



DUTCH  
SAFETY BOARD

# Perception of pilotage

Collision between pilot vessel and bulk carrier in the Scheldt area



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Collision between pilot vessel and bulk carrier  
in the Scheldt area

*The Hague, January 2021*

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*(Source cover photo: Patrick Deenik)*

## The Dutch Safety Board

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This report is published in the Dutch and English languages. If there is a difference in interpretation between the Dutch and English versions, the Dutch tekst will prevail.

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# RECOMMENDATIONS

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Sailing large ocean-going vessels in certain areas requires specific knowledge of the area, waterways and use by other shipping traffic. This was acknowledged many years ago and this is why compulsory pilotage applies in a large number of these areas all over the world. Pilots are the experts in the sailing areas in which they operate and thus have an exemplary function with regard to shipping safety.

The exemplary function with regard to shipping safety was not in line with the routine action on 21 January 2018. Safety barriers have not been observed, while it is specifically this professional group that must honor these measures.

The captain and crew of a ship in a pilotage operation need to, next to taking their own responsibility, be able to trust that a pilot and the pilot service do everything in their power to enable a safe transfer of the pilot. To all parties involved in and around this pilotage operation, it must be clear how maneuvers will proceed. There should be no room for untested assumptions.

The Dutch Safety Board issues the following recommendations:

*To the Nederlands Loodswezen (Scheldemonden region) and the Agentschap Maritieme Dienstverlening en Kust in Belgium:*

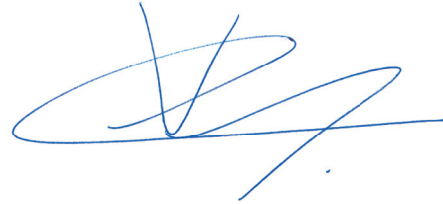
- Jointly formulate further instructions for pilots on how to act if the pilot cutter and the SWATH are in each other's presence in the vicinity of a pilotage process. Promote compliance with this process that is in line with the exemplary role of the Loodswezen. Look specifically at situations where the pilot cutter is nearby, but is not actively involved in the pilotage operation. Bring these instructions under the attention of the Schelde Coordination Centre and the pilots working on the Scheldt area.

To the Nederlands Loodswezen B.V.:

- Make an inventory of the pilot vessels on which the Bridge Routine Standard Watch Orders deviate from the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers. Bring Bridge Routine Standard Watch Orders in line with the provisions for keeping a lookout and duties on watch.



J.R.V.A. Dijsselbloem  
Chairman Dutch Safety Board



C.A.J.F. Verheij  
Secretary Director

# 1 INTRODUCTION

In the early morning of Sunday 21 January 2018 at 04.12<sup>1</sup> hours, the Dutch pilot vessel Pollux and the Panamanian bulk carrier Nord Taurus collided with one another, off the coast of Zeeland, Netherlands. At that moment, both vessels were located 1.3 nautical miles<sup>2</sup> northwest of the Middelbank, a sandbar 12 miles northwest of Westkapelle (see Figure 1).

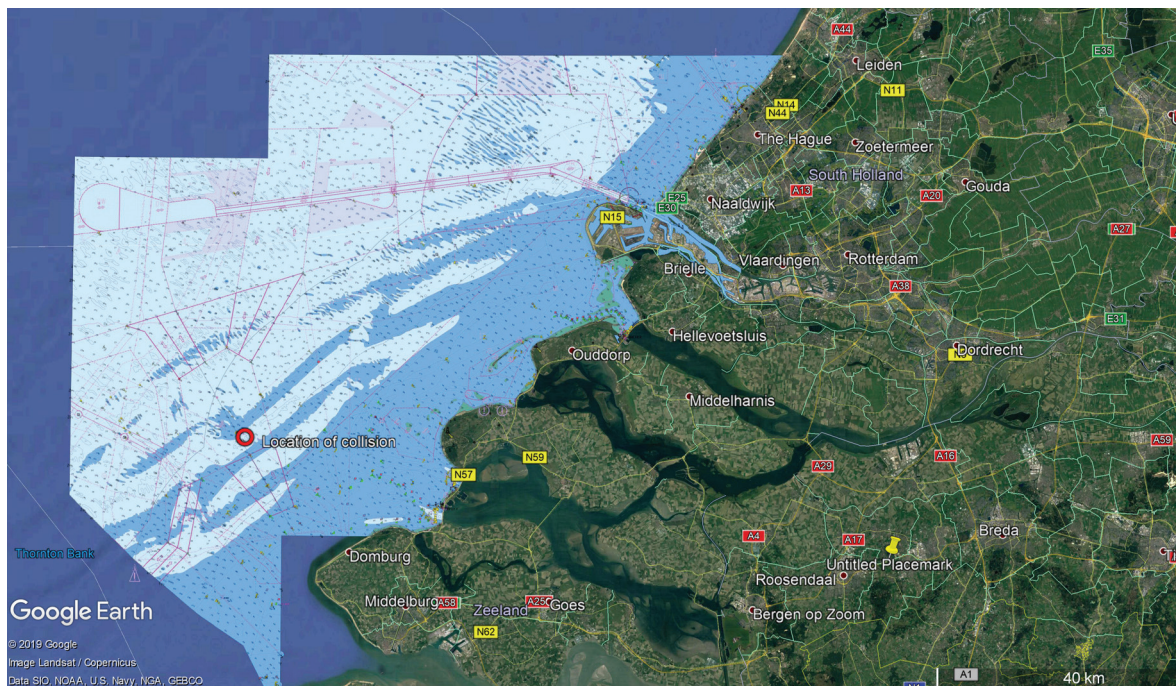


Figure 1: Position of collision northwest of the Middelbank.

The Pollux was hit on the port side and among others suffered damage to the bridge and hull. A number of crew members suffered minor injuries. The Pollux remained afloat and was able to sail to Vlissingen under its own power. The Nord Taurus anchored off the Steenbank, with minor damage.

