



DUTCH  
SAFETY BOARD

# Two crewmembers overboard in the Baltic

Ms. Marietje Andrea, Baltic



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Ms. Marietje Andrea, Baltic, 5 December 2013

*Den Haag, January 2015*

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*Source cover photo: Dutch Safety Board*

## Dutch Safety Board

The aim in the Netherlands is to limit the risk of accidents and incidents as much as possible. If accidents or near accidents nevertheless occur, a thorough investigation into the causes, irrespective of who are to blame, may help to prevent similar problems from occurring in the future. It is important to ensure that the investigation is carried out independently from the parties involved. This is why the Dutch Safety Board itself selects the issues it wishes to investigate, mindful of citizens' position of independence with respect to authorities and businesses. In some cases the Dutch Safety Board is required by law to conduct an investigation.

### Dutch Safety Board

Chairman:

T.H.J. Joustra  
E.R. Muller  
M.B.A. van Asselt

General Secretary: M. Visser

Visiting address: Anna van Saksenlaan 50  
2593 HT The Hague  
The Netherlands

Postal address: PO Box 95404  
2509 CK The Hague  
The Netherlands

Telephone: +31 (0)70 333 7000      Fax: +31 (0)70 333 7077

Website: [www.safetyboard.nl](http://www.safetyboard.nl)

NB: 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 text will prevail.

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# SUMMARY

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The accident took place between two Dutch maritime vessels in the territorial waters of the Netherlands. This involved a very serious accident as specified in the Casualty Investigation Code of the International Maritime Organisation (IMO) and EU Directive 2009/18/EC. Pursuant to the above, as the flag state the Netherlands has the duty to arrange for a safety investigation. This duty to investigate is also laid down in the Dutch Safety Board Act (*Besluit Onderzoeksraad voor Veiligheid*).

On Thursday 5 December 2013 two sailors from the Dutch motor vessel *Marietje Andrea* were lost after they fell overboard in the Baltic off Sweden. No crewmembers saw this happen. At the moment when they fell overboard, the sailors were probably making their way across the deck hatches to the foredeck. The bridge crew heard the sailors calling for help in the water, and their response included dropping a lifebelt and smoke marker from the bridge into the water and marking the location. The ship also turned about. When the *Marietje Andrea* returned to the Man Overboard (MOB) location, they could not find the sailors there. The sailors were not found in the months following the incident.

Based on the investigation by the Dutch Safety Board, the board deems it reasonable to assume that the crew members were in a location with a risk of falling. Because there was no effective provision against falling overboard at the location in question, they were able to fall over the railing into the water. The risks of a passage over the deck hatches or the risk of falling overboard had not been identified as risks onboard. As a result, control measures were lacking.

After the sailors fell into the water, the crew very quickly carried out a large number of tasks which could have contributed to a successful rescue. However, they omitted to immediately apply a hard turn to the ship and carry out an MOB manoeuvre. As a result, it took longer than necessary to return to the MOB position.

The shipping company has informed the board that following the incident, crews were notified that they are not permitted in principle to be on the deck hatches in order to make their way to the foredeck. Exceptions to this are if passage to the foredeck is necessary but cannot take place via the gangways for exceptional reasons. The incident was also discussed on board by the safety committee.<sup>1</sup> This has led to an additional instruction to always wear a lifejacket when working on deck.

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<sup>1</sup> Article 26e, paragraph 1 of the Schepenwet (Ships Act) stipulates that there is a safety committee on board every ship. The safety committee's most important task is to advise the captain about measures to prevent industrial accidents on board.



Figure 1: Marietje Andrea. (Source: Dutch Safety Board)

## Ship and crew

The family business Rederij Danser van Gent is the owner of the motor vessel Marietje Andrea. Chartering takes place through Wagenborg Shipping B.V. In addition to the Marietje Andrea, the shipping company has two sister ships. The Marietje Andrea was constructed in 2009 at Barkmeijer Shipyards in Stroobos, the Netherlands. During the months prior to the incident the Marietje Andrea carried various types of cargo in the Mediterranean and Europe. The Marietje Andrea has two holds with a total cargo capacity of 5418 GT.

The minimum required crew for the Marietje Andrea is six persons. At the time of the incident there were nine crewmembers on board, six of Dutch nationality and three of Filipino nationality. The official working language on board was English. The Dutch crewmembers spoke Dutch between themselves. The majority of the crew had been sailing for the shipping company for a lengthy period. All crewmembers had the prescribed certificates of competency.

The sailors who fell overboard were 26 and 27 years old respectively. Both came from the Philippines and were related. The older sailor was the most experienced, and served as a mentor to his younger cousin on board. The sailors held the 'deck rating' (STCWII/4) certificate of competency and could both swim. The older sailor had been sailing for the shipping company since 2011. His younger cousin had been on board the Marietje Andrea for several months. Both sailors had a temporary contract with the Danser van Gent shipping company. The Wagenborg employment agency in the Philippines assisted with the recruitment of the sailors.

## Safety management system

The Marietje Andrea has its own safety management system which is certified in accordance with the International Safety Management (ISM) Code. The most recent (external) audit on board took place on 19 October 2012. The Marietje Andrea also has a Risk Inventory & Evaluation (RI&E) prescribed by Dutch law, in which the risks to health and safety on board as identified by the employer are recorded. The RI&E also provides a summary of the measures taken to limit the risks as much as possible. The RI&E was prepared in-house. The obligatory familiarisation on board meant that the crew were familiar with the contents of the RI&E.

## **Weather conditions**

On the morning of the incident it was windy and overcast. There was a westerly wind with a force of 7 Beaufort. The wind would further strengthen during the day. There was a moderate swell with an average wave height of 1 metre. Sunrise on 5 December 2013 was at 08:10 ship's time (07:10 UTC). It was a light at the time of the incident. The temperature of the sea water was around 7 degrees Celcius.

## **Circumstances**

On Thursday 5 December 2013 the Marietje Andrea was sailing in the Baltic on an easterly course of 100°. At 04:00 the first officer relieved the captain, who then went to his cabin to rest. The ship was travelling from Halsvik, Norway, to Riga, Latvia, with a bulk cargo of aggregates (gravel). The planned arrival in Riga was on 6 December 2013.

