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REPORT ON MARINE ACCIDENT - COLLISION BETWEEN STAR KVARVEN LAJK7 AND LULANYU 61809, 27 NOVEMBER 2014

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This report has been translated into English and published by the Accident Investigation Board Norway (AIBN) to facilitate access by international readers. As accurate as the translation might be, the original Norwegian text takes precedence as the report of reference.

Photo of ferry on the Norwegian west coast: Bente Amandussen

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NOTIFICATION OF THE ACCIDENT

On 1 December 2014, the Accident Investigation Board Norway (AIBN) was notified by the Norwegian Maritime Authority (NMA) that the cargo ship Star Kvarven had been reported as having collided with a Chinese fishing vessel (Lulanyu 61809) on 27 November 2014. The NMA's notification was based on an accident report from the shipping company.

The crew on board Star Kvarven had spotted the other vessel but they had not registered any collision. They notified the shipping company, the agent and Chinese authorities, and participated in the subsequent search and rescue operation.

The Chinese search and rescue (SAR) authorities searched for three days for survivors, but did not find any. It is assumed that Lulanyu 61809 sank after the collision with Star Kvarven and that all the eight crew members on board died.

Chinese authorities informed the AIBN on 5 December 2014 that the accident was to be investigated by Jiangsu MSA (Maritime Safety Administration). A preliminary report was received by the AIBN on 5 March 2015. In order to meet the requirement for investigations to be conducted in accordance with MSC-MEPC.3/Circ.2,[1] the AIBN decided in November 2015 to conduct a limited investigation and prepare a report.

