MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

ACCIDENT REPORT

VERY SERIOUS MARINE CASUALTY | REPORT NO 16/2014 | JUNE 2014

Crewman lost overboard from *Sea Melody* Groveport, River Trent 18 December 2013

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SUMMARY

At 1915 UTC[1] on 18 December 2013, crewman Sergey Gaponov was pulled overboard from the forward mooring area of the general cargo vessel *Sea Melody* **(Figure 1)** when his foot became caught in the bight of a mooring rope as the vessel was shifting berth. Despite an extensive search by the crew, a rescue helicopter, a lifeboat, coastguards and police divers the crewman's body was not found.

The MAIB investigation established that the crewman was unsupervised at the time of the accident and that the crew had not been briefed before the mooring operation began. Also, there was a breakdown in communication between the shore linesmen and the crew, at both the planning stage and during the operation.

Following the accident:

- Associated British Ports (ABP), the Competent Harbour Authority[2] (CHA), made pilotage compulsory for vessels moving between berths on tidal rivers within its area of jurisdiction.
- The vessel's manager, Torbulk Limited, issued instructions to its vessels regarding:
  - the need to hold a briefing about the mooring plan
  - the danger of being caught in a bight of rope during mooring operations
  - the importance of immediately informing harbour authorities and the coastguard when an emergency situation occurs.

In view of the actions taken, no recommendations have been made.

Figure 1: *Sea Melody*

[1] All times are UTC (Universal Co-ordinated Time) unless otherwise stated.

[2] Competent Harbour Authorities were established by the Pilotage Act 1987. A CHA has specific powers and duties for marine pilotage and must issue pilotage directions if it decides, based on its assessment of the risks, that pilotage should be made compulsory in its area of jurisdiction.

FACTUAL INFORMATION

Narrative

Sea Melody arrived at Groveport, River Trent, at 0611 on 16 December 2013 to discharge its cargo of steel products. The vessel was secured, starboard side alongside, with two headlines and two springs forward, and two sternlines and two springs aft. While at the discharge berth orders were received to load cullet for recycling, from the adjacent berth, as the vessel's next cargo.

Cargo discharge was completed at 1600 on 18 December, following which the chief officer went ashore to read the vessel's draught, which was 1.4m forward and 2.4m aft. While on the quayside he met a shore linesman, who advised him of the vessel's required position at the adjacent berth for loading cargo. The linesman also advised on the sequence in which the forward mooring ropes should be transferred from bollard to bollard during the move and the VHF frequency for ship to shore communications during the operation.

At 1830, the master called the crew and prepared to manoeuvre the vessel from the control console on the starboard bridge wing **(Figure 2)**.

It was dark, the flood stream was flowing at a rate of about 2 knots from ahead, and the wind was blowing off the berth and increasing in strength as the operation to move *Sea Melody* began. The master instructed the crew, all of whom carried portable VHF radio sets, to let go the aft mooring ropes and then ordered the forward mooring party, which consisted of a second officer and two seamen, to slack away the headlines.

