Final Report

FATALITY OF CHIEF OFFICER ONBOARD SEACON OSLO AT SEA ON 28 OCTOBER 2025

TIB/MAI/CAS.216

Transport Safety Investigation Bureau
Ministry of Transport
Singapore

9 June 2026

The Transport Safety Investigation Bureau of Singapore

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ABBREVIATIONS

ASD	Able Seafarer Deck
BVMO	Bureau of Veritas Marine & Offshore
CCS	China Classification Society
CPR	Cardio-pulmonary resuscitation
CO	Chief Officer
COSWP	Code of Safe Working Practices for Merchant Seafarers
DOC	Document of Compliance
H	Hour
ISM	International Safety Management
MLC	Maritime Labour Convention
MRCC	Maritime Rescue Coordination Centre
MSA	Maritime Safety Administration of the People's Republic of China
nm	Nautical Mile
OOW	Officer of the Watch
OS	Ordinary Seaman
OSLO	Seacon Oslo
PA	Public Address
PPE	Personal Protective Equipment
PTW	Permit to Work
SMS	Safety Management System
STCW	Seafarers Training, Certification and Watchkeeping
2O	Second Officer
3O	Third Officer

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SYNOPSIS

On 28 October 2025, the Singapore registered bulk carrier, Seacon Oslo (OSLO) was transiting the Mozambique Channel enroute to Port of Durban, South Africa, for the loading of chromite ore. The Chief Officer (CO) was discovered lying on the tank top[1] inside No.1 cargo hold at about 1155H. Medical first aid was immediately rendered upon discovery of the CO; however, he could not be resuscitated.

The Transport Safety Investigation Bureau classified the occurrence as a very serious marine casualty.

The investigation revealed that the CO, the designated Safety Officer, had entered No. 1 cargo hold alone, likely to inspect the cargo space without informing any crew member and fell through an unguarded opening in the inspection walkway onto the tank top. The unguarded opening in the inspection walkway was the result of a metal grating being left open by ship crew without providing any safety barriers.

The investigation also found that the Company's safety management procedures were not systematically implemented onboard OSLO. The inspection carried out by the CO on the walkway within the cargo hold was regarded as working aloft, but the required Checklist for Aloft Work and Permit to Work (PTW[2]) were neither prepared by the CO nor approved by the Master. In addition, the Cargo Hold Preparation Operating Checklist for the CO's entry into No. 1 cargo hold was not completed or approved by the Master.

[1] Tank top is an industry term meaning the base of the cargo hold.
[2] The PTW system was intended to ensure that appropriate control measures were established, based on the hazards identified and the findings of the risk assessment, to safeguard persons who might be affected by the work. The PTW also served as a formal record that control measures had been put in place before the activity commenced.

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VIEW OF VESSEL

Seacon Oslo - (*Source:* the Company)

DETAILS OF VESSEL

Name	Seacon Oslo (OSLO)
IMO number	9980435
Classification society[3]	China Classification Society (CCS), Bureau of Veritas Marine & Offshore (BVMO)
Ship type	Bulk carrier
Year built	2023
Owner / ISM Manager[4]	Xiang T11 SG International Ship Lease Pte. Ltd. / Seacon Ships Management Pte. Ltd.
Gross tonnage	48785
Length overall	228.90m
Breadth	36.00m
Designed draft	14.00m
Summer freeboard	6.174m
Main engine(s)	MAN 6S60ME-C10.5-TIII(HPSCR), 9000kw x 84 r/min
Propellers	Fixed-pitch propeller, 4 blades

[3] CCS was the Recognised Organisation (RO) authorised by the flag Administration for carrying out surveys and issuance of statutory certificates. As per the International Safety Management (ISM) Code for the Safe Operation of Ships and for Pollution Prevention – BVMO was the RO for the ISM audits and issuance of ISM related certificates. The Safety Management Certificate (SMC) was issued by CCS, while the Document of Compliance (DOC) was issued by BVMO.

[4] Seacon Ships Management Pte. Ltd., the ISM Manager, is hereinafter referred to as the Company in this investigation report.

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1 FACTUAL INFORMATION

Unless otherwise stated, all times used in this report are expressed in Ship's Mean Time (SMT), which is two hours ahead of Coordinated Universal Time (UTC[5] + 2H).

In the conduct of marine safety investigation into the circumstances surrounding this death occurrence, the investigation team reviewed information obtained from the Master, crew, and the Company.

1.1 Sequence of events

1.1.1 On 28 October 2025, a gearless[6], seven-hatch bulk carrier, Seacon Oslo (OSLO) (see **Figure 1**), in ballast condition, was transiting the Mozambique Channel on a voyage to the Port of Durban, South Africa, for the loading of chromite ore. The vessel was scheduled to arrive at the port on 30 October 2025, after discharging coal in Mormugao, India.