On the morning of the incident the first officer was on duty on the bridge. The Filipino sailors were instructed by the first officer to carry out cleaning work on the foredeck. Despite the fact that the wind was picking up, the ship was stable. The weather and the deck conditions would be good enough to carry out the work on the foredeck until at least 11:00. But because of the increasing wind they agreed to reassess the situation during the coffee break on the bridge at 10:00.

At 07:45 the two Filipino sailors left the bridge in order to change into red overalls. They did not don a lifejacket or a fall protection harness. The investigation has not otherwise revealed what clothing the sailors were wearing. On the bridge the regular activities took place after breakfast: the cook was cleaning the bridge and the first officer was providing an update report to the shipping company by e-mail.

After the sailors were dressed in the overalls, they attached a hose on the aft deck. This hose ensured that there was always a stopcock open to protect the pump if they were to shut off the hose on the foredeck. A second deck hose was ready on the spreader of the hatch crane in order to be brought forward (see figure 2). There were also an empty bucket and a jerrycan with cleaning product ready on the deck hatch.



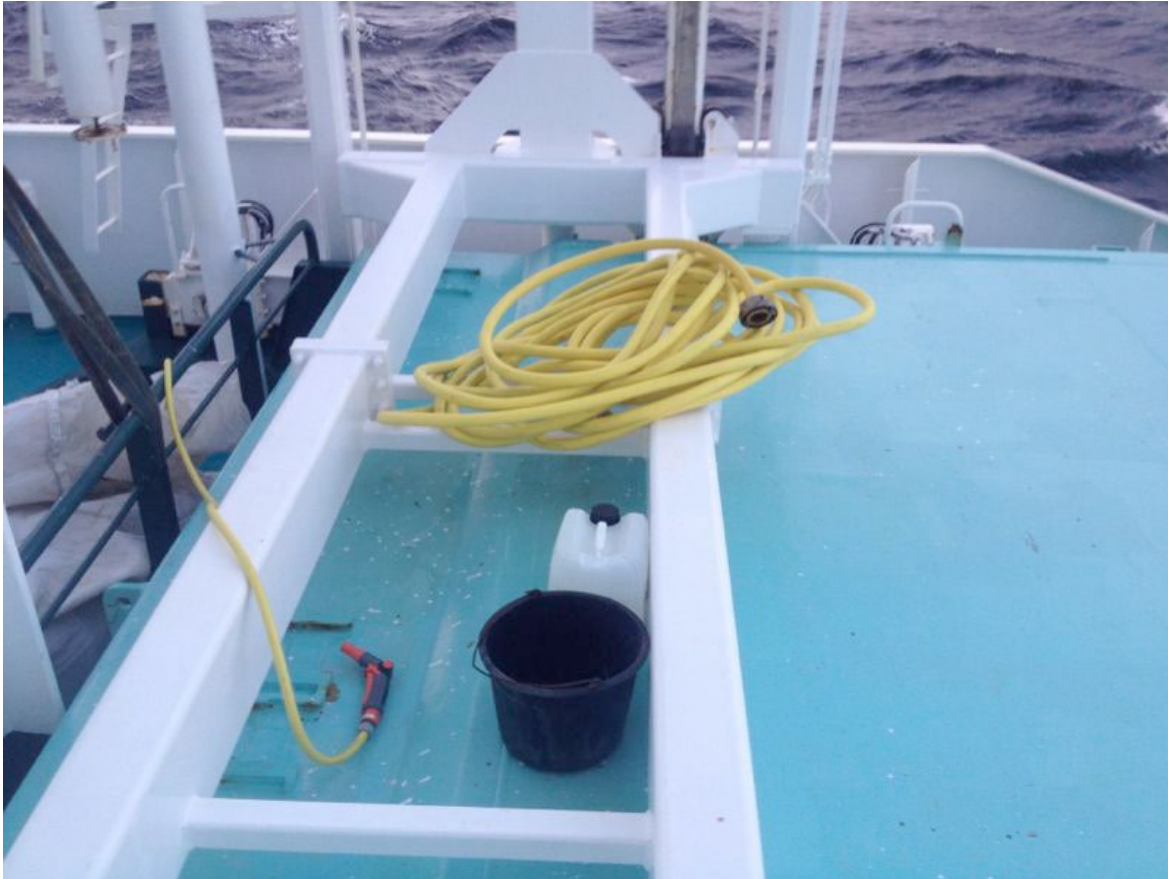


Figure 2: The situation on deck immediately before the incident. (Source: rederij Danser van Gent)

Shortly after 8:00 the cook saw the two sailors walking towards the foredeck over the deck hatch. The first officer on the bridge suddenly heard a shout outside. After hurrying outside, he saw both sailors in the water. At that moment it was 08:26:15.<sup>2</sup> The ship was at the location 55°11.3N, 013°48.1E and was sailing on a course of 100° at a speed of 13 knots. The first officer saw both sailors in the water behind the bridge on the port side and parallel to the ship, with a gap between them of around 2 metres. They were still conscious at that point. The younger sailor was furthest aft.

The first officer then instructed the cook to grab a pair of binoculars and not to lose sight of the two men. He threw a lifebelt and a smoke marker into the water. The first officer then went inside to mark the man overboard location (MOB location) on the electronic sea chart. At 08:27:17 he used the telephone to notify the captain, who was sleeping in his cabin at that time. The cook saw the sailors, but lost sight of the sailors after a while due to distance and the swell.

The Dutch motor vessel 'Delfborg' was sailing about 5 nautical miles behind the Marietje Andrea. At 08:27:29 the first officer contacted the Delfborg on the radio and informed them that they had two men overboard. Using the autopilot the first officer slowly put the ship into a starboard turn at 08:28:08 (1 minute and 53 seconds after the MOB). He

<sup>2</sup> The Marietje Andrea is equipped with a VDR of the brand Danelec (DM400). This system records the ship's position, course, speed, radar image and communications (including the communications by the crewmembers on the bridge) amongst other things. The times and actions taken as cited in the report are largely derived from an analysis of VDR data.

asked the Delfborg to look out for the men in the water. As a result of this (public) announcement the Swedish Coastguard contacted the Marietje Andrea at 08:28:10 with a request for more information about the MOB situation. Over the radio the coastguard verified the identity of the Marietje Andrea, the nature of the emergency and the MOB position. The coastguard then alerted two lifeboats and a rescue helicopter from Denmark. The captain arrived on the bridge during the communication with the Coastguard. He then took over control of the ship and accelerated the starboard turn. He also activated the general alarm to alert the rest of the crew.