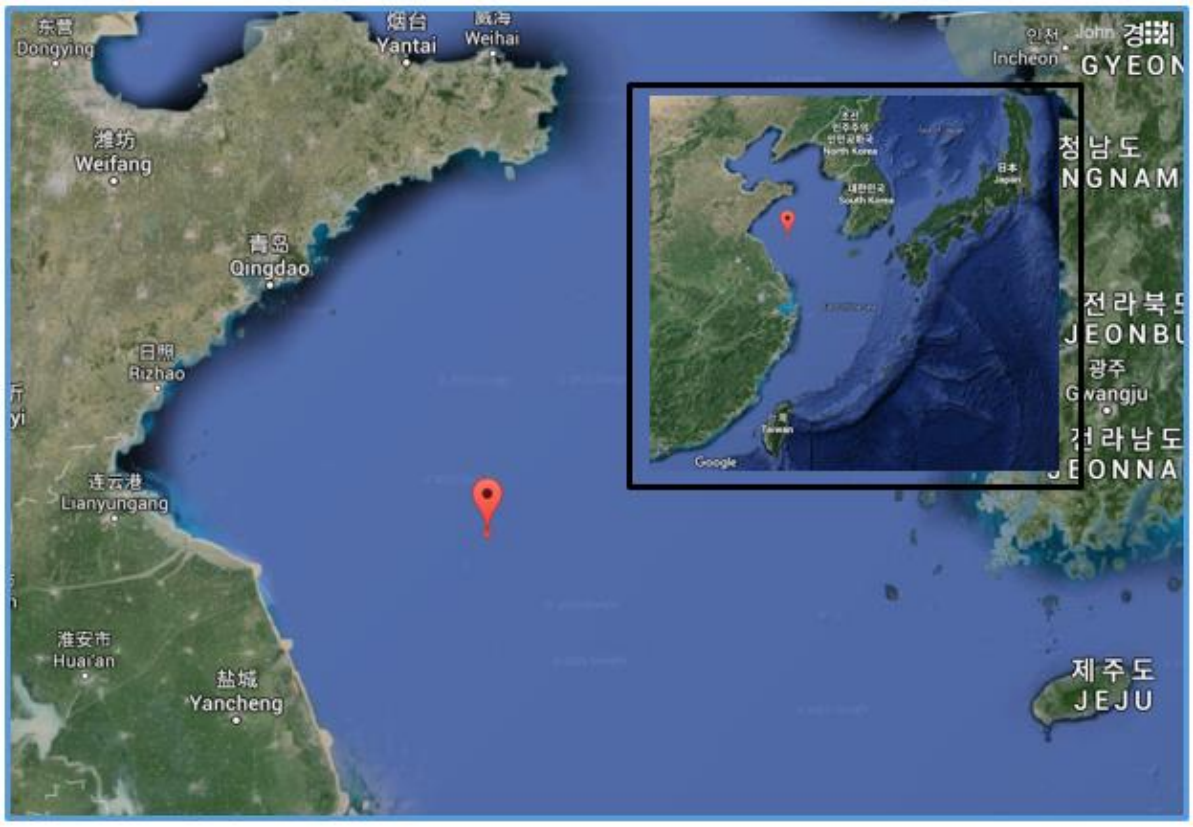

Figure 1: Map section marking the position in the Yellow Sea where the two vessels collided. Map: Google maps

[1] Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident

SUMMARY

On its way from Lianyungang, China, on 27 November 2014, the cargo ship Star Kvarven came on collision course with the fishing vessel Lulanyu 61809 as it approached from starboard. Star Kvarven made an evasive manoeuvre to starboard, using the autopilot, to pass on the port side of the fishing vessel (port to port). The fishing vessel also turned slightly to starboard during the same period.

Six minutes after Star Kvarven had made the evasive manoeuvre to starboard, the officer of the watch started to change the course to port, back to the vessel's original course, through a series of small course adjustments using the autopilot.

The AIS plot shows that Lulanyu 61809, around the same time, also started adjusting its course to port. The adjustment developed into a continuous turn to port, first slowly, then with increasing speed, and the vessel ended up on a course that was almost completely opposite to the original course.

Because no one on Lulanyu 61809 survived the accident, the AIBN has no firm indications of the fishing vessel crew's assessments and decisions. The AIBN is unable to explain the manoeuvre to port that resulted in an almost complete reversal of the vessel's original course. The AIS plot is the only indication of the fishing vessel's movements during the sequence of events, in which restricts the investigation.

The situation quickly escalated, and Star Kvarven made an emergency manoeuvre to starboard to avoid collision, but it was not enough to prevent the two vessels from colliding. Star Kvarven sustained indents and scratch marks on the forward part of the bulb, while Lulanyu 61809 sank and the eight crew members on board died.

In the AIBN's view, the factors with the greatest impact on the sequence of events leading up to the collision were that both vessels failed to maintain a steady course until the avoidance action had the desired effect, that course changes on board Star Kvarven were performed with the autopilot (2-3 degrees at a time) and that the fishing vessel made a continuous turn to port. Furthermore, at no time during the sequence of events was the captain on board Star Kvarven notified of the critical or potentially critical situation.

The investigation of this marine accident has not identified any areas in which the AIBN deems it necessary to propose safety recommendations. However, the AIBN would like to point out that this was a very serious marine accident, and that Norwegian shipping companies should focus strongly on preventing such collisions by focusing on safe navigation, collaboration on the bridge and handling of crisis-situations.

1. FACTUAL INFORMATION

The factual information is based on written statements from Star Kvarven's crew and examinations of Star Kvarven's VDR data, as well as information obtained from Chinese authorities, the Norwegian Maritime Administration, DNV-GL and the shipping company Grieg Star AS.

Local time is used for the course of events. Local time is UTC (Coordinated Universal Time) +8 hours.

1.1 Sequence of events

Figure 2: Star Kvarven. Photo: Grieg Star AS

At 10:18 on 27 November 2014, Star Kvarven left Lianyungang in China, carrying 4920 tonnes of ceramic proppants. The cargo gave the vessel a midship draught of 7.715 m and an aft trim of 0.67 m. The vessel's destination was Pohang in South Korea.

Star Kvarven was being steered in autopilot mode at a speed of 12.5 knots (economic cruising speed), a speed that was maintained throughout the sequence of events. The voyage proceeded as normal throughout the day and afternoon.

At 20:00, there was a changeover of the watch on the bridge. When the third officer and the lookout arrived just before 20:00, they observed the captain sitting by a computer in the radio room together with the chief engineer. After completing the procedures for the watch changeover, the captain told the officer of the watch (the third officer) to let him know if the traffic became very dense or if he had any questions. The officer of the watch confirmed that he had received the message.

