

Final Report

Missing Second Engineer (MOB)

SRS China Champion

At Sea

Enroute from Singapore to Guinea

On 26 December 2025

TIB/MAI/CAS.220

Transport Safety Investigation Bureau
Ministry of Transport
Singapore

14 August 2026

The Transport Safety Investigation Bureau of Singapore

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ABBREVIATIONS

ASD	Able Seafarer Deck
2E	Second Engineer
3E	Third Engineer
BF	Beaufort Force
CC	China Champion
CE	Chief Engineer
CM	Chief Mate
DOC	Document of Compliance
ECDIS	Electronic Chart Display and Information System
FTR	Fitter
IAMSAR	International Aeronautical and Maritime Search and Rescue
ISM	International Safety Management
LB	Lifeboat
LR	Lloyd's Register
LSA	Life Saving Appliance
MOB	Man Overboard
MPA	Maritime and Port Authority of Singapore
MRCC	Maritime Rescue Coordination Centre
NM	Nautical mile
OMM	Operation and Maintenance Manual
PPE	Personal Protective Equipment

PRC	People's Republic of China
PTW	Permit to Work
RA	Risk Assessment
RB	Rescue boat
RC	Rescue craft
RPW	Recovery of Persons from Water
SMC	Safety Management Certificate
SMS	Safety Management System
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
SWP	Safe Work Procedure
VHF	Very High Frequency

SYNOPSIS

On 26 December 2025, the Second Engineer (2E) of the Singapore-registered bulk carrier China Champion fell overboard into the sea while carrying out maintenance work near the ship's side as the vessel was underway at sea.

Following the occurrence, the bridge team initiated man overboard (MOB) response actions. At the time of the occurrence, the prevailing environmental conditions were Beaufort force (BF¹) 5 winds, with sea and swell conditions of about 2m, which created challenging conditions for recovery operations and affected rescue craft manoeuvrability. Despite repeated recovery attempts, 2E could not be recovered from the water.

The Transport Safety Investigation Bureau of Singapore classified the occurrence as a Very Serious Marine Casualty.

The investigation revealed the following:

- The work location, being near to ship's side, exposed 2E to the risk of falling overboard while carrying out maintenance work from an A-frame ladder as the ship was underway.
- Although the risk assessment (RA) for working at height required the use of fall-arrest equipment and identified a suitable anchor point, the investigation found no evidence that the fall-arrest equipment and its securing arrangements were in use at the time of the occurrence.
- When 2E was first sighted in the water by ASD-1 and later by ASD-2, no lifebuoy or buoyant flotation device was immediately deployed towards him, although ASD-2 was positioned closest to the MOB location. The MOB lifebuoy was subsequently released as part of the ship's MOB response.
- The prevailing environmental conditions posed operational difficulties for deploying the rescue boat for the recovery operation, and a decision was made to launch the free-fall lifeboat. While the free-fall lifeboat could be launched more readily under the prevailing conditions, its design characteristics and operating limitations reduced the effectiveness of the recovery operation.

¹ BF is a standard measure of wind speed based on the Beaufort Scale, ranging from Force 0 (calm) to Force 12 (hurricane-force)

VIEW OF VESSEL



Figure 1: Image of China Champion (*Source: CMT website*)

DETAILS OF VESSEL

Name	China Champion
IMO No.	9940095
Flag	Singapore
Classification Society	American Bureau of Shipping (ABS) ²

² ABS was the Recognised Organisation (RO) for carrying out surveys and issuing statutory certificates.

Issuance of SMC and DOC Certificate	Lloyds Register (LR) ³
Ship Type	Flush Deck, Bulk Carrier
Year Built	15 Nov 2022
Builder / Yard	Qingdao Beihai Shipbuilding Heavy Industry Co. Ltd
Company / Operator	Chinese Maritime Transport Ltd (Taiwan)
Gross Tonnage	108 985
Length Overall	299.88m
Breadth	50.00m
Depth	25.20m
Draft (Scantling)	18.50m
Summer Freeboard	6.74m
Main Engine(s)	CSSC-MAN 6G70ME-C10.5 SMCR ⁴ 14,400kW x 66.7rpm CSR ⁵ 11,660kW x 63.9rpm
Propellers	4 Blades, Dia.: 9.40m
Service Speed	14.5 knots

Table 1

³ LR was the RO for issuing ISM related certificates for the Company.

⁴ Specified Maximum Continuous Rating (SMCR) is the full capacity of the engine, but ships normally do not operate continuously at this level.

⁵ Continuous Service Rating (CSR) is the day-to-day operating level of the engine.

1 FACTUAL INFORMATION

All times (H) stated in this report were in Ship's Mean Time (SMT)⁶, equivalent to Local Mean Time (LMT)⁷ and Coordinated Universal Time (UTC)⁸.

The investigation reviewed the voyage data recorder (VDR), supporting documents, and crew statements from China Champion.

