

Investigation Report No. 19/19

Date: 17.12.2020

Less Serious Marine Casualty

Accident involving a person on the multi-purpose vessel MARFAAM at the Rüterbergen pilot station on the Kiel Canal (NOK) on 13 January 2019

1 Summary

At 0650 on 13 January 2019¹, the Dutch-flagged multi-purpose vessel MARFAAM was sailing westbound on the NOK level of the Rüterbergen pilot transfer station, where the canal helmsman and the pilot were to be transferred.

A 4 – 5 Bft south-west wind prevailed, it was still dark and it was raining. The pilot vessel RÜSTERBERGEN went to the starboard side of the MARFAAM. The lowered pilot ladder was illuminated and the overall impression of the pilot embarkation point from on board the pilot vessel was apparently good.

The canal helmsman was the first to climb the pilot ladder. He was unable to find a handhold when he was level with the main deck at the gateway and fell from a height of 3 – 4 m first upon the rails and from there head first upon the deck of the pilot vessel. The transfer manoeuvre was immediately aborted and the pilot on board the pilot vessel administered first aid. The emergency services were alerted and the pilot vessel sailed to the pilot station. The emergency services arrived at shortly after 0700 and took charge of administering medical care.

The pilot and the canal helmsman from the eastern section stayed on board the MARFAAM and sailed on to Brunsbüttel.

The canal helmsman suffered life-threatening injuries. Despite a basilar skull fracture, rib fractures, lung contusions, rupture of the spleen and further injuries, he was fit for work again after several months.

In the wake of this accident, the BSU became aware of two similar incidents involving the MARFAAM during the transfer of personnel at the Rüterbergen pilot transfer station prior to mid-March 2019. They both occurred in December 2018. The two cases also involved pilots being unable to find a handhold while crossing from the pilot ladder to the main deck via the gateway. However, for various reasons these individuals escaped with nothing more than just a fright and were able to reach the main deck physically unharmed.

The lack of – internationally binding – adequate handholds at the MARFAAM's gateway was the reason for the accident involving the canal helmsman and the two pilots nearly falling from a

¹ All times shown in this report are Central European Time (CET) = UTC + 1 hour.

height. In particular, both this and the other accidents that have come to light were caused by the fact that

- lacking handholds were not identified but the pilot embarkation point certified as appropriate by a classification society acting on behalf of the flag State²;
- this situation was not identified subsequently during a port State control inspection;
- neither pilots nor canal helmsmen rated this deficiency as a threat to the safe navigation of the MARFAAM or potential threat to the environment and therefore failed to report it to a vessel traffic service (VTS) for specific scrutiny during a port State control inspection.

From the BSU's perspective, adequate handholds have now been installed on the MARFAAM to eliminate the primary cause of the accident.

The investigation revealed many other hazards of a fundamental nature associated with the use of pilot embarkation points, which can be reduced if the safety recommendations are observed. In particular, they include an

- absence of occupational health and safety standards for canal helmsmen and pilots and unclear responsibilities, respectively.
- absence of specific international requirements for the adequacy of handholds at pilot embarkation points with a gateway;
- absence of a culture of reporting dangerous pilot embarkation points to VTSs, and
- absence of sufficient implementation and enforcement of existing internationally binding rules for pilot transfer arrangements.

Further aspects and details can be found in the investigation report.

2 Safety Recommendations

The following safety recommendations do not attribute a presumption of blame or liability in respect of type, number or sequence.

2.1 Federal Ministry of Labour and Social Affairs

- a) The BSU recommends that the Federal Ministry of Labour and Social Affairs clarify the legal status of canal helmsmen with regard to occupational health and safety.
- b) The BSU recommends that the Federal Ministry of Labour and Social Affairs introduce and enforce binding occupational health and safety standards for canal helmsmen that correspond to the general standards of the ArbSchG.

2.2 Federal Ministry of Transport and Digital Infrastructure

- a) The BSU recommends that the Federal Ministry of Transport and Digital Infrastructure consider an initiative to amend Regulation 23, Chapter V SOLAS Convention:
 - aa) the adequacy requirements for handholds at a pilot embarkation point with a gateway should be specified with regard to circumference of these handles (minimum/maximum), in

² The flag State is the State whose flag a ship legitimately carries.

particular, and should be mandatory for all ships. In addition, the handholds should be coated in a bright colour, the gateways always fully open and it should be possible to lock the gateways in an open position. Crew members standing at an open gateway should be secured against falling from a height so as to be able to assist with embarkation if necessary (see also Investigation Report 478/09);

