

Final Report

FATAL INJURY OF SECOND ENGINEER ONBOARD VIYADA NAREE AT SEA ON 20 JANUARY 2026

TIB/MAI/CAS.224

Transport Safety Investigation Bureau of Singapore
Ministry of Transport
Singapore

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The Transport Safety Investigation Bureau of Singapore

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ABBREVIATIONS

ASD	Able Seafarer Deck
BSN	Bosun
CCTV	Closed-Circuit Television
CE	Chief Engineer
ClassNK	Nippon Kaiji Kyokai
CO	Chief Officer
COSWP	Code of Safe Working Practices for Merchant Seafarers
CPR	Cardiopulmonary resuscitation
DOC	Document of Compliance (ISM related)
ECDIS	Electronic Chart Display and Information System
FT	Fitter
H	Hours
ISM	International Safety Management
OOW	Officer of the Watch
PPE	Personal Protective Equipment
PTW	Permit to Work
RA	Risk Assessment
SMC	Safety Management Certificate
SMS	Safety Management System
STCW	The International Convention on Standards of Training, Certification and Watch keeping for Seafarers
SWL	Safe Working Load
TSS	Traffic Separation Scheme

VN	Viyada Naree
VTs	Vessel Traffic Service
TSIB	Transport Safety Investigation Bureau of Singapore
2E	Second Engineer
2O	Second Officer
3O	Third Officer

SYNOPSIS

On 20 January 2026, while enroute from a dry-docking facility to open sea, the Chief Officer (CO), Bosun and Fitter onboard the Singapore-registered bulk carrier, Viyada Naree (VN), were freeing the jammed No. 2 crane swivel hook at the No. 1 mast house top platform. Due to the moderate sea swells, the vessel experienced rolling motion. The No. 2 crane swivel hook and two D-shackles, which had been disconnected from the crane block together with a chain block, slid from the mast house top platform and hit the Second Engineer (2E). 2E sustained serious injuries and died while the vessel was diverting to the Longyanwan Anchorage in China for medical evacuation, as advised by the Chengshan Jiao Vessel Traffic Service.

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

The investigation revealed the following:

- No. 2 crane block was overhauled during dry docking, which included renewing its components. However, functional tests of No. 2 crane swivel hook, were not performed.
- The overhaul of the crane block and renewal of the components were also not made known to the classification society attending surveyor at the time of survey.
- In the risk assessment conducted for freeing the jammed No. 2 crane swivel hook, weather hazard was identified as very low risk, and the deteriorating sea conditions were not anticipated.
- At the working area of the No. 2 crane, warning notices and physical safety barriers were not placed to warn and prevent other crew from entering the adjacent port-side main deck to mitigate the risk of exposure to falling objects.

An incidental finding noted that the Company's Safety Management System procedures authorised only the ship's Safety Officer to stop work that they reasonably believed could cause a serious accident. However, the Safety Officer was not physically at the worksite while the three crew members were freeing the jammed No. 2 crane swivel hook.

DETAILS OF VESSEL

Name	Viyada Naree
IMO number	9722039
Flag registry	Singapore
Classification society	Nippon Kaiji Kyokai (ClassNK) ¹
Ship type	Bulk carrier
Date keel laid	11 December 2014
Owner / ISM Manager ²	Precious Wisdom Pte. Ltd. / Great Circle Shipping Agency Ltd.
Hull	Steel
Gross tonnage	24235
Length overall	182.0m
Moulded breadth	30.0m
Moulded depth	14.8m
Main engine power	Wartsila 5RT-FIEX50-D, Tier II Delta Turning (CSR 4918 Kw x 92.9 RPM)
Service speed	Single screw propeller, at about 14.0 knots



Viyada Naree (Source: MarineTraffic)

¹ As per the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code), ClassNK was the Recognised Organisation (RO) for carrying out ISM audit and issuance of ISM related certificates, as well as for survey and issuance of other statutory certificates.

² The "ISM Manager" is referred to as the Company in this investigation report.

1 **FACTUAL INFORMATION**

All times used in this report are Ship Mean Time, which is eight hours (H) ahead of Coordinated Universal Time (UTC+8H), unless otherwise stated.

1.1 Sequence of Events

- 1.1.1 On 19 January 2026, at about 1348H, the Singapore-registered bulk carrier, *Viyada Naree* (VN) unberthed from Shanhaiguan Shipyard after completing drydocking activities and was sailing outbound with a pilot onboard.
- 1.1.2 At about 1412H, the pilot disembarked, and VN proceeded on her outbound passage towards open sea³, outside the China Emission Control Areas (ECAs)⁴.
- 1.1.3 While the vessel was continuing her outbound passage, the Chief Officer (CO) together with the Bosun (BSN), inspected the condition of No. 2 crane block swivel hook (No. 2 swivel hook) as it was found difficult to rotate prior to departure from the shipyard. They confirmed that the No. 2 swivel hook was jammed and not rotating.
- 1.1.4 The following morning, 20 January 2026, CO planned to disconnect the jammed No. 2 swivel hook from the crane block for lubrication to free it. CO made a call to the engine control room informing the Second Engineer (2E) about his plan and to seek assistance from 2E. CO also highlighted to 2E that the No. 2 crane would be used for cargo loading either at a port in China or at a port in the Republic of Korea and that the sea passage to the port would take only a few days. Hence, there was an urgency to free the No. 2 swivel hook. 2E replied that he would go on deck to inspect the No. 2 swivel hook.
- 1.1.5 At the time of handing over the bridge watchkeeping duties to 3O at about 0800H, CO briefly informed 3O about the planned No. 2 swivel hook repairs to be carried out on deck.
- 1.1.6 At about 0830H, a Permit to Work (PTW) for working aloft was completed by