1.1 Narrative of the Occurrence

1.1.1 On 26 December 2025, the Singapore-registered bulk carrier China Champion (CC) was underway from Singapore to Port De Boke, Guinea. At about 1508H, the ship was at location 01°10.40'S, 009°18.3'W.

1.1.2 The Second Engineer (2E), together with Third Engineer (3E) and a Fitter (FTR), was assigned to carry out inspection and maintenance of the port side bunkering davit. The task included testing of the davit safety devices.

1.1.3 During the inspection, the limit switch of the port side bunkering davit was observed to malfunction intermittently. A Permit to Work (PTW) was obtained and associated pre-work activities as per the company SMS were performed by the work team (see paragraph 1.4.8). The work team proceeded to the worksite with the necessary hand tools, electrical equipment, and an A-frame ladder.

1.1.4 The A-frame ladder was positioned on the deck next to the port side bunkering davit to access the limit switch control box for inspection. See **Figure 2**, which shows a reenactment with FTR holding the A-frame ladder and two persons simulating 2E and 3E on the ladder during the inspection.

⁶ Ship's Mean Time (SMT): Time maintained onboard the ship for operational purposes, as set by the ship's crew.

⁷ Local Mean Time (LMT): Mean time at a specific longitude, based on the position of the sun relative to that location.

⁸ Coordinated Universal Time (UTC): The primary international time standard from which all time zones are derived.

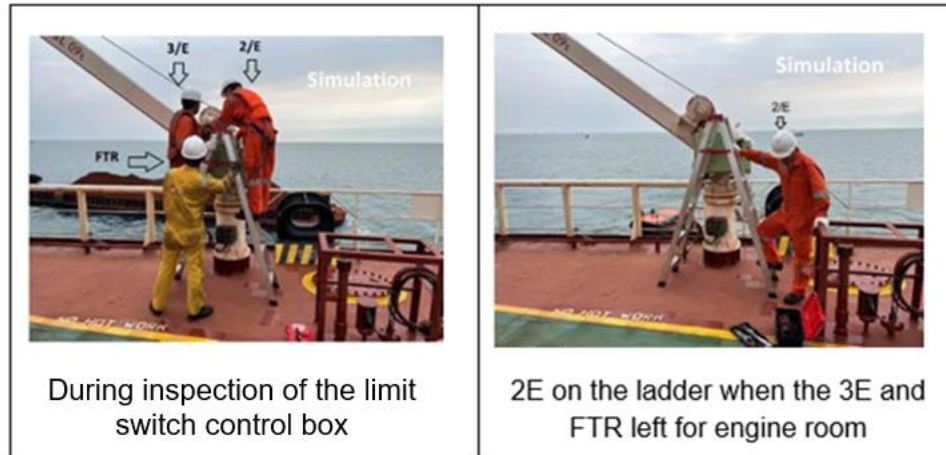


Figure 2: Reenacting the positions of 2E and 3E on the A-frame ladder during inspection of the limit switch control box. (Source: Company of CC)

- 1.1.5 At about 1505H, following the inspection, 2E observed that the screws on the limit switch control box were covered with paint. As a suitable screwdriver was not available at the worksite, 2E instructed FTR to retrieve a large striking screwdriver from the engine room and 3E to obtain silicone sealant. 3E and FTR then left the worksite to retrieve the required tools and materials, leaving 2E standing on the ladder.
- 1.1.6 At about 1508H, Able Seafarer Deck-1 (ASD-1), who was carrying out painting work on the port side provision crane platform at C deck, observed a person wearing an orange boiler suit in the water astern of the ship. A safety helmet was also seen floating nearby. ASD-1 immediately shouted, “Man Overboard” (MOB) and alerted Able Seafarer Deck-2 (ASD-2), who was working at the stern and closest to the MOB location, see **Figure 3**. The person in water was subsequently identified as 2E. There were no eyewitnesses to 2E’s fall overboard.

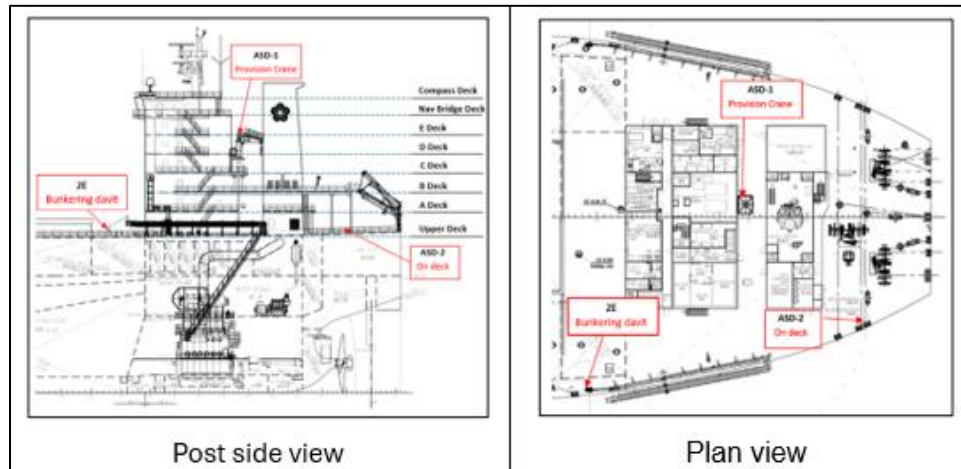


Figure 3: Port side and plan view indicating the locations of crew at the time of the occurrence. (Source: The Company of CC and Annotated by TSIB)