After finishing the work in the radio room just before 22:00, the captain went into the wheelhouse, where he updated himself with the situation in relation to other ships in the area. About the same time as the captain came in, the lookout observed a Chinese fishing vessel on the starboard side of the course line. The fishing boat Lulanyu 61809 was returning to Lanshan port after a trip to the fishing grounds.

On the radar, the officer of the watch could see that Lulanyu 61809 was 6.5 nm away, moving at a speed of 8.3 knots, which it maintained throughout the sequence of events. At this time, he noted that the closest point of approach (CPA) would be 0.29 nm, given the course and the speed of the two vessels.

The captain communicated to the officer of the watch that he should let the fishing boat pass ahead of them. After this, the captain sat down in the captain's chair (the pilot's chair) and soon fell asleep. He did not issue any further instructions, but both the officer of the watch and the lookout observed that the captain sat down in the captain's chair.

In order to give way to Lulanyu 61809 and let it pass ahead of them, Star Kvarven changed its course to starboard at 22:10 using the autopilot (2-3 degrees at a time), from a true course of 107º to a true course of 117,4º, which put the fishing vessel on the port side of Star Kvarven's course line.

The AIS plot of the sequence of events shows that Lulanyu 61809 adjusted its course to starboard at around 22:13 (from 322º to 335º). From 22:16 onwards, the fishing boat adjusted its course to port several times (from 335º to 277º). At this point, the closest point of approach between the vessels was approximately 0.7 nm, until the fishing boat sharply changed its course to port at 22:18. At 22:20, Lulanyu 61809 had turned almost 180º from its original course.

Star Kvarven maintained its evasive manoeuvre by keeping a course of 117,4º until 22:16. Now, the officer of the watch started to change the course back to port, through a series of small course adjustments using the autopilot, and, around 22:19, the vessel had a true course of 107,4º. According to the officer of the watch, he observed that the fishing boat was on the port side of Star Kvarven's course line the whole time.

Just after 22:19, the lookout on Star Kvarven observed that the fishing boat was moving to starboard in relation to Star Kvarven's course line, and he reported this to the officer of the watch. The officer of the watch perceived the message from the lookout. According to the officer of the watch, he started to perform an evasive manoeuvre to starboard around this time, using the autopilot. The situation had escalated quickly, and he had not taken the time to notify the captain.

The captain, who were awakened by the sound of the lookout and the officer of the watch calling out messages to each other, asked what was going on, and quickly assumed command. At 22:20, he ordered a change to manual steering and helm hard to starboard, at the same time as he signalled using the vessel's horn. The lookout, who was now at the helm, followed the captain's orders and put the helm hard to starboard, while the officer of the watch ran to the port bridge wing and then to the starboard bridge wing to look for the fishing boat.