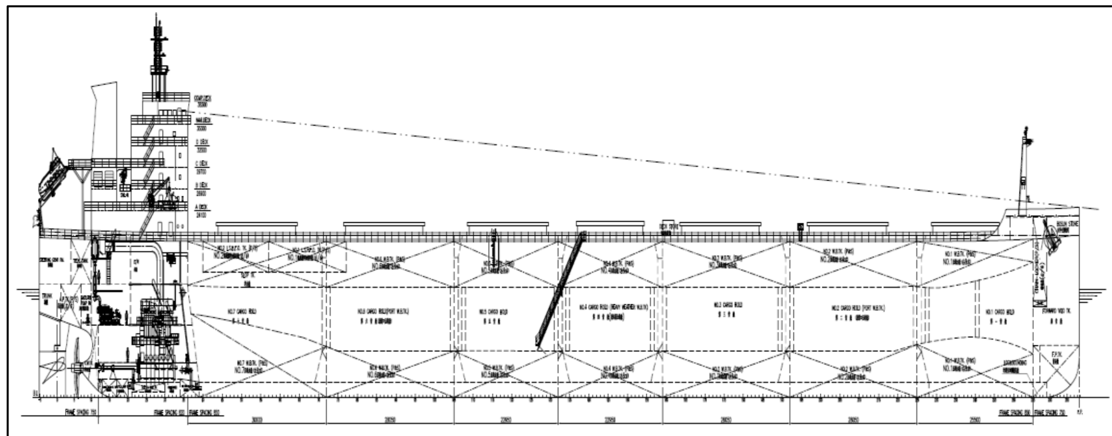

Figure 1 - General Arrangement of Seacon Oslo (*Source*: the Company)

1.1.2 At about 0700H, the Bosun met with the Chief Officer (CO) who was keeping a navigational watch[7] on the bridge. The CO assigned two tasks to the Bosun: a) painting of the bulkheads in No.3 cargo hold; and b) removing stains from previous cargo in No. 5 cargo hold.

[5] Coordinated Universal Time (UTC) is the primary time standard to which the world regulates clocks and time.
[6] A bulk carrier not equipped with cargo cranes onboard.
[7] In accordance with the shipboard working arrangements, the CO was scheduled for watchkeeping duties from 0400H to 0800H and from 1600H to 2000H while at sea.

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1.1.3 At about 0745H, the CO handed over the bridge watch to the relieving watchkeeper, the Third Officer (3O), and remained on the bridge to discuss with the Master on an email response to the Charterer of OSLO about incoming cargo loading stowage. Relating to this, the CO updated the Master that work in No. 3 and No. 5 cargo holds had been assigned[8], and that the cleaning of No.1 and No. 7 cargo holds had been completed[9].

1.1.4 At about same time, the Bosun conducted a toolbox meeting with the deck crew in the ship's office and distributed tasks assigned by the CO. The deck crew was split into two teams, i.e. the first team (Team-1), consisting of the Bosun, an Able Seafarer Deck (ASD1) and two Ordinary Seamen (OS), was assigned to clean the stains in No.5 cargo hold, and the second team (Team-2), consisting of another ASD (ASD2) and a Deck Cadet (DC), was assigned to paint the bulkheads of No. 3 cargo hold.

1.1.5 At about 0800H, following the completion of the toolbox meeting, the deck crew, after donning their personal protective equipment (PPE), proceeded to the main deck in preparation for tasks in the cargo holds. The Bosun fully opened[10] the hatch covers of the four cargo holds (No. 1, 3, 5, and 7). No. 1 and No. 7 cargo holds had already been cleaned and painted on previous days, the opening of the hatch covers was to facilitate the drying process.

1.1.6 At about 0825H, after collecting the necessary tools, equipment and paint, the two teams entered the cargo holds. Prior to entering the cargo holds, the Bosun and the DC each informed the 3O via their own walkie-talkie.

1.1.7 Following the discussion with the Master, the CO left the bridge at about 0845H for his breakfast. After replying to the email to the Charterer, the Master also left the bridge to join the CO for breakfast.

1.1.8 After their breakfast, the Master returned to the bridge to prepare the pre-arrival port documentation, while the CO brought his walkie-talkie on deck to supervise the cargo holds cleaning and painting works.

1.1.9 At about 0945H, according to the Master, the CO returned to the bridge and updated him on the progress of the cargo holds cleaning and painting works.

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[8] The Cargo Hold Preparation Operating Checklist for No. 3 and No. 5 Cargo Holds was approved by the Master on 28 October 2025.

[9] The CO did not mention any works or entry requirements for No. 1 or No. 7 cargo holds to the Master. There was neither PTW nor Cargo Hold Preparation Operating Checklist raised for No.1 and No.7 Cargo Holds.

[10] For natural ventilation of the cargo hold.

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He returned to deck at about 0951H. The Master did not ask if the CO had physically entered the cargo holds to check the work progress.