³ The Port Clearance issued to VN by the local port authority on 19 January 2026 indicated the next port as "Open Sea". The next port of call had not been determined at the time of the occurrence. VN intended to sail to international water to wait for owner's instructions for the next deployment.

⁴ China ECAs cover the Chinese territorial coastal seas, navigable inland rivers and the Bohai Rim waters. All vessels sailing in these areas are required to comply with strict sulphur limits such as a maximum sulphur cap of 0.50% m/m applies to fuel oil across all coastal ECAs.

CO and the Chief Engineer⁵ (CE) and approved by the Master to carry out work where No. 2 crane block and hook were secured, which was about 2.7m above the main deck, where the No. 1 crane mast house top platform (No. 1 crane platform) was located.

- 1.1.7 At about 0840H, while waiting for the hot work permit⁶ to be approved by the Master, an engine Fitter (FTR), as instructed by 2E, was preparing gas-cutting equipment and a fire extinguisher to be placed near the No. 1 cross deck⁷.
- 1.1.8 At about 0910H, a toolbox meeting and a risk assessment (RA) for freeing the No. 2 crane swivel hook were carried out by CO, together with five crew members⁸. According to CO, the vessel was assessed to be steady with the current sea condition, although it was occasionally rolling slightly. Prior to the commencement of the crane operation, CO had a radio check via walkie talkie with 3O. 3O subsequently kept a listening watch on walkie talkie in case any assistance was needed.
- 1.1.9 Following the toolbox meeting and RA, the Able Seafarer Deck 1 (ASD-1) lowered the No.2 crane swivel hook and CO and BSN went onto the No. 1 crane platform (see **Figure 1**) and started to release the swivel hook by loosening two D-shackles from the crane block.

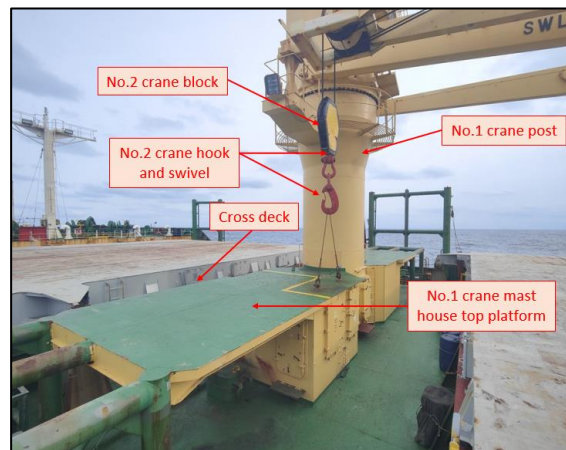


Figure 1 - View of No. 2 crane block and swivel hook and No. 1 crane mast house top platform (*Source: the Company, annotation by TSIB*)

⁵ CE was the Safety Officer onboard VN.

⁶ The hot work permit was prepared in anticipating that heating up or gas-cutting of the No.2 hook swivel in case it was jammed badly.

⁷ A transverse walkway of the upper main deck located between two consecutive cargo hatch openings.

⁸ The Bosun, three ASDs and the Deck Cadet.

- 1.1.10 At about 0918H, FTR came to assist CO and BSN. About three minutes later, 2E arrived to check the condition of No.2 swivel hook and discussed with CO whether any hot work was needed. After noting that hot work was not required, 2E left the work site and walked forwards in the direction of the bow.
- 1.1.11 A few minutes later, 2E was seen exiting the Bosun store and walking along the port side main deck towards the aft (seen from ship's CCTV footage after the occurrence).
- 1.1.12 At about 0928H, after No. 2 swivel hook and two D-shackles were separated from the crane block, the three crew members (CO, BSN and FTR) were trying to secure the crane block to the No.1 crane platform with a chain block and web sling belts (see **Figure 2**). During this time, the vessel started experiencing moderate rolling motions due to a change in sea condition.



Figure 2 – Reenactment of securing No. 2 crane block to No. 1 crane platform after the occurrence (*Source: the Company, annotation by TSIB*)

- 1.1.13 As the vessel's rolling motions increased, both the No. 2 swivel hook with two D-shackles and the chain block were sliding on the No. 1 crane platform. Similarly, the crane block was swinging between port and starboard.
- 1.1.14 During the rolling motion, the No. 2 swivel hook with two D-shackles and chain block (see **Figure 3**) slid from the No.1 crane platform and dropped onto the port side main deck. FTR sustained a minor injury and fell on the starboard outer cover of No. 1 crane mast house when No. 2 crane block swung towards him.