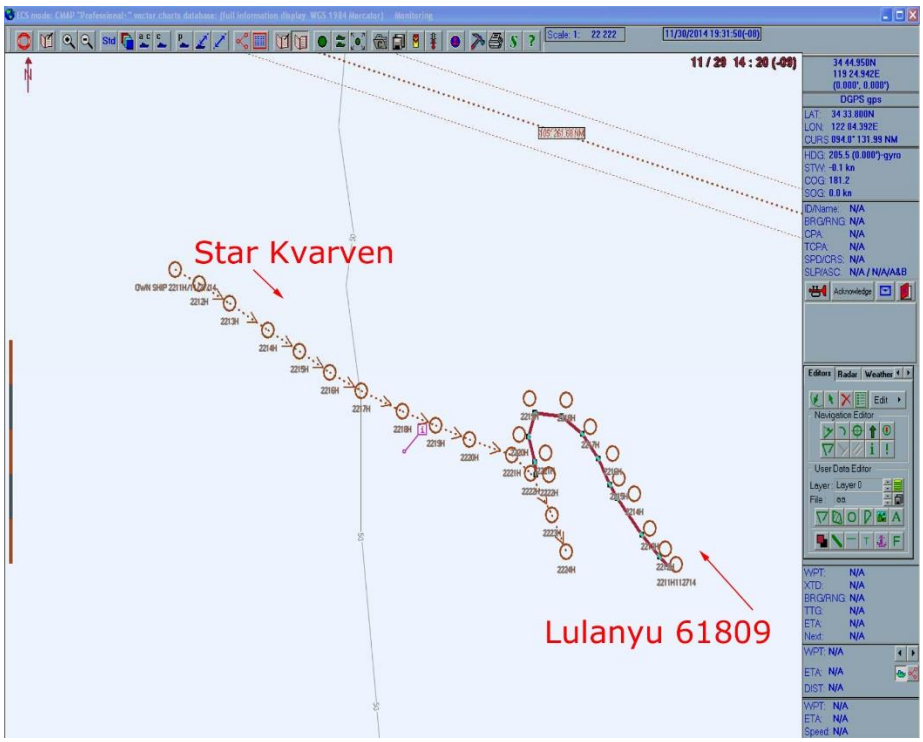

Figure 3: AIS plot of Star Kvarven and Lulanyu 61809's pattern of movement. Source: Grieg Star AS.

At 22:21:46, Star Kvarven and Lulanyu 61809 collided in position N34º 34.7', E122º 04.3'. The crew on board Star Kvarven had not registered the collision, nor did they see any signs of the fishing vessel. At 22:24:04, the AIS signal from Lulanyu 61809 disappeared from the radar.

At approximately 22:25, the captain ordered that the whole crew should be notified and prepare for a search and rescue operation. Star Kvarven reversed direction at approximately 22:29, and at approximately 22:40, the crew initiated a search and rescue operation in the relevant area. The captain notified the shipping company in Bergen, local agents in Lianyungang-Sinolink, and Lianyungang MRCC (Maritime Rescue Coordination Centre).

1.2 The search and rescue operation

Lianyungang MRCC received the distress message from Star Kvarven at 00:35 on 28 November 2014. According to the message, the crew of Star Kvarven suspected that the vessel had collided with a fishing vessel at around 22:20 on 27 November 2014. Lianyungang MRCC quickly identified the fishing vessel as being Lulanyu 61809 and forwarded the distress message to Jiangsu MRCC and the authorities of Lianyungang. Shortly after, an extensive search and rescue operation was initiated. In addition to deploying professional SAR resources, Star Kvarven and other ships in the area were instructed to take part in the search.

The search and rescue operation was concluded at approximately 22:25 on 1 December 2014, without Lulanyu 61809 or any of its eight crew members having been found.

1.3 Description of injuries/damage

It is assumed that the Chinese fishing vessel Lulanyu 61809 sank after the collision, and that the entire crew of eight died.

Star Kvarven sustained a 24 cm long and 7–10 cm deep indentation on the port side of the bulb, and the paint was scraped off in a contact area of 1.7x0.5 m; see Figure 4.

Figure 4: The photo shows the damage to Star Kvarven's bulb. Source: Jiangsu MSA / Grieg Shipping.

1.4 Weather and sea conditions

The accident occurred at 22:20 local time. It was dark at the time, but visibility was good (8–10 nm). There was south-easterly winds of 13–14 m/s, a 0.5 knots westerly current and approximately 2 m wave height.

1.5 The vessels, the crew and the onshore organisations

1.5.1 Star Kvarven

1.5.1.1 *The vessel*

The cargo ship Star Kvarven was built at Hyundai Mipo Dockyard in Ulsan in South Korea in 2010. It has an overall length of 208.73 metres. The ship has 11 cargo holds with a total carrying capacity of 65,000 m^3, and its deadweight tonnage[2] is 49,856 tonnes. Star Kvarven had a draught of 12.34 m when loaded to the summer load line. Star Kvarven was equipped with two gantry cranes, which made her very suitable for loading and unloading cargo in areas with inadequate infrastructure.

At the time of the accident, the ship was registered in the Norwegian International Ship Register (NIS), and held valid certificates issued by DNV-GL.

1.5.1.2 *Bridge equipment*

Among other things, the vessel was equipped with a magnetic compass (type Saracom Ti2060), two gyro compasses (type Tokyo Keiki Co. Ltd. TG-8000), two radars (type

[2] Describes the ship's carrying capacity.