At 08:37:43 (after 11 minutes and 28 seconds) the ship returned to the vicinity of the MOB position. The sailors were not found there. In order to refresh the smoke marker, they threw a second smoke marker into the water at 08:48:13. The rescue helicopter arrived on the scene at 09:05. It then immediately started searching in the vicinity of the lifebelt. At around 09:16 a Swedish coastguard vessel took over the coordination of the rescue operation from the Marietje Andrea.

At 12:20 the Marietje Andrea found its own lifebelt again for the second time that day. In the course of the afternoon, as darkness set in, the Coastguard stopped the search operation at 16:24, after which the ship set course for Riga. The missing crewmembers have not been found in the months following the incident.

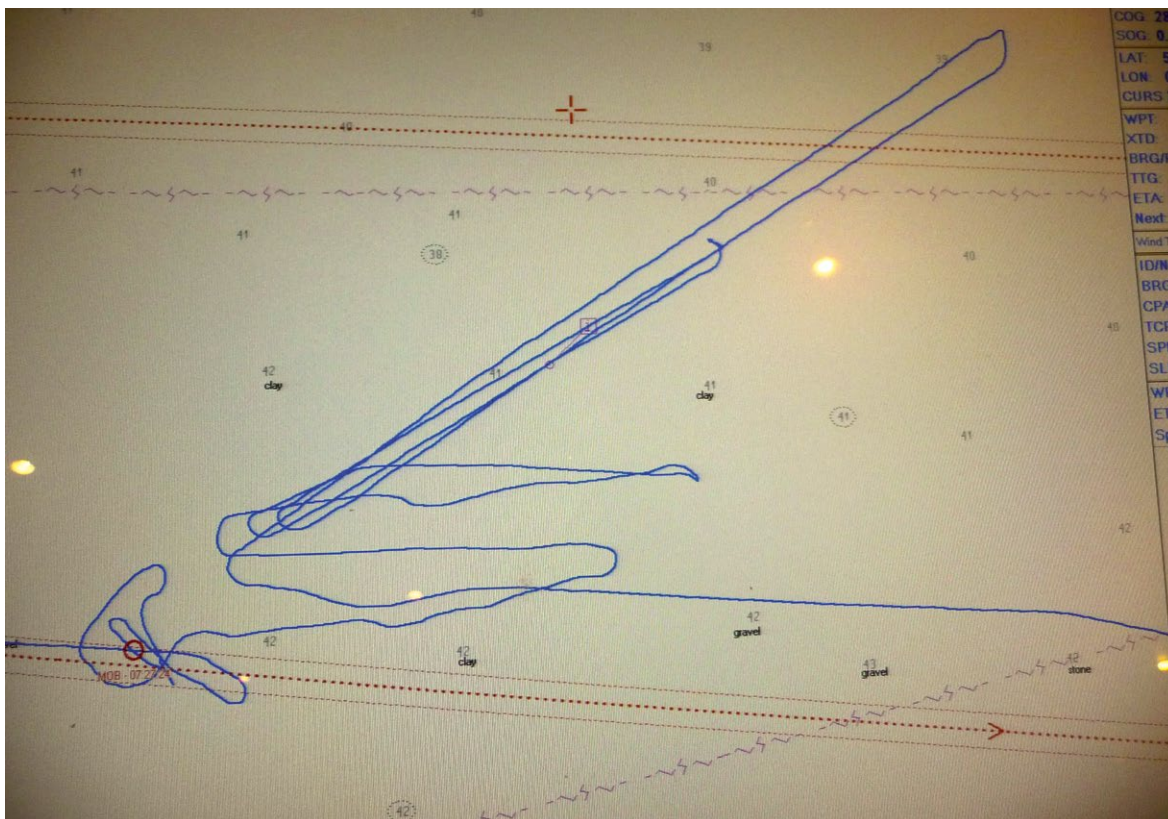


Figure 3: The MOB location and the Marietje Andrea's search path. (Source: rederij Danser van Gent)

