Statens haverikommission
Swedish Accident Investigation Authority

Interim report

(Published to fulfill the obligations from EU Directive 2009/18/EC, art. 14.2)

Fatal accident on board *m/v Morraborg* – PEBG - in port of Holmsund, Sweden, July 3rd 2011, during mooring operations

S-95/11

Fig. 1, The Morraborg berthed at Holmsund right after the accident. Discharging of the deck cargo has not yet started.

The report is also available on our web site: www.havkom.se

This document is a translation of the original Swedish report. In case of discrepancies between this translation and the Swedish original text, the Swedish text shall prevail in the interpretation of the report.

Statens haverikommission (SHK) Swedish Accident Investigation Authority

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Swedish Accident Investigation Authority

Interim report RS 2012:~

The Swedish Accident Investigation Authority (SAIA) is investigating an accident that occurred on July 3rd 2011, involving the vessel *Morraborg*, call sign PEBG.

In accordance with section 13 b of the Ordinance on the Investigation of Accidents (1990:717) the SAIA Investigation team herewith submits an interim report on the investigation.

On behalf of the SAIA investigation team,

Jonas Bäckstrand

Ylva Bexell

General observations

The Swedish Accident Investigation Authority (SAIA) is an independent authority with the task of investigating accidents and incidents with the aim of improving safety. SAIA accident investigations are intended to clarify, as far as possible, the sequence of events and their causes, as well as damages and other consequences. The results of an investigation shall provide the basis for decisions aiming at preventing a similar event from occurring again, or limiting the effects of such an event. The investigation shall also provide a basis for assessment of the performance of rescue services and, when appropriate, for improvements to these rescue services.

SAIA accident investigations thus aim at answering three questions: *What happened? Why did it happen? How can a similar event be avoided in the future?*

SAIA does not have any supervisory role and its investigations do not deal with issues of guilt, blame or liability for damages. Accidents and incidents are, therefore, neither investigated nor described in the report from any such perspectives. Therefore, accidents and incidents are neither investigated nor described in the report from any such perspective. These issues are, when appropriate, dealt with by judicial authorities or e.g. by insurance companies. The task of SAIA also does not include investigating how persons affected by an accident or incident have been cared for by hospital services, once an emergency operation has been concluded. Measures in support of such individuals by the social services, for example in the form of post crisis management, also are not the subject of the investigation.

The investigation

On the 3:rd of July, 2011, SAIA was informed that a fatal accident had occurred onboard the Dutch general cargo vessel *Morraborg* while berthing at the port of Holmsund, Sweden.

The accident is under investigation by a SAIA team including Ms Carin Hellner as Chairperson until January 2012, Mr Jonas Bäckstrand as Chairperson from February 2012, Mr Per Lindemalm as Investigator in Charge until September 2011, Ms Ylva Bexell as Investigator in Charge from September 2011, Mr Jens Olsson as Investigator on Human and Organisational Factors from December 2011.

The investigation team of SAIA is assisted by Mr Alexander van der Zee as representative of the Dutch Safety Board.

The work of the investigation team is followed by Mr Jörgen Zachau of the Swedish Transport Agency.

Innehåll

1 FACTUAL PART

1.1 Ship particulars

Flag/register	Netherlands
Identification	Morraborg
IMO number/ call sign	9190274 / PEBG
Vessel data	
Type of ship	General cargo ship / Container ship
New buildning shipyard/year	Bijlsma bv, Lemmer (the Netherlands) / 1999
Gross tonnage	6540
Length, over all	134,55 m
Beam	16,50 m
Draft, max	7,13 m
Deadweight at max draft	9149
Main engine, output	Wartsila 8L38, 5280 kW
Propulsion arrangement	CPP
Lateral thruster	Bowthruster 600 kW
Rudder arrangement	
Service speed	14,5 knots
Ownership and operation	Wagenborg Shipping bv
Classification society	Bureau Veritas
Minimum safe manning	9 (1 master, 1 chief mate, 1 navigational officer, 1 chief engineer, 1 engineering officer, 4 ratings deck)

1.2 Voyage particulars

Ports of call	Rostock - Holmsund
Type of voyage	Cargo
Cargo information/ passengers	General cargo
Manning	Total 9, in accordance with the MSM Certificate
Other	Under pilotage

1.3 Marine casualty or incident information

Type of marine casualty or incident	Fatal injury (very serious casualty)
Date and time	2011-07-03, at 10:15 h, Swedish Summer Time (SST)
Position and location of the marine casualty or incident	Port of Holmsund, Sweden
Weather conditions	Winds from N/E, 7-9 m/s, with gusts up to 12-14 m/s
Other factors	Daylight, good visibility
Consequences	
Personal injuries	1 deceased crewmember
Enviroment	No consequences
Vessels	No consequences

2 NARRATIVE

The Dutch general cargo ship *Morraborg* departed from the port of Rostock, Germany, in the morning of July 1st 2011 with a cargo consisting mainly of components for windpower stations. Part of the cargo was stowed on the hatches resulting in a relatively large lateral wind area for the ship.