Furuno 2827 and 2837S), an autopilot system (type Tokyo Keiki Co. Ltd. N.V. 09 50) and a VDR (type MSRIS VDR 2200).

Figure 5: Bridge arrangement on board Star Kvarven: Photo: Grieg Star AS.

1.5.1.3 *Vessel lights*

Star Kvarven was equipped with and carried two masthead lights, side lights and a stern light.

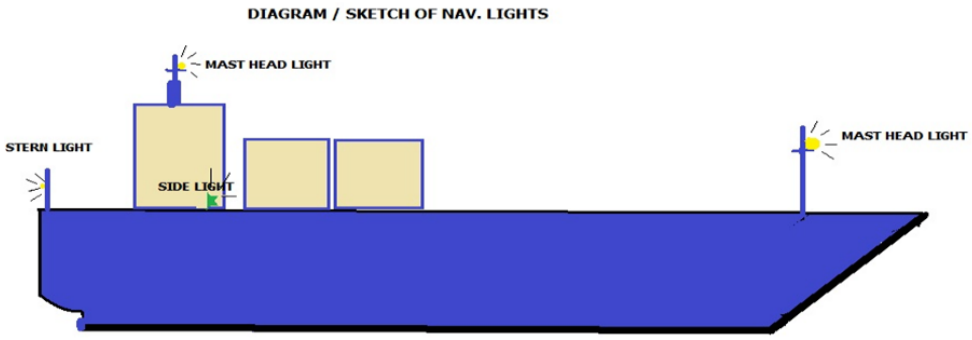

Figure 6: The location of Star Kvarven's lights. Diagram: Grieg Star AS.

1.5.1.4 *Safety management*

The shipping company's safety management system was certified by DNV on 8 March 2012, with validity until 18 April 2017.

From the chapter on 'Bridge operations', the following is relevant to this accident:

- 'Instructions for Officer of the Watch (OOW)': Among other things, the instructions state that the officer of the watch must have read and must comply with the instructions issued by the captain in 'Standing orders' and in the 'Night order book', and that he must have read and understood the 'ICS Bridge Procedures Guide'.

- ‘Master’s standing orders and night order book’:

  ‘Master’s standing orders’ consists of 15 different orders and state the following in order no 12:

  > *‘The officer of the watch shall observe applicable regulations and guidelines and, on that basis, keep a safe passing distance to vessels on an oncoming/crossing/converging course, and to take measures/act at an early stage to avoid close-quarters’.*

  The ‘master’s night order book’ is a notebook with blank pages that the captain writes in every night at around 20:00. The captain’s written orders for 27 November state the following, among other things:

  > *‘Keep a good lookout and maintain safe navigation and times. Avoid close-quarters situations with all oncoming, crossing and passing traffic. Keep out of the way of vessels engaged in fishing and always maintain a wide closest point of approach. If in doubt, do not hesitate to contact the captain at any time. In general, follow the captain’s standing orders.’*

From the chapter on ‘Company required training’, the following is relevant to this accident:

- ‘Bridge Resource Management (BRM) ’: A training matrix shows for which functions the shipping company required the completion of BRM courses.

- ‘Maritime Resource Management (MRM) ’: The shipping company had recently established MRM training, an internal training programme that focuses on management, communication and cooperation in the day-to-day operation of the vessel. MRM training is carried out as classroom training.

1.5.1.5 *The crew*

At the time of the accident, Star Kvarven had a crew of 21. All were Philippine nationals. The captain and crew on watch had the following qualifications:

The captain held a master’s certificate issued by the Philippine state on 5 August 2008. The certificate had been renewed and was valid until 31 December 2016. It had been approved by Norwegian authorities on 19 June 2013 as valid until 31 December 2016. He had completed his BRM training on 25 April 2008.

The third officer held a deck officer’s certificate issued by the Philippine state on 22 October 2012. The certificate was valid until 31 December 2016. It had been approved by Norwegian authorities on 20 December 2012 as valid until 31 December 2016. He had completed his BRM training on 22 June 2012.