1 All times in this report are local time, UTC+1  
2 Nautical mile, 1 NM = 1.852 km

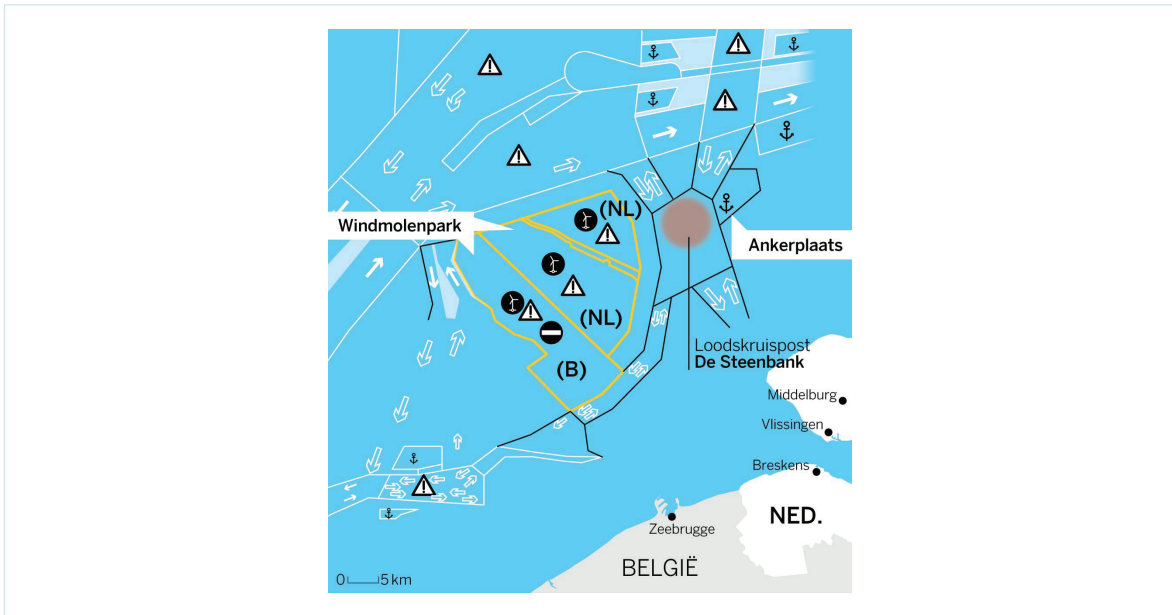


Figure 2: Overview of Pilot Station De Steenbank. (Source: Rijkswaterstaat)

The occurrence has been classified as a serious accident as defined in the Casualty Investigation Code of the International Maritime Organization (IMO) and Directive 2009/18/EC of the European Parliament and Council. This means that the Netherlands, as the flag state, bears the obligation to carry out an initial assessment of the accident for the presence of possible significant safety lessons (assessment).

The conclusion of this assessment was that there are safety lessons to be learned and as a consequence, the Dutch Safety Board was required to carry out a safety investigation. This obligation to carry out an investigation is also laid down in the Safety Board Decree. This report is the result of that safety investigation.

The Dutch Safety Board held interviews and was permitted to examine the relevant documents, photographic material and the voyage data recorders of the Pollux and the Nord Taurus. On the basis of the analysis of this investigation information, the Dutch Safety Board drew up this report, which offers answers to the following investigation questions:

- What agreements are reached before disembarking the pilot and how are these communicated?
- What were the options for action available to the captain of the Nord Taurus when he discovered the risk of collision?



## 2 LEVANT FACTS AND BACKGROUND INFORMATION

### Vessels, crew and pilotage

#### 2.1 Pollux

The Dutch pilot cutter Pollux was built in 2013 by the Barkmeijer shipyard in Stroobos (see Appendix A for further details of the vessel). She is a sister vessel to the Polaris and the Procyon, the so-called P-class pilot station vessels. These vessels are moored permanently at sea and serve as embarkation and disembarkation point for pilots. At the time of the accident, there were 22 persons on board (20 crew members, including the crew members of the SWATH<sup>3</sup> not on duty at that time, and 2 pilots), all of Dutch nationality. The vessel operates under the management of the Nederlands Loodswezen and is responsible for piloting activities in the Scheldemonden region.



Figure 3: Pilot station vessel Pollux. (Source: Kees Torn, Wikipedia)

3 Small Waterplane Area Twin Hull, is a twin-hull ship design that minimizes hull cross section area at the sea's surface.

### **P-class pilot station vessels**

The P-class pilot station vessels are stationed at the pilot station, at sea. In the Scheldemonden region there are two P-class pilot station vessels available. The P-class pilot station vessels do not themselves tie up alongside the ship to be piloted, but embark and disembark the pilot by means of a pilot's dinghy, a small boat suspended from the side of the pilot station vessel.

The P-class vessels are equipped to exchange crew members with the SWATHs. They serve as watch accommodation for pilots and as overnight accommodation for the crews of the SWATH. The crews of the pilot station vessel and of the SWATH operate a watch roster of 8 hours on and 8 hours off. The SWATH ties up alongside the pilot station vessel at 04.00 hours, 12.00 hours and 20.00 hours, for the watch change. Shortly prior to the watch change on the SWATH, the watch on the pilot station vessel itself is also changed.

## **2.2 Perseus**

The Dutch SWATH Perseus is a pilot tender built by Abeking & Rasmussen in Lemwerder (Germany) in 2006. The Perseus is a sister ship to the Cetus. The vessel operates under the management of the Nederlands Loodswezen and is responsible for piloting activities in the Scheldemonden region. The Perseus was part of the pilotage operation at the moment of the collision.



Figure 4: SWATH Perseus. (Source: Alf van Beem, Wikipedia)

### 2.3 Nord Taurus

The bulk carrier Nord Taurus, sailing under Panamanian flag, was built in 2016 in Japan at the Imabari yard, and has a length of 229 metres (43,471 GT). See Appendix B for further details of the vessel. The Nord Taurus is operated by Fleet Ship Management Ltd., Singapore. At the time of the collision, the crew of the Nord Taurus consisted of 21 crew members, of three different nationalities. The Nord Taurus was travelling from Ghent, Belgium to Murmansk, Russia, under ballast.



Figure 5: Nord Taurus. (Source: Patrick Deenik)

### 2.4 Nederlands Loodswezen (Dutch Pilotage Service), Scheldemonden region

The registered pilots of the Scheldemonden region (River Scheldt) operate in all ports on the Westerschelde and in the Oosterschelde area. Piloting services are provided by both Dutch and Flemish registered pilots. The close collaboration between the Flemish and Dutch pilots starts at the mouth of the Westerschelde, where the pilot stations Wandelaar and Steenbank are located. The Flemish pilot service is responsible for the Wandelaar station, which is positioned off Ostend. The Scheldemonden region of the Nederlands Loodswezen is responsible for pilotage services from the Steenbank station, located 12 miles from Westkapelle. Both Dutch and Flemish registered pilots operate from the two stations at sea.