Figure 3 – The fallen No. 2 swivel hook with two D-shackles and chain block
(Source: the Company, annotation by TSIB)

- 1.1.15 At about 0933H, CO called the officer of the watch on the bridge (the Third Officer, 3O) via walkie-talkie requesting 3O to adjust the ship's heading to reduce the vessel's rolling motion. Noting that FTR had sustained an injury, CO went to check on his condition. At about this time, ASD-1 had lowered the crane block onto No.1 crane platform to prevent it from swinging and banging onto No.1 crane post.
- 1.1.16 While BSN was walking around to look for the fallen No. 2 swivel hook with two D-shackles and chain block, 2E was found lying unconscious on the port side of the main deck and bleeding⁹. 2E's helmet was on the deck about 3m away from him. BSN quickly informed CO about 2E's condition. CO immediately notified 3O and requested him to inform the Master.
- 1.1.17 The Master went to the bridge and instructed 3O to make a public address announcement for responding to the emergency. However, as VN was within the precautionary area of the Traffic Separation Scheme¹⁰ (TSS, see **Figure 4**). VN was facing multidirectional traffic at the TSS and the surroundings vessels posed difficulty for VN to alter her course. Thus, there was a delay in altering the ship's heading. 3O altered the ship's heading to reduce vessel's

⁹ According to CO, BSN and FTR, at the time of occurrence, they did not hear any impact sound, nor any sound from 2E.

¹⁰ A maritime traffic management route system established by the International Maritime Organization, which is purposed to separate opposing streams of traffic into designated traffic lanes to prevent collisions in high traffic density waters. The Rule of 10, Traffic Separation Schemes, of the Convention on the International Regulations for Preventing Collision at Sea (COLREGs) dictates the conduct of vessels navigating in or near TSS.

rolling motion when the traffic situation permitted.

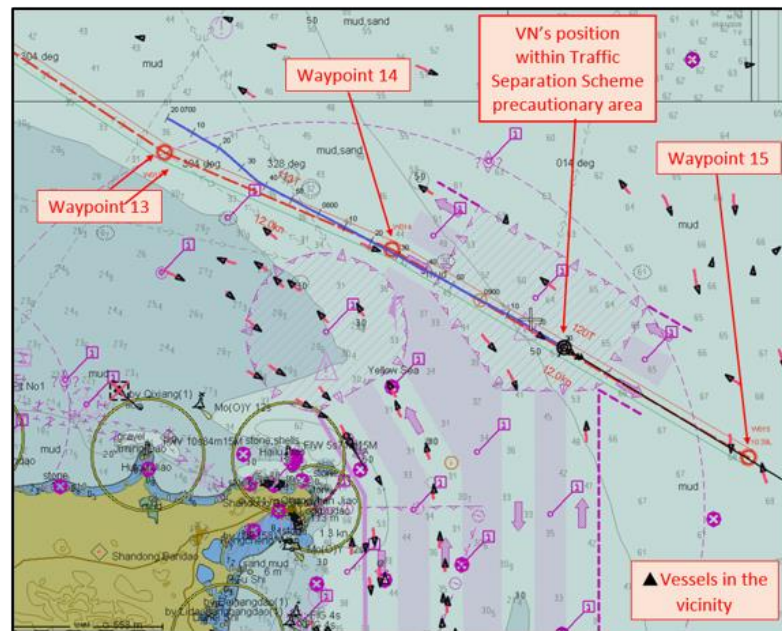


Figure 4 – VN's position within the TSS prior to the occurrence
(Source: the Company, annotation by TSIB)

- 1.1.18 The Master and assisting crew (CE, two ASDs, Chief Cook) arrived with a stretcher to transfer FTR to the ship's infirmary for first aid treatment. FTR sustained injury to his right leg.
- 1.1.19 2E, who remained unconscious, was also transferred to the ship's infirmary by stretcher. Cardiopulmonary Resuscitation (CPR) was administered to 2E, and first aid was given to stop the bleeding.
- 1.1.20 The Master instructed 2O to take charge of first aid treatment and returned to the bridge.
- 1.1.21 At about 0940H, the Master reported the crew injuries to the Company and vessel owner and contacted Chengshan Jiao Vessel Traffic Service (VTS) to request for urgent medical evacuation to shore by helicopter. The Master also notified the vessel's local agent in China about the injury of 2E and FTR.
- 1.1.22 At about 0948H, Chengshan Jiao VTS informed VN to proceed to Longyanwan Anchorage, located in the Yellow Sea off the coast of Rong Cheng, Shandong Province, China, where shore medical assistance would standby for help.

1.1.23 According to the Master, CPR continued to be administered to 2E till about 1300H and the ship crew made their best efforts to revive 2E, but they were unable to stop the bleeding from 2E's ears. At about 1630H, 2E's vital signs were lost.

1.1.24 At about 1830H, 2E's body was kept in the vessel's cold room, wrapped in a mortuary transfer bag as instructed by the Company.

1.1.25 On 25 January 2026, at about 0930H, VN returned to a shipyard berth in Shidao, China. 2E's body was transferred ashore at 1630H on the following day after all required port formalities had been completed.