The able seaman on duty held a bridge watch certificate issued by the Philippine state on 12 March 2014. The certificate had been approved by the Norwegian authorities on 18 September 2014.

1.5.1.6 *The shipping company*

Star Kvarven was owned by Grieg International II AS. The ship operating company was Grieg Star AS. Grieg Star was operating 37 ships as of 31 December 2014. For more information about Grieg Star see: www.griegstar.com

1.5.2 *Lulanyu 61809*

1.5.2.1 *The vessel*

The stern trawler Lulanyu 61809 was built at the Wendeng shipyard in Shandong in China in 2007. It was a 25.58 m long steel vessel. The vessel had six watertight bulkheads located at frames 4, 10, 20, 27, 41 and 45, respectively.

At the time of the accident, Lulanyu 61809 had been issued with a nationality certificate by the Chinese authorities. The vessel had been inspected by the supervisory authority for fishing vessels in China on 30 July 2011. According to information that the AIBN has received from the Chinese authorities, the vessel had not been assigned a call signal or IMO number.

1.5.2.2 *Bridge equipment*

Among other things, the vessel was equipped with a compass (type CPT-130), radar (type M-1831MARK2), echo sounder (type HE-777) and positioning equipment (type GPSMAP 182C).

1.5.2.3 *Vessel lights*

The vessel carried lights that met the requirements of rules 21 and 23 of the Regulations of 1 December 1975 No 5 for preventing collisions at sea (Rules of the Road at Sea).

1.5.2.4 *Rescue equipment*

The vessel was equipped with a life raft (type QJF-Y10) for 10 people, 4 lifebuoys (type 5556-I) and 12 life jackets (type DY91-I).

1.5.2.5 *Radio systems*

The vessel was equipped with an HVIS/HF type TKM-707 radio, and a type TS-480 radiotelephone for fishing vessels.

1.5.2.6 *The crew*

Lulanyu 61809 had a crew of eight, all Chinese nationals. Some of the crew were certified as follows:

The master held a Class 4 master's certificate for fishing vessels, issued on 13 September 2012 with five years' validity. He also held a telephone operator certificate, issued on 15 July 2014 with five years' validity.

The chief engineer held a Class 4 engine officer's certificate for fishing vessels, issued on 9 September 2011 with five years' validity.

The chief mate held a Class 4 deck officer's certificate for fishing vessels, issued on 13 September 2012 with five years' validity.

The first engineer held a Class 3 engine officer's certificate for fishing vessels, issued on 13 September 2012 with five years' validity.

1.5.2.7 *The owner*

The vessel's certificate shows that the owner of Lulanyu 61809 came from Hushan in Lanshan in China.

1.6 Relevant rules and regulations

1.6.1 Provisions on safety management systems

Requirements for safety management systems are regulated by the Regulations of 5 September 2014 No 1191 relating to safety management systems on Norwegian ships and mobile facilities (Regulations on Safety Management Systems). Among other things, the regulations apply to Norwegian cargo vessels with a gross tonnage of 500 or more.

1.6.2 Provisions on visibility from the bridge

The Regulations of 5 September 2014 No 1157 on navigation and navigational aids for ships and mobile offshore units. Section 13 contains provisions on navigation bridge visibility.

1.6.3 Provisions on watchkeeping on passenger ships and cargo ships

According to Appendix A Part 3 Section 9 of the Regulations of 27 April 1999 No 537 concerning watchkeeping on passenger ships and cargo ships, the master of every ship is bound to ensure that watchkeeping arrangements are adequate for maintaining a safe navigational watch. Under the master's general direction, the deck officers on watch are responsible for navigating the ship safely during their watch periods, when they are required to pay particular attention to avoiding collision and running aground.

According to Appendix A Part 3-1 Section 13, a proper lookout shall be maintained at all times in accordance with Rule 5 of the International Regulations for Preventing Collisions at Sea (1972).