From the Schelde Coordination Centre in Flushing, a registered pilot and vessel traffic coordinators employed by Rijkswaterstaat (RWS) control shipping. The registered pilot (acting as Steenbank pilot) and the staff of the coordination centre work closely together to provide traffic guidance, creating a chain operation from sea to berth.

In the Scheldemonden region, pilots are transported to and from the ships to be piloted by three types of vessels, depending on the location and situation.

1. Tenders: in the roads of Flushing, pilots are transported by tenders. Two Flemish-flagged and one Dutch-flagged tenders are available for this purpose.
2. Cutter: at the Steenbank station, the pilot is transported to and from the vessels to be piloted by a P-class pilot station vessel, equipped with fast dinghies or
3. by a SWATH.

At the pilot stations, pilots are transported to and from seagoing vessels by a number of permanently available pilot vessels, up to wave heights of around 3.5 metres. In the Scheldemonden region there are, next to the two P-class pilot station vessels, two SWATHs available, the Perseus and the Cetus. There is (almost) always one cutter (P-class) and one SWATH available at the pilot station at sea.

#### *Internal investigation Nederlands Loodswezen*

Following the collision, the Nederlands Loodswezen itself launched an internal investigation and drew up a report of the accident, followed by an evaluation and an evaluation report. The Dutch Safety Board received these documents.

## 3 THE OCCURRENCE

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In the evening of 20 January 2018, at 19.48 hours, the bulk carrier Nord Taurus sailing under Panamanian flag set sail from Ghent, under pilotage. The Nord Taurus had unloaded its cargo in Ghent and was set to sail to Murmansk in Russia, in ballast condition. After passing the lock in Terneuzen, the ship set sail for the roads of Flushing. On the Flushing roads, a pilot change took place and at 00.38 hours in the morning of 21 January 2018, the new pilot came on board in order to guide the vessel further out to sea, from Flushing. The Nord Taurus left the Westerschelde via the Wielingen (taking the westerly route due to the draught of the vessel) and then followed a northerly heading towards the Steenbank pilot station. At the pilot station, the pilot was due to be disembarked by the SWATH Perseus, from which point onwards the Nord Taurus would continue its journey to Murmansk, without further guidance.

### **Choice of SWATH or dinghy**

With every vessel that enters the Scheldemonden region and takes a pilot on board, a decision is taken on which type of pilot vessel should come alongside. A vessel with a freeboard of more than 3 metres is referred to as 'SWATH operable'. This means that the vessel is suitable for the SWATH to moor alongside and that (without instructions to the contrary) the pilot can also be disembarked using the SWATH. In that case, the pilot first contacts the crew of the SWATH about the course to be followed while disembarking the pilot. For other vessels, the pilot is embarked or disembarked via the P-class pilot station vessel.

At 01.25 hours in the morning of 21 January 2018, the Dutch pilot station vessel Pollux was positioned approximately one mile northwest of the Schouwenbank Zuid buoy (SBZ buoy). Between then and 03.45 hours, a series of movements were carried out under pilot guidance, all undertaken by the Perseus or tenders. Three pilots were disembarked, two of whom were then transferred to the Pollux, while a third pilot was transported to an incoming vessel. Throughout this period, the Pollux anticipated the movements of surrounding shipping and on several occasions made space for vessels from which the pilot was disembarked.

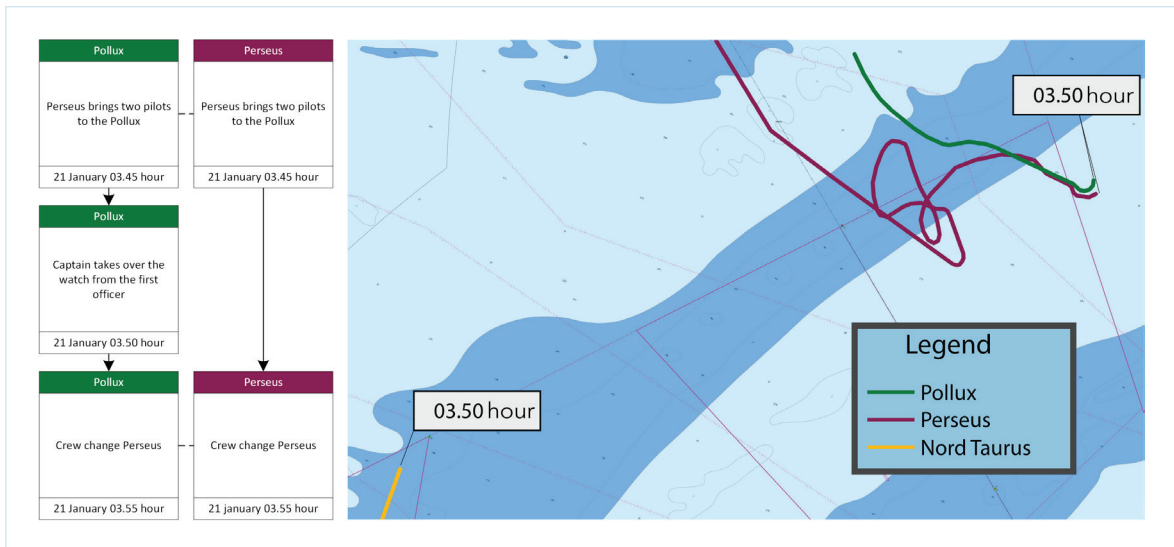


Figure 6: Situation at 03.50 hours LT.

At 03.45 hours, the Perseus came alongside the portside of the Pollux and transferred the two previously disembarked pilots to the Pollux. The Perseus then moved off and the Pollux made a turn to port. From that moment, the Perseus stood waiting for a signal to once again come alongside the Pollux for the watch change. At 03.50 hours, the watch change took place on board the Pollux, whereby the captain took over the watch from the chief officer (Figure 6). Shortly after the watch change on board the Pollux, the watch change also took place on board the Perseus. The crew of the Perseus that had completed its shift came back on board the Pollux, and the new crew transferred from the Pollux to the Perseus. Following the crew change, the Perseus set course to disembark the pilot from the Nord Taurus.