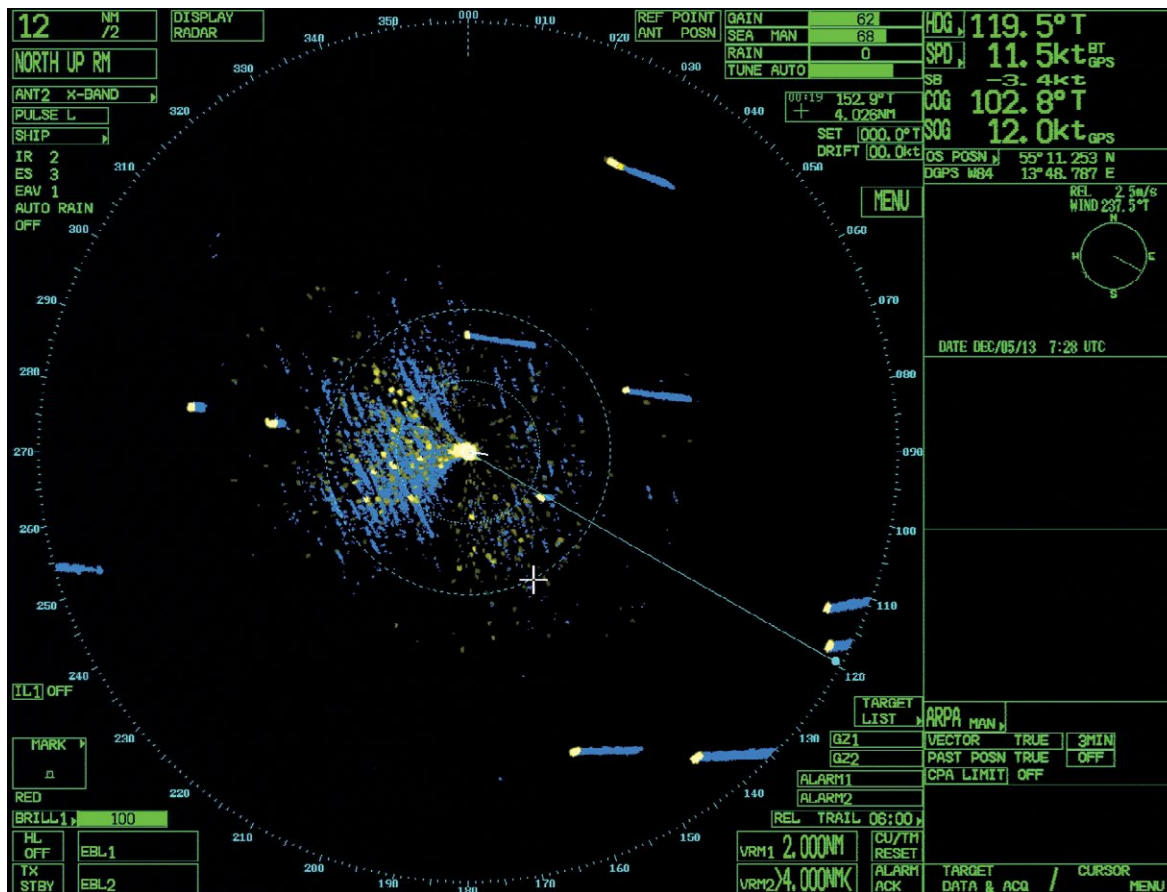


Figure 4: Radar image of the Marietje Andrea at the time of the MOB. With the echoes (including the Delfborg at around 5 miles) of the ships sailing in the vicinity. (Source: rederij Danser van Gent)

## Shipping company's action following the incident

As a result of the incident, the shipping company immediately alerted the ships' crews to the danger of falling overboard. This later led to the safety instruction that a lifejacket and a helmet must always be worn when working on deck. The shipping company also indicated that a passage over the deck hatches to the foredeck is not permitted in principle. Exceptions to this are if passage to the foredeck is necessary but cannot take place via the gangways for exceptional reasons (water or protruding deck cargo in the gangways). The incident was also discussed on board by the safety committee.<sup>3</sup> This has led to an additional instruction to wear a lifejacket when working on deck if the circumstances require it.

<sup>3</sup> Article 26e, paragraph 1 of the Schepenwet (Ships Act) stipulates that there is a safety committee on board every ship. The safety committee's most important task is to advise the captain about measures to prevent industrial accidents on board.

## The fall overboard

Nobody actually saw the sailors fall. The precise cause of the fall could therefore not be established with certainty.

The sailors had two options for the passage to the foredeck. They could walk forwards along the port gangway (figure 5 left-hand photo) or opt for a passage over the deck hatches (figure 5 right-hand photo). The crew have stated that both options were regularly used by the crew. In view of the fact that the cleaning materials (hose, bucket etc.) were found on the spreader of the hatch crane and the routine nature of a passage over the deck hatches, the Board deems it reasonable to assume that the sailors adopted the latter option. All the more because the gangway had a narrowest width of 70 centimetres (by the boarding ladder), which would have made it a difficult passage for the sailors with the stiff and heavy hose.



Figure 5: The two options for a passage to the foredeck. Via the gangway (L) or over the deck hatches (R).  
(Source: Dutch Safety Board)

The ship has a sea rail which is intended to protect the crew against the risk of falling overboard. This rail is 110 centimetres high and offers effective protection against falling when passing along the gangway. However, the sea rail does not offer any protection

from falling when passing over the deck hatches. The deck hatches are approximately the same height, whereby the gangway is narrow. In order to still enable a safe passage over the deck hatches, it was customary on board the *Marietje Andrea* to stretch a guide rope over the deck hatches in bad weather. However, the guide rope had not yet been placed on the morning of the incident. There was no indication that the weather conditions would inherently make a passage over the deck hatches without a guide rope dangerous or irresponsible because of a swaying ship or greater slipperiness. This may have contributed to the fact that additional fall protection for the sailors was not present on the morning in question.



*Figure 6: Suspected last position of the sailors on the deck hatch before they fell overboard. (Source: Dutch Safety Board)*

Following the fall overboard, the first officer saw the sailors very close together (approx. 2 metres). It is very likely that they entered the water at the same time. The speed of the ship was around 6 m/s at the time of the MOB, making it very unlikely that the older sailor jumped in after his young cousin.

The absence of heavy weather combined with the suspicion that both sailors fell overboard simultaneously makes this an unusual incident. It shows mariners once again that they must be conscious of the risk of falling (overboard) at all times and that they should primarily not be in a location where there is a risk of falling, particularly not if effective protection against falling is absent.

## The MOB manoeuvre

As soon as an MOB situation arises, the crew's attention must focus primarily on rescuing the man overboard. The ship often has to carry out a manoeuvre in order to return to the MOB location. There are various 'standard' MOB manoeuvres. The most common manoeuvres are the Williamson turn and the direct MOB turn (also called the Anderson turn). These manoeuvres were known on board the *Marietje Andrea*. Both manoeuvres must be initiated immediately with full rudder. The choice of manoeuvre depends on the situation.

