



SAFETY INVESTIGATION REPORT

201701/014

REPORT NO.: 01/2018

January 2018

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 ARMATA

**Fatal fall down the staircase
in position 38° 48' N 118° 12' E
16 January 2017**

SUMMARY

Armata departed Tianjin, China in ballast on 15 January 2017 and anchored outside the limits of Tianjin port in position 38° 48' N 118° 12' E, awaiting orders.

At 0540, the chief mate on the bridge wing caught a glimpse of a person on the port boat deck.

He hastened to the area and noticed that a crew member was lying motionless on his back near the staircase. A mobile phone set was close nearby. The chief mate hurried towards the unresponsive crew member but was later pronounced dead.

The autopsy report revealed no narcotic or psychotropic drugs, but showed presence of ethanol in blood (1.9 %) and in the urine (2.2 %).

The MSIU has issued two recommendations to the Company designed to ensure that the Company's drug and alcohol policy is implemented.

The flag State Administration is also recommended to issue a Merchant Shipping Notice on the potential issues with excessive consumption of alcohol on board.



FACTUAL INFORMATION

Vessel

Armata, 26,922 gt bulk carrier (Figure 1) was built in 1996 and was registered in Malta. She was owned by Elodie Ltd., managed by Mariteam Services Inc., of Greece and was classed with Nippon Kaiji Kentei Kyokai (NKKK). The vessel has a length overall of 190.00 m and a moulded depth of 16.60 m. *Armata* has a summer draught of 11.22 m and a summer deadweight of 43,769 tonnes.

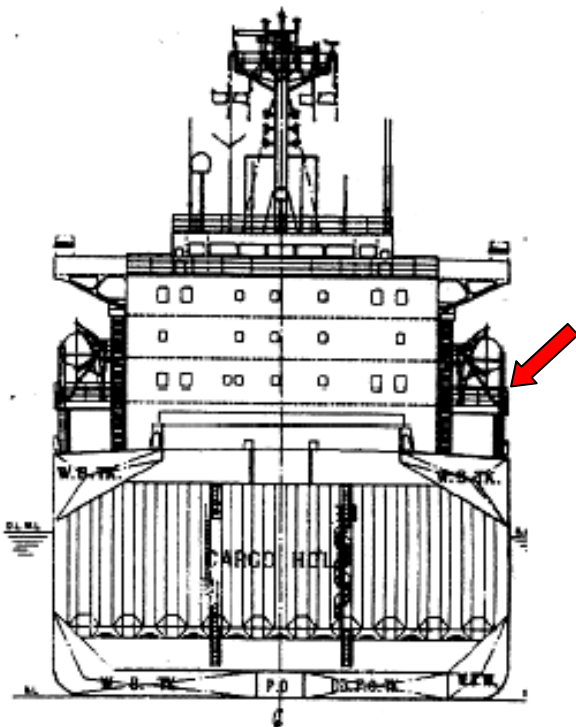


Figure 1: Midship section showing location of the accident

Propulsive power is provided by a 6-cylinder B&WE 6S50MC, 2 stroke, single acting, slow speed, direct drive, diesel engine, producing 8,290 kW at 126 rpm. This drives a single, fixed pitch propeller to reach a service speed of 14.70 knots.

Crew

At the time of the accident, *Armata* had a crew complement of 20, which was in excess of the number stipulated in the Minimum

Safe Manning Certificate. All crew members were Ukrainian nationals.

The deceased crew member was an ordinary seaman, aged 33. He had been at sea for about eight months and held a certificate as deck rating, issued by the Ukrainian authorities. He had been medically examined on 21 November 2016 and certified fit for sea service. He joined *Armata* on 30 November 2016. His watch-duties on board were designated at support level.

Environment

On the morning 16 January, there was a light to moderate breeze. Visibility was moderate to good. The air temperature was 0 °C. It was partly cloudy but there was no precipitation. The swell was about 0.50 m. The deck and superstructure lights were switched on at the time of the accident.

Narrative

On 16 January, at about 0450, safety and security checks were carried out from the bridge. The checks were reportedly uneventful. At 0540, however, the chief mate on the bridge wing caught a glimpse of a person lying on the boat deck, on port side (Figure 2).

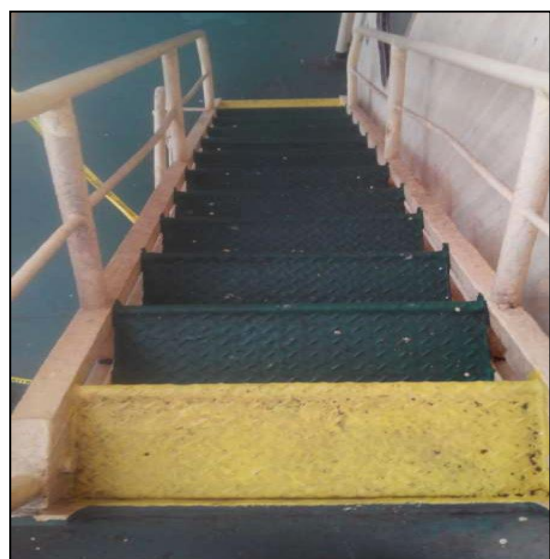


Figure 2: Staircase leading to the boat deck

He hastened to the boat deck and noticed that the person was wearing shorts, a jacket and a pair of black jogging shoes, and lying motionless on his back near the ship's ladder. A mobile phone set (Figure 3) was close-by.



