



Statens haverikommission
Swedish Accident Investigation Board

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SUMMARY of Report RS 2010:02e

***Collision between passenger ferries
Gotlandia II and Gotland outside Nynäshamn,
Stockholm County, July 23 2009***

Case S-114/09

SHK investigates accidents and incidents with regard to safety. The sole objective of the investigations is the prevention of similar occurrences in the future. It is not the purpose of this activity to apportion blame or liability.

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This is a translation of the Swedish Summary done by SHK from the original Swedish report.

In case of discrepancies between the English and the Swedish texts, the Swedish text is to be considered the authoritative version.

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Statens haverikommission
Swedish Accident Investigation Board

June 15 2010

S-114/09

Swedish Transport Agency
Maritime Department
601 15 NORRKÖPING

Report RS 2010:02e

The Swedish Accident Investigation Board (Statens haverikommission, SHK) has investigated a collision that occurred on July 23 2009 outside Nynäshamn, Stockholm County, between passenger ferries *Gotlandia II* and *Gotland*.

In accordance with section 14 of the Ordinance on the Investigation of Accidents (1990:717) the Board herewith submits a final report on the investigation.

The Board will be grateful to receive, by December 15 2010 at the latest, particulars of how the recommendations included in this report are being followed up.

Göran Rosvall

Magnus Hammarqvist

Copy to the Swedish Civil Contingencies Agency, Swedish Maritime Administration and National Public Transport Agency.

Rapport RS 2010:02e

S-114/09

Report finalised June 15 2010

Gotlandia II

<i>Vessel; Type, registration</i>	HSC Roro passenger ship, SKWR
<i>Signal letters</i>	IMO Nr: 9328015
<i>Certificate</i>	Valid
<i>Registered owner</i>	Rederi AB Gotland
<i>Nationality/Flag</i>	Swedish
<i>Classification society</i>	Lloyd´s Register
<i>Type of voyage/Business</i>	Passenger and freight traffic
<i>Persons on board: crew</i>	19
<i>passengers</i>	532
<i>Injuries to persons, physical</i>	33 passengers, of which 10 were taken to hospital
<i>Damage to vessel</i>	Major damage to the starboard side above the waterline on the superstructure and interior
<i>Damage to cargo</i>	None
<i>Other damage (environment)</i>	None
<i>The captain</i>	
<i>Sex, age, time as captain</i>	Male, 42 years, 8 years
<i>The chief officer</i>	
<i>Sex, age, time as officer</i>	Male, 42 years, 18 years, of which 10 years as captain
<i>Chief engineer</i>	
<i>Sex, age, time as officer</i>	Male, 38 years, 15 years

Gotland

<i>Vessel; Type, registration</i>	Roro passenger ship, SGPI
<i>Signal letters</i>	IMO Nr: 9223796
<i>Certificate</i>	Valid
<i>Registered owner</i>	Rederi AB Gotland
<i>Nationality/Flag</i>	Swedish
<i>Classification society</i>	Lloyd´s Register
<i>Type of voyage/Business</i>	Passenger and freight traffic
<i>Persons on board: crew</i>	75
<i>passengers</i>	1 338
<i>Injuries to persons, physical</i>	None
<i>Damage to vessel</i>	Limited
<i>Damage to cargo</i>	None
<i>Other damage (environment)</i>	None
<i>The captain</i>	
<i>Sex, age, time as captain</i>	Male, 58 years, 29 years
<i>The chief officer</i>	
<i>Sex, age, time as officer</i>	Female, 36 years, 13 years
<i>The second officer</i>	
<i>Sex, age, time as officer</i>	Male, 31 years, 6 years

<i>Time of occurrence</i>	July 23 2009, at 11.17 hrs in daylight, fog. <i>Note:</i> Swedish summer time (UTC + 2 hour)
<i>Location</i>	Nynäshamn, Stockholm County, pos. N 58° 55,0' E 017° 59,3' .
<i>Sea and weather conditions</i>	According to SMHI ¹ analysis: Wind south to southeast 2-5 m/s, insignificant wave height and current, fog with varying visibility between 300-700 m. According to observations: Visibility in fog banks 100-200 m.

The Swedish Accident Investigation Board (SAIB) was notified on July 23 2009 that a collision between passenger ferries *Gotlandia II* and *Gotland* had occurred outside Nynäshamn, Stockholm County, on the same day at 11:17 hrs.

The accident has been investigated by SAIB represented by Göran Rosvall, Chair of the committee, Magnus Hammarqvist, Inspector In Charge, Per Lindemalm, Inspector Marine Engineering and Patrik Dahlberg, Inspector Fire and Rescue.

SAIB has been assisted by Lena Kecklund and Sara Pettersson as experts in the field of interaction between people, technology and organisation (Human Factors). Sven-Eric Lindberg has assisted SAIB as an expert regarding the rescue operation.

Summary

Two Destination Gotland ferries, *Gotlandia II* and *Gotland*, collided in the harbour entrance to Nynäshamn, close after 11:17 hrs on July 23 2009. At the time of the accident there was dense fog in the area.