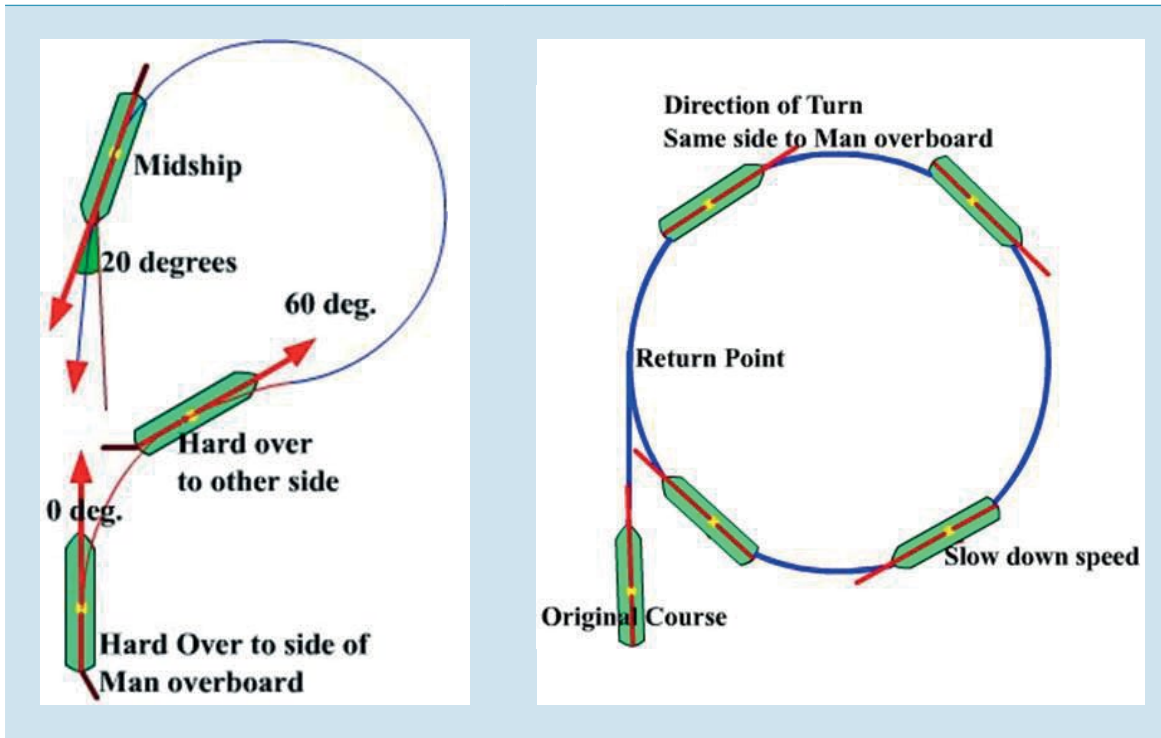


Figure 7: Williamson turn (L) and Anderson turn (R). (Source: [www.thenauticalnauticalsite.com](http://www.thenauticalnauticalsite.com) consulted on 8 July 2014)

The Williamson turn has the characteristic that, provided performed correctly, the ship reaches the MOB position on a reciprocal course. The disadvantage of the Williamson turn is that the ship travels a considerable distance. It therefore takes longer for the ship to return to the man overboard than if the ship performs an Anderson turn. The advantage of the Anderson turn is that it is quick. The Anderson turn is a turn which commences immediately, but it does not guarantee that the ship will actually return to the MOB location. The Anderson turn is therefore only preferable if the weather conditions are good and the bridge crew can continuously maintain visual contact with the man overboard during the turn. An additional advantage of the Anderson turn is that the man overboard sees the ship coming towards them sooner.

The first officer of the *Marietje Andrea* initially responded rapidly to the cries for help from the sailors who had fallen overboard. He carried out a large number of tasks which could contribute to a successful rescue in a short space of time. Hence he instructed the cook not to lose sight of the crewmembers, he threw a smoke marker and a lifebelt into

the water, communicated with nearby shipping and the coastguard, alerted the captain and marked the position on the electronic sea chart and in the log. However, the first officer omitted to immediately apply a hard turn to the ship and carry out an MOB manoeuvre. Hence it took two minutes after the MOB before the MOB manoeuvre was initiated. The ship's available turning momentum was thereby not utilised.

Because the turn was not immediately initiated with hard rudder, the turn which the ship finally made cannot be described as either a Williamson turn or an Anderson turn (see figure 7). The distance travelled was long, and the ship did not return to the MOB location on the reciprocal course. Hence it took 11 minutes and 28 seconds before the ship returned to the MOB location. The Marietje Andrea's manoeuvring book, which includes the Williamson turn, indicates that the ship could potentially return to the MOB location in 5 minutes and 16 seconds (established during test journey under ballast conditions and good weather conditions). The manoeuvre which was carried out therefore took longer than necessary.

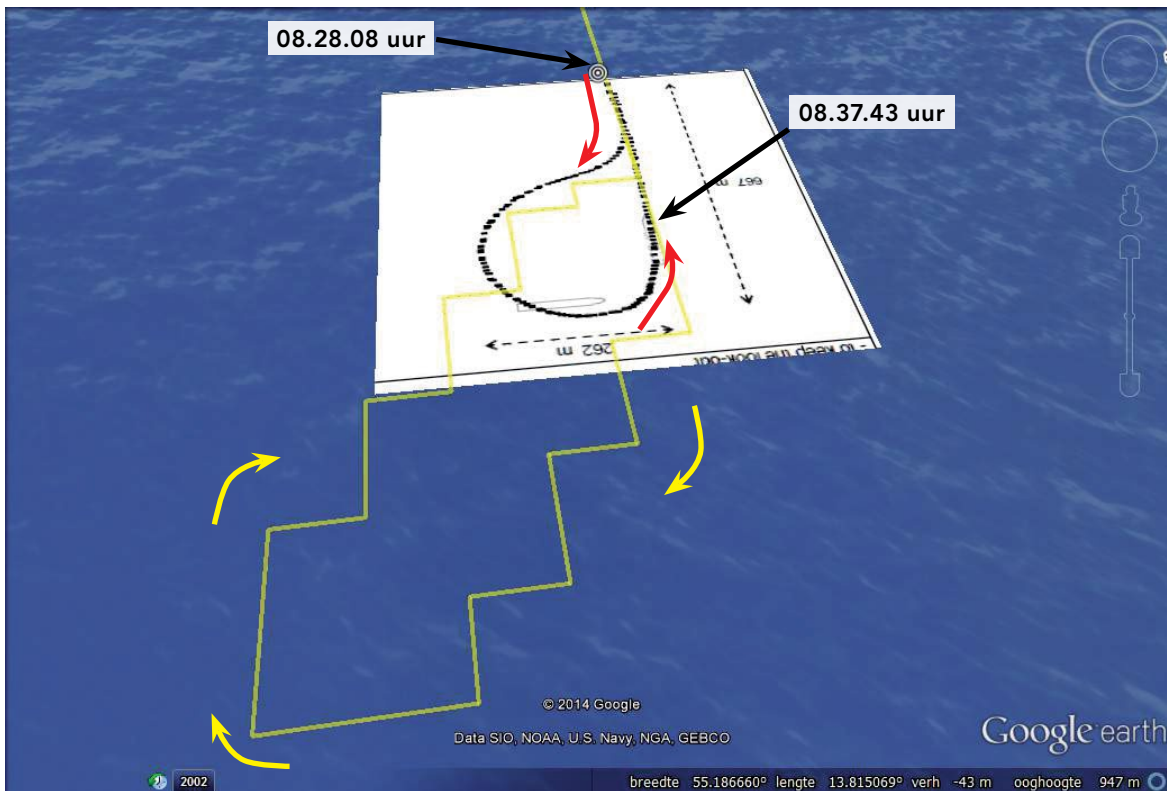


Figure 8: MOB manoeuvre carried out (yellow line with yellow arrows) in relation to the Williamson turn from the manoeuvring book (black line with black arrows). Yellow line is an analysis of positional data from the VDR. (Source: Google earth)

