



SAFETY INVESTIGATION REPORT

201805/023

REPORT NO.: 09/2019

May 2019

The Merchant Shipping (Accident and Incident Safety Investigation) Regulations, 2011 prescribe that the sole objective of marine safety investigations carried out in accordance with the regulations, including analysis, conclusions, and recommendations, which either result from them or are part of the process thereof, shall be the prevention of future marine accidents and incidents through the ascertainment of causes, contributing factors and circumstances.

Moreover, it is not the purpose of marine safety investigations carried out in accordance with these regulations to apportion blame or determine civil and criminal liabilities.

NOTE

This report is not written with litigation in mind and pursuant to Regulation 13(7) of the Merchant Shipping (Accident and Incident Safety Investigation) Regulations, 2011, shall be inadmissible in any judicial proceedings whose purpose or one of whose purposes is to attribute or apportion liability or blame, unless, under prescribed conditions, a Court determines otherwise.

The report may therefore be misleading if used for purposes other than the promulgation of safety lessons.

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MV SEASTAR ENDEAVOUR **Man overboard** **in the North Sea Deep Water Route** **20 May 2018**

SUMMARY

On 21 May 2018, the Marine Safety Investigation Unit (MSIU) was informed that the Maltese registered bulk carrier *Seastar Endeavour* had lost a crew member at sea. It was also reported that the accident had occurred a day before, when the ship was navigating the North Sea Deep Water Route. No crew member had witnessed the accident.

An extensive search was carried out by the Netherlands MRCC and *Seastar Endeavour's* crew. However, the search was

unsuccessful and the crew member was never recovered. The search and rescue operations were subsequently suspended by the MRCC. The safety investigation determined that in all probability, the crew member was lost overboard during maintenance work on the vessel's rescue boat.

Taking into consideration the safety actions taken by the Company, the MSIU has issued no recommendations following the completion of the safety investigation.



MV Seastar Endeavour

FACTUAL INFORMATION

Vessel

Seastar Endeavour (Figure 1), is a 22,683 gt bulk carrier. She was built in 2011 and is registered in Malta. She is owned by Seastar Bulk Three Ltd., managed by Norbulk Shipping of UK, and classed with Det Norske Veritas Germanischer Lloyd (DNV GL). The vessel has a length overall of 186.40 m and a summer deadweight of 36,781 tonnes.

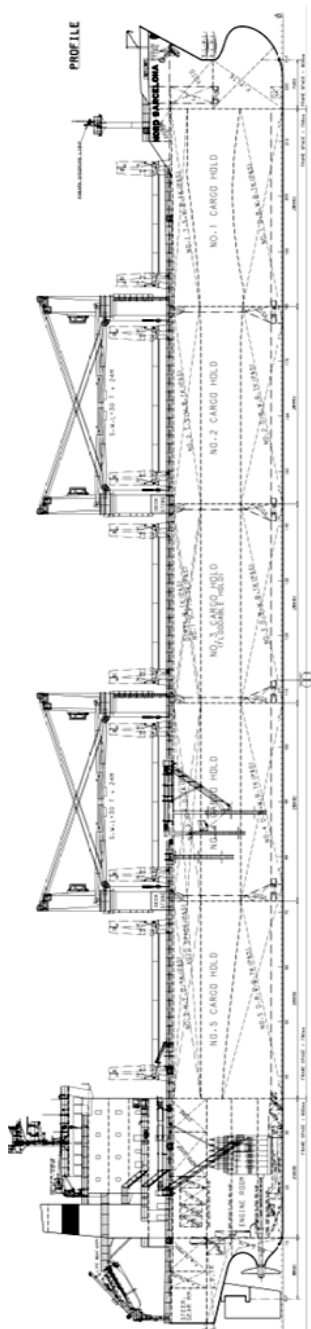


Figure 1: MV *Seastar Endeavour* GA Plan

Propulsive power is provided by a Hyundai B&W 6S46 MC-C7, two-stroke, internal combustion diesel engine, producing 7,883 kW at 129 RPM. This drove a single, fixed pitch propeller, giving a service speed of about 14.5 knots.

Crew and manning

Seastar Endeavour had a crew complement of 17, which was in excess of the number stipulated in the Minimum Safe Manning Certificate issued by the flag State Administration. The crew members were from the Russian Federation, Ukraine and the Philippines. The master was 54 years old from Russia and had over eight years of experience serving as a master. He had joined the vessel in Gulluk, Turkey on 08 May 2018.

The missing crew member was the Filipino third mate and was 40 years old. He joined *Seastar Endeavour* on 01 May 2018, but he had already served on the vessel during his previous contract with the Company.

Medical examination

During the course of his previous contract with the Company, the third mate had been diagnosed with a medical condition. This had required radio assistance from the International Radio Medical Centre (CIRM), Italy.

On 24 October 2017, he was admitted in a hospital in Mombasa, Kenya, where he was diagnosed with a cardiac condition and was subsequently discharged for treatment and requested to rest at home in the Philippines.

Prior to rejoining *Seastar Endeavour* on 01 May 2018, the third mate was medically examined in Cebu, Philippines. The examining physician prescribed medication which had to be taken daily, and advised medical check-up after one year.