Gotland had just left the jetty in Nynäshamn and was on her way around the shoal of Finnhällorna. *Gotlandia II* was, as agreed between the ship officers, supposed to wait outside the 500 m wide strait between Brunnsviksholmen lighthouse and Finnhällorna until *Gotland* had passed and then continue to the jetty in Nynäshamn.

The deck officers on the bridge of *Gotlandia II* consisted of a captain and chief officer. Both were experienced deck officers, but relatively inexperienced in their respective positions on board this particular ship. It was also the first time they worked together.

The captain had extensive experience of vessels with water-jet power - he had among other things during the past two seasons worked as chief officer on the shipping company's HSC (High Speed Craft) ferries. However, it was his first season as a captain for the shipping company. He was employed as captain in mid-June 2009.

The chief officer, who operated the ship, had very extensive experience in coastal navigation and vessel manoeuvring from his ordinary job as captain on freight ships since more than ten years. He had only worked about 15 days on board before the accident and therefore had very little experience of operating HSC vessels with water-jet power.

¹ Swedish Meteorological and Hydrological Institute

At the time when *Gotlandia II* was about to pass a ship that was anchored just north of the fairway the crew lost, partly due to various distractions, their orientation in the poor visibility. They were unable to discontinue the assigned port side turn to steer down to the jetty in Nynäshamn, which during the passage of the anchored ship became too sharp. This meant that *Gotlandia II* involuntarily came to steer in front of *Gotland*, which resulted in that the vessels collided.

On board *Gotlandia II* 33 passengers were injured in the collision - but none seriously. None of the crew was injured. The vessel sustained major damage.

On board *Gotland* no persons were injured. The vessel had minor damages and could be taken into service the next day.

During the investigation, SAIB has not been able to find a single factor that alone is the main explanation for the collision between *Gotlandia II* and *Gotland*. SAIB has established that the explanation for the collision instead is to be found in a number of weaknesses and shortcomings in various areas which were not such that they alone could trigger the accident, but due to their interaction caused it.

The cause of the collision was that there were deficiencies in the given prerequisites for the deck officers of *Gotlandia II* to make the journey in question safely with regards to poor visibility, experience, training and education, including the company's safety procedures and safety management.

On board *Gotland*, information was provided from the bridge to the passengers and crew about what happened, etc. immediately after the collision. On board *Gotlandia II* there was no such information. As a result of the lack of information the passengers were in a state of uncertainty as to how serious the situation was and what they would do. For the crew, which was drilled for such an event that now had occurred, the lack of information led to that no clear signal was received to start the emergency organisation. This led to confusion and uncertainty about what would be done.

The rescue operation in a major accident, is a matter of significant effort from a variety of public agencies. For the response to be effective, coordination and joint exercises are required. There was a lack of coordination between the various participants. This led to great uncertainty at the accident site regarding who was responsible for the operation, which steps to take and who would act.

Recommendations

The Swedish Transport Agency, Maritime Department, is recommended to:

- improve the requirements for obtaining TRC (Type Rating Certificate) with regards to operating HSC vessels and review procedures for competence control and follow-up (RS 2010:02 e R1).
- review existing procedures for improved control and follow-up that seasonal staff have gained sufficient knowledge of e.g. handling emergencies (RS 2010:02 R2).
- review procedures for approval of emergency plans e.g. management of information to passengers and replacements of key personnel, etc. (RS 2010:02 R3).
- review procedures and coordination between different departments of the Swedish Transport Agency to improve the overall assessment of a vessel's total staffing for handling various types of emergencies aboard, such as fire or collision, and bearing in mind particularly the high security standards that must be addressed regarding passenger traffic (RS 2010:02 R4).
- investigate possible need to regulate traffic in the fairway into Nynäshamn and in this context also conduct a review of existing anchorage areas (RS 2010:02 R5).
- review procedures for monitoring the AIS and VDR equipment on vessels (RS 2010:02 R6).
- work internationally for the requirements for VDR equipment to be improved as regards to e.g. memory capacity, user- friendliness and reliability, etc. (RS 2010:02 R7).

The Swedish Maritime Administration is recommended to:

- review procedures for reporting, etc. between the VTS (Vessel Traffic Service) and MRCC² (Maritime Rescue Coordination Center) (RS 2010:02 R8).

The Swedish Civil Contingencies Agency is recommended to:

- promote greater coordination between state and local emergency services and other public agencies that have duties to perform at an accident site (RS 2010:02 R9).
- work to conduct exercises and training, focusing on coordination and responsibility sharing between the public agencies that have duties to perform at a major accident (RS 2010:02 R10).

The National Public Transport Agency is recommended to:

- consult the Swedish Transport Agency, Maritime Department with regards to sea safety issues when formulating agreements relating to scheduled passenger service at sea (RS 2010:02 R11).

² From January 1 2010, after the merger of sea and air operations center, the correct reference is JRCC. However in the report, SHK has chosen to use the former name for sea rescue center, i.e. MRCC.