- ab) ship's commands should be permitted to arrange the mandatory organisation of personnel during a pilot transfer, as required by Regulation 23, paragraph 2.2, Chapter V SOLAS, more flexibly to allow for officer rest periods. The Manila Amendments to the STCW Convention introduced standards of competence for seafarers deck. By virtue of their competence, holders of a seafarer deck certificate of competency should be allowed to carry out the duties associated with pilot embarkation and disembarkation in place of an officer, as far as the linguistic communication with the pilots is provided for.
- b) The BSU recommends that the Federal Ministry of Transport and Digital Infrastructure develop the requirements for the licencing of canal helmsmen further and issue a regulation in accordance with the SeeAufgG.
- c) The BSU recommends that the Federal Ministry of Transport and Digital Infrastructure revise the SeeLotUntV 1998, taking into account examination criteria for works involving a risk of falling from a height.

2.3 Classification societies

The BSU recommends that classification societies approved by Germany do not substitute 'handholds', as prescribed by SOLAS, with stanchions, handrails, handhold stanchions, etc. at pilot embarkation points with a gateway.

2.4 Ship Safety Division (BG Verkehr)

- a) The BSU recommends that BG Verkehr pay more attention to possibly absent handholds at pilot embarkation points with a gateway during port State control inspections, so as to initiate appropriate measures to remedy any shortcomings if necessary.
- b) The BSU recommends that BG Verkehr launch an initiative to conduct a CIC for pilot transfer arrangements, taking into account all aspects of the pilot embarkation point in accordance with the IMPA safety campaign.

2.5 Prevention Division (BG Verkehr)

The BSU recommends that the Prevention Division (BG Verkehr) revise the visual presentation of a pilot transfer in the manual on occupational health and safety in merchant shipping and fisheries (s. especially 3.2.13.4).

2.6 GDWS

The BSU recommends that the GDWS review the one-person operation of pilot vessels on the NOK taking into account the tasks of the deck crew mentioned in chapter 4.3.1, in order to preferably prevent accidents during a pilot transfer or other comparable operations. It should always be possible to ensure that person-overboard manoeuvres and first aid measures can be carried out immediately.

2.7 Verein der Kanalsteuerer e.V.

The BSU recommends that the Verein der Kanalsteuerer e.V. continue and enhance ongoing occupational health and safety measures for its members until the current legal position is clarified,

i.e. in particular give concrete form to the operating instructions, continuous training on the subject of embarkation via pilot ladder.

2.8 FCP

- a) The BSU recommends that the FCP regularly advise all pilot trainees and pilots within the scope of their basic and advanced training that dangerous pilot embarkation points are to be reported to the Vessel Traffic Services (VTS).
- b) The BSU recommends the FCP regularly advise all pilot trainees and pilots within the scope of their basic and advanced training that pilotages may be refused under the terms of Section 8 (2) ALV, if the embarkation point neither complies with the international standards nor is adequate and no alternative can be used.
- c) The BSU recommends that the FCP develop and provide a digital application (App) for pilot embarkation points. In particular, this application should be capable of presenting current requirements for pilot embarkation and notifications to the respective Vessel Traffic Service and the Ship Safety Division with respect to arrangements endangering safety in a manner that is transparent for all users. Possibly, the PIA can be further developed. The FCP should include the port pilots.
- d) The BSU recommends that the FCP enhance the safety culture among pilots so as to reduce dangers during pilot transfers at sea. In particular, this includes the introduction of risk assessments and use of appropriate PPE.
- e) The BSU recommends that the FCP enhance the poster on pilot transfer arrangements published by the IMPA via the IMO. In particular, the poster should include a note stating that it contains only a selection of possible pilot embarkation points and that the SOLAS text is authoritative.
- f) The BSU recommends that the FCP participate in the SOLAS amendment initiative. In particular, further adequacy criteria for handholds should be specified if necessary.
- g) The BSU recommends that the FCP assist BG Verkehr (Ship Safety Division) in preparing a CIC.
- h) The BSU recommends that the FCP conduct or commissions a study about “alternative pilot transfer arrangements to avoid pilot ladders” and implement appropriate alternatives so as to improve the occupational health and safety for all users of pilot ladders.

2.9 Port pilots

The BSU recommends that the competent authorities of the Free and Hanseatic City of Hamburg and the Free Hanseatic City of Bremen implement all safety recommendations of this investigation report relevant to port pilots in accordance with the law of the respective *Land*. Moreover, it is to be ensured that pilotages may be refused if the embarkation point neither complies with international standards nor is adequate and no alternative can be used.