A medical waiver was issued and the third mate, while on board *Seastar Endeavour*, agreed to:

- take the said medications and to follow any other instructions issued by the doctor;
- take regular exercise; and
- refrain from smoking, drinking alcoholic beverages and/or other vices.

Environment

On the day of the accident, the weather was foggy, with a light to gentle Northerly breeze. The sea state was calm and no rolling was reported. Visibility was poor due to dense fog. The air and sea temperatures were 13 °C and 12 °C respectively.

Narrative¹

On the morning of 20 May 2018, *Seastar Endeavour* cleared the English Channel on a Northerly route in the North Sea Deep Water Route. The vessel was heading to Gdansk, Poland, carrying 30,003 tonnes of sodium feldspar.

During the third mate's 0800 to 1200 navigational watch, the master reminded him to check Life Saving Appliances (LSA) and Fire Fighting Equipment (FFE) in accordance with the ship's daily work-plan. In the afternoon, the third mate spent some time with the second mate on the bridge and later, at about 1505, he was seen in the crew accommodation wearing a blue overall and white helmet. He was again seen at 1520 in the tally-room arranging liferings and walking towards the after part of the vessel. The crew member was reportedly working alone.

At 2000, it was noticed that the third mate failed to report for his navigational watch. Numerous calls to his cabin remained

unanswered. The general alarm was raised and the crew members, led by the chief mate, started a search. By the time the search was completed at 2040, the third mate was still missing.

Immediately, a Mayday message was broadcasted on the VHF radio. The master set the vessel at full speed on reciprocal course to the position where the third mate was believed to have fallen overboard. At 2050, the master contacted the Company and MRCC Netherlands to notify them of the situation.

The coordinates of the vessel (53° 31.8' N 003° 49.2' E) at 1530 were communicated to the MRCC, which launched a search and rescue operation, deploying a helicopter and three vessels. At 2330, *Seastar Endeavour* joined in the search for the missing crew, coordinated by the MRCC search and rescue vessel *Arie Visser*. There was no sign of the third mate and at 0130, the MRCC called off the search and the vessel was authorised to resume her passage.

ANALYSIS

Aim

The purpose of a marine safety investigation is to determine the circumstances and safety factors of the accident as a basis for making recommendations, and to prevent further marine casualties or incidents from occurring in the future.

Fatigue, drugs and alcohol

Records of the hours of rest for the third mate were found to be in accordance with the MLC and the STCW Convention requirements. The MSIU did not come across any evidence of alcohol or drugs other than the medication, which was prescribed by his physician prior to joining the vessel. Alcohol was therefore not considered to be a contributing factor to this accident.

¹ Unless otherwise stated, all times are ship's time (UTC + 2).

With respect to medication, it was evident from the medical examination that the third mate's fitness to carry out shipboard duties was conditional on taking medication, whose common side effects apparently include drowsiness, confusion and dizziness.

Although the above could not be dismissed, the safety investigation, was unable to determine with absolute certainty whether the crew member was regular in his medication and his level of fitness prior to the accident.

Potential man overboard area

Following discussions with the master, the weather was considered suitable for maintenance work on the vessel's LSA and FFE. The third mate seemingly set out to work inside the rescue boat. A bucket of yellow paint was discovered near the safety railing (Figure 2). Two seats on the rescue boat had been freshly painted (Figure 3). Furthermore, the locker's cover had been shifted and the boat's anchor had also been taken out.

It seemed, therefore, that either the rescue boat or the area around the boat was the likely position of the accident.



Figure 2: The rescue boat and the paint bucket

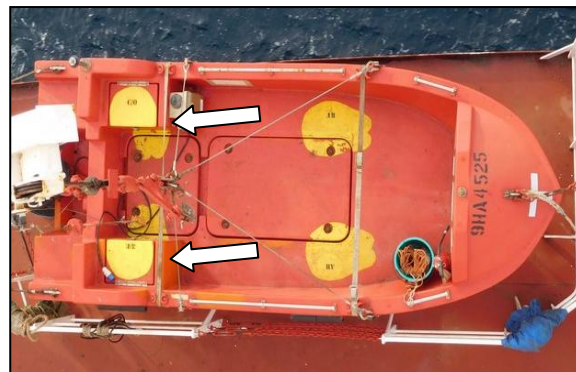


Figure 3: Freshly painted seats

Risk assessment

The master stated that he had reminded the third mate of the importance to check the LSA and the FFE in anticipation of flag and port State Control inspections. As the work plan only indicated 'inspection/maintenance of LSA & FFE', specific directions were very likely to have been issued on maintenance work on the rescue boat, given that the weather was deemed appropriate by the master.

The rescue boat, situated on the boat deck on port side, was outside of the perimeter of the main deck's safety rails and the seaward side of the boat had no effective means of protection (Figure 4).



Figure 4: Location of the rescue boat

The safety investigation neither found evidence of toolbox talk nor a formal risk assessment in the documentary evidence submitted to the MSIU² (addressing identified risks). When last seen, the crew member was not wearing any fall arrestor devices.