1.1.10 At about 0954H, the CO was observed, through CCTV playback, walking forward towards the bow on the starboard side of the main deck (see **Figure 2**). An image captured at about 1002H shows the CO last seen on the port side of the main deck, between cargo holds No. 1 and No. 2.

Figure 2 – Snapshots from CCTV playback
(*Source*: the Company, annotated by TSIB)

1.1.11 According to the Bosun, the members of the two teams did not take morning coffee break as they aimed to complete the cargo hold tasks before arriving the next loading port. Both the Bosun and the DC did not hear any communication from the CO over their walkie-talkie nor see the CO entering their cargo holds during the working period. Furthermore, both also did not notice any unusual sounds or loud noises (e.g. falling) while working inside the cargo holds.

1.1.12 At about 1130H, the Master was having lunch in the officers' mess and noticed that the CO had not come for lunch as he normally would. The Master attempted to contact the CO via walkie-talkie. After receiving no response, the Master proceeded to look for the CO on deck at about 1140H.

1.1.13 At about 1145H, the 3O handed over the bridge watch to the relieving watchkeeper, the Second Officer (2O).

1.1.14 On the main deck near the accommodation, the Master met the Wiper who then accompanied the Master to look for the CO. After failing to locate the CO

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at the accommodation area, they continued their search towards the bow. At about 1155H, the CO was found lying motionlessly in the No.1 cargo hold (see **Figure 3**).

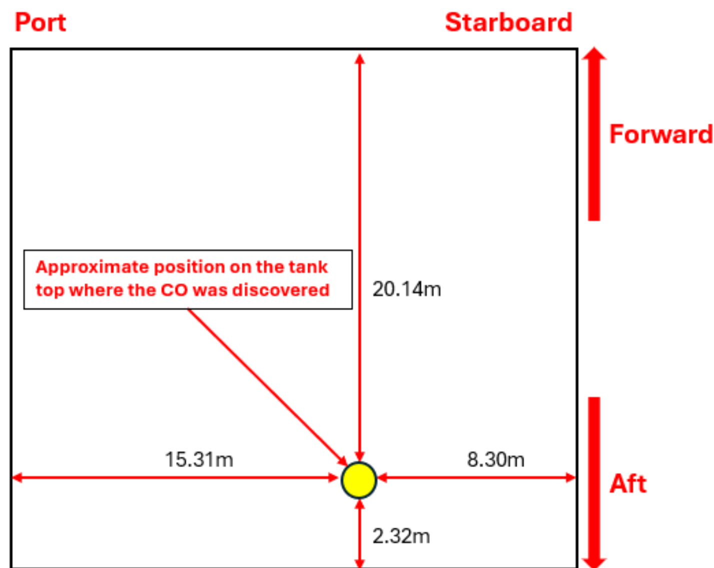

Figure 3 – Sketch of the top-down view of No. 1 cargo hold showing the location where the CO was found on the tank top

1.1.15 Both the Master and the Wiper climbed into No.1 cargo hold. The CO was found wearing PPE, including coverall, gloves, and safety shoes, and was in possession of his walkie-talkie. His safety helmet was found several metres away from his body. The CO was unconscious, lying on his left side, breathing weakly, bleeding from his mouth and appeared to have suffered a leg fracture. The Master immediately requested for assistance via walkie-talkie and instructed the bridge to make a public address (PA) announcement to alert all crew members of the emergency.

1.1.16 At about 1157H, 2O made a PA announcement regarding the medical emergency. After handing over the watch duty to the 3O, the 2O made his way to No.1 cargo hold with the first aid kit, stretcher, and oxygen bottle. Meanwhile, the deck crew from No.3 and No.5 cargo holds, after hearing the PA announcement, proceeded to No.1 cargo hold to assist with the emergency.

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1.1.17 At about 1230H, after assessing the CO's condition[11], the 2O administered medical oxygen to the CO. Meanwhile, the Master proceeded to the bridge, informed the Company of the incident, and was instructed to initiate rescue operations and notify the relevant authorities, including the Maritime Rescue Coordination Centre (MRCC) of Maputo, Mozambique, regarding the medical emergency. The Master sought medical advice[12] via teleconsultation from doctors ashore and continued monitoring the CO's condition and administering first aid treatment.

1.1.18 At about 1317H, after consulting the Company, the Master deviated the ship's course towards Beira Port, Mozambique, about 287nm away (see **Figure 4**), to seek shore medical assistance, following the instructions from MRCC Maputo. The estimated time of arrival at Beira Port was at 1200H on 29 October 2025.

Figure 4 – Map depicting the location of OSLO from Beira Port, Mozambique when decision was made to deviate for medical emergency
(*Source:* MarineTraffic, annotated by TSIB)

1.1.19 At about 1400H, the crew transferred the CO from No.1 cargo hold to the ship infirmary using a stretcher, where his blood pressure, pulse, and body

[11] The blood pressure - 80/65, pulse rate - 58 beats per minute, and body temperature - 37.6°C.

