Norwegian Safety Investigation Authority

Submitted September 2023

REPORT MARINE 2023/05

Fatal accident on board M/V 'Oslo Wave 3', port of Hamina in Finland, 13 February 2023

The Norwegian Safety Investigation Authority (NSIA) has produced this report exclusively for the purpose of improving safety at sea.

A safety investigation is conducted in order to determine the sequence of events and causal factors, study factors of importance for preventing marine accidents and improving safety at sea, and publish a report and any safety recommendations. It is not the NSIA's task to apportion blame or liability under criminal or civil law.

This report should not be used for purposes other than preventive maritime safety work.

Photo: Police in Finland

This report has been translated into English and published by the NSIA to facilitate access by international readers. As accurate as the translation might be, the original Norwegian text takes precedence as the report of reference.

About the investigation

The purpose of this investigation has been to clarify the sequence of events and consider whether there are lessons to be learned that may contribute to improving safety.

Figure 1: Cargo ship M/S 'Oslo Wave 3' berthed in the port of Hamina in Finland. Photo: Police in Finland

The Norwegian Safety Investigation Authority (NSIA) was notified of the accident on 14 February 2023 after the ship had left the port headed for Béjaïa in Algeria, where it was scheduled to arrive on 25 February. It was planned to board the vessel when it was passing Gothenburg. This was not possible due to the weather conditions. Factual information is therefore based on available data from surveillance cameras installed on the ship and in the port of Hamina, and information from the local police and the Safety Investigation Authority of Finland.

Factual information

Data relating to the incident

Vessel:	
Name	Oslo Wave 3
Flag state	Norway, NIS
Classification society	DNV
IMO number / call sign	9208198/LAKT8
Type	General Cargo
Build year	2000
Ship Owner	Oslo Wave AS, Oslo
The Company responsible for ISM, DOC holder	Bulkship Management AS, Oslo
Operator/Bareboat Charter	Dalaro Shipping AB, Sweden
Construction material	Steel
Length/breadth/draught	142.82 m/21.5 m/9.7 m
Gross tonnage/Deadweight	11,894/17,485
Voyage:	
Port of loading	Hamina, Finland
Port of discharge	Béjaïa, Algeria
Type of activity	Protection and securing of deck cargo
Cargo	Timber: A total of 20,700.927 CBM divided between 15,307.234 CBM in the cargo hold and 5,393.693 CBM on deck
Crew	14
Information about the accident:	
Date and time	13 February at 20:20 local time
Type of accident	Fall from a height of 6.5 m onto a concrete quay
Location/position where the accident occurred	Port of Hamina, pier EU2. Moored with the starboard side alongside the quay. Direction of the quay: 345 degrees.
Place on board where the accident occurred	From the top of the deck cargo down onto the quay.
Circumstances of the accident	The accident occurred while the crew were laying tarpaulins to protect the deck cargo.
Injuries/fatalities	One person died after falling from height.
Environmental conditions	Dark. Cloudy. Work lighting. Temperature: +4–0 °C. Northwesterly moderate to fresh breeze (red 30), with gusts reaching strong breeze.

Sequence of events

BEFORE THE ACCIDENT

Oslo Wave 3 had taken on board timber in two ports in Finland, namely Jakobstad and Hamina. The timber was loaded into the cargo holds and on deck. A quarter of the timber was placed on deck on top of the cargo hatches and all the way out to the ship's side. The loading operation was completed at around 15:45 local time. Tarpaulins were placed over the deck cargo as protection. The tarpaulins were nailed down before the deck cargo was secured with cargo straps at intervals of approximately 3 metres.

According to the vessel's accident report, the chief mate had reviewed the checklist for work at height. It was written in English, but was conveyed to the crew in Russian, as this was the working language used on board. The crew had limited English proficiency, except for some of the officers.

The surface of the cargo was icy in some places, and the crew were wearing grips on their shoes to prevent them from slipping. The crew have stated that they were aware of the wind force. When readying the tarpaulins, they had to keep them low to prevent them from catching the wind. The tarpaulins were of different sizes, and the tarpaulin being handled at the time of the accident was one of the biggest.