In the meantime the captain of the Pollux wanted to return to the, for him, usual starting position. After the captain of the Pollux saw the Nord Taurus, he plotted a course to cross the Nord Taurus by its bow. At 04.00 hours, the Pollux set a course of  $300^{\circ}$  at a speed of 8 knots (Figure 7). At 04.02 hours, the automatic pilot<sup>4</sup> was activated. The Pollux was sailing with pilot lights on and therefore recognizable as pilot vessel. The captain then focused his attention on his administrative tasks. At that point, the Nord Taurus was sailing on a heading of  $045^{\circ}$  at a speed of 10 knots. To set course for the Perseus to safely disembark the pilot, via the VHF radio, the Nord Taurus was informed by the Perseus to sail on a heading of  $030^{\circ}$  and to maintain a speed of 10 knots. The Nord Taurus then shifted its heading to port, adopting a heading of  $030^{\circ}$ .

4 Heading and track control system.

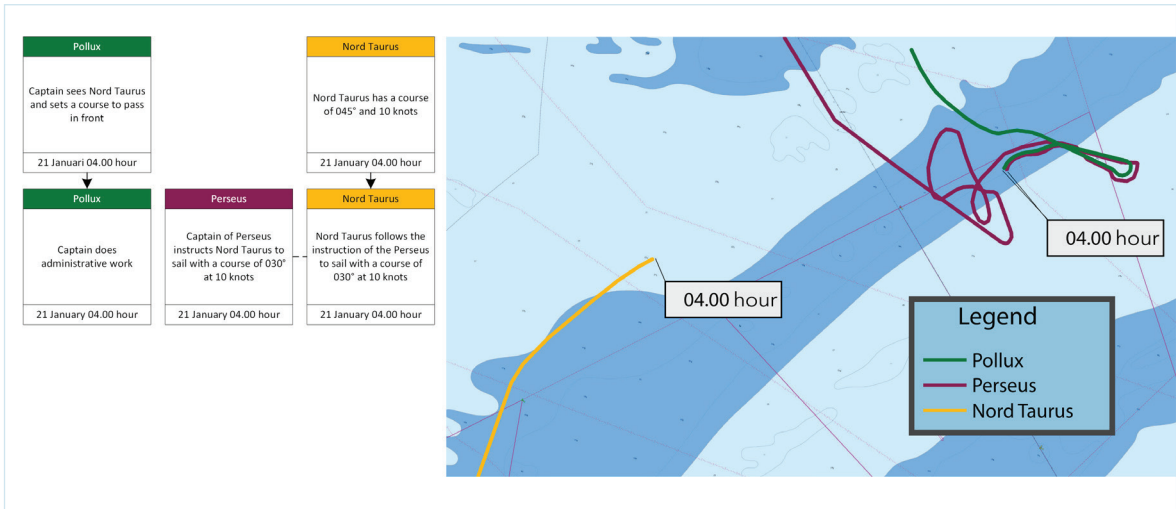


Figure 7: Situation at 04.00 hours LT.

At 04.07 hours, the pilot left the bridge of the Nord Taurus and headed to the point on the deck where he would disembark from the Nord Taurus.

Because the combination of gangway and pilot ladder on board the Nord Taurus was hung low, the crew of the Perseus had to be particularly careful to ensure that the pilot could be safely brought on board. The long gangway and pilot ladder increased the risk that the Perseus could damage the gangway. At 04.11 hours, the pilot had disembarked from the Nord Taurus, onto the Perseus (Figure 8). The Perseus then cast off from the Nord Taurus. After the pilot had been safely disembarked, the captain of the Nord Taurus issued the order port 20, in order to adopt a heading of 350°, as had been advised by the pilot, before he disembarked.

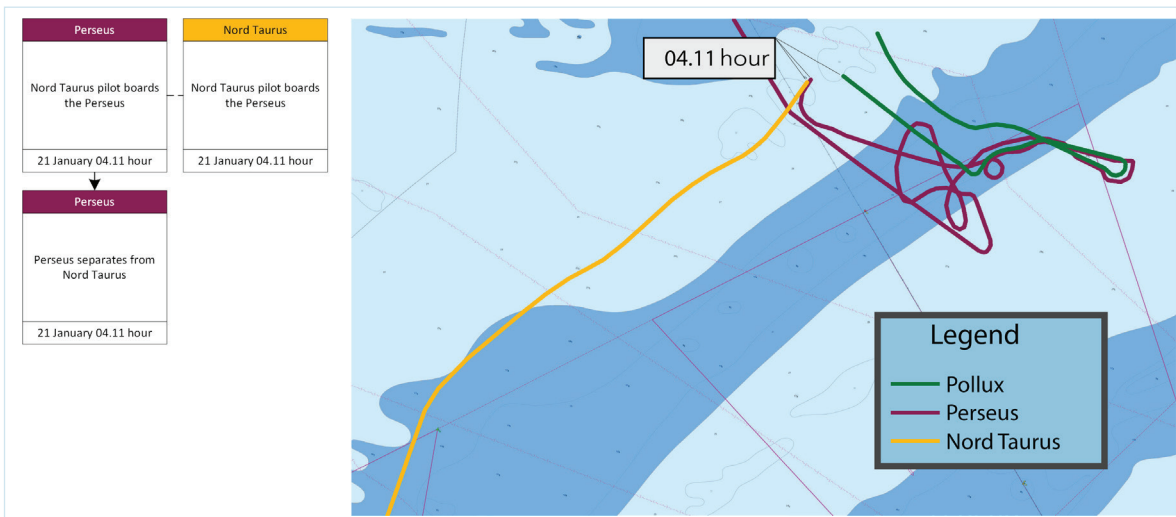


Figure 8: Situation at 4.11 hours LT.

The Pollux continued along the same heading at the same speed, on the automatic pilot. At 04.12 hours, the collision occurred between the Pollux and the Nord Taurus whereby the starboard bow of the Nord Taurus came into contact with the portside of the Pollux (Figure 9). On board the Pollux a number of crew members suffered minor injuries; there were no injuries on board the Nord Taurus. The Pollux suffered severe damage to its

portside (see Figure 10). Immediately following the collision, the crew of the Pollux completed the checklist from the emergency procedure manual, which included an inspection for leaks. Contact was also sought with the coastguard and the Traffic Centre Steenbank, to report the collision. Because the Pollux had suffered no leaks, and because propulsion and steering were still working correctly, the Pollux sailed to Flushing, under its own power. The Nord Taurus anchored off the Steenbank, with slight damage to her bow.