The temperature of the sea water on 5 December at the site of the incident was around 7 degrees. The manner in which the MOB manoeuvre was performed reduced both the likelihood that the ship could find the missing sailors and their chance of survival in the cold water.

SOLAS specifies that drills<sup>4</sup> must correspond to the emergency situation as much as possible and training must be carried out at least monthly<sup>5</sup>. However, the MOB drills on board the Marietje Andrea in the months prior to the incident consisted of discussing the actions of the crew and the lowering of the MOB boat whilst the ship was at anchor or not underway. An MOB situation with a ship underway in good weather conditions was last practiced on 8 July 2013.

Despite the fact that the first officer's workload increased substantially with effect from the MOB and he carried out many actions that could contribute to the successful rescuing of the sailors, not all procedures were followed. Hence there was no general alarm raised on board straightaway by issuing auditory signals on the intercom or the ship's siren, and the proposed sequence of actions following an MOB on the wheelhouse poster was not followed. Finally the MOB manoeuvre was performed in such a way that it took longer than necessary to return to the MOB position.

In view of the fact that the MOB procedures were not all followed correctly, and the limited training value of the MOB drills in the months prior to the incident, the Board questions how proficient the crew were in carrying out an MOB manoeuvre. Only the actual performance of an MOB manoeuvre under various conditions from a ship underway can prepare the crew for an actual MOB situation.

## **Safety management**

The safety handbook contains an RI&E of the activities on board. The RI&E describes the potentially hazardous activities, risks and control measures. The RI&E was drawn up in 2009 and revised in 2011. In order to assess the hazardousness of a risk, a matrix has been drawn up in which likelihood and effect are set against one another.

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- <sup>4</sup> The aim of carrying out drills is to train ship and crew to be ready and knowledgeable in order to effectively deal with the drill situation when it occurs in real life. Internationally the SOLAS regulations stipulate that drills must be carried out on board ships. These regulations serve on the one hand to support the shipping sector by advising on how drills can be conducted effectively, on the other hand the drills are also enforced by the regulations. The regulations stipulate the minimum frequency with which various drills must be carried out. With regard to MOB drills, these include two drills, namely practising the MOB manoeuvre and practising the lowering of the rescue vessel. It is advisable also to carry out these drills together regularly. The underlying thinking behind carrying out drills must not be to carry them out in order to stick to the letter of the law, but in order to be ready when the situation occurs in real life. The IMO has now issued a guideline in order to draw attention to this: MSC1/Circ 1447.
- <sup>5</sup> SOLAS 2.2.1.3 - Chapter III Life-saving appliances and arrangements – 3.1 and Solas III reg 19



### Risk Estimator:

Likelihood	Consequence		
	Slightly Harmful	Harmful	Extremely Harmful
Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
Likely	Moderate Risk	Substantial Risk	Intolerable Risk

The table below indicates the recommended response in each case:

Trivial	No action is required.
Tolerable	No additional controls are required.
Moderate	Efforts are required to reduce risks.
Substantial	Do not start new job with this procedure/material. Reduce the risk, do not use or follow this procedure/materials anymore.
Intolerable	Work should not be started or continued, if improvement is not possible, stop this procedure or using this material.

Figure 9: Marietje Andrea Risk Inventory Matrix. (Source: rederij Danser van Gent)

Various risk-bearing situations have been identified for the situation of 'ship at sea'. This does not include a MOB situation. However, the risk of falling on board has been analysed. The RI&E assesses a fall from height as a 'tolerable' risk. The RI&EA then indicates that no additional control measures are required for this, but that a harness and specific instructions will reduce the hazardousness. The shipping company has stated that walking over the deck hatches was not viewed as a hazardous activity and they did not feel that there was a risk of falling overboard since the ship was equipped with a sea rail with a minimum height of at least one metre.

However, the Board finds it remarkable that the MOB situation in open sea is omitted as a risk from the RI&E, and that a fall from height is identified as an 'acceptable' risk. This is all the more remarkable since a fall overboard is recognised as a real danger amongst crewmembers in the maritime industry. That is why the International Maritime Organization stipulates that crews must train for an MOB situation at least once a month. A higher classification of the risk of falling (overboard) would ensure that appropriate control measures are taken. That did not happen. Added to this is the fact that the cleaning activities on the foredeck and the passage there were viewed as routine. This meant that the risks which could thereby occur were not recognised, as a result of which control measures were absent.

## Risk of falling

According to the Arboret (Working Conditions Act) “a risk of falling in any case exists in the presence of risk-increasing circumstances, openings in floors, or if there is a risk of falling 2.5 metres or more.<sup>6</sup> Although the sailors on the deck hatches were only at a height of around 1.10 metres, the narrowness of the gangway and the suspected simultaneous fall overboard show that the rail did not offer any effective protection against falling overboard if the crewmembers occupied a position on the deck hatches.

Since 1 January 2013 five very serious and 25 serious accidents whereby someone fell from height have been reported to the Inspectie Leefomgeving en Transport (Netherlands Shipping Inspectorate). Five deaths thereby occurred, including the two sailors from the *Marietje Andrea*. A number of these accident also led to (very) serious injuries, including permanent disability.