Morraborg arrived at the port of Holmsund, Sweden, in the morning of July 3rd . After having taken on board a pilot, the vessel approached the jetty dedicated for her unloading. The weather was windy with strong gusts setting out from shore, but the wind speed was somewhat decreasing while the ship was entering the port area. Tug boats were available in the port but not ordered for the docking.

It was the first time for the crew to moor the *Morraborg* alongside this quay in Holmsund. On the bridge were the captain, pilot and a helmsman. The forward mooring team working at the forecastle consisted of three persons: The chief officer, the boatswain and an able seaman (AB). The forecastle deck has a quite narrow design with little open space during mooring operations. The chief officer was leading the team from a position by the bow railing, mid between the spring line and the head line fairleads. At this position there is a remote control unit for the wind lasses as well as a small platform enabling a person to step up for a better view over the ship's side.

The high bulwark forward of the cargo area prevented the bridge team to observe those working on the forecastle deck. The visibility was further reduced by the high deck cargo.

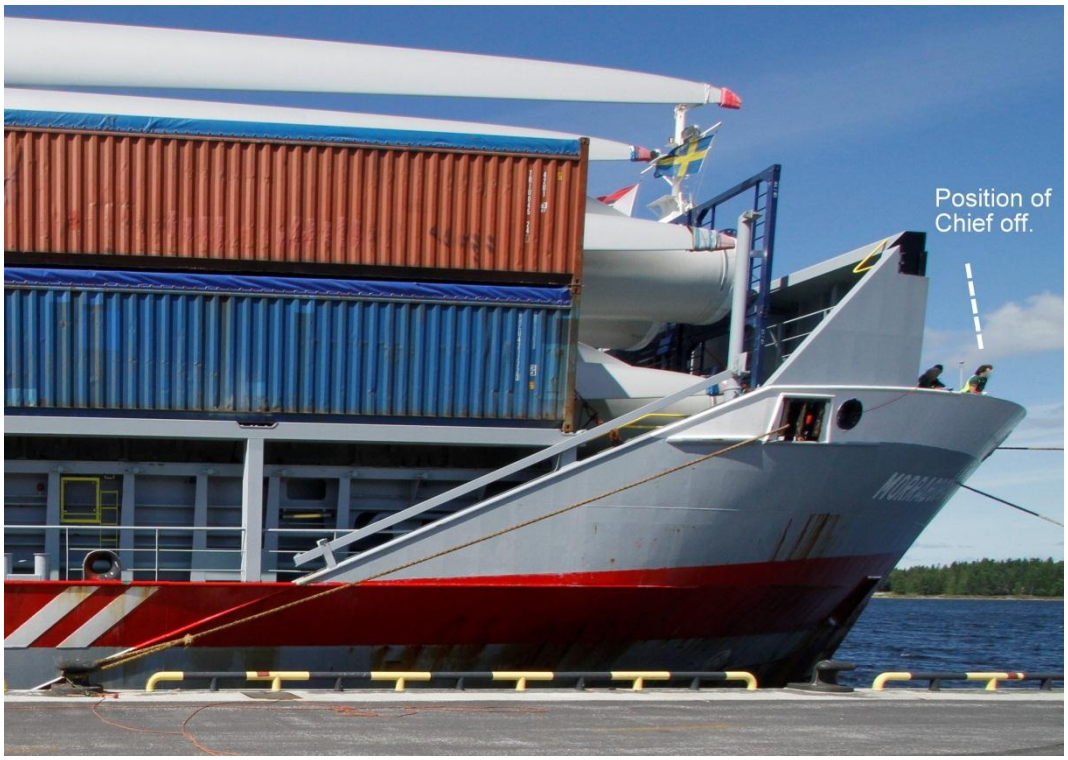

Fig. 2, Morraborg after berthing in Holmsund. Another person indicates the approximate position of the chief officer at the time of the accident. (Photo from the Police)

The ship approached the berth at an angle of 25-30 degrees. When the ship had been positioned with her bow close to the quay the forward spring line was sent ashore and laid on a bollard while the stern was still too far out to allow heaving lines to reach the berth.