1.6.4 Provisions on the prevention of collisions at sea

The Regulations of 1 December 1975 No 5 for preventing collisions at sea (Rules of the Road at Sea) contain inter alia steering and sailing rules (Part B), and provisions on lights, shapes and sound signals (Part C). Rule 8 on action to avoid collision, Rule 16 on action by give-way vessel and Rule 17 on action by stand-on vessel are relevant to this accident.

1.7 Implemented measures

The operational company had already before the accident planned to start up internal MRM training for the management on board the company's ships by organising a 'MRM pilot course' on 20–22 January 2016. This was a result of internal discussions about how the shipping company could further develop the management role on board the

company's ships. The Star Kvarven accident is now used in the company's MRM training.

2. ANALYSIS

2.1 Introduction

Because there were limited access to information in the case and the accident occurred in Chinese waters, the AIBN's assessments in connection with this accident are limited. The Chinese fishing vessel sank with eight people on board. The AIBN has largely based its assessments on a review of the AIS plot of the vessels, and written statements from the crew of Star Kvarven.

2.2 Assessment of the sequence of events

The officer of the watch on Star Kvarven made an evasive manoeuvre to starboard at 22:10 using the autopilot (2-3 degrees at a time) in order to pass port to port with Lulanyu 61809. At 22:16, the officer of the watch started changing the course back to port to resume the original course through a series of small course adjustments using the autopilot. In the AIBN view, the manoeuvre back to resume the original course started too early. The manoeuvre led to a reduced passing distance, which, in turn, reduced the time available to deal with an unforeseen situation.

Star Kvarven was required to stay out of the way of Lulanyu 61809, while Lulanyu 61809 was required to maintain its original course and speed in relation to Star Kvarven. The AIS plot show, however, that Lulanyu 61809 adjusted its course to starboard at the same time as Star Kvarven made an evasive manoeuvre to starboard. The AIS plot of the sequence of events shows that Lulanyu 61809 changed its course to starboard (from 322º to 335º) during the period from 22:13 to 22:16.

The fact that both vessels adjusted their course to starboard meant that the passing distance between them increased in relation to Star Kvarven's original calculations. The AIBN believes that this may have been a contributory factor in causing Star Kvarven to start to change course to port already at 22:16, in order to resume its original course with the help of the vessel's autopilot.

The AIS plot shows that Lulanyu 61809, from 22:16, also started to adjust its course to port. The adjustment turned into a continuous turn to port, however, first slowly and then at an increasing speed, until the vessel, at 22:20, ended up on a course that was almost the complete opposite to its original course. The AIS plot shows that the most significant part of the turning manoeuvre took place at 22:18.

Because no one on Lulanyu 61809 survived the accident, the AIBN has no firm indications of the fishing vessel crew's assessments and decisions. The AIS plot is the only indication of the fishing vessel's movements during the sequence of events. The AIBN is unable to explain the manoeuvre to port at 22:16 that resulted in an almost complete reversal of the vessel's original course.

The AIBN is uncertain about the reason for Lulanyu 61809's course changes and movements both before and after 22:16. The AIBN notes that the "Rules of the Road at Sea" point out that a vessel that is to keep her course and speed shall take action to avoid

collision by her manoeuvre alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action in compliance with these Rules.

The AIBN considers that the factors with the greatest impact on the sequence of events leading up to the collision were that both vessels failed to maintain a steady course until the avoidance action had the desired effect and that the fishing vessel made a continuous turn to port. Furthermore, the captain on board Star Kvarven was not notified of the critical situation that was developing. This will be discussed further in section 2.1 on collaboration on the bridge.

2.3 Collaboration on the bridge

In the AIBN's view, the situation on the bridge as regards navigation appeared to be under control on both vessels up until 22:16. After that point, the situation quickly became critical, and the AIBN assumes that this is one reason why the officer on watch on Star Kvarven did not take the time to notify/wake up the captain, who was seated in the pilot's chair on the bridge.

At no time during the sequence of events was the captain on board Star Kvarven notified of the critical or potentially critical situation. This was not in accordance with the captain's orders in the night order book. The fact that the captain was asleep while sitting in the pilot's chair on the bridge may have given rise to uncertainty – in the dark, the officer of the watch may have been under the impression that the captain was paying attention to what was going on. The AIBN nonetheless takes the view that the officer of the watch should have used the opportunity to communicate with the captain when the situation arose and especially when it started to become critical.