Date	Ship involved	Victims
27-2-2013	Azoresborg	1
1-8-2013	Cormorant	1
5-12-2013	Jacoba Alyda (UK268)	1
5-12-2013	Marietje Andrea	2

Table 1: Summary of very serious incidents in 2013 whereby someone has fallen from height.

Employers can use the Working Conditions Catalogue (Arbocatalogus)<sup>7</sup> for the risk and measures identified in the RI&E. Work on deck and the risk of falling do not form part of the Working Conditions Catalogue which has been prepared by employers (Koninklijke Vereniging van Nederlandse Reders (Royal Association of Dutch Ship Owners, KVNRR) and employees (the trade union Nautilus International). To date this catalogue only contains working conditions sheets relating to ‘Gantry crane and hatch crane’, ‘Mooring and casting off’ and ‘Use of small lifting equipment and lifting tools’. In the Board’s investigation published in May 2014 into a deadly fall overboard during loading work on board the *Azoresborg* on 27 February 2013 the Dutch Safety Board addressed a recommendation to the KVNRR and Nautilus International to expand the existing Working Conditions Catalogue with a working conditions sheet about the risk of falling, taking account of all circumstances which increase the risk. The KVNRR has informed the Board that it will include information about working at height in the booklet “Dat is Juist”. This booklet is on the list of recommended books (by the Inspectie Leefomgeving en

<sup>6</sup> Arbeidsomstandighedenbesluit (Working Conditions Decree), Article 3.16. Preventing the risk of falling.

<sup>7</sup> The government specifies target prescriptions in the working conditions laws and regulations. It thereby sets out the level of protection and safety that companies need to offer employees so that they can work in safe and healthy conditions. A working conditions catalogue, consisting of working conditions sheets which describe specific activities, employers and employees then work out these regulations in practical terms for their own sector or their own company. In effect they take over the drafting of policy rules from the government. The Working Conditions Catalogue (Arbocatalogus) is thereby a guiding, practical and accessible tool which offers options for complying with the target prescriptions. (sources Stichting van de Arbeid (Labour Foundation) and SER (Socio-Economic Council)).

Transport (Netherlands Shipping Inspectorate - ILT)) on board ships sailing under the Dutch flag. The KVNR has also stated that it is in discussions with Nautilus International on how it can best communicate with ships/companies, and recommendations must be pragmatic. They believe it is better to work on seamanship and safety awareness than just draw up rules.

# CONCLUSIONS

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- Following the investigation, the board deems it reasonable to assume that the crew members were in a location with a risk of falling. Partly because no provisions had been made to make falling overboard impossible, they were able to fall overboard.
- The risks of a passage over the deck hatches or the risk of falling overboard were been identified as risks onboard. As a result, control measures were lacking. This meant that the obligations under the Arboret (Working Conditions Act) were insufficiently met. There is a need to think about under what circumstances passage over the deck hatches is acceptable, and what safety measures are sensible if the choice has been made to travel over the deck hatches.
- After the sailors fell overboard, the crew very quickly carried out a large number of tasks which could have contributed to a successful rescue. However, the crew failed to apply a hard turn to the ship, as a result of which it took longer than necessary to return to the man overboard location.

# RECOMMENDATIONS

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## **To Danser van Gent shipping company**

1. Review the inventory of risks associated with working at height and take steps to limit these risks as much as possible. Thereby pay particular attention to the 'man overboard' situation. Implement these procedures in the safety management system.
2. Ensure that ships' crews are practiced in order to be able to rescue an man overboard in various circumstances, taking account of the statutory periods stipulated for this.

## TABLE OF SHIP'S DATA

Marietje Andrea ship data	
Call sign:	PBWR
IMO number:	9361134
Flag state:	The Netherlands
Home port:	Delfzijl
Ship type:	General cargo with container capacity
Ice class	1A
ISM manager:	Danser van Gent shipping company
Classification society:	Bureau Veritas
Year of construction:	2010
Shipyard:	Barkmeijer Shipyards, Stroobos, the Netherlands
Length overall (LOA):	126.13 m
Length between perpendiculars (Lpp):	120.26 m
Beam:	15.20 m
Actual draught:	6.69 m. (fore), 7,27 m (aft)
Gross Tonnage:	5418
Maximum container capacity	303 TEU
Engines:	MAN B&W 9L27/38
Propulsion:	1 screw – variable speed, 1 bow screw
Maximum propulsive power:	2999 kW
Maximum speed:	14 knots
Ship's certificates:	All valid

## REVIEW OF THE DRAFT REPORT

In accordance with the Dutch Safety Board Act, a draft version of this report was submitted to the parties involved for review. The parties were requested to check the report for any factual inaccuracies and to provide additional information, where applicable. The report was submitted to the following parties for review:

- Danser van Gent shipping company
- Marietje Andrea's captain
- Marietje Andrea's first officer
- Sailors' next of kin
- Koninklijke Vereniging van Nederlandse Reders (Royal Association of Dutch Shipping Companies - KVNR)
- Nautilus International, the trade union for maritime personnel
- Rederij Royal Wagenborg b.v.

With the exception of the sailors' next-of-kin, all parties availed themselves of the option of commenting. The comments received can be divided into the following two categories:

- The Board has adopted corrections of factual inaccuracies, additions in terms of detail and editorial comment (in so far as is relevant). The relevant parts of the text have been amended in the final report. These comments are not listed separately;
- The comments that have not been adopted have been furnished with a response. These responses are set out in the table below. Alongside the verbatim content of the comments, this table also gives the paragraph to which the comment relates, the party from which it comes and the Board's response to the comment.

