



SAFETY INVESTIGATION REPORT

201604/040

REPORT NO.: 08/2017

April 2017

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 SEAGULL **Fatal fall overboard** **in Trincomalee, Sri Lanka** **28 April 2016**

SUMMARY

On 28 April 2016, the Maltese registered ship *Seagull* was at anchor outside Trincomalee port, Sri Lanka, awaiting supply of bunkers.

In order to read the draught marks, a ladder was rigged above the starboard marks. At about 1730, the chief mate read the draught and while on his way up the ladder, he fell into the sea.

The deck-boy, who was standing-by on the poop deck, threw the nearest lifebuoy and raised the man overboard alarm. The chief mate managed to

grasp the lifebuoy but before long, his body became limp.

The deck-boy and two crew members jumped into the sea and kept his face out of the water. They managed to administer CPR, however, he was declared dead upon arrival at the hospital.

The MSIU has issued one recommendation to the Company designed to ensure that the Company minimises the exposure of crew members to the risk of working aloft.



MV Seagull

FACTUAL INFORMATION

Vessel

Seagull is a 34,374 gt bulk carrier. She was owned by Catalina Shipping Co. and managed by Blue Sea Shipping of Greece. The vessel was classed with Nippon Kaiji Kyokai (NKK).

The vessel (Figure 1), which was built in 2010 at Sacheon, South Korea, had a length overall of 196.0 m, a moulded breadth of 32.26 m and a moulded depth of 18.60 m. *Seagull* had a summer deadweight of 58,609 tonnes at a corresponding draught of 13.02 m. She was fitted with five cargo holds served by four electro/hydraulically operated cranes.

Propulsive power was provided by a 6-cylinder Doosan-MAN B&W 6S50 MC-C8 two stroke, slow speed, direct drive diesel engine, producing 9,960 kW at 127 rpm. This drove a single fixed pitch propeller, reaching a service speed of 14.50 knots.



Figure 1: MV *Seagull*

Ship's crew

Seagull's crew complement was in accordance with her Minimum Safe Manning Certificate, issued by the flag State Administration. There were 20 crew members on board from Greece, Montenegro and the Philippines. The deceased crew member was 57 years old from Montenegro.

He was in possession of an STCW Certificate of Competency as a master. He had joined *Seagull* as a chief mate on 08 December 2015. He was also the ship's designated safety officer.

Environmental conditions

At the time of the accident, visibility was reported to be good. There was a light to gentle Easterly breeze. The sea was generally calm, with a swell of about 0.5 m. The air and sea temperatures were 36 °C and 29 °C respectively.

Narrative¹

On 13 March 2016, *Seagull* left Davant, Louisiana, USA, with 55,207 tonnes of pet coke. *En route* to India, she stopped at Trincomalee, Sri Lanka for bunkers. On 28 April 2016 at 1650, she dropped anchor at Back Bay Anchorage in position 08° 36.4' N 081° 14.7' E (Figure 2).

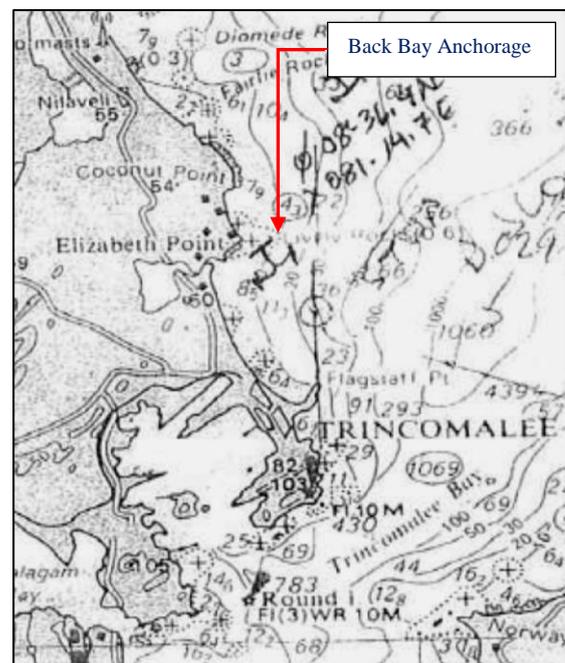


Figure 2: Detail of the anchorage area

At the time of the accident, the aft draught gauges fitted on board were not working. To

¹ Unless otherwise stated, all times are ship's time (UTC +5.5).

this effect, a rigid aluminium ladder was rigged on the starboard side poop deck over the draught marks (Figure 3). At 1730, the chief mate, accompanied by a deck boy, walked to the poop deck and climbed down the ladder to read the aft draught marks. On his way up, however, he briefly stopped; his hold on the ladder eased, and fell in the sea.



Figure 3: A reconstruction to show how the aluminium ladder had been rigged

The deck boy observed the chief mate grasping the lifebuoy (without line), which he had just tossed, after which, he rushed to the ship's office to raise the man overboard alarm. On his return to the poop deck, he saw the chief mate flaccid and not moving. He jumped into the sea with two able seamen to keep his face out of the water. Meanwhile, a rescue boat (Figure 4) was launched and the ship's agent and port authorities were informed of the occurrence by VHF radio.



Figure 4: The ship's rescue boat

Shortly afterwards, the chief mate was recovered and administered CPR in the rescue boat and on board the vessel. A naval patrol boat, which was alerted of the medical emergency on *Seagull*, took the chief mate on board and transported him ashore for further medical treatment. However, upon arrival at the hospital, the attending doctor examining the chief mate and pronounced him dead.

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

Analysis of the hours of rest and work document showed that on the days preceding the accident, the chief mate had daily rest periods of 13 hours. Although there were no records of sleep quality and duration, fatigue was not considered to be a contributing factor.