- 1.1.7 After hearing ASD-1 shout “Man Overboard”, ASD-2 proceeded to the stern to check and sighted a person floating in the water astern of the ship. ASD-2 then immediately informed 2M, who was the Officer of the Watch on the bridge, by telephone from the accommodation deck office room.
- 1.1.8 Upon receiving the report, 2M activated the MOB alarm, made a general announcement through the public address system, informed Master, and marked the MOB position on the Electronic Chart Display and Information System (ECDIS). 2M subsequently released the MOB lifebuoy fitted with self-igniting light and self-activating smoke signal after the Master arrived on the bridge and confirmed the release.
- 1.1.9 At the same time, 3E and FTR, who were in the engine room workshop, heard the MOB alarm and public address announcement. They returned to the upper deck and observed the A-frame ladder resting on the port side railing. 2E was not sighted at the worksite, see **Figure 4**. 3E and FTR subsequently reported to the bridge that 2E was missing.

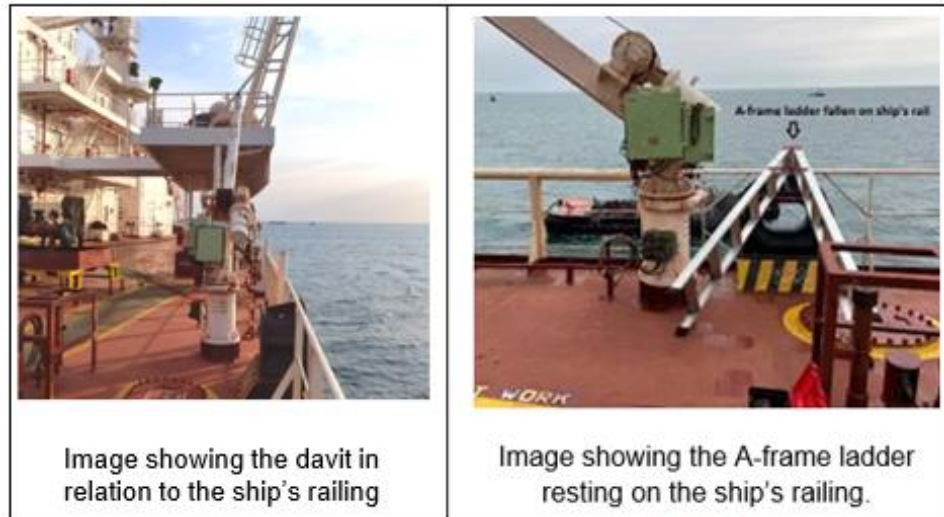


Figure 4: Images showing the bunkering davit and the A-frame ladder.
(Source: Company)

1.2 Recovery and Search Operations

- 1.2.1 Following the activation of the MOB response, an MOB position marker was recorded on the ECDIS. At that time, the ship was on a heading of 325° and making 12.6 knots. The Master arrived on the bridge shortly thereafter and assumed command of the MOB response.
- 1.2.2 At about 1511H, the helm was put hard-to-port while the ship maintained a speed of 12.6 knots. The MOB marker was at a bearing of 143.6° at a distance of 0.22 nautical miles (nm).
- 1.2.3 The Master subsequently ordered various helm and engine movements to manoeuvre CC towards the recorded MOB position while directing the crew to maintain a lookout for 2E in the water. During the manoeuvring, the ship's speed was progressively reduced. At about 1523H, while CC was heading 090° at about 3.1 knots, the lookout reported sighting 2E at approximately 1,000 m from the port bow.
- 1.2.4 As CC approached the reported location of 2E, the Master assessed that deployment of the rescue boat (RB) would present operational difficulties due to the prevailing environmental conditions of BF 5 and 2m waves. The Master subsequently decided to use the lifeboat (LB) for the recovery operation.