## Preview responses which have not been incorporated

Preview party	Initials	Argument. Reasoning behind your comment	Comment
Wagenborg and KVNR	Analysis/the MOB manoeuvre	<p>Observations concerning above text; the MOB drill in relation to SOLAS.</p> <p>"SOLAS III/19 Emergency training and drills" deals mainly with abandon ship &amp; fire drills; the following is stated with regard to drilling with rescue boats:</p> <p>3.3.6. As far as reasonable and practicable, rescue boats other than lifeboats which are also rescue boats, shall be launched each month with their assigned crew onboard and manoeuvred in the water. In all cases this requirement shall be complied with at least once every three months.</p> <p>3.3.7. If lifeboat and rescue boat launching drills are carried out with the ship making headway, such drills shall, because of the dangers involved, be practiced in sheltered waters only and under the supervision of an officer experienced in such drills. In practice the drill with the rescue boat will have to take place in port, since this is the safest setting, see also 3.3.7. Drilling with a rescue boat and practising "return to MOB position" are therefore two different drills in practical terms. SOLAS III/19 does not/not clearly require practising "return to MOB position".</p> <p>IMO has apparently also identified the above, since MSC.1/circ. 1447 "Guidelines for the development of plans and procedures for recovery of persons from the water" has now come into effect for existing ships (first survey after 1 July 2014). Reference is made to MSC.1/circs 1182 and 1185.</p> <p>MSC.1/circ.1447 states amongst other things: "The plans and procedures should be considered as a part of the emergency preparedness plan required by paragraph 8 of part A of the ISM-code" and Competence and familiarisation "Drills should ensure that crew are familiar with the plans, procedures and equipment for recovery of persons from the water. Such drills may be conducted in conjunction with routine man-overboard drills".</p> <p>MSC.1/circ 1447 therefore now does provide a clearer, more extensively described requirement to practice more than just the routine MOB drill.</p>	<p>The observations relate to the questions which the board raises about the crew's proficiency in terms of carrying out an MOB situation. Your observations strengthen the Board's view in questioning the crew's proficiency in actually carrying out the MOB manoeuvre.</p> <p>Your observations show that the drills are carried out in accordance with the letter of the law, and that less attention is paid to the desired affect of the drill - ensuring that the crew are prepared for the emergency situation Man Over Board - when carrying out the drills.</p>
KVNR	Factual information	What was the nationality of the other crew members involved? What language was spoken on board? How competent were the sailors in that language?	Specified in the paragraph.
KVNR	Factual information	How much time precisely had he been sailing on the ship? Had he previous sailed on a similar ship?	The times for which the persons concerned had been sailing on the ship are specified. It is clear that the older sailor had extensive experience and acted as mentor to the younger sailor.
KVNR	Factual information/ Circumstances	It would be desirable if the action were shown in a timeline.	Noted, the timeline is recorded in the text.
KVNR	Factual information/ circumstances	<ul style="list-style-type: none"> <li>• Did the first officer say where they should walk, deck or gangway?</li> <li>• Was there discussion of any dangers?</li> <li>• Is it customary to walk over the deck hatches on the ship?</li> <li>• Was a fall protection harness or lifejacket prescribed in the RI&amp;E</li> </ul>	As stated in the report, the first officer indicated that cleaning work needed to be carried out, not how they should do it. With regard to dangers, there was discussion of an evaluation in connection with the worsening weather. The report's analysis described that it was customary to walk to the foredeck over the deck hatches, or along the gangway on the port side of the ship. The analysis also describes that in the RI&E walking over the deck hatches was not viewed as a hazardous activity and there was not felt to be a risk of falling overboard since the ship was equipped with a sea rail with a minimum height of at least 1 metre.
KVNR	Factual information/ circumstances	Was there an option to initiate the manoeuvre quickly from the manoeuvring console on the bridge wing? On some ships this is very easy, and on some not when it is enclosed.	This potential option of operating the ship from the bridge wing is not relevant. The first officer carried out other actions first (lifebelt and smoke marker, instructed cook, marked position, etc.) before the ship was manoeuvred.
KVNR	Factual information/ circumstances	Was the cook already on the bridge? Where did he come from? When did he go outside?	As stated in the report, the cook was engaged in cleaning activities on the bridge and he went outside when the first officer told him to keep an eye on the MOB's through binoculars.



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KVNR	Factual information/ circumstances	Did he also initiate a search pattern? What was done during an drill?	In an MOB situation it is not the first priority to initiate a search pattern; as soon as the ship has turned around and cannot find the MOB, a search pattern needs to be initiated. The analysis in the report states how drills on board were carried out.
KVNR	Factual information/ circumstances	Why was the MOB or general alarm not activated immediately? It may give the man overboard more hope (indirectly a greater chance of survival) to hear the alarm. The man overboard then knows that he/she has been seen. Why was a Williamson turn not initiated immediately? What is specified on the muster list in the event of MOB? Why not first the coastguard and then the Delftborg? Was a procedure list for MOB followed (ICS has an example in the bridge procedures guide)? And was the procedure used during drills?	The actions performed by the first officer are described in the paragraph 'circumstances', the analysis deals with the manoeuvre, the conduct of drills and the RI&E. There was deviation from sounding the general alarm immediately. If this had been done, more people might have been able to keep an eye on the men overboard.
KVNR	Factual information/ circumstances	Did the Swedish coastguard also give instructions in terms of manoeuvres?	The Swedish coastguard did not give any manoeuvring instructions as a result of the emergency call. This is not desirable since the coastguard was not on site at that time and could not adequately carry out the coordination from their position.
KVNR	Analysis/the fall overboard	It would help if this was also shown in a drawing. This also applies to figure 5.	Noted.
KVNR	Analysis/the fall overboard	On page 4 it says "But because of the approaching storm they agreed to reassess the situation during the coffee break on the bridge at 10:00." When (in what weather conditions) was a guide rope usually put up? Or is it company policy that no one should then go to the foredeck?	As stated in the text, it was customary to put up a guide rope in bad weather.
KVNR	Analysis/the fall overboard	Was a particular turn specified on the muster list? What turn was carried out during a drill? Did the first officer also practice it on this ship?	The report states that the crew's proficiency in carrying out MOB drills is questionable. This applies to both the manoeuvre and the other steps to be taken.
KVNR	Analysis/the MOB manoeuvre	Is this the case? We are generally familiar with Williamson and Scharnow.	It is true that there are other possibilities. The Board has merely used 2 examples. The Scharnow manoeuvre is also an efficient turn if someone is lost overboard. The ship rapidly returns to the old course and loses speed once arrived on the reverse course.



DUTCH  
SAFETY BOARD

**Visiting Address**

Anna van Saksenlaan 50  
2593 HT The Hague  
T +31(0)70 333 70 00  
F +31(0)70 333 70 77

**Postal Address**

PO Box 95404  
2509 CK The Hague

[www.safetyboard.nl](http://www.safetyboard.nl)