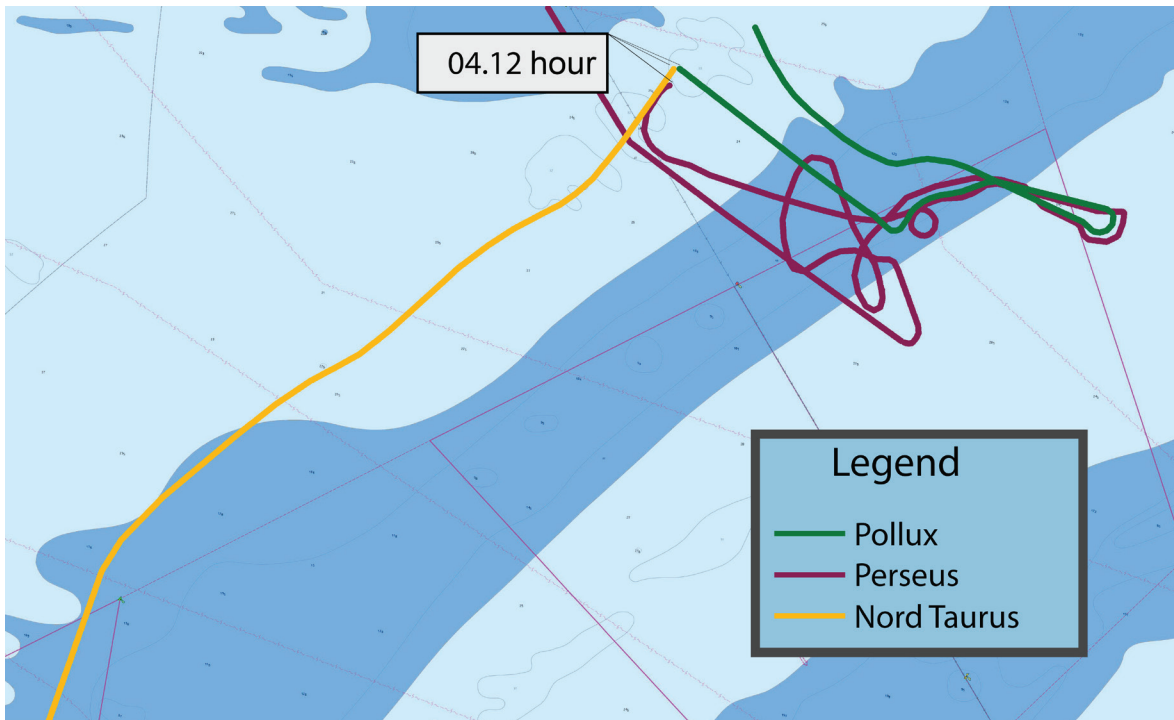


Figure 9: Situation at 04.12 hours LT, the collision.

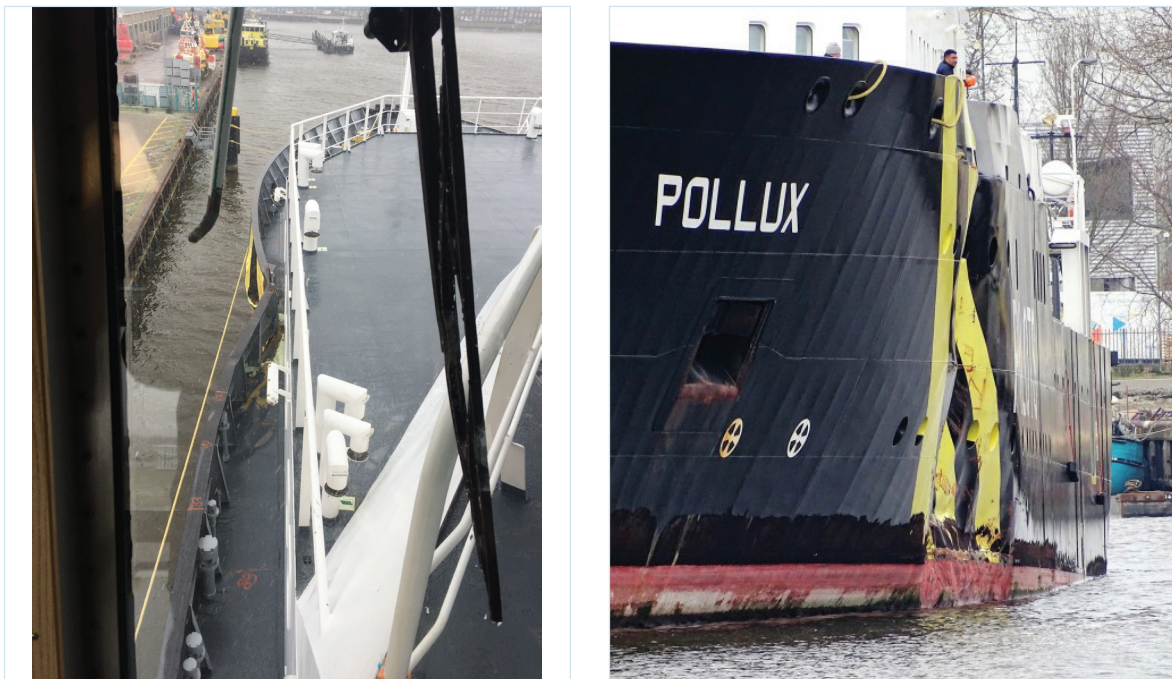


Figure 10: Damage to the Pollux. (Source righthand picture: Kees Torn)



Using the TRIPOD incident analysis method, the failing safety measures, the direct causes, the circumstances and the underlying factors were investigated. To analyse the collision between the Nord Taurus and the Pollux, the accident was considered both from the perspective of the Nord Taurus and the perspective of the Pollux and Perseus.