- 1.2.5 The Master instructed the Chief Mate (CM), who was in charge of the rescue team, to organise the team and prepare the LB for launch. The rescue team comprised the CM, Fourth Engineer (4E), FTR and ASD-3, as identified in the shipboard contingency plan.
- 1.2.6 The rescue team boarded the LB and secured themselves prior to launch. The LB was launched at about 1553H and proceeded towards the reported position.
- 1.2.7 During the approach, CM, who was steering the LB, reported difficulty in maintaining control of the LB due to significant rolling and pitching. 4E and FTR maintained lookout at the forward window, while ASD-3 was stationed at the aft door. All personnel in the LB reportedly suffered seasickness.
- 1.2.8 At about 1605H, the Master instructed the Chief Engineer (CE) to prepare the RB and keep it ready for launch if required.
- 1.2.9 At about 1612H, the rescue team sighted 2E at approximately 20m from the LB. 2E was observed to be motionless, with his back facing upwards and his head in the water. During the recovery attempt, the LB continued to experience difficulty in manoeuvring due to the sea conditions, while the crew members became increasingly exhausted and seasick.
- 1.2.10 The rescue team continued the efforts to recover 2E for about 10 to 15 minutes. At about 1630H, visual contact with 2E was lost and he could no longer be sighted on the sea surface.
- 1.2.11 The Master continued to broadcast navigational warnings and maintain communications with the Company and relevant authorities.
- 1.2.12 At about 1650H, as visibility gradually decreased, the Master directed for the recovery of the LB. By about 1830H, the LB was recovered onboard. The ship continued the search operations using a sector search pattern.
- 1.2.13 The search operation continued from 27 to 29 December 2025. On 30 December 2025 at about 0808H, the Abidjan Marine Rescue Coordination Centre (MRCC) instructed the termination of the search. The ship subsequently resumed its voyage.

1.3 Crew Particulars

1.3.1 At the time of the occurrence, CC was manned by 20 officers and crew from the People's Republic of China (PRC), in accordance with the Minimum Safe Manning Document issued by Maritime and Port Authority of Singapore (MPA).

1.3.2 Records of hours of work and rest of the crew, including those involved in the occurrence, were maintained onboard and in accordance with applicable regulatory requirements.

1.3.3 For reference, details of the crew members relevant to the occurrence are provided in **Table 2**.

Rank	Age at time of occurrence	Years with Company	Years in Rank	Years Sailing	Remarks
Master	40	3.6	2.8	11.0	
CM	40	5.8	3.0	11.5	
CE	43	4.6	4.2	13.2	
2E	37	7.6	3.2	8.0	MOB
3E	34	4.4	0.6	6.0	
FTR	44	4.6	5.25	7.6	

Table 2

1.3.4 Particulars of the Second Engineer (2E)

1.3.4.1 2E joined the ship on 30 November 2025 in Singapore. He had completed the required training and seagoing service and met the standards of competence prescribed for a Second Engineer Officer under the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), Regulation III/2 and Section A-III/2. He was familiar with the Company's procedures and had also completed additional computer-based training through the Company.

- 1.3.4.2 A medical report issued on 20 January 2025 indicated that 2E was fit for duty without any limitations or restrictions.
- 1.3.4.3 Feedback from crew indicated that 2E maintained good working relationships with other crew members, and no concerns were reported regarding his behaviour or performance prior to the occurrence.
- 1.3.4.4 2E held a Certificate of Competency as a Marine Engineer, Class 1, and had several years of service with the Company. He was identified for promotion to Chief Engineer upon completion of the current contract.
- 1.4 Safety Management System (SMS)
 - 1.4.1 A Document of Compliance (DOC) was issued to the Company of CC, Chinese Maritime Transport Ltd (Taiwan), by Lloyd's Register (LR) on 3 August 2022, following verification completed on the same day. The certificate was valid until 14 August 2027. An annual verification was carried out on 19 August 2025.
 - 1.4.2 A Safety Management Certificate (SMC) was issued to CC by LR on 2 October 2023, following verification completed on the same day, and was valid until 1 October 2028.
 - 1.4.3 CC was operating under an approved SMS that complied with the requirements of the International Safety Management (ISM) Code and MPA. The onboard documentation included policies, procedures, manuals, checklists, and relevant publications to support shipboard operations. The SMS included procedures for emergency response on actions to be taken in the event of an MOB, as well as guidance for the deployment of rescue craft and recovery of persons from the water.
 - 1.4.4 Organisation of MOB Response
 - 1.4.4.1 CC had established a rescue team for MOB situations, with the Master having overall command of the operation.
 - 1.4.4.2 The bridge team was responsible for navigation and tracking of the person overboard. The engine team, led by CE, maintained propulsion readiness. The rescue team, led by CM, was responsible for rescue operations, including the preparation and launching of rescue craft. Communication between teams was conducted using handheld radios.

1.4.5 MOB Procedures

- 1.4.5.1 Based on the SMS procedures for MOB situations, upon notification of an MOB occurrence, officers in-charge of watchkeeping duties were required to carry out a series of actions, including the release of the MOB lifebuoy⁹, sounding the MOB alarm followed by a public address announcement, and informing the master.
- 1.4.5.2 Master would then command the MOB responses, including manoeuvring the ship, assigning additional lookouts, coordinating communications, and initiating external notifications to relevant authorities and nearby vessels. Lookouts were to be posted with binoculars to maintain visual contact with the MOB, and the engine was to be placed on standby for manoeuvring.
- 1.4.5.3 The SMS procedures included the requirement to broadcast navigational warnings via very high frequency (VHF) radio and to transmit distress messages via MF/HF. The master was also required to notify the Company and the relevant MRCC. The vessel's position relative to the MOB position was to be continuously monitored, plotted, and made available for external communications.
- 1.4.5.4 The SMS procedures further required the preparation and deployment of a rescue craft for recovery of the MOB under the command of the master. This included mustering the rescue boat crew and support party, preparing the rescue craft, and manoeuvring the ship to facilitate launching.