[12] Upon receiving the emergency notification from the Master, the Company established an emergency medical team group chat via social medium, WeChat. The members of the group included the Master of OSLO, the Designated Person Ashore (DPA), the crewing superintendent, the Marine and Technical Superintendents, as well as medical professionals from both the Affiliated Hospital of Qingdao University and the COSCO Qingdao Medical Office.

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temperature were continuously monitored. Subsequently cardio-pulmonary resuscitation (CPR) was administered by the 2O and the attending crew.

1.1.20 At about 1550H, the 2O administered dopamine to the CO under the guidance of the doctors ashore, after it was determined that the CO's blood pressure was too low.

1.1.21 At about 1813H, the CO was observed to have no breathing or pulse, with dilated pupils and dropping body temperature. However, CPR efforts were continued on the CO.

1.1.22 At about 1855H, the condition of the CO was reassessed. The CO was still not breathing and had no detectable heartbeat and pupils were dilated. There was no detectable blood pressure, the body temperature had dropped further, and the skin had turned to a bluish-grey appearance.

1.1.23 At about 1915H, the Master declared the CO had passed on, following the shore doctors' advice. The crew ceased administering CPR to the CO. The body of the CO was placed in the ship cold room. The Master resumed the original route to Durban, South Africa after receiving the guidance from the Company and the MRCC Maputo.

1.1.24 On 2 November 2025, the CO's body was offloaded ashore at Durban, South Africa and was transferred to the State Mortuary.

1.2 The crew

1.2.1 OSLO was manned[13] by 20 officers and crew of various nationalities including the Master at the time of the occurrence. Details of the crew members relevant to the occurrence are listed in **Table 1** – Relevant crew particulars.

[13] Comprising nine Chinese nationals, six Myanmar nationals and five Vietnamese nationals.

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Rank/Age	Master, 40	CO, 43	2O, 35	Bosun	DC, 21
Certificate held	STCW II/2[14]	STCW II/2	STCW II/2	STCW II/5[15]	STCW VI/1[16]
Experience in rank (years)	1.0	8.8	3.5	10	0.1
Service with company (years)	3.0	7.8	2.0	8.0	0.1
Service onboard (months)	1.0	6.7	7.0	6.7	1.0

Table 1 – Relevant crew particulars

1.2.2 Prior to the occurrence, the ship's records documented that the CO's work/rest hours in the past 24-hour and the last 7-day period, complied with the requirements of the STCW[17] and MLC[18].

1.2.3 A Medical Certificate for Seafarer issued by the Marine Safety Administration (MSA), People's Republic of China on 8 November 2024, indicated that the CO was fit[19] for sea service, without restrictions, with the certificate valid for two years.

1.2.4 According to the Master and crew, they had a good working relationship with the CO. Prior to the occurrence, they did not observe any abnormal behaviour from the CO.

1.3 The vessel

1.3.1 OSLO was a Panamax-class bulk carrier, equipped with seven cargo holds,

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[14] STCW Code - A-II/2 Mandatory minimum requirements for certification of masters and chief mates on ships of 500 gross tonnage or more.
[15] STCW Code - A-II/5 Mandatory minimum requirements for certification of ratings as able seafarer deck.
[16] STCW Code – A-VI/1 Mandatory minimum requirements for safety familiarisation, basic training and instruction for all seafarers.
[17] STCW Code, A-VIII/1, Fitness for duty - All persons who are assigned duty as officer in charge of a watch or as a rating forming part of a watch and those whose duties involve designated safety, prevention of pollution and security duties shall be provided with a rest period of not less than: .a) a minimum of 10 hours of rest in any 24-hour period; and .b) 77 hours in any 7-day period.
[18] Maritime Labour Convention, 2006, Regulation 2.3, Hours of work and hours of rest - The limits on hours of work or rest shall be as follows: (a) maximum hours of work shall not exceed: (i) 14 hours in any 24-hour period; and (ii) 72 hours in any seven-day period; or (b) minimum hours of rest shall not be less than: (i) 10 hours in any 24-hour period; and (ii) 77 hours in any 7-day period.
[19] Meeting the requirements of the Maritime Labour Convention, 2006 - Regulation 1.2 – Medical certificate and STCW Code - A-I/9 Medical standards.

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and was capable of transporting solid bulk cargo such as coal, iron ore, and bauxite. At the time of the occurrence, she was in tramp service plying between the Far East and North America.

1.3.2 The statutory certificates of OSLO were valid at the time of the occurrence.

1.3.3 There were two points of access (see **Figure 5**) to No. 1 cargo hold, both located on the main deck:

a) Forward access: via the booby hatch located forward of No. 1 cargo hold, leading to the cargo hold through a vertical ladder.

b) Aft access: via the booby hatch located between No. 1 and No. 2 cargo holds, leading to the cargo hold through a spiral ladder.