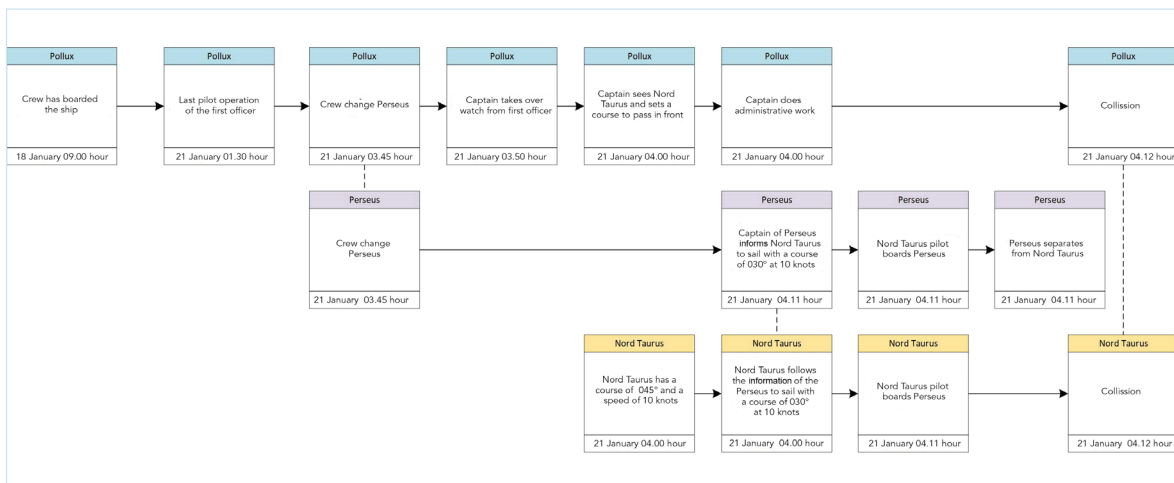


Figure 11: Timeline, leadup to the collision.

## 4.1 The perspective of the Nord Taurus

At the moment of the collision, the Nord Taurus was sailing on the lee course of 030°<sup>5</sup>. The crew on board the Nord Taurus had seen the Pollux. The Pollux was approaching the Nord Taurus from starboard. Under normal circumstances the Nord Taurus had to give way to a vessel that is on its starboard side. Information gathered during the investigation revealed that on board the Nord Taurus, it was assumed that the Pollux would give way. Based on the relevant articles of the Convention on the International Regulations for Preventing Collisions at Sea (Colregs) this is logical: rule 18 (b) (ii) of the Colregs contains the provision that – with a few exceptions – vessels need to give way to a vessel restricted in her ability to manoeuvre. In this case the Nord Taurus was restricted in its ability to manoeuvre, because it was engaged in replenishment or transferring persons (rule 3 (g) (iii) of Colregs). The fact that the pilot lights on the Pollux were on, was another contributing factor to the assumption of the crew of the Nord Taurus that the Pollux was engaged in the pilot operation and therefore knew that the Nord Taurus was disembarking a pilot.

In the Colregs rule 8, Action to avoid collision, also states that, despite the exceptions, ‘any action to avoid collision shall be taken’. For the Nord Taurus it was not desirable to

<sup>5</sup> The pilot of the Nord Taurus was informed by the Perseus about the suitable lee course at that moment.

deviate from the lee course just prior to the disembarkation of the pilot (04.11 hours). Part of the pilotage operation was to follow the advised lee course, so that the Perseus could come alongside safely, to disembark the pilot from the Nord Taurus. Via the pilot ladder, the pilot would transfer from the Nord Taurus to the Perseus, with the Perseus alongside the Nord Taurus. While the pilotage operation is underway, it is unusual and potentially risky to change course. Although at the moment of the collision, the pilot was already on board the Perseus, and the Perseus had already disconnected from the Nord Taurus, only a short time had passed between the completion of the pilotage operation and the collision. As a result, the Nord Taurus had no more time to change heading, following completion of the pilotage operation.

Also the pilot that had transferred from the Nord Taurus onto the Perseus just before the collision, assumed that the Pollux would give way. Before the pilot leaves the bridge, the pilot must take the necessary precautions so that the vessel can sail a safe course for some time after disembarkation. During the handover to the captain, the pilot issued a number of final recommendations, informing the captain that there was 'no traffic'. This information was passed on despite the fact that the Nord Taurus and the Pollux were on collision course. This fact indicates that the pilot did not view the Pollux as a normal participant in shipping traffic, but as a pilot vessel involved in the pilotage operation.

The situation in the Schelde area whereby two independently operating pilot vessels are present on a regular basis at practically the same location, happens regularly in the Schelde area, but is unusual outside this area. For a captain, too, this is therefore an unusual situation that can result in confusion. For other participants in the pilotage operation, the situation is also unclear, as demonstrated by the comment from the pilot that there was no traffic. It is therefore not surprisingly that the captain of the Nord Taurus assumed that the Pollux was involved in the pilotage operation. As a consequence, he felt no need to warn the Pollux that the two vessels were on collision course.

The Pollux was sailing with its pilot lights on and the Nord Taurus was involved in the pilotage operation. It would have been unusual and possibly risky for the Nord Taurus to deviate from the designated heading. Both the pilot and the crew of the Nord Taurus assumed that the Pollux was involved in the pilotage operation. They therefore assumed that the Pollux would not hinder the Nord Taurus. Although the Nord Taurus, according to rule 18 of the Colregs, was the stand-on vessel, but nonetheless according to the same Colregs had to take any action to avoid a collision, it is understandable that the Nord Taurus maintained the designated course because of the disembarkation of the pilot.

## **4.2 The perspective of the Pollux**

Around twenty minutes before the collision, the captain of the Pollux took over the watch from the chief officer. At around 04.00 hours, the Pollux changed heading to 300°, to return to the normal starting position for the captain, which at that moment meant that

the Pollux would cross ahead of the Nord Taurus. The automatic pilot was then activated. However, at practically that same moment, the Nord Taurus was issued with the information about the lee course of 030°. This alteration of the course meant that the Pollux and Nord Taurus found themselves on a collision course.

The change in course by the Nord Taurus was not observed on board the Pollux, although it could be heard via the VHF radio on the bridge of the Pollux. The captain was focused on an administrative task relating to the pilot cutter, and assumed that the Pollux would cross ahead of the Nord Taurus. Because as a pilot cutter it was common for the Pollux to sail close to other vessels, the alarm to warn of potential collision risk (CPA alarm, Closest Point of Approach) was switched off. The captain of the Pollux noticed the potential collision only seconds before it happened. He managed to reverse the engine, but couldn't prevent the collision. In addition to the captain there was no second lookout on the bridge of the Pollux, who could have observed the threatened collision. This lookout is in fact required by law<sup>6</sup>, but turns out not to have been deployed. Despite the obligation, it is recorded in the *Bridge Routine Standard Watch Orders* on the Pollux: "At all times maintain a good lookout. When circumstances allow it, navigation is permitted with a 1-man watch. The officer of the watch must be authorized". This perhaps explains why only one person was walking the watch.