Drugs and alcohol

No toxicological reports were available to the MSIU during the course of the safety investigation. The Company's safety policy prohibited the consumption of alcohol, drugs or similar substances on board. Moreover, the dispensing of controlled medicines was controlled by the master. Alcohol and drugs were not considered contributing factors to this accident.

Probable cause of the fall

Although the microscopic analysis of the lungs during the initial post-mortem examination indicated factors compatible

with drowning, there was no information on what has led to the fall from the ladder². Thus, on the basis of the deck boy's observations, the safety investigation did not rule out *ischemia* (restriction of blood supply to heart) and momentary loss of consciousness. The subsequent trauma caused by the sudden immersion (albeit in relatively warm water) and the strenuous effort to reach the lifebuoy, may have gravely debilitated the chief mate's physical strength and cardiac function.

Guidance on working aloft

EU Directive 2001/45/EC established the minimum safety requirements to protect workers from the risks of working at height. It is prescribed that where fixed structures cannot be altered, ladders for temporary work may be used, provided the risk level is low, the use is of short duration, and that arrangements are made to arrest falls to prevent injury.

The UK's Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Work at Height) Regulations defined 'work at height' as work on any place on a ship including access to or egress except by a permanent stairway, gangway or companionway. In these Regulations, 'access' or 'egress' include the ascent and the descent. Further guidance is provided in the UK's MCA MGN Notice 410 and the Code of Safe Working Practices for Merchant Seamen.

Safety Management System (SMS)

Seagull had been provided with PPE and its SMS provided general instructions for working aloft or over the side (Procedure PO2-CO2-014). Safety harness, lifeline, arresting device, life-vest, ship movement and weather were listed for personal safety.

² The autopsy report was received at a very late stage, during the course of the safety investigation. The report confirmed that the cause of death was drowning.

The instructions also stated that personnel under 18 years of age or with less than 12 months experience should be supervised by an experienced crew member.

Safety Awareness

Review of documentary evidence suggested that the Company had put in significant effort to enhance safety on board its vessels. SMS procedures were periodically updated. Crew members were provided induction and familiarisation training on safety policies and safety procedures. Regular safety meetings were held and crew members were randomly checked for safe work practice. The Company, however, explained that on board assessment of risk for the reading of draught marks was not usually carried out and a rescue boat was not recommended for reading of the draught marks.

Work practices

While *Seagull's* SMS described safety measures for working aloft / over side, it provided no detailed reference / guidance to the crew. It was not known if the chief mate was aware of these safety measures; it was certain, however, that he followed established work procedures of taking draught readings with only a crew member standing by on deck with a lifebuoy (and possibly no means of communication with the rest of the crew members).

The safety investigation neither found evidence of risk assessments addressed in the monthly safety meetings nor identified any safety measures applied by the chief mate. It is very probable that daylight, good weather, task duration, perceived complexity (and apparent good health), were all influential on the decision to accept the risk of falling overboard.

Moreover, given that the draught gauges were not operational and the rescue boat was not deemed appropriate to be lowered for the task, it would seem that the chief mate saw

no other option but to improvise a way to read the aft draught marks.

Whilst *per se* this was not considered to be a problem, the main safety issue was the fact that the improvisation by the chief mate was carried out without a clear mental model of the risks involved, but with the intention to complete a step as part of the bunkering procedure.

CONCLUSIONS

1. The chief mate may have suffered from a medical condition which caused his fall overboard;
2. The aft draught gauges in the control room were faulty;
3. On-board assessment of risk for the reading of draught marks was not usually carried out;
4. The rescue boat was not used to read the draught marks since it was considered inappropriate for the task;
5. The chief mate saw no other option but to improvise a way to read the aft draught marks;
6. The improvisation by the chief mate was carried out without a clear mental model of the risks involved, but with the intention to complete a step as part of the bunkering procedure.

SAFETY ACTIONS TAKEN DURING THE COURSE OF THE SAFETY INVESTIGATION³

Following the accident and the internal investigation carried out by the Company in terms of Section 9 of the ISM Code, the DPA attended all Company vessels to highlight the importance of safety management system procedures.

RECOMMENDATIONS

Blue Seas Shipping S.A. is recommended to:

08/2017_R1 ensure that where fitted, the draught gauges are operational in order to minimise the exposure of crew members to the risk of working aloft.

³ Safety actions and recommendations should not create a presumption of blame and / or liability.

SHIP PARTICULARS

Vessel Name:	<i>Seagull</i>
Flag:	Malta
Classification Society:	NKK
IMO Number:	9452505
Type:	Bulk carrier
Registered Owner:	Catalina Shipping Co.
Managers:	Blue Seas Shipping S. A.
Construction:	Steel
Length Overall:	196.0 m
Registered Length:	190.09 m
Gross Tonnage:	34374
Minimum Safe Manning:	14
Authorised Cargo:	Dry cargo

VOYAGE PARTICULARS

Port of Departure:	Davant, USA
Port of Arrival:	Krishnapatnam, India
Type of Voyage:	International
Cargo Information:	55,207 tonnes of pet coke in bulk
Manning:	20

MARINE OCCURRENCE INFORMATION

Date and Time:	28 April 2016 at 1730 (LT)
Classification of Occurrence:	Very Serious Marine Casualty
Location of Occurrence:	08° 36.4' N 081° 14.7' E
Place on Board	Overside
Injuries / Fatalities:	One fatality
Damage / Environmental Impact:	None
Ship Operation:	Bunkering
Voyage Segment:	Arrival
External & Internal Environment:	There was light to gentle easterly breeze. The sea was generally calm with ripples on the surface. The swell was 0.5 m. The air and sea temperatures were 36 °C and 29 °C respectively.
Persons on board:	20