In order to manoeuvre the stern closer to the quay the pilot requested slow ahead and full port rudder. In addition, the bow thruster was activated to portside. Before ordering the manoeuvre the master called out a warning by VHF to the foredeck team that the engine would be working forward and that they should seek shelter from the mooring line. He received a confirmation from the chief officer by his portable VHF that he had understood the order, but for unknown reasons the latter remained at his position.

The manoeuvre was performed but had to be repeated as the stern did not move sufficiently towards the quay.

Before the second attempt the master again called out a warning to the foredeck team and again got confirmation from the chief officer that he had understood. The chief officer again remained at his position by the remote control unit. The manoeuvre was performed with slightly increased engine power.

During the manoeuvre the forward spring mooring line broke. The broken rope end flexed back and fatally hit the chief officer to his head and neck.

Fig. 3, Forecastle deck. To the right; the position of the chief officer when the accident occurred in the area of the platform at the remote control unit. To the left; the remaining of the parted spring line, piled up at its wind lass drum. (Photo from the Police)

Fig. 4, Forecastle deck, opposite direction. Through the opening in the bulwark the spring line fairlead can be seen. To the right the wind lass drum with the remaining's of the parted spring line. It has not been established which of the pedestal leads where used. (Photo from the Police)

An ambulance was ordered immediately after the accident. It arrived after about 20 minutes.

The pilot hurried forward to the forecastle where he found the chief officer lying on the deck seemingly lifeless. The pilot immediately started cardiopulmonary-resuscitation (cpr) and continued until the ambulance arrived and their personnel took over. About one hour after the accident the ambulance doctor declared the chief officer dead.

Investigation of the accident

In accordance with EU Directive 2009/18/EC, the Swedish Accident Investigation Authority (SAIA) and the Dutch Safety Board (DSB) agreed for SAIA to act as the lead investigating State in the investigation, with the Dutch Safety Board acting as substantially interested State.

SAIA and the DSB performed joint interviews with officers and crew on board m/v *Morraborg* on the 6th of July 2011, i.e. three days after the accident. Those interviewed were the master, the boatswain and the AB who both were part of the mooring crew on the forecastle, the AB who acted as helmsman and the chief engineer.

In addition the superintendent from the shipowner was interviewed. He had travelled to Holmsund as soon as the news of the accident reached the shipping company. The superintendent stayed on board as support for the master and crew until the cargo was unloaded and the ship had departed.

The pilot was interviewed on the 7th of July.

Two police officers who made the technical investigation on board directly after the accident were interviewed. SAIA and DSB also retained the parts of the mooring rope which the police had cut off from the broken mooring line.

On July 4th a port state control inspection was performed by an inspector from the Swedish transport authority. He found five deficiencies and commented that none of these would have had any impact on the accident.

Wagenborg Shipping's safety manager, who also acts as Designated Person Ashore, was interviewed by the DSB regarding recruitment of officers and crew, education and training and the way the company manages safety issues and especially hazardous working moments such as mooring.

The vessel was equipped with a Simplified Voyage Data Recorder (S-VDR), but contrary to the company's shipboard operating manual procedure the S-VDR recorded data was not saved after the accident.

3 PRELIMINARY STATEMENT OF FACTS

This report has been published to fulfil the obligations from EU Directive 2009/18/EC which requires the publication of an interim report within 12 months after the casualty, in case a final report cannot yet be produced. The current planning is to finalize the analysis before the end of summer 2012.

Following preliminary statements can, however, be made at this time;

- Tug boats were not used for the docking manoeuvre,
- The spring line had been in use for a month and appeared to be in good condition,
- There was a brisk, gusty wind setting outwards from the quay,
- The docking method used resulted in risk that the mooring rope could brake under load,
- The master warned the foredeck team to take protection,
- There was no visual contact between the bridge and the forecastle,
- The chief officer confirmed the master's warning but did not take any protection,
- The forecastle deck area for mooring was confined,
- The remote control unit was located in close proximity to the mooring line under tension and within its immediate snap-back zone,
- The company had no specific guidelines for mooring and the company management had not identified mooring to be a dangerous type of work.