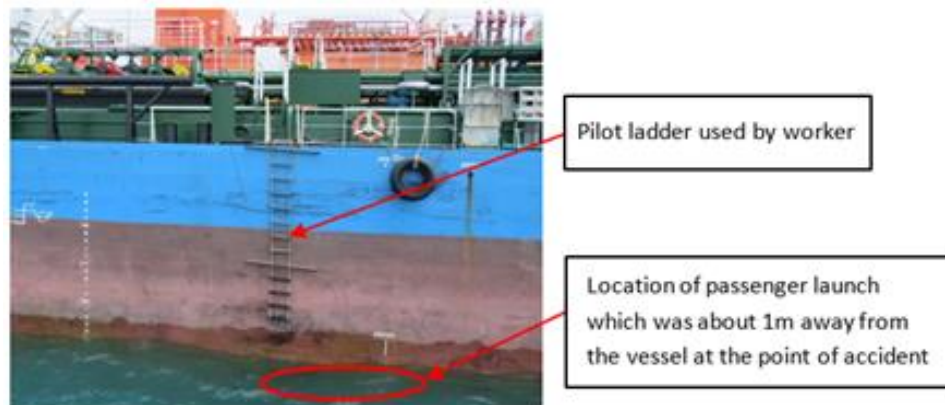


Figure 1: Overview of accident scene.



Figure 2: Photo of passenger launch.

## Recommendations

Stakeholders such as occupiers, employers and principals in control of similar workplaces and work activities are advised to consider and implement the following risk control measures to prevent similar accidents:

### **Selection of vessel embarkation and disembarkation method**

- Where possible, always select a safer method (e.g. use of vessel gangways) for vessel embarkation or disembarkation.
- If pilot ladders must be used, ensure workers are physically fit for the task and sufficiently confident before allowing them to proceed.

### **Pre-embarkation/disembarkation briefing**

- Prior to vessel embarkation/disembarkation, employers should ensure that workers

involved in a boat-to-vessel or vessel-to-boat transfer are briefed on the following (non-exhaustive) safety factors:

- Method of transfer (the pilot ladder in this case).
- Personal protective equipment to be used (e.g. anti-slip footwear, life jacket).
- On-site hazards (e.g. slippery floor, choppy waters, weather condition).
- Employers must also ensure that workers are physically fit for the transfer by asking the following (non-exhaustive) questions and instructing workers not to transfer when it is unsafe to do so:
  - Are you feeling unwell?
  - Are you familiar and confident with the use of pilot ladder?
  - Do you have a good sense of balance?
  - Do you suffer from motion sickness?
  - Are you taking medication that may impair judgement?
  - Are you afraid of heights?

### **Safe use of pilot ladder**

- Safe Work Procedures (SWPs) must be established to guide workers on the safe use of pilot ladders.
- Instruct workers not to proceed with embarkation/disembarkation if the environmental conditions are unfavourable, where there is extensive vessel/boat movement, or if the worker feels the situation is unsafe.
- When using a pilot ladder, workers should observe the following (non-exhaustive) safety guidelines:
  - ensure that both hands are free to hold onto the ladder;
  - items which may impede climbing movement must not be carried;
  - wear non-slip boots or shoes;
  - use the ladder one person at one time;
  - maintain 3 points of contact when climbing the ladder; and
  - climb the ladder at a comfortable pace.

### **Inspection and storage of pilot ladder**

- Inspect the pilot ladder before each use. Ensure that ladder is properly secured. Look out for signs of wear and tear (e.g. worn ropes, damaged steps, steps that are not horizontal). Defective pilot ladders should be put out of service immediately.
- Ensure that the pilot ladder is kept clean (e.g. free from oil and grease).
- Pilot ladders should be stored in a cool, dry and well-ventilated space and away from sunlight and chemicals.

### **Safe environment condition**

- Always observe the environmental/weather conditions before vessel embarkation/disembarkation.
- Instruct workers not to attempt embarking or disembarking a vessel when conditions are not favourable (e.g. heavy rain, strong winds and/or choppy waters). If conditions are good, then embarking/disembarking may proceed only when the passenger launch is in position.

### **Transfer supervision**

- Consider deploying a deckhand on board the launch boat to supervise and assist passengers during embarkation/disembarkation. The deckhand would be able to advise if the environmental/weather conditions are conducive for safe passenger transfer.

### **Personal protective equipment (PPE)**

- Regulation 23 Part 11(b) of the WSH (General Provisions) Regulations stipulates that it is the duty of the employer of a person who is exposed to the risk of falling into water and drowning to provide a suitable life jacket or other equipment to keep the person

- afloat in the event the person falls into the water.
- Employers should instruct and educate their workers on the importance of wearing life jackets for boat-to-vessel and vessel-to-boat transfer. Employers are also advised to ascertain the workers' ability to swim before deployment as the ability to swim will help to reduce the risk of drowning should the worker fall into the water.
- Provide on-site supervision to ensure that workers are equipped with the necessary PPE (e.g. anti-slip footwear, life jacket) and properly attired prior to embarkation/disembarkation.

## Risk Assessment

Conduct a thorough Risk Assessment (RA) for all work activities to eliminate or minimise, any foreseeable risk that may arise when workers are involved in vessel embarkation/disembarkation. The RA should cover but not limited to the following areas:

- Workers' physical condition and ability for the task.
- Adverse environmental/weather conditions.
- Availability and proper use of life jacket.
- Response plan for emergency situations e.g. man overboard.

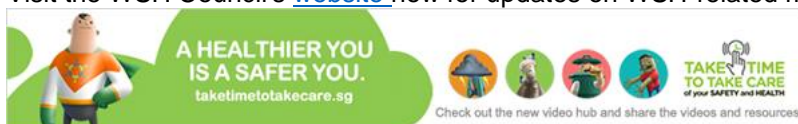
## Further Information

- Workplace Safety and Health Act
- Workplace Safety and Health (Risk Management) Regulations
- Workplace Safety and Health (General Provisions) Regulations
- Workplace Safety and Health (Shipbuilding and Ship-Repairing) Regulations
- Code of Practice on Workplace Safety and Health Risk Management
- Workplace Safety & Health Manual for Marine Industries
- Guide to WSH for Service Providers on Safe Working on Ships at Anchorages
- WSH Council's Video – Safe Boarding of Vessels
- SOLAS Chapter 5 Regulation 23 - Pilot Transfer Arrangements
- Standard Club's Article – Pilot Ladder Safety
- Dedicated website on Pilot Ladder Safety: <https://pilotladdersafety.com/>
- Port Logistics Operations' Video – Safety Video: Boarding and Leaving a Vessel Safely
- Wilhelmsen's Article – Through the Eyes of a Ship Agent: Boarding Vessels at Sea

Information on the accident is based on preliminary investigations by the Ministry of Manpower as at 4 March 2021. This may be subject to change as investigations are still on-going. Please note that the recommendations provided here are not exhaustive and they are meant to enhance workplace safety and health so that a recurrence may be prevented. The information and recommendations provided are not to be construed as implying any liability on any party nor should it be taken to encapsulate all the responsibilities and obligations under the law.

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