1.4.6 MOB Drill and Checklist

- 1.4.6.1 CC maintained a MOB checklist¹⁰ (Form No. CTG-08), which outlined actions to be taken during a MOB situation, including manoeuvring, deployment of rescue equipment, communication, and coordination of response teams.
- 1.4.6.2 Records indicated that a MOB drill was last conducted on 3 November 2025 between 1403H and 1500H. The drill included the execution of a recognised rescue turn, releasing of MOB lifebuoy, sounding the alarms, mustering the RB

⁹ The MOB lifebuoy refers to a lifebuoy fitted with a self-igniting light and self-activating smoke signal, provided in accordance with the requirements of SOLAS Chapter III and the LSA Code, and of sufficient mass (not less than 2.5 kg) to enable effective deployment from a quick-release arrangement. Company records provided during investigation indicated that the MOB lifebuoy was released during the initial MOB response.

¹⁰ There was no contemporaneous record showing that the MOB checklist was used during the occurrence. The Company subsequently provided a completed MOB Checklist, Form CTG-08, and Search & Rescue Checklist, Form CTG-09, both dated 26 December 2025 at 1521H, as part of the incident records.

crew and support party, preparing and launching the RB, and recovering of the RB following a simulated rescue.

- 1.4.6.3 The drill also included the posting of lookouts, communication between shipboard teams, and tracking of the vessel's position relative to the simulated MOB position. Upon completion of the drill, all equipment was reported to be in good condition, and a debrief was conducted.

1.4.7 Recovery of Persons from Water (RPW)

- 1.4.7.1 The ship's SMS included procedures for the recovery of persons from water (RPW), which incorporated guidance from relevant international publications, including IMO guidelines and the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual¹¹.
- 1.4.7.2 The purpose of these procedures was to facilitate the RPW while reducing risks to personnel involved in the operation.
- 1.4.7.3 The RPW procedures described that recovery may involve a combination of methods, including:
- manoeuvring the ship to create a lee;
 - deployment of rescue boats where conditions permitted;
 - use of lines, buoyant appliances, or ladders; and
 - lifting arrangements using shipboard equipment.
- 1.4.7.4 The procedures highlighted that recovery operations could be complex and hazardous, particularly in adverse environmental conditions, and required appropriate preparation, equipment readiness, and coordination among crew members.
- 1.4.7.5 The procedures required that a risk assessment be conducted when planning recovery operations, considering ship-specific characteristics and anticipated environmental conditions.

¹¹ The IAMSAR Manual provides guidance on the organisation and conduct of search and rescue (SAR) operations, including coordination, communication, search planning and patterns, and the recovery of persons in distress at sea.

1.4.8 Permit to Work System

- 1.4.8.1 The work on the port side bunkering davit on 26 December 2025 was conducted under the PTW system. A Working at Height/Over the Side Permit (SWP¹²-05) valid from 1420H to 1600H, was issued for the work, with the associated RA conducted. An Electrical Work Permit, supported by a separate RA, was also issued.
- 1.4.8.2 The Working at Height/ Over the Side Permit specified that the work was to be carried out on the upper deck for inspection and testing of the port side bunkering davit, with access gained using a ladder. The personnel involved were 2E, 3E and FTR, and CE was the designated person responsible for safety and environmental matters. Emergency communication was to be maintained via VHF Channel 16.
- 1.4.8.3 In addition to the RA (see paragraph **1.4.9**), the Working at Height/ Over the Side Permit required that a toolbox meeting be conducted and that no conflicting work activities were in progress prior to commencement. The permit also required consideration of weather conditions, vessel position, and access arrangements.
- 1.4.8.4 The Working at Height/Over the Side Permit recorded that the work was to be carried out on the upper deck using ladder access and that “work overside” was marked “No”. Accordingly, the section relating to approved buoyancy rings, vests and lifejackets for personnel working over the side was marked as “not applicable”. The permit further specified that the required personal protective equipment included a safety helmet and safety harness with a line attached to a strong point. The bunkering davit was identified as a suitable anchor point. However, the investigation found no evidence that the fall-arrest equipment and its securing arrangements were in use at the time of the occurrence.
- 1.4.8.5 The Electrical Work Permit required isolation of equipment, including switching off the power supply and implementation of additional precautions. The electrical power supply to the bunkering davit was reported to have been isolated prior to the occurrence.