The Pollux came in from starboard, however the Nord Taurus was engaged in replenishment or transferring persons and was therefore restricted in its manoeuvrability. Based on rule 18 (b) (ii) of Colregs the Pollux, should have given way to the Nord Taurus, due to the restricted manoeuvrability of the Nord Taurus. The Pollux failed to do so because the alteration to the advised lee course of the Nord Taurus went unnoticed. The Pollux therefore didn't recognize the vessels were on a collision course.

Although there was no rush, and despite the fact that the position of the Pollux was not unusual, and the Nord Taurus was involved in a pilotage operation, the captain of the Pollux still decided to sail to his preferred starting position where the pilot station is virtually located, ahead of the Nord Taurus. This repositioning manoeuvre was not in fact necessary at that time.

The Pollux and the Perseus operate independently of one another. Nonetheless, because of the crew changes, they are sometimes located close together. This also was the case just before the collision. The captain was not aware of the fact that as a pilot cutter, the Pollux could be viewed as part of the pilotage operation by other participants in the pilotage operation. He therefore wasn't aware of the fact that the pilot on board the Nord Taurus would inform him if they were on a collision course, because the pilot on board the Nord Taurus assumed that a pilot vessel like the Pollux would monitor the ongoing pilotage operation and facilitate it where necessary.

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6 STCW Code Chapter VIII, section A-VIII/2.

The Pollux wasn't involved in the ongoing pilot operation, but did sail with its pilot lights on. The CPA-alarm was, for understandable reasons to the captain, switch off. The Pollux was sailing on automatic pilot. The change in course by the Nord Taurus to the advised lee course, went unnoticed on board the Pollux, because the captain was focused on administrative tasks and there was no second lookout. The captain of the Pollux noticed the potential collision only seconds before it happened, but couldn't prevent the collision.

### **4.3 The perspective of the Perseus**

Although the Perseus was in a position to warn the Pollux, the crew members needed to focus all their attention on the low-hanging combination of gangway and pilot ladder. Only after the pilot had stepped on board, and the Perseus turned away from the Nord Taurus did they realize that the Pollux had come very close. Nonetheless, even at that time, no contact was sought with the Pollux because they were confident in the seamanship of the captain of the Pollux. The crew of the Perseus assumed that the Pollux would take account of the pilotage operation. When the crew of the Perseus realized that the Pollux did not intend to change course, it was too late to issue any communication.

On board the Perseus, the crew members had to focus all their attention on the safe transfer of the pilot as a result of the low-hanging combination of gangway and pilot ladder. In addition, they were confident that the Pollux would take account of the presence of the Nord Taurus, and therefore saw no reason to make contact with the Pollux.

### **4.4 An unusual situation**

For the efficiency of pilotage operations in the Scheldemonden region, the Nederlands Loodswezen has opted for the simultaneous deployment of a pilot cutter and a SWATH. The crew of the SWATH works according to a shift roster of 8 hours on and 8 hours off. Without the pilot cutter, the SWATH would be required to return to the port of Flushing for every crew change. Because the pilot cutter and the SWATH pilot the same area, and therefore remain close to one another, the crew changes are achieved far more quickly.

However, this does mean that the two pilot vessels regularly find themselves close together, both for crew changes on the SWATH and for disembarking pilots from the SWATH to the pilot cutter and vice versa. Occasionally a tender moors alongside the pilot cutter, to transport surplus pilots to shore. This is an unusual situation for shipping, especially for vessels not well versed in the situation in this area. If the crew on the ship believes that both the SWATH and the P-class pilot station vessel are involved in the pilotage operation, while the crew on board the P-class pilot station vessel do not see

themselves as part of that operation, the result can be confusion. In this way, various groups of people may see an imminent collision developing, but nonetheless fail to communicate the fact to the pilot vessel. Assumptions made by those involved, which were not tested, made an important contribution to this incident.

A situation whereby two vessels that are clearly recognizable as pilot vessels are located close together for reasons of efficiency during a pilotage operation is unusual in the world of shipping, but is a regular occurrence in the Scheldemonden region. This situation can lead to confusion in the minds of crew members of other vessels involved in the pilotage operation; in this case, the Nord Taurus and the Perseus. The Pollux was recognizable as a pilot boat and against that background was also perceived as being involved in the pilotage operation. Moreover, the pilot who switched from the Nord Taurus to the Perseus also assumed that the Pollux would monitor the ongoing pilotage operation and facilitate it where necessary. Therefore, in his final recommendations to the captain of the Nord Taurus, he indicated that there was "no traffic" even though the Pollux was nearby at the time. The Pollux, on the other hand, did not consider itself involved in the pilotage operation. The high-risk situation and the imminent danger of collision were therefore poorly assessed by all three ships involved.

## 5 CONCLUSIONS

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The collision between the Nord Taurus and the Pollux could take place because the captain of the Pollux noticed too late that there was an imminent danger of a collision, so that he could not give way in time. Moreover, the crew as well as the pilot of the Nord Taurus assumed that the Pollux would monitor the ongoing pilotage operation and facilitate it where necessary and therefore would not hinder the course of the Nord Taurus. The high-risk situation and the imminent danger of collision were therefore poorly assessed by all three ships involved.

From the investigation it is made clear that prior to the disembarkation of the pilot, no specific agreements were made regarding the disembarkation. As usual the pilot inquired about the recommended lee course (in this case with the Perseus) and advised the captain of the Nord Taurus about the continuation after the pilot had disembarked. Communication about the lee course was done on a public channel on the VHF and was thus audible on the bridge of the Pollux. In addition, the provisions in the Colregs are intended to clearly lay down priority rules, so that they do not have to be negotiated at the last minute.

According to the Colregs the Pollux had to give way, despite being on the Nord Taurus' starboard side. The captain of the Pollux didn't notice the change of course by the Nord Taurus to the advised lee course. The absence of a second lookout, the CPA-alarm being switched off and the administrative work done by the captain is inconsistent with the STCW-code. It ensured that nobody on the Pollux was aware that a collision would occur on the courses ahead. Once the captain realized the danger, he set the engines in reverse, but this could not prevent the collision.

The crew and pilot of the Nord Taurus assumed that the Pollux, as a pilot vessel, would not hinder the course of the Nord Taurus. The Nord Taurus was confident that the Pollux would give way, because the Nord Taurus was engaged in replenishment or transferring persons, and therefore, according Colregs restricted in its manoeuvrability. Rule 8 of Colregs states that, despite the exceptions, everyone must do as much as possible to avoid a collision. For the captain of the Nord Taurus this meant that he could have diverted, but understandably he did not, in order not to endanger the pilot and the crew of the adjacent Perseus. The only course of action for the captain of the Nord Taurus in this case was to maintain course and speed and to contact the Pollux. The latter did not happen.