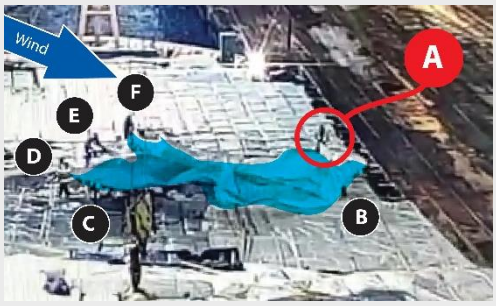
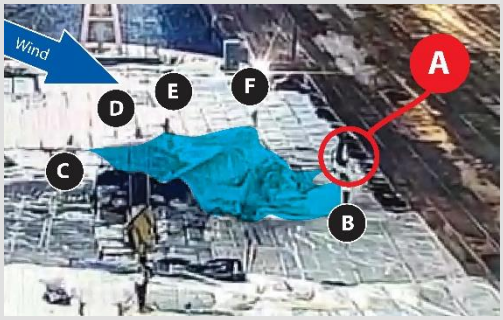
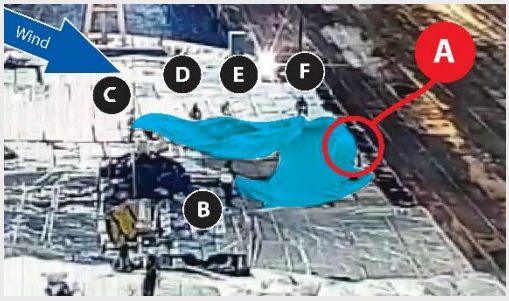
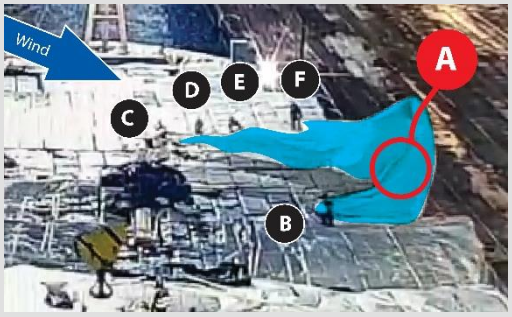
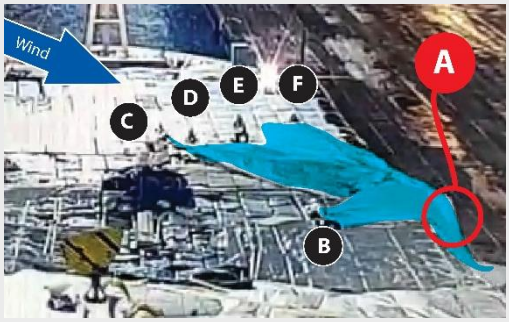
CCTV footage from earlier that day shows that the tarpaulins were removed from bags and spread out before being placed over the cargo. On several occasions, the deck crew had to rotate the tarpaulins. The number of crew involved in the work varied between four and eight.

From the time they started securing the cargo, the wind had turned 15 degrees and was hitting the port bow from 30 degrees. Gusts of more than 10 m/s were recorded. The ship management had previously announced that they would depart early the next day. The deck crew considered the conditions to be risky but chose to complete the work to make the departure time.

THE ACCIDENT

At 20:10 on 13 February, the crew started laying down a new tarpaulin. There were six crew members working on the tarpaulins at that time. Everyone was wearing personal protective equipment in addition to grips on their shoes, but none of them were wearing fall protection; see Table 1.

Table 1: The sequence of events. The crew of six are designated A, B, C, D, E and F. Source: Shipping Company

	C, D, E and F were standing on top of the deck cargo in the middle of the deck and grabbed the side of the tarpaulin that was facing the wind. (A and B) grabbed one side each and spread the tarpaulin out towards the starboard side. When the tarpaulin had been spread out, the crew realised that it should have been rotated 90 degrees.
	C, D, E and F started to rotate it by moving clockwise. They ended up standing with their backs to the bow.
	Person B, who was standing 3–4 metres from the edge of the deck, moved towards the centre of the ship. Person A moved 2–3 metres aft along the edge of the deck.
	When they had nearly completed the rotation, the ship was hit by several strong gusts of wind that caught the tarpaulin. Person A, who was still moving along the starboard side, was caught under the tarpaulin and pushed towards the edge of the deck.
	Person A held onto the tarpaulin, but lost his grip when parts of the tarpaulin blew out over the side of the ship, and the person fell down onto the quay.