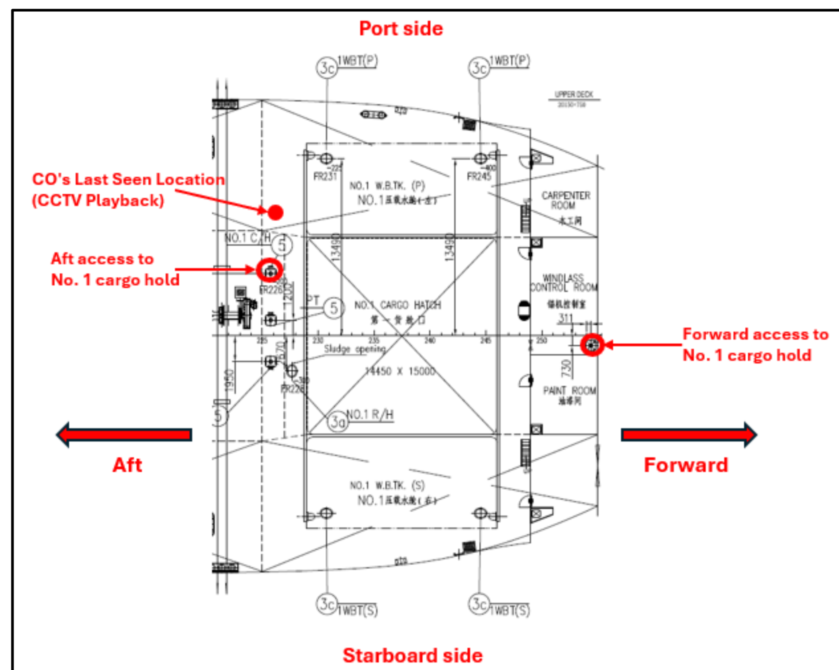

Figure 5 – Forward and aft access to No. 1 cargo hold
(*Source*: the Company, annotated by TSIB)

1.3.4 No.1 cargo hold was internally fitted with two fixed inspection walkways: one located at the forward part of the hold and the other at the aft part. The aft inspection walkway (see **Figure 6**) was situated at a height of about 16 metres above the tank top of the cargo hold. These walkways were intended to allow personnel to move within the hold at an elevated level and access parts of the hold structure for inspection and maintenance.

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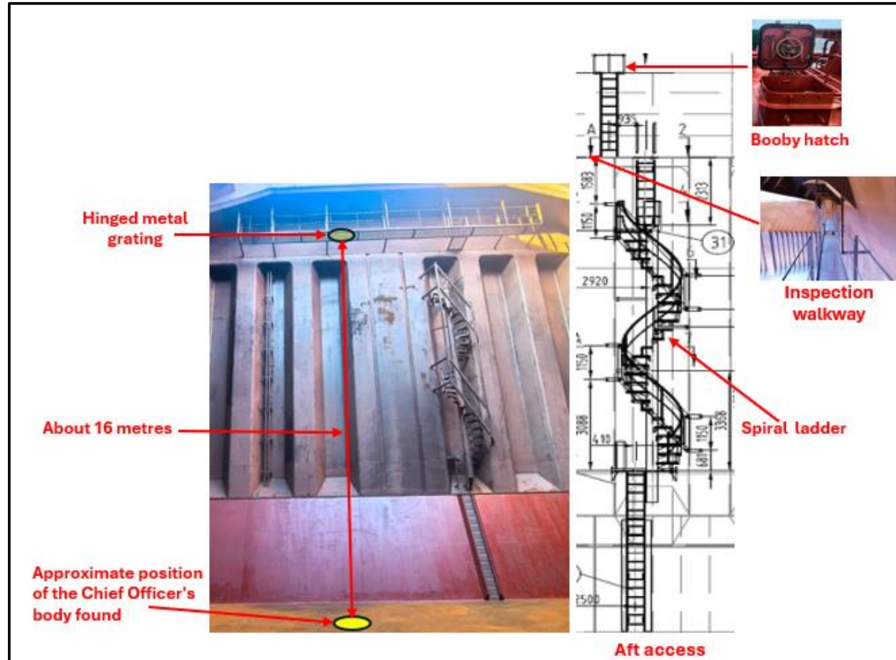

Figure 6 – Overview of the aft elevated inspection walkway and the spiral ladder (*Source:* the Company, annotated by TSIB)

1.3.5 A metal grating, hinged at the side railing (see **Figure 7**) and located near the midway of the elevated inspection walkway at the aft access, can be lifted to form an opening to facilitate the disposal of residues from the cargo hold during washing and cleaning. The lifted metal grating can be hooked onto the side railing to form an opening in the inspection walkway.