The underlying cause of the accident is the unusual situation of the presence of two vessels clearly recognizable as pilot vessels, during the pilotage operation. As a result of this situation, two assumptions arose among the crew members on board the Perseus and the Nord Taurus:

1. the Pollux is part of the pilotage operation and will not disrupt the operation;
2. the Pollux is aware of the disembarkation of the pilot and therefore does not need to be informed of the risk of a collision on the current heading.

Because the perception of the pilotage operation was different for the Pollux and the Nord Taurus, the assumptions were not reflected in the actual situation. The assumptions were also not tested and therefore no active communication took place. On board the Pollux, the captain did not consider himself directly involved in the pilotage operation and his attention was not focused on the changing situation affecting the Nord Taurus and the Perseus, despite the fact that the captain of the Pollux knew that the pilot of the Nord Taurus was about to disembark. On board the Nord Taurus it was assumed that the Pollux actively monitored the pilotage process and would facilitate it where necessary and it was assumed that the Pollux would give way. The pilot of the Nord Taurus, in his final recommendations to the captain of the Nord Taurus, indicated that there was "no traffic", so it is understandable that the captain of the Nord Taurus assumed that the Pollux knew that the Nord Taurus was engaged in the pilotage operation. There was no active communication between the Nord Taurus and the Pollux and the Perseus did not contact the Pollux.

On board the Nord Taurus, it was assumed that the Pollux was part of the pilotage operation, and the crew of the Nord Taurus assumed that the Pollux would avoid the Nord Taurus. For that reason, there was no attempt on board the Nord Taurus to communicate with the Pollux. The Perseus also failed to communicate with the Pollux, because they were confident in the seamanship of the crew of the Pollux.

The current system according to which it is possible for two pilot vessels to be found close together during a pilotage operation can therefore lead to confusion. Even if a pilot vessel is not part of the pilotage operation, but is located nearby if a pilot is due to be disembarked, it will still be recognized as being a pilot boat. On that basis, the perception will be that even if not actually involved in the pilotage operation, the pilot vessel will actively monitor the pilotage operation and facilitate it when necessary. This perception can result in a poor assessment of a hazardous situation.

## 6 RECOMMENDATIONS

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Sailing large ocean-going vessels in certain areas requires specific knowledge of the area, waterways and use by other shipping traffic. This was acknowledged many years ago and this is why compulsory pilotage applies in a large number of these areas all over the world. Pilots are the experts in the sailing areas in which they operate and thus have an exemplary function with regard to shipping safety.

The exemplary function with regard to shipping safety was not in line with the routine action on 21 January 2018. Safety barriers have not been observed, while it is specifically this professional group that must honor these measures.

The captain and crew of a ship in a pilotage operation need to, next to taking their own responsibility, be able to trust that a pilot and the pilot service do everything in their power to enable a safe transfer of the pilot. To all parties involved in and around this pilotage operation, it must be clear how maneuvers will proceed. There should be no room for untested assumptions.

The Dutch Safety Board issues the following recommendations:

*To the Nederlands Loodswezen (Scheldemonden region) and the Agentschap Maritieme Dienstverlening en Kust in Belgium:*


- Jointly formulate further instructions for pilots on how to act if the pilot cutter and the SWATH are in each other's presence in the vicinity of a pilotage process. Promote compliance with this process that is in line with the exemplary role of the Loodswezen. Look specifically at situations where the pilot cutter is nearby, but is not actively involved in the pilotage operation. Bring these instructions under the attention of the Schelde Coordination Centre and the pilots working in the Scheldt area.

*To the Nederlands Loodswezen B.V.:*

- Make an inventory of the pilot vessels on which the Bridge Routine Standard Watch Orders deviate from the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers. Bring Bridge Routine Standard Watch Orders in line with the provisions for keeping a lookout and duties on watch.



## VESSEL DETAILS POLLUX

Vessel Data	Pollux
Photograph:	
Call sign:	PCVH
IMO number:	9496953
Flag State:	Netherlands
Home port:	Flushing
Type of ship:	Pilot cutter
Classification society:	Bureau Veritas
Year of construction:	2013
Shipyard:	Scheepswerf & Machinefabriek Barkmeijer Stroobos B.V. Shipbuilding
Length over all (Loa):	81.20 m.
Length between perpendicular (LPP):	74.93 m.
Width:	13.30 m.
Actual draft:	5.10 m.
Gross Tonnage:	2501
Engines:	4x Caterpillar C32 Alert, 2x Caterpillar C18

Vessel Data	Pollux
Propulsion:	Diesel electric, 2 x fixed propellers,
2 x bow thrusters	5100 kW
Maximum propulsion capacity:	5100 kW
Maximum speed:	16.0 knots
Vessel certificates:	All valid

## VESSEL DETAILS NORD TAURUS

Vessel Data	Nord Taurus
Photograph:	
Call sign:	3EAW9
IMO number:	9782182
Flag Stte:	Panama
Home port:	Panama
Type of ship:	General cargo
Classification society:	Nippon Kaiji Kyokai
Year of construction:	2016
Shipyard:	Imabari Shipbuilding Company Limited
Length over all (Loa):	228.94 m.
Length between perpendiculars (LPP):	222 m.
Width:	32.24 m.

Vessel Data	Nord Taurus
Actual draft:	14.47 m.
Gross Tonnage:	43471
Engines:	Hitachi-Man B&W 6S60ME-C8.2, Turbocharger MET 53MA
Propulsion:	Unknown
Maximum propulsion:	9660 kW
Maximum speed:	14.50 knots
Vessel certificates:	All valid

## COMMENTS ON THE DRAFT REPORT

A draft version of this report, with the exception of the summary, consideration and recommendations, was submitted to the parties directly involved. These parties were requested to check the report for any factual inaccuracies and ambiguities. The draft report was submitted to the following parties:

- Nederlands Loodswezen BV
- Loods
- Nord Taurus

The Board has taken note of the responses received. The responses and explanations are listed in a table which is available on our website [www.safetyboard.nl](http://www.safetyboard.nl).

All comments that were considered relevant by the Board, have been incorporated in the report. Comments that have not been incorporated in the report are also listed in the aforementioned table together with an explanation on the Board's decision.



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