



REPUBLIC OF THE MARSHALL ISLANDS

Maritime Administrator

TIGRIS CASUALTY INVESTIGATION REPORT

Fatal Fall on Stairs

North Sea | 26 August 2020

Official Number: 3615

IMO Number: 9443841



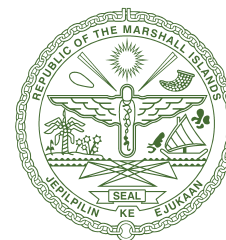
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AUTHORITY

An investigation, under the authority of the Republic of the Marshall Islands laws and regulations, including all international instruments to which the Republic of the Marshall Islands is a Party, was conducted to determine the cause of the casualty.



Maritime Administrator

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LIST OF ABBREVIATIONS

2/O.....	Second Officer
3/O.....	Third Officer
ASD.....	Able Seafarer Deck
C/E.....	Chief Engineer
C/O.....	Chief Officer
CPR.....	Cardiopulmonary Resuscitation
IMO.....	International Maritime Organization
m.....	Meter
MLC, 2006.....	Maritime Labour Convention, 2006
OOW.....	Officer on Watch
STCW Code.....	Seafarers Training, Certification and Watchkeeping Code
VTS.....	Vessel Traffic Service



PART 1: EXECUTIVE SUMMARY

On 26 August 2020, the Republic of the Marshall Islands-registered chemical/oil products tanker TIGRIS, managed by Suntech Ship Management PTE. Ltd. (the “Company”), was underway in the North Sea off Rotterdam, Netherlands. The ship was slowly sailing on a northeasterly course along the Netherlands coast while awaiting berth availability at Rotterdam.

Rough seas caused the ship to pitch and roll heavily. Several times during the morning, the Master went to the Bridge to try to turn the ship back towards Rotterdam; however, because of excessive rolling, he was unable to do so. The Master periodically returned to the Bridge to check the sea state and assess the viability of coming about.

Presumably while attempting to open the door to the Bridge, the ship’s Master fell down the stairs between the B deck and the Bridge. He suffered internal bleeding and a pneumothorax¹ from the fall.

Crewmembers immediately provided first aid and requested shoreside assistance. Medical responders, who were lowered to the ship by a helicopter, provided care to the Master. Despite the crewmembers and medical responders’ efforts, the Master was pronounced deceased.

The marine safety investigation conducted by the Republic of the Marshall Islands Maritime Administrator (the “Administrator”) identified the following:

1. Causal factors that likely contributed to this very serious marine casualty include:
 - (a) rough seas which caused frequent heavy pitching and rolling; and
 - (b) the Master’s fall from the top of the stairs between the B deck and the Bridge while likely attempting to open the Bridge door.
2. Causal factors that may have contributed to this very serious marine casualty include:
 - (a) the handrails on the stairs between the B deck and the Bridge did not extend onto the landing outside the Bridge wheelhouse door.

1 A pneumothorax is the build-up of air between the chest wall and lung, causing a full or partial collapse of the lung.

PART 2: FINDINGS OF FACT

The following Findings of Fact are based on the information obtained during the Administrator's marine safety investigation.

1. Ship particulars: *see* chart to right.
2. On 23 August 2020, TIGRIS departed Liverpool, United Kingdom, in ballast and was proceeding to Rotterdam, Netherlands, for loading.
3. On 25 August 2020, TIGRIS was approaching Rotterdam. The ship was experiencing winds to 40 knots and a swell of 5 m, both out of the southwest.
4. At about 1800,² Rotterdam VTS advised the Master that a berth would not be available until about 1200 on 27 August 2020. Due to the prevailing weather conditions, the Master decided to remain underway. TIGRIS slowly steamed north along the Netherlands coast instead of attempting to anchor in the rough conditions. The passage plan was updated to reflect this change.
5. At 2000, the Master assumed duty as the OOW. He was relieved by the 2/O at 0000 on 26 August 2020 and left the Bridge.
6. At about 0255, the Master returned to the Bridge. He decided that the ship should come about and begin steaming back towards Rotterdam to make the anticipated berthing time. However, TIGRIS began rolling heavily when attempting to turn and the Master determined that it was unsafe to continue the maneuver. He then ordered the ship to resume a northeasterly course. The Master indicated that he would return to the Bridge later to attempt the turn and went below.
7. At about 0400, the Junior Officer³ relieved the 2/O as the OOW, along with an ASD. Shortly after the Junior Officer assumed duty, the Master returned to the Bridge to check on the weather and status of the ship. He left the Bridge after about 30 minutes.
8. At about 0655, the Junior Officer heard what he thought was the Bridge door handle being opened. At the time, the ship

SHIP PARTICULARS

Ship Name
TIGRIS

Registered Owner
Tigris Trading S.A.