1.2 The Ship

1.2.1 VN was a bulk and log carrier, with five cargo holds on tramp service. Her deployment was on ad-hoc basis based on cargo loading instructions from the vessel owner.

1.2.2 At the time of the occurrence, VN completed her dry docking and was in ballast condition waiting for a loading instruction, with a forward draft of 10.0m and an aft draft of 10.35m, with less than half a meter trim by the stern. Prior to the dry docking, VN called at ports of China, Republic of Korea, and New Zealand for the past three voyages and carried logs as cargo.

1.3 The Crew

1.3.1 There were 24 crew onboard VN, mainly from Thailand, with some from India. All crew held valid STCW¹¹ competency certificates required for their respective positions onboard. The working language onboard VN was English.

1.3.2 The qualification and experience of the Master, relevant officers and crew are tabulated in **Table 1** below.

Designation onboard	Nationality	Age	Qualification	Duration onboard (Months)	In rank service (Years)	Service in Company (years)	Working schedule onboard
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¹¹ The International Convention on Standards of Training, Certification and Watch keeping for Seafarers (or STCW), 1978 sets qualification standards for masters, officers and watch personnel on seagoing merchant ships.

Master	Thai	53	COC – Master / STCW II/2, IV/2	0.8	20	29	On day work ¹²
CO	Thai	44	COC – Master / STCW II/2, IV/2	9.3	11	21	0400H – 0800H 1600H – 2000H
3O	Thai	28	COC – Chief Mate / STCW II/2, IV/2	9.3	3	7	0800H – 1200H 2000H – 2400H
CE	Thai	42	COC – Chief Engineer / STCW II/2	4.6	7	20	On day work ¹³
2E	Thai	41	COC – Second Engineer / STCW III/2	4.6	5	16	0400H – 0800H 1600H – 2000H
BSN	Thai	39	Deck Rating as per STCW II/4	4.6	11	20	On day work
ASD-1	Indian	34	Deck Rating as per STCW II/4	7.9	3	3	On day work
FTR	Indian	43	Deck Rating as per STCW III/4	7.9	12	12	On day work

Table 1

1.3.3 The Master joined the Company in 1997 and had 20 years of ship command experience on bulk carriers. According to the Company's management policy, the Master had an overall responsibility in administration and management over a safe shipboard operation.

1.3.4 CO, the executive officer and the Master's deputy in addition to his navigational watchkeeping duties, was responsible to the Master for the operation, administration and supervision of the deck department, as well as ensuring all deck machinery and cargo gear were in good working condition, and planning and supervising the work to be done by the deck department.

1.3.5 CE was in charge of the engine department and was responsible to the Master for the administration and supervision of the engine department. CE was the designated Safety Officer onboard VN.

1.3.6 FTR had been trained for shipboard welding and gas cutting and had more

¹² Normally from 0800H to 1700H. The Master was overall in command and remained on call at any time if needed from any crew onboard VN.

¹³ Normally from 0800H to 1700H. The Chief Engineer was the head of engine department and remained on call at any time if needed from any engineering crew onboard VN.

than 10 years of working experience as a fitter. Hierarchically, FTR reports to CE and 2E. FTR had a role to assist in deck maintenance and repair all machinery and associated equipment. Any deck repairs requiring FTR's assistance would go through CE.

- 1.3.7 2E, who held a certificate of competency of chief engineer officer, had served five years as the second engineer in the Company. 2E was responsible to CE for the operation and overall maintenance of all machinery and associated equipment, and to allocate duties to other engineers including FTR for daily maintenance, overhaul, etc. and to inspect the works that were in process and works that had been completed.
- 1.3.8 2E was medically certified fit for sea services, without any restriction. The medical examination was carried out on 27 August 2025. Vision acuity, hearing and colour vision were documented as "Yes", and the medical certificate was subsequently issued to 2E on the same day with a two-year validity.
- 1.3.9 According to the shipboard work/rest hour records, 2E had rest periods of 12 hours in the past 24 hours and 95 hours in the past seven days prior to the occurrence. 2E had a regular 12-hour rest each day on 4 – 17 January 2026 during the dry docking. The rest hours for the other officers and other crew members were documented in compliance with the STCW and MLC Convention's requirements concerning the hours of work and rest¹⁴.
- 1.4 The cargo crane and No. 2 swivel hook
 - 1.4.1 There were four hydraulically operated cargo cranes installed onboard VN. The safe working load (SWL) of 36 metric tonnes was certified for each crane without grabs, and SWL of 28 metric tonnes with grabs. VN did not carry grabs onboard, if the ship cranes were to be used for discharging bulk cargo from the cargo holds, the grabs would be provided by cargo terminals and attached to the crane hooks.
 - 1.4.2 The four cranes were secured in pairs for sea passage, with the jibs of No. 1 and No. 2 resting on each other's U-shaped steel supports, the same securing arrangement was used for No. 3 and No. 4 cranes (see **Figure 5**). The crane

¹⁴ STCW Chapter VIII and MLC, Reg 2.3 with regards to rest hour - Minimum hours of rest shall not be less than: i) 10 hours in any 24-hour period; and ii) 77 hours in any seven-day period. Hours of rest may be divided into no more than two periods, one of which shall be at least six hours in length, and the interval between consecutive periods of rest shall not exceed 14 hours.

block with swivel hook was secured by wires onto the opposite crane's mast house top platform.