Figure 3: Mobile phone on the accident site

The chief mate detected no pulse, respiratory or eye movement and the crew member was unresponsive. He immediately raised the alarm and called the master, who in turn reported to the Company, local P&I representative and ship's agent in Tianjin. From the injuries sustained by the casualty (hematoma of left eye, injuries on the back of the head and left outside palm), it was immediately suspected that the crew member had fallen down the staircase (Figure 2).

Cause of death

The autopsy revealed numerous fatal injuries to the head and facial area and concluded blunt fatal head injuries, causing hypostasis and inturgescence of the brain, extensive haemorrhage under the meninges and focal bruises of the tissue of the brain. The report declared that the injuries could have been caused by a blunt trauma to the parietal area of the head, hitting a hard surface, probably several hours before death.

The toxicological tests of blood and urine revealed no narcotic or psychotropic drugs but identified 1.9 ‰ presence of ethanol in

blood and 2.2 ‰ in urine¹. The report further stated that the specified concentration of ethanol in blood could correspond to a lifetime average degree of alcoholic intoxication.

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, alcohol and probable cause of the fall

The safety investigation has determined that the crew member was neither on duty nor assigned any work at the time of the accident. His last rest period was of no less than 12 hours. Fatigue was therefore not considered to be a contributing cause of the accident.

Section A-VIII/1.10 of the STCW Convention, as amended, requires measures to prevent drug and alcohol abuse on board. A mandatory requirement establishes a maximum limit of either blood alcohol content (BAC) not greater than 0.05 ‰ or 0.25 mg/l alcohol in the breath for crew members serving as OOWs.

The Company's policy strictly prohibited the use and consumption, distribution, sale of non-prescribed drugs or other control substances and alcohol. According to the policy, the master had the responsibility to ensure that all crew members acknowledged and supported the implementation of the drug and alcohol policy.

¹ 1.9 ‰ is equivalent to 0.19%.

The MSIU had no direct evidence to suggest that the deceased crew member had either consumed alcohol or was under the influence of drugs. Witnesses, who had seen him as late as 0100 on the day of the accident stated that the seaman had manifested normal behaviour.

Prior to the accident, none of the crew members saw the ordinary seaman step outside of the crew accommodation. The second engineer reported that at about 0300, he saw from his cabin one of the crew members outside on deck, with a mobile phone in his hand. However, it was neither established nor corroborated if it was the deceased seaman or whether the noise resembling the closing of accommodation door (that the engineer reportedly heard at 0330), could have actually been the same person falling down the staircase.

The blunt head injury affirmed by the autopsy report was compatible to a fall. A photograph of the staircase submitted by the master suggests a height of about three metres. It is very probable that the crew member fell down the staircase to the deck, resulting in a traumatic shock and possibly loss of consciousness. However, in the absence of any witness, the safety investigation was unable to establish precisely what had caused his fall.

Nonetheless, it is possible to suggest the following likely causes:

- Although no precipitation was reported, the possibility of condensation on the cold staircase was not excluded, making the steps slippery;
- The slippers worn by the seaman may have caused him to slip down the staircase;
- The crew member may have missed his footing or handhold while carrying / using his mobile phone; and

- High level of alcohol may have impaired cognition or caused poor coordination.

CONCLUSIONS

1. The cause of death was fatal injuries to the head and face;
2. The toxicological tests of blood and urine revealed 1.9 ‰ and 2.2 ‰ presence of ethanol respectively;
3. It was very probable that the crew member fell down the staircase to the deck, resulting in a traumatic shock and possibly loss of consciousness;
4. Although no precipitation was reported, the possibility of condensation on the cold staircase was not excluded, making the steps slippery;
5. The jogging shoes worn by the seaman may have caused him to slip down the staircase;
6. The crew member may have missed his footing or handhold while carrying / using his mobile phone;
7. High level of alcohol may have impaired cognition or caused poor coordination.

RECOMMENDATIONS²

Mariteam Services Inc. is recommended to:

01/2018_R1 carry out unannounced and regular alcohol tests on board;

01/2018_R2 bring this safety investigation report to the attention of all crew members serving on board Company vessels to emphasize the implementation of the Company's drug and alcohol policy.

The flag State Administration (Merchant Shipping Directorate) is recommended to:

01/2018_R3 issue a Notice to all managers of Maltese registered vessels, highlighting the potential safety issues as a result of excessive consumption of alcohol.

² **Safety recommendations shall not create a presumption of blame and / or liability.**

SHIP PARTICULARS

Vessel Name:	<i>Armata</i>
Flag:	Malta
Classification Society:	NKKK
IMO Number:	9125542
Type:	Bulk carrier
Registered Owner:	Elodie Limited
Managers:	Mariteam Services Inc., Greece
Construction:	Steel
Length Overall:	190.0 m
Registered Length:	182.4 m
Gross Tonnage:	26,922
Minimum Safe Manning:	15
Authorised Cargo:	Dry bulk

VOYAGE PARTICULARS

Port of Departure:	Tianjin, China
Port of Arrival:	Tianjin OPL
Type of Voyage:	Not applicable (awaiting orders)
Cargo Information:	In ballast
Manning:	20

MARINE OCCURRENCE INFORMATION

Date and Time:	16 January 2017 at 0540 (LT)
Classification of Occurrence:	Very Serious Marine Casualty
Location of Occurrence:	38° 48' N 118° 12' E
Place on Board	Boat deck
Injuries / Fatalities:	One fatality
Damage / Environmental Impact:	None
Ship Operation:	At anchor
Voyage Segment:	Arrival
External & Internal Environment:	Visibility was moderate to good. The air temperature was 0 °C. It was partly cloudy but there was no precipitation. The swell was about 0.50 m. The deck and superstructure lights were switched on.
Persons on board:	20