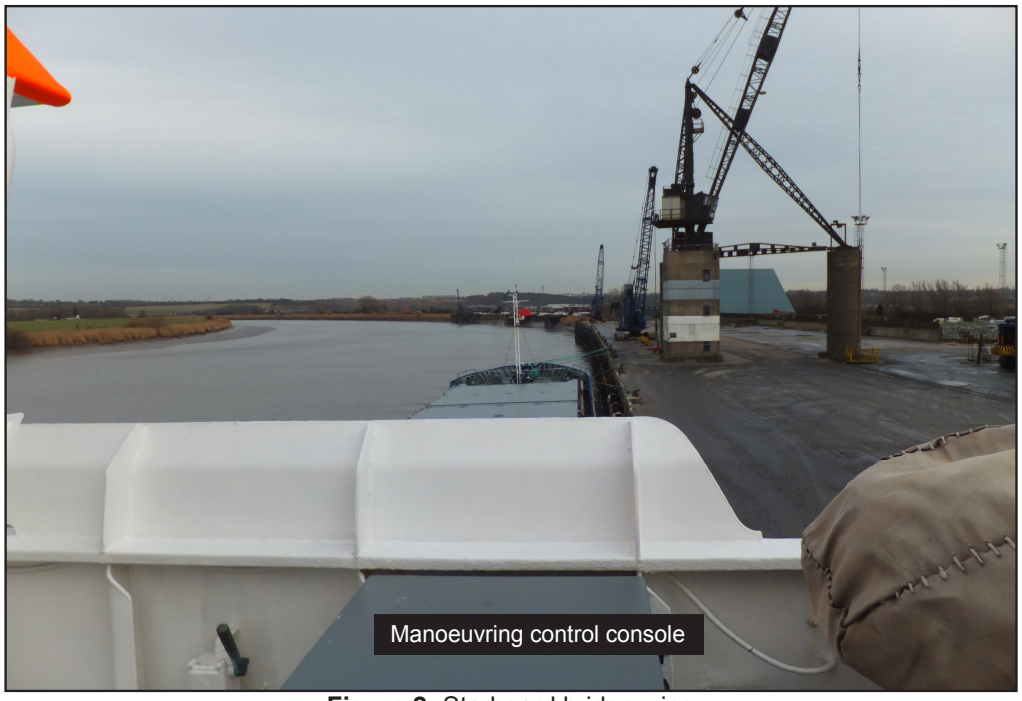

Figure 2: Starboard bridge wing

When the move commenced, *Sea Melody* was in a light condition, with its bow thruster just below the surface of the water. The master used the engine, helm and bow thrust to control the vessel, which was observed to move away from the berth and into the centre of the river on three occasions during the manoeuvre **(Figure 3)**.

The shore linesmen, whose VHF radios were set to channel 17, attempted to contact the master to inform him of the preferred sequence for transferring the mooring ropes from bollard to bollard on the wharf. But they were unable to do so. They called across from the wharf to the forward mooring party that the master should monitor VHF channel 17, but this message was relayed to the master as VHF channel 73.

The wind continued to increase in strength, up to Beaufort force 7, and it began to rain as the manoeuvre proceeded. The forward mooring party found it difficult to handle the mooring lines as the vessel veered off the berth into the river, and the master sent another second officer to assist them.

The two second officers and one of the seamen were tending the two forward springs on the starboard side while the other seaman, Sergey Gaponov, worked alone on the port headline.

At about 1915 Sergey was heard to call out for help. His colleagues turned towards him and saw that his left leg had become caught in a bight of the headline and that he was being pulled towards the bow as the vessel moved astern **(Figure 4)**. The crewmen went to help Sergey, but could not prevent him from being pulled over the bow due to the weight on the headline.