Figure 5 – View of the four cranes and their securing arrangements for sea passage looking forward (*Source: the Company*)

- 1.4.3 The No.2 crane block was overhauled during the dry docking at Shanhaiguan Shipyard, and its components such as sheave bearings, block guard, bolt and nuts had been renewed, except for the swivel hook.
- 1.4.4 The “Register of Ship’s Lifting Appliances and Items of Loose Gear”¹⁵ issued by ClassNK to VN on 1 January 2016 indicated that all lifting appliances (four cargo cranes) and their associated loose gears were regularly inspected and examined annually and five-yearly as required by ClassNK. The last thorough examination on the lifting appliances and loose gears was performed by ClassNK on 19 January 2026 and accordingly a test certificate was issued on the same day.
- 1.4.5 According to ClassNK, the thorough examination on the lifting appliances and loose gears was surveyed based on the class Rules¹⁶. Opening and examining

¹⁵ The Register is the standard international forms as recommended by the International Labour Office (ILO) in accordance with the ILO Convention No. 152.

¹⁶ The survey items specified in 2.4.2(1), 2.4.5 (1) and 2.5.1(1) / (2) / (5) of Rules for Lifting Appliances and Anchor Handling Winches.

the loose gears such as cargo blocks, hooks, swivels under the class Rules, 2.4.5 (2), were subject to the attending surveyor's consideration if deemed necessary. Based on ClassNK's records, the overhauling of No. 2 crane block and renewal of its components were not made known to the attending surveyor during the 19 January 2026 examination. The attending surveyor therefore only carried out visual examination on loose gears and the load test (see **Figure 6**) on all four cargo cranes on 19 January 2026.

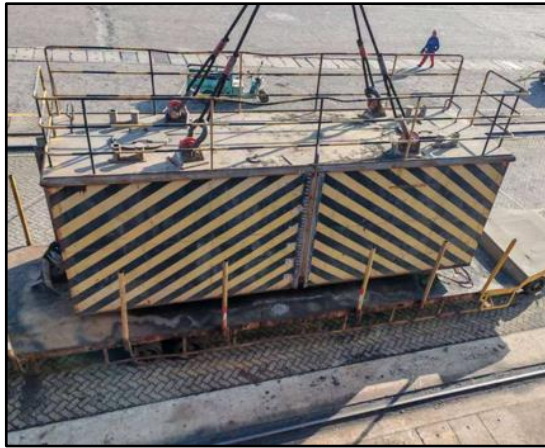


Figure 6 – Performing load test of No. 2 crane (*Source: ClassNK*)

- 1.4.6 According to the Master, after No. 2 crane block and swivel hook were reassembled during the dry docking, VN did not carry out functional tests on No. 2 swivel hook.
- 1.5 The Safety Management System
 - 1.5.1 The Company managed a fleet of bulk carriers and other types of cargo ships. The Document of Compliance (DOC) was issued to the Company on 15 October 2025 by ClassNK after completing a renewal audit in Bangkok, Thailand, on 15 October 2025. An observation was raised to the Company relating to unclear routine maintenance inspection interval for main engine and generator engines which was subsequently addressed and closed by the Company. The DOC was valid till 19 November 2030.
 - 1.5.2 A full-term Safety Management Certificate (SMC) was issued to VN on 6 May 2021 by ClassNK after the completion of a verification audit onboard VN on 6 May 2021. The last Intermediate Verification audit was carried out on 18 April 2024 to endorse the SMC for compliance of the ISM Code. There were no non-

conformities and no observations raised during the audit onboard VN.

- 1.5.3 The last Port State Control (PSC) inspection was conducted at the Port of Panjang, Indonesia, on 13 October 2025 with no deficiency raised. There was no Flag State Control inspection carried out onboard VN in 2025 before to the occurrence.
- 1.5.4 The Company carried out an internal audit¹⁷ onboard VN on 1 September 2025 while the vessel was berthed at the Ho Chi Minh, Vietnam. The audit was to assess whether the implementation of the Company's Safety Management System (SMS) procedures was effective. There were 20 observations raised at the internal audit and were subsequently closed with corrective actions carried out. None of the observations related to the cargo crane.
- 1.5.5 Working at Height
 - 1.5.5.1 The Company's SMS procedures stated that working at height more than 1.5 metres was to be avoided as far as possible while the vessel was underway and rolling or pitching, even gently (No. 1 crane platform was at about 2.7 metres above the main deck). If working at height was unavoidable, a proper RA for the job was to be carried out in advance and risk mitigation actions conveyed to the team through a toolbox meeting.
 - 1.5.5.2 Suitable precautions were to be taken and to ensure personal protective equipment (safety harness) was worn by the crew performing the work at height in addition to the safety helmets, gloves, etc. as required. At the time of occurrence, all three crew members (CO, FTR and Bosun) wore proper PPEs as required by the Company's SMS procedures.
- 1.5.6 Risk Assessment (RA) and Permit to Work (PTW)
 - 1.5.6.1 An RA was to be conducted before performing any tasks onboard ship which could expose safety hazards to personnel. Based on the RA conducted, additional control measures were to be implemented if the risk factor was concluded to be 'medium risk' or 'very high risk'. Such tasks should not be undertaken if additional control measures could not be implemented.
 - 1.5.6.2 Existing safety measures in the Company's SMS procedures such as the inspections by the ship's Safety Officer and use of PTW were to identify risks

¹⁷ The audit was required by the International Safety Management (ISM) Code.

and hazards for ensuring safe working conditions. The PTW system was to set out the precautions to be taken prior to commencement of any potentially hazardous work activity.