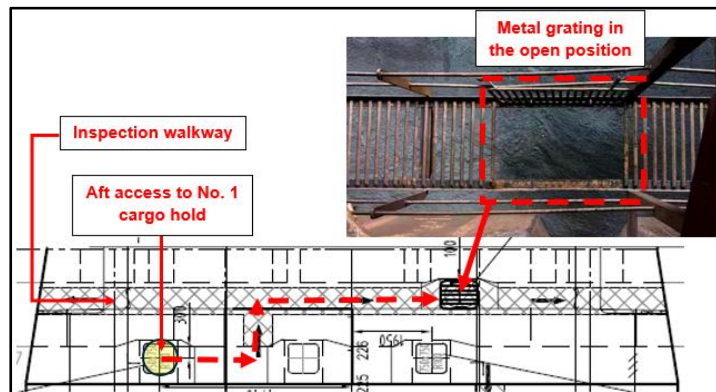

Figure 7 – Walking route from the booby hatch to the opening (after metal grating being hooked to the side railing) on the inspection walkway (*Source:* the Company, annotated by TSIB)

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1.3.6 The metal grating was left open by the deck crew after completing painting works in the cargo hold on 26 October 2025.

1.4 SMS procedures

1.4.1 Cargo hold cleaning is a critical operation for bulk carriers, aimed at ensuring the quality of the next cargo, preventing contamination from the last cargo carried, minimising corrosion of the ship's structures and ensuring compliance with maritime safety regulations. The process involves sweeping, washing, rinsing, drying, and conducting an inspection to ensure that cargo holds are properly prepared for the safe carriage and transport of the next cargo. The cleaning requirements depend on the type of cargo being carried and the specific guidelines outlined in the International Maritime Solid Bulk Cargoes (IMSBC[20]) Code.

1.4.2 In accordance with OSLO Charterer's requirements, cargo holds of OSLO were required to be thoroughly cleaned, swept, and washed down with seawater, followed by fresh water, and properly dried. These cargo holds were required to be free from salt, rust scale, and any residues of previous cargo prior to arrival at the loading port.

1.4.3 The Company's Safety Management System (SMS) designated the CO as the person responsible for overseeing cargo hold preparation. It was required that no fewer than two persons enter the same cargo hold at any given time. Unauthorised entry into a cargo hold or working alone without supervision was strictly prohibited. The vessel's Cargo Hold Preparation Operating Checklist was required to be completed and approved by the Master before commencement of any work or operations in the cargo hold, such as cargo hold cleaning and painting. According to the Master, the cargo hold inspection conducted from the internal inspection walkway was considered to fall under the Company's cargo hold preparation operating procedures and was also regarded as 'working aloft / work at height'.

1.4.4 The Company's SMS for working aloft[21] states that the Chief Officer and Bosun were responsible for ensuring that working aloft was carried out safely, with all

[20] IMSBC Code facilitate the safe stowage and shipment of solid bulk cargoes by providing information on the dangers associated with the shipment of certain types of solid bulk cargoes and instructions on the procedures to be adopted when the shipment of solid bulk cargoes is contemplated.

[21] The Company's SMS identified operations conducted at heights greater than 2 metres as "working aloft".

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necessary safety precautions implemented prior to the operation. The crew was required to secure the safety harness and safety rope, with the safety rope attached to a firm structure or object. In addition, the vessel's Checklist for Aloft Work and PTW were required to be completed and approved by the Master before the commencement of work aloft. The investigation team noted that, in relation to the CO's inspection of No. 1 cargo hold, the Checklist for Aloft Work, the Cargo Hold Preparation Operating Checklist, and the PTW form had not been initiated.

1.4.5 The Cargo Hold Preparation Operating Checklist specified, among other things, that crew members assigned to cargo hold preparation were to be familiar with their respective duties and responsibilities, wear the appropriate PPE for the operation, and report every entry into and exit from the cargo hold to the Officer of the Watch (OOW) on the bridge via walkie-talkie. The checklist also required an assessment of whether entry into the cargo hold was to be treated as enclosed space entry. Where the enclosed space entry requirements applied, the Company's SMS procedures were to be followed. These included checks on the oxygen level and the presence of toxic or harmful gases within the cargo hold, as well as the issuance of a PTW.

1.5 Code of Safe Working Practices for Merchant Seafarers (COSWP[22])

1.5.1 The COSWP provides safe working practices for improving health and safety onboard ships. A physical copy of the COSWP (2024 Edition) for reference was provided onboard OSLO. The relevant Chapters addressing unguarded openings and working at height, are as follows:

- Chapter 11.5 provides the control on guarding of openings, to mitigate the risk of accidental fall. Guardrails or fencing should consist of an upper rail at a height of one metre and an intermediate rail at a height of 0.5 metre. The rails may consist of taut wire or taut chain. Onboard OSLO, the opening (created by the lifted metal grating) in the walkway in No. 1 cargo hold lacked any form of guarding, such as guardrails or fencing, to prevent falls.