ISM Ship Management
Suntech Ship Management PTE. Ltd.

Flag State
Republic of the Marshall Islands

IMO No.	Official No.	Call Sign
9443841	3615	V7SB4

Year of Build	Gross Tonnage
2009	8,247

Net Tonnage	Deadweight Tonnage
3,725	12,966

Length x Breadth x Depth
113.2 x 20.4 x 11.9 m

Ship Type
Chemical/Oil Products Tanker

**Document of Compliance
Recognized Organization**
American Bureau of Shipping

**Safety Management Certificate
Recognized Organization**
American Bureau of Shipping

Classification Society
American Bureau of Shipping

Persons on Board
20

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

³ The Junior Officer held the appropriate national certificate of competence and flag State endorsement to serve as the officer in charge of a navigational watch.

was pitching and rolling heavier than normal. Once the ship settled and after ensuring that there was no nearby traffic, the Junior Officer went aft to the door. When he opened it, he saw the Master lying on the landing of the stairs on B deck.

9. The Junior Officer went down the stairs to assist the Master, who said he was experiencing severe pain in his back. The Junior Officer then knocked on the 3/O's cabin and notified him that the Master was injured. The 3/O went to the Bridge to relieve the Junior Officer as the OOW and notified other crewmembers by telephone.
10. The C/O and C/E came out of their cabins (on B deck) after hearing the commotion and saw the Master lying on the deck. They immediately began checking him for injuries. He reported that he had fallen down the stairs and was having severe pain in his back and neck. The Master was carried on a stretcher to his cabin.
11. Once in his cabin, the 2/O checked the Master's vital signs. They were within a normal range. The Master was conscious and alert at this time.
12. The Master then asked the C/O to attempt to alter course towards Rotterdam and notify the Company. The C/O went up to the Bridge, while the 2/O continued to monitor the Master's condition.
13. At about 0735, the C/O and 3/O attempted to turn the ship to the south. The ship again began to roll heavily. The attempt was aborted, and the ship returned to its northeasterly course.
14. Shortly afterwards, the C/O notified the Company of the incident and the Master's condition. He also requested medical advice through the Company.
15. At about 0850, the Master reported that he was having difficulty breathing and requested that he be administered medical oxygen. He was transferred to the ship's Hospital.
16. At about 0925, the 2/O observed that the Master's blood pressure and pulse were falling. He also began intermittently losing consciousness. CPR was started once deemed necessary by the 2/O and urgent medical evacuation was requested from local authorities.
17. At about 1024, a rescue helicopter arrived and lowered two medical responders. They immediately went to the ship's Hospital and began administering life saving measures to the Master while the crewmembers continued CPR.
18. Despite their efforts, the Master was pronounced deceased at 1042 by the medical responders.
19. A public pathologist in Rotterdam conducted a postmortem examination. The cause of death was determined to be "loss of blood and pneumothorax after falling from the stairs of the ship."

Stairs Between the B Deck and the Bridge

20. The stairs that the Master fell from run between the B deck and the Bridge (*see Figure 1*). A door at the bottom of the stairs separates the landing from the B deck corridor.

21. There is a landing at the top of the stairs, and a door separating it from the Bridge. At the time of the incident, the door at the bottom of the stairs was held open by a magnetic holdback. The Bridge door was closed.
22. Continuous handrails are on both sides of the stairs. These end at the top of the steps, but do not extend onto the landing.



Figure 1: Stairs between the B deck and the Bridge of TIGRIS.

23. The stair treads, landings, handrails, and doors were reported to be in good condition, dry, and free of foreign objects or contamination.

Crew

24. TIGRIS had a complement of 20 crewmembers, five more than required by the Minimum Safe Manning Certificate issued by the Administrator.

Crew Experience

RANK	TIME ON BOARD TIGRIS	TIME IN RANK	TIME WITH COMPANY	TOTAL TIME AT SEA
Master	2 months, 18 days	15 years, 7 months	1 year, 8 months	20 years, 7 months
C/O	1 month, 27 days	1 year, 8 months	6 months	6 years, 8 months
2/O	1 month, 27 days	2 months	3 years, 9 months	2 years, 4 months
3/O	1 month, 27 days	1 year, 8 months	4 months	5 years, 2 months
Junior Officer	6 months, 7 days	6 months	6 months	2 years
C/E	1 month, 27 days	7 years, 2 months	3 years, 2 months	13 years, 2 months

- 25. The Master had previously served nearly six months as the Master of TIGRIS.
- 26. All involved seafarers held the appropriate Republic of the Marshall Islands-issued seafarer documentation for their positions.
- 27. The Administrator did not find any indication that any crewmembers involved with this incident had failed to receive the amount of rest mandated by the STCW Code, Section A-VIII/1, paragraphs 2 and 3 and the MLC, 2006, Regulation 2.3.
- 28. The Master’s most recent medical examination was conducted on 4 June 2020. He was found fit for full duty without restrictions.