- 1.5.6.3 Before signing the PTW, the Responsible Officer was required to check that all the measures specified had in fact been taken and that all appropriate safety arrangements were maintained until the permit was cancelled.
- 1.5.6.4 The ship's records indicated that RA and PTW for the task on No. 2 swivel hook had been carried out on two separate occasions, on 19 January 2026 and on 20 January 2026 respectively.
- 1.5.6.5 In both RAs, among others, falling from height was identified as 'medium risk' with control measures requiring the crew involved to be briefed about the work and to wear proper PPE¹⁸. Weather hazard was identified to be 'very low risk' under control measures of performing the task only in daylight hours and in clear weather. According to the Master who approved the PTW, clear weather was not explicitly defined in the Company SMS procedures, but to the crew's understanding, behaviour of the vessel in sea conditions at the time of RA was assessed to be 'steady'. Slight rolling of the vessel 'occasionally' was regarded as 'clear weather' for a task to commence.
- 1.5.6.6 In the two PTWs prepared by CO, endorsed by the Safety Officer (CE), among others, the 'Warning Notices Posted' in work preparation list was checked as 'Yes'. However, in the vicinity of the worksite, there were no warning notices posted to warn other crew of the work performed in the vicinity of the No. 1 crane platform.
- 1.5.7 Stop Work Order
 - 1.5.7.1 The Company's SMS did not have specific stop work order, but in the General Duties of the Ship's Safety Officer, it is stated that the Safety Officer was required to stop any work which he/she reasonably believed may cause a serious accident and immediately inform the master or chief officer who could decide when the work process could be safely resumed.
 - 1.5.7.2 The Safety Officer was required to ensure the Company's safety policy and manuals were complied with, including the guidance provided in the

¹⁸ According to the Company, the three crew members worn safety harness for preventing falling from height (refer to **Figure 2** reenactment).

COSWP¹⁹. The Safety Officer was also required to carry out shipboard health and safety inspections of each accessible part of the ship at least once every three months, or more frequently if there had been substantial changes in the conditions of work. At the time of occurrence, the Safety Officer (CE) was not physically at the worksite where the work on No.2 swivel hook was carried out.

1.5.7.3 Another responsibility of the Safety Officer was to investigate all shipboard health and safety hazards, and to make recommendations to the master to prevent recurrence, and to document the investigation in the Safety Officer's Record Book (SORB).

1.5.8 Safety Signs

1.5.8.1 The Company's SMS procedures highlighted that appropriate safety signs, which included hazard warnings, were required to be used whenever a hazard or obstruction existed. Further information on the use of safety signs was referred to the COSWP.

1.5.8.2 The chapter of the COSWP on "Safety Signs and Their Use" states that safety signs including hazard warnings should be used to indicate hazards and obstructions or control measures to be taken where the hazard or obstruction cannot be removed. It also states that the Company should ensure that safety signs are displayed where appropriate. These safety signs should be clearly understood and in place before allowing any relevant work to take place.

1.6 Safe Working Practices

1.6.1 The chapter of the COSWP on Personal Protective Equipment states that PPE must be used when risks cannot be avoided or reduced to an acceptable level by safe working practices. Safety helmets are commonly provided for protection against falling objects. Since the hazards may vary, it will be appreciated that no one type of helmet would be ideal as protection in every case, therefore, safety helmet should be used in accordance with manufacturer's instructions. The investigation team was unable to assess the

¹⁹ Code of Safe Working Practices for Merchant Seafarers (COSWP) is not a mandatory publication for carriage on Singapore registered ships. The Maritime and Port Authority of Singapore (flag Administration) had issued a Shipping Circular (No.25 of 2017) – Carriage Onboard of Safe Working Practices Publications, indicating that, "...For SOLAS Convention ships (>500 GT), if the SMS makes reference to relevant safe working practices code/guidelines, a copy of these code/guidelines should be made available on board." The COSWP is published by the UK Maritime and Coastguard Agency (MCA) provides best practice and guidance for improving health and safety on board ships.

sustainable impact force of the safety helmet worn by 2E (see **Figure 7**) as the type/ model and safety compliance certificate were not available.

- 1.6.2 At the time of occurrence, 2E was wearing a safety helmet without a chinstrap. The safety helmet was reportedly found on the floor about three meters away from him, no visible damage was seen on the safety helmet.