¹² Safe Work Procedure (SWP) is a documented procedure that describes how a task is to be carried out safely, including relevant hazards and control measures.

1.4.9 Risk Assessment (RA)

- 1.4.9.1 The SMS required that a RA be conducted prior to work activities. This included identifying hazards associated with the task and implementing appropriate control measures to minimise the risks.
- 1.4.9.2 The RA checklist under SWP-05 recorded that an RA had been carried out prior to commencement on the bunkering davit task.
- 1.4.9.3 The RA checklist indicated that weather conditions, the ship's operational environment, and potential slip hazards associated with the task on the bunkering davit had been considered. The RA also indicated that suitable anchor points for the attachment of fall-arrest equipment were available on the bunkering davit, and that fall-arrest equipment was required for the task. No unacceptable risks were identified, and the checklist recorded that appropriate safety measures had been taken to eliminate or reduce identified risks to an acceptable level prior to commencement. However, the RA checklist did not provide further details of the identified risks or the specific safety measures implemented for the task.

1.5 Rescue Craft¹³

1.5.1 Free-Fall Lifeboat (LB)

- 1.5.1.1 CC was fitted with a LB using free-fall mechanism, which was located at the stern. The LB was designed and approved as a survival craft for ship abandonment purpose, see **Figure 5**.

¹³ Lifeboat and Rescue boat last Annual Servicing conducted on 8 April 2025.

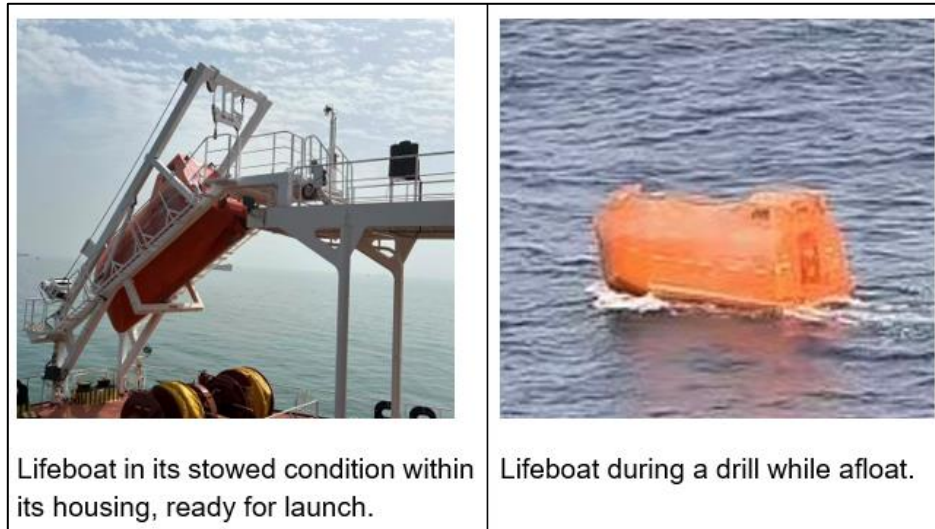


Figure 5: Photographs showing the LB in its stowed position and afloat in water after launching. (Source: The Company)

- 1.5.1.2 The LB was fully enclosed and fitted with two openings, comprising a forward hatch in the form of a window and an aft entrance door. It had an overall length of 6.7m, breadth of 2.75m, depth of 1m, and an overall height of 3.15m. It was certified to accommodate up to 28 persons.
- 1.5.1.3 The LB was certified to be launched from a height of 21m by means of a free-fall ramp set at an angle of 35°. It was powered by a type 380J-3 engine, rated at 20.6kW at 2,800rpm, and was capable of achieving a speed of more than six knots. The LB weighed about 3,925kg in a lightly loaded condition and would weigh about 6,235kg when fully loaded.
- 1.5.1.4 The LB manufacturer's Operation and Maintenance Manual (OMM) contained procedures for the operation and maintenance of the release hook system, including normal and emergency release arrangements. No procedures were included for the recovery of persons from the water using the LB.
- 1.5.1.5 Records¹⁴ indicated that the LB was subject to routine inspection, maintenance, and drills in accordance with statutory and Company requirements.

¹⁴Monthly record indicated that the last check was conducted on 24 December 2025.

1.5.2 Rescue Boat (RB)

- 1.5.2.1 The ship was also equipped with an RB of type BH-R4. The RB was designed for the recovery of persons from the water, with open-sided arrangement to facilitate access during rescue operations, see **Figure 6**.