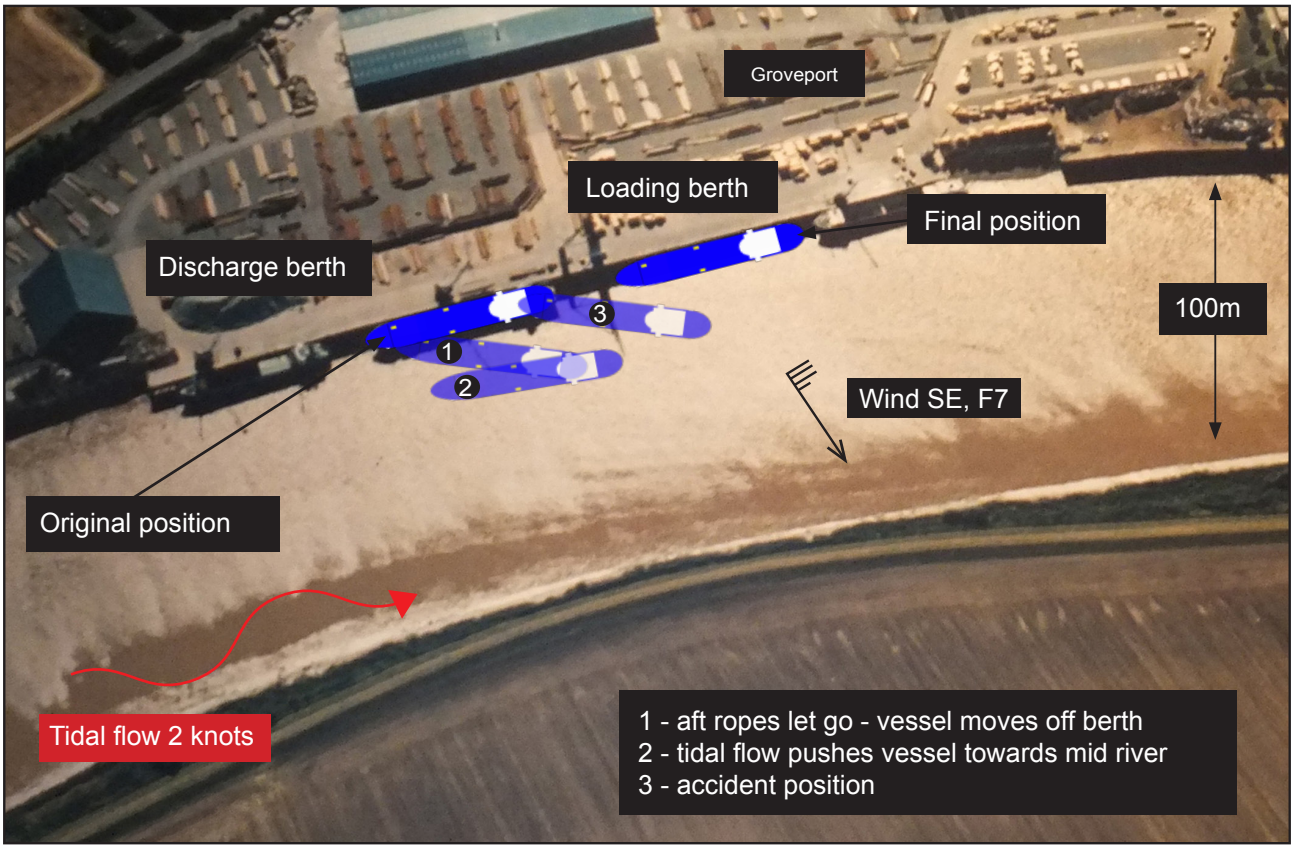

Figure 3: Reconstruction: *Sea Melody* moving berth

Figure 4: Reconstruction of accident scenario

Post-accident response

When the crewmen looked down from *Sea Melody*'s bow they saw Sergey face-down in the water. One of the men monitored his position while the others threw two lifebuoys, with lights and lines attached, that landed on the water close to Sergey, who remained motionless.

One of the men continued to monitor Sergey's body, which was taken by the tidal stream along *Sea Melody*'s starboard side until he disappeared from sight beyond the vessel's stern.

The master instructed the crew to launch the vessel's fast rescue craft (FRC) to search for Sergey and then reported the accident to *Sea Melody*'s manager at 1917. The FRC was launched at 1920. At 1927 the master called Humber Vessel Traffic Services (VTS) to report the accident and to request assistance.

At 1929 Humber VTS informed Humber Coastguard of the accident.

At 1938 the crew of the FRC recovered the lifebuoys from the opposite bank of the river, but found no trace of Sergey. A search and rescue (SAR) helicopter, fitted with an infra-red sensor to assist detection, was diverted from another mission and arrived at 1950. It began to search the river in conjunction with coastguard rescue teams and a Humber Rescue lifeboat.

Sea Melody was secured alongside the loading berth at 2050 and the search for Sergey continued until 2200. The search resumed the following morning, with police divers in attendance, but Sergey's body was not found.

Environmental conditions

Wind: South-east, Beaufort force 7
Weather: Dark with rain showers
Tidal: High Water (local): 1930 UTC, height 5.0m (85% of spring range)
Water temperature: 5.5°C

Crew

Missing seaman

Sergey Gaponov was a 40 year old Russian national. He was an able seaman and had obtained a Certificate of Competency as a rating, forming part of a navigational watch (STCW[3] II/4), in 2002.

This was his third consecutive tour of duty on *Sea Melody*, which he had re-joined in November 2013. He was well regarded by his shipmates and had received positive reports on his conduct and ability during his time on the vessel.

Master

The master was a 52 year old Russian national. He had obtained his Master's Unlimited Certificate of Competency (STCW II/2) in 1996.

He had been employed by Torbulk Limited as master since 2000 and this was his third consecutive tour of duty on *Sea Melody*, which he had re-joined in November 2013.

Chief officer

The chief officer was a Montenegrin national and was 49 years old. He held a Master's Certificate of Competency (STCW II/2) for vessels up to 3,000 gross tonnes.

He had been employed mainly by Torbulk Limited since 1988 and had re-joined *Sea Melody* for his third consecutive tour of duty 2 weeks before the accident.

Crew

The remainder of the crew were all Russian.

Linesman

The shore linesman who had briefed the chief officer before the vessel's move had worked at the river wharves as a stevedore and mooring handler for more than 30 years.

[3] International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, as amended (STCW Convention)

His normal routine was to board vessels prior to the movement and brief the master in person. On this occasion, two other vessels were due to depart from adjacent berths, which he was required to attend before *Sea Melody*'s movement, and he took the opportunity to speak to the chief officer on the quayside.