Figure 7 – The safety helmet worn by 2E (Source: the Company)

- 1.7 Additional Information
- 1.7.1 According to the Master, the No. 2 swivel hook weighed about 20kg, and the two D-shackles weighed about 15kg. The chain block weighed about 10kg.
- 1.8 The Death and Injury to the Crew
- 1.8.1 The cause of 2E's death was haemorrhage or excessive blood loss due to blunt force injury to the left neck and cranial base (also known as skull base) as preliminarily concluded by a local forensic doctor at the time of issuing a death certificate.
- 1.8.2 The CCTV installed onboard VN did not cover the location of the occurrence, it is not known which of the fallen items specifically, No. 2 swivel hook with two D-shackles and/or chain block, hit 2E. According to CO and BSN, 2E was lying on the port side main deck and bleeding with head facing the sea and feet towards the ship's centreline.

1.9 Environmental Condition

- 1.9.1 The weather conditions recorded in the ship's logbook indicated northerly fresh breeze between 17 and 21 knots (BF 5) at 0800H on 20 January 2026. The sky was overcast but visibility was more than 6nm. The sea state had been moderate²⁰ from the night of 19 January 2026 until the time of occurrence. The CCTV installed onboard VN captured the sea conditions which correlated the ship's logbook records (see **Figure 8**), many white horses were formed in the moderate sea state.



Figure 8 – VN's CCTV footage showing sea conditions at the time of occurrence
(Source: the Company)

- 1.9.2 At the time of occurrence (at about 0931H on 20 January 2026), no course alteration was made, VN was sailing at latitude 37-33.7 N and longitude 123-01.4E, in the Yellow Sea, on a gyro heading of 121°, at a speed of 13.6 knots²¹.

²⁰ Sea swells up to 1.5m over northern part of Yellow Sea and Central part of Yellow Sea as broadcasted by the National Meteorological Center (NMC) Beijing, for METAREA XI, valid at 0000UTC 20 January 2026.

²¹ The speed over ground was recorded as 11.6 knots.

2 ANALYSIS

2.1 The Occurrence

2.1.1 On the occurrence day, three crew members commenced operations to free the jammed No. 2 crane swivel hook while the vessel was underway in a ballast condition, experiencing occasional slight rolling.

2.1.2 As the vessel continued sailing toward the open sea, environmental conditions deteriorated to moderate sea with swells up to about 1.5 metres. The moderate sea resulted in larger rolling motions and caused the No. 2 swivel hook and two D-shackles, which had been disconnected from the crane block, to slide across the No. 1 crane platform. During this time, FTR was struck by the swinging No. 2 crane block, sustaining minor injuries to his right leg.

2.1.3 During a subsequent roll, the No. 2 swivel hook and the two D-shackles, weighing about 35kg together, and the chain block weighing about 10kg fell from the No. 1 crane platform onto the port-side main deck. The fallen equipment likely struck 2E who was walking pass the worksite and caused 2E to suffer serious injuries. 2E succumbed to the injuries later in the day.

2.2 Functional Test of Crane Swivel Hooks After Overhauled

2.2.1 The investigation team noted that No. 2 crane block was overhauled during dry docking, which included renewing its components such as the sheave bearings, block guard, bolts, and nuts. However, a functional test of No. 2 crane swivel hook was not performed because the swivel hook was not changed.

2.2.2 The overhaul of No. 2 crane block and the renewal of its components were not made known to ClassNK. Consequently, opening and examining the loose gear, including the No. 2 crane swivel hook, was not considered by the attending surveyor under ClassNK Rules 2.4.5 (2). An opportunity, at the time of survey, to identify and rectify the jammed crane swivel hook before the vessel left the dry docking was missed.

2.2.3 It would have been desirable to test the functionality of equipment after reassembling to ensure that they are fully functional and safe for use. The Company should have brought to the attention of the attending class surveyor

that the overhaul and renewal work performed on the No. 2 crane so that the surveyor, as a trained and competent person, could assess whether opening and examining the affected parts of the crane was necessary.

2.3 Risk Assessment and Control Measures

- 2.3.1 Prior to performing the task of freeing the jammed No. 2 crane swivel hook, two key risks were identified, i.e. falling from height of personnel and weather hazard. As falling from height was identified to be 'medium risk', the additional control measures were taken in accordance with the Company's SMS procedures, such as conducting safety briefing to the crew (during toolbox meeting) and wearing safety harness.
- 2.3.2 The weather hazard was identified as very low risk, under control measures of performing the task in daylight hours and in clear weather when the toolbox meeting and a risk assessment (RA) were carried out (see paragraph 1.5.6.5).
- 2.3.3 In granting the Permit to Work (PTW) approval for the operation to proceed, the Master regarded these sea conditions as clear weather. However, clear weather was not explicitly defined in the Company SMS procedures and slight rolling of vessel occasionally was regarded as 'clear weather for a task to commence.
- 2.3.4 The deterioration of the sea conditions to "moderate" was not anticipated when the vessel sailed further out toward the open sea, thus the risk of moderate rolling of the vessel was not identified during the RA. Control measures, such as securing No. 2 swivel hook and two D-shackles before disconnecting them from the crane block, to prevent them from sliding or falling from No. 1 crane platform onto the main deck (equipment falling from a height), were not carried out. In addition, adjusting vessel's heading to reduce rolling motion was also not identified. This occurrence highlighted the importance of taking weather changes into consideration when performing an RA.
- 2.3.5 While the "Warning Notices Posted" item on the work preparation list had been checked on the PTW, no physical safety barriers or warning signs were posted at the worksite to alert others of the work being performed at the No. 1 crane platform. Consequently, there was nothing to prevent passing crew members from entering the adjacent port-side main deck and risking exposure to falling objects. Having safety barriers or warning signs could prevent or warn other

crew members from entering an area that posed risk of falling objects.