This suggested that the risk of falling overboard was not envisaged while working on the rescue boat.

Probable cause of the fall overboard

Notwithstanding the absence of witnesses, the MSIU considered it very likely that the third mate had accidentally fallen into the sea. The safety investigation, however, was unable to establish precisely what had caused his fall. Four scenarios were considered as possible causes of the man overboard:

- the third mate tripped and fell overboard while moving about inside the rescue boat;
- felt dizzy when he stood up, following a prolonged period of sitting down inside the rescue boat;
- felt dizzy in view of the prescribed medication; or
- due to natural causes.

Cold water immersion

A crew member on board reported that the third mate was last seen at 1520 in his blue overall and safety helmet. At the time, he was wearing neither a personal flotation device (PFD) nor a safety harness / fall preventer. His clothing offered no thermal protection against immersion in cold water.

Had he survived the fall, it was probable that the sudden cold water immersion would have affected his swimming ability. His body temperature would drop, leading to hypothermia and death. Bearing in mind a

water temperature of about 12 °C, hypothermia could have set in within minutes.

In this ill-fated event, it was well over four hours before the third mate was noticed missing on board and search and rescue operations initiated.

CONCLUSIONS

1. The likely position of the man overboard position was either the rescue boat or the area around the boat;
2. Four scenarios were considered as possible causes of the man overboard:
 - the third mate tripped and fell overboard while moving about inside the rescue boat;
 - felt dizzy when he stood up, following a prolonged period of sitting down inside the rescue boat;
 - felt dizzy in view of the prescribed medication; or
 - due to natural causes;
3. Neither a toolbox talk nor a formal risk assessment had been carried out on board;
4. The crew member was not wearing a fall preventer device;
5. There were no other crew members overseeing the task in the area;
6. The risk of falling overboard was either not envisaged or the third mate was expected to work on the inside of the rescue boat but without actually accessing it (perhaps with the use of a ladder);
7. It was highly probable that once immersed in the cold water, hypothermia would have set in within minutes.

² A risk assessment document referred to the launching / recovery of rescue boat in the port of Gulluk, Turkey.

SAFETY ACTIONS TAKEN DURING THE COURSE OF THE SAFETY INVESTIGATION³

During the course of the safety investigation, the Company prepared and introduced a new procedure on working in areas outside of the safety railing (rescue boat, life boat and life raft) in the Company's Health and Safety Manual. As a minimum, the following precautions are being implemented across the fleet:

1. All work conducted outside the perimeter of the safety rails is to be discussed during the daily work planning meeting. A formal risk assessment has to be conducted, taking into account the following safety controls:
 - work must be carried out during daylight hours and in favourable weather condition;
 - personnel conducting the work must be positioned as far as possible from the outer board;
 - decks must be free from any grease or other oily substance;
 - use of flotation aid, fall arresters, or safety harnesses is now compulsory;
 - constant or periodic visual supervision or VHF reporting routine must be established, if deemed necessary; and
 - end of task shall be reported to the safety officer;
2. Safety rounds are being carried out to confirm that all worksites are secured and tools are stored away at the end of the working day; and
3. Manning agencies are being requested by the Company to check and analyse medical certificates against seafarers' previous ailments and fitness for sea duties prior to their engagement on board vessels.

³ **Safety actions shall not create a presumption of blame and / or liability.**

Moreover, the Company has also circulated a Safety Bulletin across the fleet to ensure that the new procedure is communicated to all vessels and that a safety meeting is conducted on board to discuss the Safety Bulletin.

RECOMMENDATIONS

In view of the actions taken by the Company, no recommendations were made by the MSIU.

SHIP PARTICULARS

Vessel Name:	<i>Seastar Endeavour</i>
Flag:	Malta
Classification Society:	DNV GL
IMO Number:	9544748
Type:	Bulk Carrier
Registered Owner:	Seastar Bulk Three Ltd.
Managers:	Norbulk Shipping UK Ltd.
Construction:	Steel
Length Overall:	186.40 m
Registered Length:	178.93 m
Gross Tonnage:	22,683
Minimum Safe Manning:	14
Authorised Cargo:	Dry bulk

VOYAGE PARTICULARS

Port of Departure:	Gulluk, Turkey
Port of Arrival:	Gdnask, Poland
Type of Voyage:	International
Cargo Information:	30,003 metric tonnes of Sodium Feldspar
Manning:	17

MARINE OCCURRENCE INFORMATION

Date and Time:	20 May 2018 at 1530 (LT)
Classification of Occurrence:	Very Serious Marine Casualty
Location of Occurrence:	53° 31.8' N 003° 49.2' E (North Sea Deep Water Route)
Place on Board	Boat deck
Injuries / Fatalities:	One crew member over board (presumed loss of life)
Damage / Environmental Impact:	None reported
Ship Operation:	In passage
Voyage Segment:	Transit
External & Internal Environment:	Weather was foggy, with a light to gentle Northerly breeze. The sea state was calm and no rolling was reported. Visibility was poor due to a dense fog. The air and sea temperatures were 13 °C and 12 °C respectively.
Persons on board:	17