He explained the planned manoeuvre to the chief officer as well as the potential problems that the tidal flow could pose, especially that if the vessel's bow came too far off the berth during the move, the vessel could become difficult to control.

Compulsory pilotage

The Humber pilotage directions 2010, issued by Associated British Ports (ABP), the Competent Harbour Authority for the area, stated that a pilot should be in charge of a vessel when navigating in the River Trent. This direction did not apply to vessels moving between berths, which were not deemed to be navigating providing some of their ropes remained connected to the shore during the movement.

Berth operator's guidance to masters

The operator of Groveport provided masters with a letter of guidance which gave information about the health, safety and security arrangements for the wharf. The letter included information on some of the VHF radio channels in use locally and referenced advice from the harbour authority relating to the strong tidal flows in the area. The letter did not contain guidance relating to the movement of vessels between berths.

Sea Melody - safety management system

The vessel's safety management system (SMS) contained procedures for the guidance of crews when mooring and un-mooring. These included the following general precautions:

- *The mooring crew to liaise with the master with regards to the mooring plan*
- *All personnel should be aware of the operations going on around them*
- *During operations there are safe places to stand, as well as dangerous ones. Never stand in a bight of rope*
- *During all mooring operations there shall be a responsible person in charge*.

Guidance on mooring operations

The Code of Safe Working Practices for Merchant Seamen, issued by the Maritime and Coastguard Agency (MCA), advises that "*Personnel should not in any circumstances stand in a bight of rope".*

Marine Guidance Note (MGN) 308, issued by the MCA in 2005, recommends that pre-planning of mooring operations should be completed, and that "*Wherever practical the person in charge should avoid getting involved with the physical operations, so that they can retain an effective oversight*".

Previous accidents

Between 2007 and 2011 the MAIB was made aware of accidents involving the handling of mooring lines that resulted in 5 fatalities and 33 injuries.

Similar accidents

In 2013 an able seaman on a Scottish inter-island ferry was injured when his foot became trapped in a bight of mooring rope, and he was pulled off his feet towards the winch during mooring operations.

On 3 August 2011 a seaman on the ferry *Ernest Bevin* (MAIB Report 22/2012) sustained severe head injuries and drowned when he was dragged overboard by a rope during mooring operations.

On 13 March 2011, an able seaman on the landing craft *Forth Guardsman* (MAIB Report 16/2011) became trapped between a mooring wire and the ship's rail during a mooring operation. The weight on the wire could not be released quickly enough, and he was pulled over the guardrail and into the sea. He was recovered, but died from his injuries.

On 31 July 2007 an able seaman on the container vessel *Velazquez* was pulled overboard, through a panama fairlead, when his left foot became trapped in a bight of a messenger rope during towage operations. He landed in the water and managed to clear himself from the line and swim to the surface. He lost the tip of a finger in the accident but was otherwise unharmed.

ANALYSIS

Summary

At the time of the accident, *Sea Melody* was being moved stern first about 90 metres along the wharf which, in normal circumstances, should have been a straightforward operation. However, the vessel was in a light condition, reducing the efficiency of the bow thruster. Also, a near-gale force offshore wind and a strong tidal flow were acting on the bow, which caused the vessel to veer away from the berth towards the middle of the river on a number of occasions.

The circumstances which led to Sergey's foot becoming caught in a bight of the headline cannot be known for certain as he was not supervised at the time of the accident. However, based on evidence obtained, it can be concluded that Sergey had pulled in slack rope by hand as *Sea Melody* moved ahead, and then controlled the slack rope with his foot to pay it out as the vessel dropped astern. When almost all the slack rope had payed out his foot became trapped in a bight and he was pulled overboard before other crew could assist him.

Briefing with linesman

Sea Melody's master was not provided with highly relevant information before he commenced the operation to shift berths. The linesman's normal practice of boarding the vessel to brief the master did not occur as there were two other vessels which he also had to attend. A discussion between the linesman and the chief officer was carried out on the quayside before the operation to move *Sea Melody* began. However, at the time of this briefing the chief officer's attention was focused on reading the vessel's draught, and the information given to him was not passed on to the master.

The master, therefore, was unaware of the need for him to take measures to prevent the vessel's bow being pushed away from the berth by the strong flood stream and the wind. He was also unaware of the appropriate VHF channel to use to communicate with the linesmen ashore to co-ordinate the movement of the lines from one bollard to the next in order to keep control of the vessel's bow. As a consequence, the master had difficulty in controlling *Sea Melody* during the manoeuvres that took considerably longer than anticipated and resulted in the vessel being forced away from the berth and into the middle of the river on at least three occasions. This in turn caused more work for those handling the lines on board and led to Sergey working alone and unsupervised to tend the headline. Had the master been in possession of the relevant information he could have taken more precautions to ensure the manoeuvre was conducted safely, or deferred the move until conditions were more favourable.