Figure 6: Photographs showing the rescue boat being hoisted and afloat in water after launching. (Source: The Company)

- 1.5.2.2 The RB had a moulded length of 4.19m, breadth of 1.76m, and depth of 0.84m. It was certified to accommodate up to six persons and was capable of achieving a speed of more than six knots.
- 1.5.2.3 The RB was constructed of glass-reinforced plastic (GRP), with buoyancy provided by polyurethane foam fitted between the inner and outer hulls. It was powered by a Mercury 25 outboard engine, rated at 25 HP (18.4 kW), with the steering console located at the forward starboard side.
- 1.5.2.4 The RB¹⁵ was launched and recovered by a single-arm davit system (BD-SA23) fitted with an electric boat winch (BW-SC21B), which enabled the boat to be slewed outboard, lowered to the water, and recovered onboard.
- 1.5.2.5 The davit and launching system were designed and approved in accordance with the SOLAS Convention and the Life Saving Appliance (LSA) Code.
- 1.5.2.6 The RB OMM included reference information on sea conditions based on BF, providing indicative wind speeds and corresponding wave heights for different

¹⁵RB running test report was conducted on 22 December 2025.

sea states. Records indicated that the RB was included in the ship's planned maintenance, inspection, and drill programme in accordance with statutory and Company requirements.

1.6 Weather at MOB Location

- 1.6.1 At about 1508H on 26 December 2025, the ship's VDR recorded wind from the south-southeast at 17.6 knots (BF 5). The current was recorded as setting at 303.4° at 0.9 knots.
- 1.6.2 MarineTraffic data¹⁶ indicated wind from the south-southeast at 15 to 19 knots and a current of approximately 0.79 knots setting west. Swell heights were between 0.7 m and 1.0 m, and wave heights between 0.5 m and 0.7 m, both towards the north-northwest.
- 1.6.3 The ship's VDR did not record swell or wave height data. Accordingly, the sea conditions were determined based on available third-party data and the Master's observations recorded in the Company's records. These indicated that, at the time of the occurrence, the wind was BF 5, the sea height was 2.0 m, the swell height was 2.0 m, and the vessel's freeboard was 14.4 m.

¹⁶ MarineTraffic data is derived from AIS transmission and third-party sources and may be subject to limitations in accuracy, completeness, and timeliness.

2 ANALYSIS

2.1 Probable factors resulting in the MOB

2.1.1 The maintenance work of the port side bunkering davit was conducted on the upper deck using an A-frame ladder to access the limit switch control box. The work area was located near the ship's side and exposed to prevailing environmental conditions at sea.

2.1.2 When 2E and 3E were accessing the limit switch control box from an A-frame ladder, FTR was stabilising the ladder. Subsequently, FTR and 3E left the work area to retrieve additional tools and materials required for the task, leaving 2E alone on the ladder. Following the occurrence, the A-frame ladder was found resting against the port-side railing. As there were no eyewitnesses, the manner in which 2E fell overboard could not be determined. However, the work arrangement required 2E to work from an A-frame ladder near the ship's side while the vessel was underway, increasing his exposure to the risk of falling overboard.

2.1.3 Accordingly, the investigation looked into the following:

- (a) PTW and RA for the bunkering davit task;
- (b) MOB response actions;
- (c) Decision to use the LB for search and rescue operation.

2.2 Permit to Work and Risk Assessment for the bunkering davit task

2.2.1 The maintenance work was conducted under the ship's PTW system, which included a Working at Height/ Over the Side Permit and an Electrical Work Permit.

2.2.2 The PTW for Working at Height/ Over the Side incorporated an RA checklist which recorded that fall-arrest equipment was required for the task and that suitable anchor points were available for its attachment. The investigation found no evidence that the fall-arrest equipment and its securing arrangements were in use at the time of the occurrence.

2.2.3 The Working at Height/Over the Side Permit specified that the work was to be

conducted using an A-frame ladder on the upper deck and recorded that “work overside” was not involved. As such, buoyancy aids and lifejackets applicable to personnel working over the side were not required under the permit arrangements.

2.3 MOB response actions

2.3.1 2E was first sighted in the water by ASD-1, who immediately shouted, “Man Overboard”, prompting ASD-2 to alert 2M, the Officer of the Watch (OOW), on the bridge.

2.3.2 When 2E was first sighted in the water, no lifebuoy or other buoyant flotation device was immediately deployed towards 2E before the MOB lifebuoy was released as part of the ship's MOB response. Immediate deployment of a lifebuoy could have provided both a survival aid and a visual reference for the subsequent SAR operations.

2.4 Decision to use LB for search and rescue operation

2.4.1 The prevailing environmental conditions at the time of the occurrence created challenging conditions for search and rescue (SAR) operations.

2.4.2 The Master assessed that deploying the RB under the prevailing weather conditions could present operational and safety risks during its launch, manoeuvring, and SAR operations, and therefore decided to use the free-fall LB instead of the RB.

2.4.3 The ship's procedures identified the RB as the primary recovery craft for MOB operations. However, the procedures also relied on the Master's judgement in assessing the suitability of available rescue craft and the conduct of SAR operations under the prevailing weather conditions. The available guidance did not provide a structured framework for assessing when prevailing environmental conditions could render deployment of the rescue boat impracticable or unsafe.