- Chapter 17 defines working at height as any activity where there is a risk of falling. This includes working inside a tank, near an opening such as a

[22] The COSWP is published by the United Kingdom Maritime and Coastguard Agency. The Company incorporated the COSWP in its safety management procedures for compliance.

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hatch, or on a fixed stairway. Personnel engaged in such work must wear a safety harness with a lifeline or other fall arresting device at all times. On the occurrence day, the CO was found not wearing a safety harness with lifeline, there was also no fall-arresting device found inside No.1 cargo hold.

- Chapter 14 provides a detailed framework for the PTW system, specifically designed to regulate high-risk tasks aboard ships, including working at height. The PTW system is a critical tool for managing hazards by ensuring that work is conducted only after an adequate assessment of risks, implementation of control measures, and formal authorization. The Company stated that inspections conducted on the internal walkway inside the cargo hold were regarded as working aloft and, accordingly, a PTW was required. According to the Master, there was no PTW presented for his authorisation and approval.

1.6 Cause of death

1.6.1 The CO's body was examined by a specialist forensic pathologist in Durban, South Africa, the autopsy findings indicated severe trauma and determined that the cause of death was due to multiple blunt force injuries.

1.7 Environmental condition

1.7.1 Ship's logbook records documented that, on the occurrence day, the weather was cloudy, visibility was good. The wind was northwest gentle breeze.

1.7.2 The incident occurred during daylight[23] hours with air temperature at about 30° Celsius. There was no report of precipitation before the occurrence.

1.7.3 Between 0930H and 1155H on 28 October 2025, the OOW did not make any course alterations. OSLO continued its same course throughout the morning of the occurrence day.

[23] Sunrise was at about 0430H.

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2 ANALYSIS

2.1 The occurrence

2.1.1 In the absence of any eyewitness account, the investigation team analysed the occurrence based on the available evidence, including crew statements, CCTV footage and the autopsy findings.

2.1.2 The CO was on deck to supervise the cargo hold cleaning and painting works on the occurrence day. CCTV footage indicated that the CO was last seen on the main deck between cargo holds No. 1 and No. 2 at about 1002H, in the vicinity of the booby hatch, aft access to No. 1 cargo hold. He was discovered lying on the tank top inside No.1 cargo hold at about 1155H. One of the CO's responsibilities was to oversee cargo hold preparation and ensure the cargo hold met the Charterer's requirements for loading the next cargo. It was likely that the CO had entered No.1 cargo hold for inspection as this cargo hold had already been cleaned and its hatch covers were opened for drying.

2.1.3 The CO likely entered No. 1 cargo hold via the aft booby hatch and climbed down to the elevated inspection walkway. When he walked along the elevated inspection walkway for the inspection of the cargo hold, he had likely missed seeing the opened metal grating in the mid-section and fell through the opening and landed on the tank top. The location on the tank top where the CO was found lying, was at a position approximately beneath the opened metal grating. The severe trauma and multiple blunt force injuries suffered by the CO could have been the result of falling from height (about 16m).

2.2 Implementation of Company's SMS procedures

2.2.1 The cargo hold entry procedures for inspection, required the vessel's Cargo Hold Preparation Operating Checklist to be completed and approved by the Master. The procedures also required that no fewer than two persons enter the same cargo hold, and that every entry into and exit from the cargo hold be reported to the OOW on the bridge via walkie talkie. This Cargo Hold Preparation Operating Checklist was approved by the Master for the work being carried out in cargo holds No, 3 and No. 5. It was noted that Cargo

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Hold Preparation Operating Checklist had not been filled up by the CO nor approved by the Master prior to his entry into No. 1 cargo hold.

2.2.2 The working aloft procedures for operations conducted at heights greater than 2 meters and the associated Checklist for Aloft Work and PTW were not followed and approved by the Master before commencement of work aloft. Though the CO had been providing updates to the Master on the progress of cleaning and painting works in No.3 and No.5 cargo holds[24], the Master was not aware of the CO's entry into No.1 cargo hold for inspection.

2.2.3 Furthermore, the CO was not wearing safety harness and safety rope when walking on the elevated inspection walkway, as recommended by the COSWP.

2.2.4 The CO did not communicate his plan to inspect No. 1 cargo hold with anyone, including the OOW, and hence none of the crew knew that he had fallen inside No.1 cargo hold till the Master realised the CO had not been seen at lunchtime and went on deck looking for him. This had resulted in the late discovery of the seriously injured CO. The Master stated that had he known the CO planned to inspect No. 1 cargo he would have insisted on the appropriate approvals being sought.

2.2.5 This occurrence highlighted the importance of adhering to the Company's established SMS procedures prior to the commencement of any work or operations in the cargo hold including procedures for working aloft. These procedures included the requirement for a person entering or leaving a cargo space to notify the OOW, so that assistance could be rendered promptly in the event of an emergency.

2.3 Guarding of opening

2.3.1 It is likely that the hinged metal grating located near mid-section of the aft elevated inspection walkway in No. 1 cargo hold had been left open after the deck crew completed painting works on 26 October 2025. This opening introduced a risk of falling from height.