AFTER THE ACCIDENT

Shortly after the accident, the crew administered first aid to Person A until port rescue personnel arrived 18 minutes later. Medical personnel initiated life-saving measures. Person A was transported by helicopter to hospital, where he died the next day from the injuries he had sustained.

The work to protect and secure the cargo was suspended until the next morning when the wind conditions had improved. The work was completed in the same way as before the accident, still without physical fall protection being used.

Implemented Measures

Following the accident, the Company has distributed a circular to all the vessel in the fleet instructing them to rig safety lines before commencing work on protecting and securing deck cargo, and to equip the crew with safety equipment necessary to perform the work in question.

Ship and Organisation

Oslo Wave AS is the owner of MV Oslo Wave 3.

Bulkship Management AS (in this report named the Shipping Company), is the Document of Compliance (DOC) holder responsible for the ships Safety Management System.

Dalaro Shipping AB has bareboat chartered the vessel from Oslo Wave AS. Dalaro utilizes the vessel in its trades with forest products between ports in the Baltic and North Africa, and is responsible for the Commercial Management of MV Oslo Wave 3.

All three companies are owned by Oslo Bulk AS, Oslo.

The NSIA’s assessments

The incident

When the tarpaulin had been spread out, the crew realised that it needed to be rotated, and they therefore moved away from their original positions. This meant that only two crew members were holding down the windward side of the tarpaulin; one in each corner (see Table 1), which reduced the crew’s ability to secure the tarpaulin when it got out of control.

Person A, who was moving aft along the edge of the deck, was caught in the tarpaulin and was unable to withstand the forces of the wind. Nor was it possible for the other crew members to withstand the forces that acted on the tarpaulin, which caught the wind like a sail, since there was no one between B and C to hold the tarpaulin down. As a result, person A was pushed over the edge of the deck cargo and fell down onto the quayside.

Time pressure

When the deck crew noticed that the wind was increasing, they considered the working conditions to be risky. External parties had already been informed that the ship was planning to leave port early the next day, which was further communicated to the crew. This meant that the work with lashing and protecting the cargo had to be completed during the evening. The NSIA believes the awareness to leave early the next day, led to the crew feeling pressed for time and not halting the work operation even though they found the working conditions risky.

Language

It was not possible for the Russian-speaking crew to fully familiarise themselves with the shipping company’s safety management system and related tools, as parts of this documentation were only available in English. Only a few officers on board mastered English, and the crew therefore depended on important safety information being relayed to them. In this case, the language barrier had no direct bearing on the accident, but a common understanding of safety procedures is essential to establishing a good safety culture, and language is an important success factor in this context.

Fall protection and safety culture

The Shipping Company’s safety management system included a procedure with a checklist to be used when working at height, in connection with loading/unloading operations and when securing cargo on deck.

In the checklist, all relevant items were ticked off as having been satisfied, including that the crew were to use fall protection equipment, without this actually being done in practice. The equipment was not used, as the crew had expressed that they found it cumbersome to use a safety line during this type of operation. When the work operation was resumed after the accident, no new risk assessment was performed that included measures to limit the risk of falls, including fall protection. This indicates an inadequate understanding of the risk of accidents involved.

The purpose and implementation of procedures and checklists appears to be poorly understood on board, as the checklist was seemingly only used to comply with the safety management system. Thus, no obvious link between the risk assessment, relevant procedures and the practical performance of the work had been established on board the ship.

Following the accident, the Shipping Company has introduced measures to reduce the possibility of falling from the deck cargo. The NSIA considers this a positive measure, but it should be more effectively reflected in the work that takes place on board.

Norwegian Safety Investigation Authority
Lillestrøm, 1 September 2023