2.4 Incidental Findings

2.4.1 Policy on Stop Work Order

2.4.1.1 The Company's SMS procedures required the CE, as part of the general duties of ship's Safety Officer, to stop any work that he or she reasonably believed could cause a serious accident, and to ensure that the guidance provided in the COSWP was followed. However, as demonstrated in this case, it was impractical for the CE to be physically present for every operation onboard the vessel. Had the policy allowed anyone onboard to raise stop work order when an unsafe act or situation had developed, it could have cultivated a culture onboard to lookout for unsafe act or situation, such the missing warning signs and safety barriers at the port side main deck where the operation of freeing the jammed No. 2 crane swivel hook was carried out.

2.4.1.2 The SMS policy on stop work order should authorise any crew member, not just the Safety Officer, to stop work when unsafe condition exists.

2.4.2 Proper Wearing of PPE

2.4.2.1 2E was wearing a safety helmet without chinstrap at the time of occurrence. After the occurrence, the helmet was found at about three metres away from him. The primary purpose of a chinstrap is to keep the helmet securely fastened to the user's head during sudden movements, impacts, or falls.

2.4.2.2 It is important to emphasise that PPE must be worn properly to serve its intended safety purpose. Without a secured chinstrap, standard internal suspension systems cannot guarantee that a safety helmet will remain in place to protect the user's head if the user stumbles or experiences a severe impact.

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 vessel's rolling motion due to moderate sea conditions had caused the disconnected No. 2 swivel hook and two D-shackles, together with a chain block, to slide and drop from the No. 1 mast house top platform and likely hit 2E, who was walking pass the worksite. 2E was seriously injured and succumbed to the injuries later in the day.
- 3.2 The risk assessment conducted for the freeing of No. 2 crane swivel hook did not account for deteriorating weather conditions, resulting in the disconnected No. 2 swivel hook with two D-shackles and a chain block sliding onto the main deck when sea conditions worsened. The lack of accounting for deteriorating weather conditions had also delayed in adjusting ship's heading to reduce its rolling motion.
- 3.3 No physical safety barriers and warning signs were placed at the worksite, as required by the Permit To Work, to alert other crew members of not entering the worksite and the potential falling objects.
- 3.4 The Company's SMS procedures restricting stop work authority solely to the Safety Officer (CE), was not adequate as the Safety Officer cannot be present for every task.
- 3.5 The remedial action of adjusting the vessel's heading to reduce vessel rolling motion was restricted due to multidirectional traffic in the TSS precautionary area. This remedial action was not discussed before commencement of freeing the jammed No. 2 crane swivel hook.
- 3.6 The overhaul of the No. 2 crane block and renewal of its components were performed during dry docking, but there was no functional test carried out on No. 2 crane swivel hook. The work done on No. 2 crane block was also not reported to ClassNK. Hence, the jammed No. 2 crane swivel hook was not discovered and rectified prior to sailing.
- 3.7 The safety helmet used by 2E was without a chinstrap.

4 SAFETY ACTIONS

During the course of the investigation and through discussions with the investigation team, the following safety actions were initiated by the ISM Manager (Great Circle Shipping Agency Ltd.):

- 4.1 After the occurrence, the Company issued an urgent Safety Alert to its fleet of ships highlighting the prevention of falling objects from mast house tops.
- 4.2 The Company also issued the following instructions to its fleet of ships:
 - a) suspended all working at height and shipboard crane maintenance activities when its vessels experience rolling or pitching motions;
 - b) the officer in charge shall establish temporary exclusion zones beneath and adjacent to all working at height areas and continuously monitor vessel motion and exercise stop-work authority without delay;
 - c) the access to these temporary exclusion zones shall be restricted using physical barriers, warning signage, and verbal briefings to all crew;
 - d) all crane hooks, blocks, shackles, and associated components shall be secured with secondary restraints when dismantled or partially disconnected. Equipment shall not be left unsecured at any stage of the operation.
- 4.3 Further instructions were issued on crew briefing and awareness as follows:
 - a) a toolbox meeting shall be conducted prior to resumption of any similar work, emphasising the fallen object hazards, vessel motion risks and prohibition of entry into exclusion zones without authorisation.
 - b) the Permit to Work system shall be reviewed onboard to ensure that exposure beneath work areas is clearly identified, and control measures are actively enforced during execution.

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.

- 5.1 It is recommended that the Company, Great Circle Shipping Agency Ltd. (the ISM Manager of Viyada Naree):
 - 5.11 ensure that functional test be carried out after a crane block has been overhauled or the crane components have been renewed and to notify the vessel classification society of such works in future. **[TSIB Recommendation RM-2026-003]**
 - 5.11 ensure safety helmet used by ship's crew has chinstrap and is properly worn. **[TSIB Recommendation RM-2026-004]**