PART 3: ANALYSIS

The following Analysis is based on the above Findings of Fact.

Heavy Weather

It was reported that TIGRIS experienced heavy weather while slowly steaming to the north of Rotterdam, awaiting berth availability. This resulted in frequent heavy rolling and pitching of the ship. Before and after the incident occurred, the sea state prevented the ship from altering course back towards Rotterdam.

Master’s Fall

While being assessed by the C/O, the Master stated that he fell down the stairs which connect the B deck and the Bridge.

Additionally, the Junior Officer stated that he heard the sound of the Bridge door handle, but that it did not open. He was unable to immediately check for someone on the other side of the door as the ship was rolling and pitching unusually heavily. When he was able to open the door to investigate, he saw the Master lying on the lower landing of the stairs.

The Master did not indicate what caused him to fall, but based on the information available, it is likely that he fell from the top of the stairs while attempting to open the Bridge door. It is possible that the fall resulted from his loss of balance due to the heavy pitching and rolling of the ship.

The Master's fall down the stairs resulted in internal bleeding and a pneumothorax. He initially appeared stable and was reporting pain in his back and neck when first examined by the crewmembers. However, the Master's condition quickly deteriorated, and he eventually succumbed to the injuries he sustained from his fall.

Stairs Between the B Deck and the Bridge

The stairs between the B deck and the Bridge were found to be clean and in good condition. The treads, landings, handrails, and doors were dry and free of foreign debris or contamination. Therefore, the condition of the stairs, landings, handrails, or doors are not considered a causal factor of this incident.

The handrail on both sides of the stairs ended at the top of the steps and did not extend onto the landing (*see Figure 1*). The handrail closest to the Bridge door would have likely been behind or to the side of the Master as he was attempting to open it.

Medical Assistance

When initially evaluated following his fall at about 0655, the Master appeared to be in a stable condition. He was in pain but conscious and alert. The crewmembers began providing first aid and notified the Company. An emergency medical evacuation was not requested at this time based on the crewmember's observed condition of the Master.

At about 0850, the Master reported difficulty breathing and was administered medical oxygen. By 0920, his pulse and blood pressure had dropped significantly.

The Master began intermittently losing consciousness and the crewmembers subsequently began CPR. Emergency medical evacuation of the Master was requested once it was apparent to the crew that his condition was worsening and that the first aid being provided would not be adequate.

PART 4: CONCLUSIONS

The following Conclusions are based on the above Findings of Fact and Analysis and shall in no way create a presumption of blame or apportion liability.

1. Causal factors that likely contributed to this very serious marine casualty include:
 - (a) rough seas which caused frequent heavy pitching and rolling; and
 - (b) the Master's fall from the top of the stairs between the B deck and the Bridge while likely attempting to open the Bridge door.

2. Causal factors that may have contributed to this very serious marine casualty include:
 - (a) the handrails on the stairs between the B deck and the Bridge did not extend onto the landing outside the door.

PART 5: PREVENTIVE ACTIONS

In response to this very serious marine casualty, the Company has taken the following Preventive Actions.

1. A safety alert was sent to all ships in the Company's managed fleet to raise awareness and share the lessons learned from this incident.
2. A fleet circular was sent to all ships in the Company's managed fleet to remind crewmembers of the importance of adjusting heading and speed when encountering heavy weather to reduce pitching and rolling.
3. A safety campaign focusing on ladder and stair safety was implemented. The safety campaign stressed the precautions to be taken during heavy weather and required a safety poster to be displayed on each deck near stairs inside the Accommodation.
4. This incident and lessons learned have been included as a case study for use at the Company's training facility.
5. The Company's drill schedule was amended to include training on medical evacuation of injured personnel.
6. A handrail was installed on the bulkhead near the Bridge door on TIGRIS.

PART 6: RECOMMENDATIONS

Based on the above Conclusions and in consideration of the Preventive Actions taken, the Administrator has no recommendations.

The Administrator's marine safety investigation is closed. It will be reopened if additional information is received that would warrant further review.