2.4.4 While the free-fall LB could be launched more readily under the prevailing weather conditions, its fully enclosed design and limited access openings reduced accessibility and available working space during SAR operations. The enclosed operating environment also contributed to seasickness of the rescue team and restricted their external visibility, reducing the effectiveness of the

recovery efforts and the rescue team's ability to recover a person from the water.

- 2.4.5 While the RB may have been better suited for recovering a person from the water, its deployment could also have exposed the rescue team to additional operational and safety risks under the prevailing environmental conditions. The Master therefore had to balance the safety of the rescue team against the effectiveness of the SAR operations when selecting the rescue craft.
- 2.4.6 The occurrence also highlighted the importance of practical MOB drills and familiarisation training in enhancing the rescue team's understanding of the operational capabilities, limitations, launching arrangements, and handling characteristics of available rescue craft. Where practicable and under controlled conditions, such drills and training can assist Masters and rescue teams in developing the familiarity and confidence needed to conduct recovery operations under varying operational and environmental conditions, while balancing operational effectiveness with crew safety.

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 On 26 December 2025, 2E fell overboard into the sea while carrying out maintenance work on the port side bunkering davit as CC was underway at sea. At the time of the occurrence, 2E was alone at the worksite near the ship's side following the temporary separation of the work team. There were no eyewitnesses to the occurrence, and the manner in which 2E fell overboard could not be determined.
- 3.2 The RA for Working at Height/ Over the Side Permit identified general work-at-height hazards and control measures, including the availability of secure anchor points and the use of fall-arrest equipment. The investigation found no evidence that the fall-arrest equipment and its securing arrangements were in use at the time of the occurrence.
- 3.3 While the maintenance work on the bunkering davit did not require personnel to work overside, conducting the work from an A-frame ladder in close proximity to the ship's side while underway exposed personnel to the risk of falling overboard.
- 3.4 When 2E was first sighted in the water, no lifebuoy or buoyant flotation device was immediately deployed towards 2E before the MOB lifebuoy was released as part of the ship's MOB response.
- 3.5 The prevailing environmental conditions created challenging circumstances for MOB SAR operations. The Master assessed that deployment of the RB presented operational and safety risks and decided to deploy the free-fall LB. Although the LB could be launched more readily, its design characteristics reduced the effectiveness of the recovery operation.

4 SAFETY ACTIONS

Arising from discussions with the investigation team, the Company has implemented the following safety actions in response to the occurrence.

- 4.1 The Company conducted fleetwide safety awareness and training sessions relating to work-at-height activities, use of personal protective equipment (PPE), Stop Work Authority, and MOB prevention measures. Additional safety familiarisation and training programmes were also carried out with shipboard personnel and manning agents.
- 4.2 The Company revised its PPE matrix to include additional fall-arrest equipment, including the use of inertia reels or equivalent fall-protection systems for relevant over-side and at-height work activities.
- 4.3 The Company enhanced its PTW, RA, toolbox meeting, and safety verification arrangements through additional reviews, audits, remote monitoring, and feedback processes conducted across the fleet. Additional procedural controls were also introduced to prohibit lone working during high-risk activities, particularly work-at-height operations.
- 4.4 The Company incorporated additional guidance relating to portable ladder inspection and usage into its safety management procedures and initiated engineering control measures, including the establishment of designated red-zone areas and installation of certified fall-arrest anchor points onboard selected vessels within the fleet.
- 4.5 The Company revised its MOB procedures to provide clearer guidance on rescue craft selection and deployment during MOB recovery operations. The revised arrangements reinforced that the RB remained the primary recovery craft for MOB situations, while alternative recovery craft were only to be considered where the RB was not operational or could not be safely and practicably deployed. The Company also introduced additional guidance and structured decision-making arrangements to assist Masters in assessing operational, environmental, safety, and recovery considerations during rescue craft selection and deployment.
- 4.6 The Company enhanced fleetwide MOB drill arrangements to include scenario-based exercises covering varying sea states, ship motions, visibility conditions, and rescue craft selection challenges. Additional guidance was also issued to

reinforce crew understanding of the operational capabilities, limitations, risks, and readiness expectations relating to rescue boats and lifeboats during MOB recovery operations.

- 4.7 The occurrence was circulated fleetwide as a safety lesson learned to enhance awareness of the risks associated with work-at-height activities, MOB prevention, and emergency response arrangements.
- 4.8 Following the occurrence, the Company issued a fleetwide instruction on the “Immediate Deployment of Lifebuoys or Buoyant Flotation Devices upon Initial Sighting of a Person in the Water”. The instruction required crew members, upon the initial sighting of a person in the water, to immediately deploy available lifebuoys or other buoyant flotation devices towards the casualty, where safe and practicable to do so. This requirement was implemented across the Company's fleet. All vessels acknowledged receipt, conducted onboard safety briefings and crew training, incorporated the requirement into familiarisation programmes and future MOB drills, and submitted training records and supporting documentation to the Company as evidence of compliance.

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, no safety recommendations were issued.