

## SUMMARY IN ENGLISH

GOTLAND departed from Visby to Oskarshamn in accordance with the timetable at 5:00 PM, on 2 January 2014. The voyage was a dangerous goods voyage with a limited number of passengers on board. With a limitation of the number of passengers the vessel was able to transport dangerous goods to a greater extent. On board were 188 passengers and 39 crew, as well as trucks, trailers and cars.

The weather conditions were darkness, with good visibility, light northerly current and south by southeasterly wind of about 10-11 m/s.

The fairway into Oskarshamn passes the buoyed Grimskalleleden and then turns almost 40° and continues down to the harbour and Ovädersuddens leading line. When the ship approached Oskarshamn the OOW<sup>1</sup> navigated under the supervision of the master. The big turn was initiated by the OOW with the speed of 14 knots using the autopilot and a preset turning radius of 0.3 nm. The autopilot was set in "heading mode", which meant that the drift was to be corrected manually. The first green buoy after the turn was passed as planned on the ship's starboard side, however somewhat closer to the buoy and a little beyond the intended route plan. At this moment, the master took over the steering and engine control on the starboard bridge wing, which in this case meant that the master himself was steering the vessel by hand and that the autopilot was disengaged. Shortly thereafter the OOW said to the master "she is drifting a bit" and the master replied promptly, "I see that".

Katygrund was passed closely on the starboard side of the vessel. The master had from his position on the starboard bridge wing lookout aft and laid starboard rudder with the intention to lift the stern of the vessel away from Katygrund before the aft part of the vessel had completely passed the buoy.

When also the stern had passed Katygrund the master looked forward and felt that the next green buoy was straight ahead. Then he put the rudder to port and crossed the engines in order to try getting the ship on the correct side of the buoy. Shortly thereafter the master saw the green buoy disappear in under the vessel in the area of L/2 (half the length of the ship). The ship ran aground at 7:41 PM. At that time, no one on the bridge noticed that the ship had run aground.

The crew in the engine room immediately understood that the ship had run aground. The 2 engineer noticed that drytank 7 was flooded and bildgepumping was immediately initiated. At that time there were five persons from the crew in the engine room, which facilitated and speeded up the leakagecontrol.

The investigation has found that the cause of the accident was that bridge routines had been developed where the taking over of the control of the ship was done at the bridge wings during the last part of navigation into Oskarshamn.

Contributing factors were that the navigation stations were not equipped with hand steering and there were deficiencies in, and differences between the used route planning and the route planning in the ISM-manual.

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<sup>1</sup> OOW – Officer On Watch

Other factors were that there was no log or windindicator at the working stations on the bridge wings. The investigation has also found that there is a limited exchange of experiences about navigating in narrow fairways between nautical officers in the company but also between the company's nautical officers and nautical officers of other shipping companies.

Furthermore, the investigation has noted that there are possibilities to develop the guidelines of the ISM-manual regarding the division of the workload between pilot and co-pilot when navigating in narrow fairways.

### **Safety recommendations**

*Destination Gotland is recommended to:*

- Analyze and consider installation of hand steering at the navigation stations in the centerline. (RS2014:11 R1)
- Analyze and develop the company's bridge routines concerning navigation in narrow fairways. (RS2014:11 R2)
- Analyze and develop the company's route planning concerning turn radius and turn control markers in narrow fairways. (RS2014:11 R3)
- Develop a written policy for handling personnel involved in an accident. (RS2014:11 R4)
- Install a separate and well visible wind indicator and log on the bridge wings. (RS2014:11 R5)

*The Swedish Maritime Administration is recommended to:*

- In consultation with pilots and the ferry companies analyze a possible installation of a turn center buoy in the turn between the lines Grimskalleleden and Ovåderslinjen. (RS2014:11 R6)

*The Swedish Transport Agency is recommended to:*

- Verify that damage control plans on ships fulfil the requirements of applicable rules and that they are constructed to include both scenarios of collision and grounding with water leakage in different parts of the ship at the same time. (RS2014:11 R7)
- Verify that the use of damage control plans is included in training of emergency procedures on ships. (RS2014:11 R8)
- Internationally work for clearer and more harmonized guidelines of bridge layout, which take into account the ship's planned use. (RS2014:11 R9)