Crew briefing

The vessel's SMS contained a procedure which required the crew to liaise with the master regarding the mooring plan, and MGN 308 recommends that mariners conduct pre-planning of mooring operations.

However, no face-to-face briefing of the mooring plan took place as *Sea Melody*'s crew were instructed to go straight to mooring stations. Had a briefing been held, the information provided by the linesman to the chief officer might have been more widely disseminated, and the master would have had an opportunity to discuss his intentions for the manoeuvre and confirm communications with the linesmen ashore. It would also have alerted the mooring parties to the risk of the vessel being forced into mid-stream by the wind and flood stream.

Supervision of mooring operations

MGN 308 states that, in order to retain oversight, the person in charge of the operation should not get involved with the physical operation.

On this occasion, one of the second officers should have taken charge, but both became involved in handling the ropes themselves leaving no-one with an oversight of the operation. This resulted in Sergey working alone on the headline with no-one either to warn him that he was stepping into a bight of rope or to take rapid action once his leg was caught and he was being dragged overboard.

Emergency response

The immediate onboard reaction to the man overboard emergency was good, with one crewman keeping Sergey in sight while others quickly deployed lifebuoys with attached lights. Tragically, Sergey remained face-down and motionless even though the lifebuoys landed very close to him in the water.

The master arranged for the FRC to be launched to search for Sergey and informed the vessel's manager within 2 minutes of the accident. However, a further 10 minutes elapsed before he notified Humber VTS who, in turn, informed the coastguard. This delayed the arrival of the SAR helicopter which, in other circumstances, could be the difference between life and death.

CONCLUSIONS

- The initial briefing about the move between the linesman and the chief officer was ineffective as it was conducted informally, on the quayside, at a time when both men were distracted by other duties. As a consequence, the master did not receive important information necessary for effective decision making.
- The crew were not properly briefed on the manoeuvre to shift berths with the result that they were unaware of the hazards that could be encountered in the prevailing conditions.
- The effects of a strong tidal flow and near gale force offshore wind combined to make the manoeuvre more complicated than expected, resulting in more crew being deployed to tend the mooring lines.
- The lack of a dedicated supervisor at the forward mooring station meant no-one was in a position to stop Sergey from standing in the bight of rope, or to intervene quickly to prevent him being dragged overboard.
- There was a short delay in notifying the emergency services after the accident, though this was unlikely to have altered the outcome.

ACTION TAKEN

Associated British Ports has:

- Issued a notice to mariners (05/2014) directing that, in future, all vessels which would normally be subject to compulsory pilotage while navigating in the Humber, will be required to have on board an authorised pilot when moving from berth to berth on tidal rivers.

Torbulk Limited has:

- Issued a fleet circular giving details of the accident and reminding crews of the SMS procedures to be followed during mooring operations.
- Informed its crews of the importance of contacting shore authorities and emergency services immediately when an emergency situation arises.
- Begun an evaluation of auto-inflation lifejackets for crew use during mooring operations.
- Considered the deployment of an axe during mooring operations for the purpose of quickly parting a mooring line in such circumstances.

RECOMMENDATIONS

In view of the actions taken, no recommendations have been made.

SHIP PARTICULARS

Vessel's name	*Sea Melody*
Flag	Barbados
Classification society	Germanischer Lloyd
IMO number	9006382
Type	General cargo
Registered owner	Saturn Shipping Limited
Manager	Torbulk Limited
Year and place of build	1994, Germany
Construction	Steel
Length overall	87.84m
Gross tonnage	2,450
Minimum safe manning	8
Authorised cargo	General Cargo

VOYAGE PARTICULARS

Port of departure	Barcelona
Port of arrival	Groveport, River Trent
Type of voyage	International
Cargo information	Steel Products
Manning	8

MARINE CASUALTY INFORMATION

Date and time	18 December 2013, 1915 UTC
Type of marine casualty or incident	Very Serious Marine Casualty
Location of incident	Groveport, River Trent
Place on board	Forward mooring area
Injuries/fatalities	1, missing presumed lost
Damage/environmental impact	None
Ship operation	Shifting berth
Voyage segment	In port
External & internal environment	Dark, Wind: south-east Beaufort force 7
Persons on board	10