3. CONCLUSION

3.1 Investigation results

a) On its way from Lianyungang in China, the cargo ship Star Kvarven came on collision course with the fishing vessel Lulanyu 61809 as it approached from starboard.

b) Star Kvarven made an evasive manoeuvre to starboard using the autopilot (2-3 degrees at a time) in order to pass port to port with Lulanyu 61809. The fishing vessel also turned slightly to starboard during the same period.

c) Six minutes after Star Kvarven had made the evasive manoeuvre to starboard, the officer of the watch started to change the course to port, back to the vessel's original course, through a series of small course adjustments using the autopilot.

d) The fishing vessel also made a manoeuvre to port at approximately the same time as the cargo ship. However, the fishing vessel continued to turn to port in an unusual manoeuvre that the AIBN cannot explain.

e) The officer on watch on board the cargo ship did not notify the captain when the situation arose or when it became critical.

f) The cargo ship made an emergency manoeuvre to starboard to avoid a collision.

g) The vessels collided, the fishing vessel sank and the eight crewmembers on board died.

4. SAFETY RECOMMENDATIONS

The investigation of this marine accident has not identified areas in which the Accident Investigation Board Norway deems it necessary to submit a safety recommendation with the purpose of improving safety at sea. However, the AIBN would like to point out that this was a very serious marine accident, and that Norwegian shipping companies should focus strongly on preventing such collisions by focusing on safe navigation, collaboration on the bridge and handling of crisis-situations.

Accident Investigation Board Norway

Lillestrøm, 25 May 2016

DETAILS ABOUT THE VESSEL STAR KVARVEN

Vessel ‘A’	
Name	Star Kvarven
Flag state	Norway
Class society	DNV-GL
IMO number / call signal	9396153/LAJK7
Type	Mixed cargo/bulk/container
Build year	2010
Owner	Grieg International II AS, Bergen, Norway
Operator / Responsible for ISM	Grieg Star AS, Bergen, Norway
Construction material	Steel
Length	208.73 m
Gross tonnage	37,158
The voyage	
Port of departure	Lianyungang, China
Destination port	Pohang, South Korea
Type of voyage	International voyage
Cargo	Ceramic proppants
Persons on board	21
Information about the accident	
Date and time	27 Nov. 2014 at 22:20 LT (14:20 UTC)
Type of accident	Very serious marine accident
Place/position where the accident occurred	The Yellow Sea, position: N34º 34.7’, E122º 04.3’
Place on board where the accident occurred	Mid-bow area
Injuries/deaths	No personal injuries
Damage to vessel/the environment	Damage to the ship’s bulb
Vessel operation	In transit
At what point of the vessel’s voyage	En route
Environmental conditions	Dark, visibility 8–10 nautical miles, 13–14 m/s south-easterly wind, 0.5 knots westerly current, and approx. 2 m wave height

DETAILS ABOUT THE VESSEL LULANYU 61809

Vessel ‘B’	
Name	Lulanyu 61809
Flag state	China
Class society	-
IMO number / call signal	-
Type	Stern trawler
Build year	2007
Owner	Junwei Fei, Hushan, Lanshan, China
Operator/ Responsible for ISM	-
Construction material	Steel
Length	25.58 m
Gross tonnage	78
The voyage	
Port of departure	Lanshan
Destination port	Lanshan
Type of voyage	Domestic fishing
Cargo	Fish
Persons on board	8
Information about the accident	
Date and time	27 Nov. 2014 at 22:20 LT (14:20 UTC)
Type of accident	Very serious marine accident
Place/position where the accident occurred	The Yellow Sea, position: N34º 34.7’, E122º 04.3’
Place on board where the accident occurred	Starboard ship side
Injuries/deaths	The entire crew of 8 died
Damage to vessel/the environment	The vessel sank
Vessel operation	In transit
At what point of the vessel’s voyage	En route
Environmental conditions	Dark, visibility 8–10 nautical miles, 13–14 m/s south-easterly wind, 0.5 knots westerly current, and approx. 2 m wave height