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[24] The cleaning and painting work for cargo holds No. 3 and No. 5 did not require the Aloft Work Checklist or PTW to be completed as the teams were not working at height.

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2.3.2 It is further noted that the opening in the inspection walkway was not fitted with any guardrails, fencing, or other physical barriers as recommended by the COSWP, to prevent a person from inadvertently stepping and falling through the opening.

2.3.3 The occurrence serves as a reminder that opening that pose a hazard of falling from height should be closed after completion of the work or be guarded with physical barriers.

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3 CONCLUSIONS

From the information gathered, the following findings are made. These findings should not be read as apportioning blame or liability to any particular organisation or individual.

3.1 The CO entered No. 1 cargo hold alone, without informing anyone of his intention inspect the cargo space including the Officer of the Watch (OOW) on the bridge. The CO fell onto the tank top in No. 1 cargo hold likely through the unguarded metal grating opening in the inspection walkway. The CO subsequently succumbed to the injuries sustained from the fall.

3.2 The Company's established SMS procedures for cargo hold entry were not systematically implemented onboard OSLO. The Cargo Hold Preparation Operating Checklist was not prepared and approved by the Master.

3.3 The Company's established SMS procedures for working aloft were not systematically implemented onboard OSLO. The Checklist for Aloft Work and PTW were not prepared and approved by the Master, and the CO did not wear the required PPE, namely a safety harness and safety rope for working aloft.

3.4 The metal grating on the inspection walkway in No. 1 cargo hold was not closed after completion of work, resulting in an unguarded opening that posed a fall hazard. Guarding arrangements for the opening were not implemented to prevent the fall hazard.

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4 SAFETY ACTIONS

Arising from discussions with the investigation team, the Company has taken the following safety action.

4.1 Sharing of information and highlighting the circumstances of the accident with all crew members of its fleet of vessels.

4.2 Issued a circular to its fleet of vessels to reinforce the need for ship's crew to carry out proper risk assessments and complete the relevant checklists and permits before commencing shipboard operations, including cargo hold cleaning, working aloft and entry into enclosed spaces. The circular also emphasised that such activities are to be conducted in accordance with the Company's SMS procedures and safety policies and highlighted the importance of maintaining safe working practices.

4.3 All bulk carriers under the Company's management have now been fitted with safety guardrails (see **Figure 8**) on both sides of the hinged metal grating on the elevated inspection walkway within cargo holds to mitigate the risk of a fall.

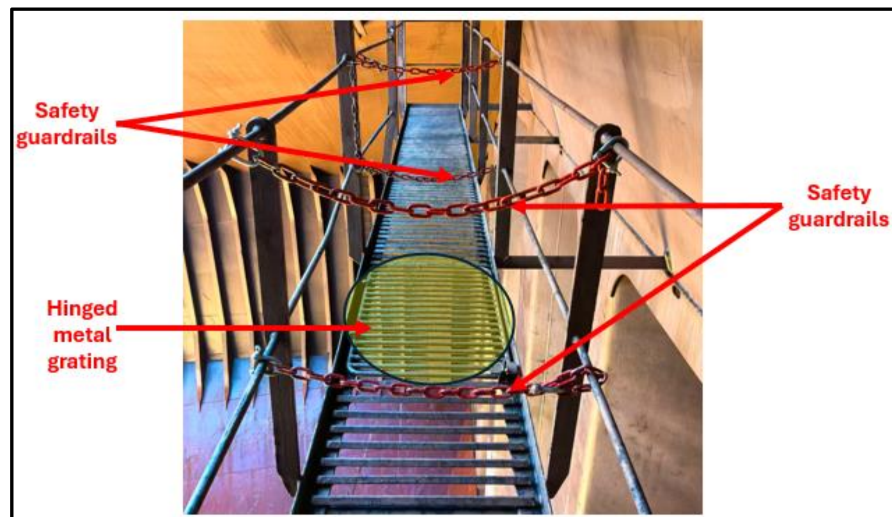

Figure 8 – Safety guardrails fitted on both sides of the hinged metal grating on the elevated inspection walkway
(Source: the Company, annotated by TSIB)

4.4 Training was conducted to enhance the crew's safety awareness in relation to working aloft and entry into cargo holds. Upon completion of work, crew

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members are also required to inspect the work area to identify and address potential safety hazards, including ensuring that any openings or spaces are properly secured.

4.5 An emergency drill was conducted onboard to simulate a fall incident in a cargo hold involving a crew member, to familiarise the crew with their roles and the procedures to be followed in the event of such an incident.

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5 SAFETY RECOMMENDATIONS

A safety recommendation is for the purpose of preventive action and shall in no case create a presumption of blame or liability.

In view of the safety actions taken by the Company (the ISM Managers), no safety recommendations have been issued.

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