Report of investigation into the fatal accident of a stevedore on board the Hong Kong registered bulk carrier "*Vienna Wood N*" at Rèunion Port, an insular region of France in Indian Ocean, on 7 July 2015

The Hong Kong Special Administrative Region
Marine Department
Marine Accident Investigation Section

28 April 2016

Purpose of Investigation

This incident is investigated in accordance with the Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (the Casualty Investigation Code) adopted by IMO Resolution MSC 255(84).

The purpose of this investigation conducted by the Marine Accident Investigation and Shipping Security Policy Branch (MAISSPB) of Marine Department, in pursuant to the Merchant Shipping Ordinance Cap. 281, the Merchant Shipping (Safety) Ordinance (Cap. 369), the Shipping and Port Control Ordinance (Cap. 313), or the Merchant Shipping (Local Vessels) Ordinance (Cap. 548), as appropriate, is to determine the circumstances and the causes of the incident with the aim of improving the safety of life at sea and avoiding similar incident in future.

The conclusions drawn in this report aim to identify the different factors contributing to the incident. They are not intended to apportion blame or liability towards any particular organization or individual except so far as necessary to achieve the said purpose.

The MAISSPB has no involvement in any prosecution or disciplinary action that may be taken by the Marine Department resulting from this incident.

Table of Contents

Page

1. Summary

1.1 On 7 July 2015, the Hong Kong registered bulk carrier *Vienna Wood N (the vessel)* was moored alongside berth in the port of Rèunion, an insular region of France, to discharge cargo.

1.2 After the completion of cargo discharge inside the No.2 cargo hold at about 2145, the crane operator of the stevedores company, who operated the No.2 ship crane, left the control cabin of the ship crane. About 30 minutes later, his body was found lying on the bottom of the crane trunk. The crane operator was certified dead on board.

1.3 There was no witness to the accident. It was deduced that the crane operator lost his grabbing on the ladder and fell down to the bottom of the crane trunk while climbing down the internal vertical ladder. He fell to his death as he hit against the water ballast tank valves control block.

1.4 The investigation into the accident revealed that the main contributory factor as follows:

- the crane operator did not take necessary precautions as he did not stay alert to avoid falling from height when climbing on a vertical ladder which was not fitted with guard rings to prevent falling sideway ;

1.5 The following safety issue was also found in the investigation:

- the vertical ladder without fitting of guard rings could not protect a person from falling sideway in case of losing grabbing on the ladder.

2. Description of the vessel

Name of vessel	:	*Vienna Wood N* **(**Fig. 1)
IMO No.	:	9593713
Call Sign	:	VRHS6
Flag	:	Hong Kong, China
Port of Registry	:	Hong Kong
Classification Society	:	Nippon Kaiji Kyokai
Trade of Vessel	:	International Trading
Ship Type	:	Bulk Carrier
Gross Tonnage	:	31,540
Net Tonnage	:	18,765
Length (LOA)	:	190.00 m
Breadth (molded)	:	32.26 m
Depth (molded)	:	18.10 m
Draft (Design)	:	12.73 m
Main Engine & Power	:	DU-SULZER 6RT-FLEX50, 8,890 kW x 1 set
Propulsion	:	Screw (Single)
Ship Builder	:	IHI Maritime United Inc., Yokohama Shipyard
Year of Built	:	2011
Management Company	:	A.M. Nomikos Transworld Maritime Agencies S.A.

Fig.1 –Vienna Wood N

3. Sources of Evidence

3.1 Information provided by the management company.

4. Outline of Events

All times are local (UTC+ 4) if not specified otherwise

4.1 At 2230 on 3 July 2015, the Hong Kong registered bulk carrier *Vienna Wood N (the vessel)* berthed alongside in the port Rèunion, an insular region of French in the Indian Ocean, for the discharge of cargo. A "Ship/Shore agreement for ship cranes handover" was signed by the master of *the vessel* and the foreman of a stevedore company to agree using the ship cranes by stevedores. A Ship/Shore Safety Checklist was also completed and signed by both parties.

4.2 The No.2 ship crane was used to discharge the bulk cargo of maize in the No.2 cargo hold. A crane operator from the stevedore company was assigned to operate the crane. Cargo discharging work was completed smoothly at about 2130 on 7 July 2015.

4.3 At about 2145, the crane operator used the No.2 ship crane to transfer a bulldozer from the cargo hold to shore. He then left the control cabin of the crane.

Fig.2 - The vertical ladder inside the trunk of No.2 ship crane

4.4 About 30 minutes later, two stevedores found the crane operator lying on the bottom of the trunk (Fig. 2). The third officer and an able-bodied seaman of *the vessel* arrived on the scene at about 2215. They informed the master and the chief officer of the accident. The crane operator was later certified dead. Police officers came on board *the vessel* at 2230 for an investigation and left *the vessel* at 2325.

5. Analysis

Ship certificates and manning

5.1 The Hong Kong registered bulk carrier "Vienna *Wood N*" (*the vessel*) was delivered on 28 February 2011. All the statutory certificates of *the vessel* were valid at the time of the accident.

5.2 The master has worked for the management company of *the vessel* as a ship master for more than three years. He joined *the vessel* about six months before the accident. He held a certificate of competency as a master issued by the Liaoning Maritime Safety Administration China on 29 September 2011 which is valid until 29 September 2016, and a Class 1 License (Deck Officer) issued by the Hong Kong Marine Department on 3 October 2011.

5.3 The chief officer has worked as a chief officer on bulk carriers for more than one year. He joined *the vessel* in April 2015 as a chief officer. He held a certificate of competency as a chief mate issued by the Maritime Safety Administration of the People's Republic of China on 22 May 2013 which is valid until 31 December 2016, and a Class 2 License (Deck Officer) issued by the Hong Kong Marine Department on 30 September 2013.

The crane operator

5.4 The deceased crane operator has worked as a stevedore and a crane operator for about four years.

5.5 Despite all efforts by the ship owner's local correspondents and lawyers, neither official local authority/police report nor coroner report could be obtained. Neither the working schedule / arrangement nor the health condition of the crane operator could be obtained from the stevedores company for analysis.

Personal Protective Equipment

5.6 According to the report of the ship's master, the crane operator wore personal protective equipment while working on board, such as safety helmet, gloves and safety shoes. It is the normal practice that no fall arresting arrangement was used while he was climbing the vertical ladder inside the trunk of the crane.

Access ladders of the crane

5.7 There were two vertical ladders for access to the control cabin of the No.2 ship crane. One was fitted on the external wall of the trunk of the crane (Fig.4). The other was fitted inside the trunk of the crane (Fig. 2). According to the drawing of the internal

access ladder (Fig. 3), it ran from the top to bottom platform with a height of about 5820 mm. The width of the ladder was 300mm while the distance between each step was 340mm, which complied with Japanese Industrial Standard JIS F2602-1966 and was considered appropriate.

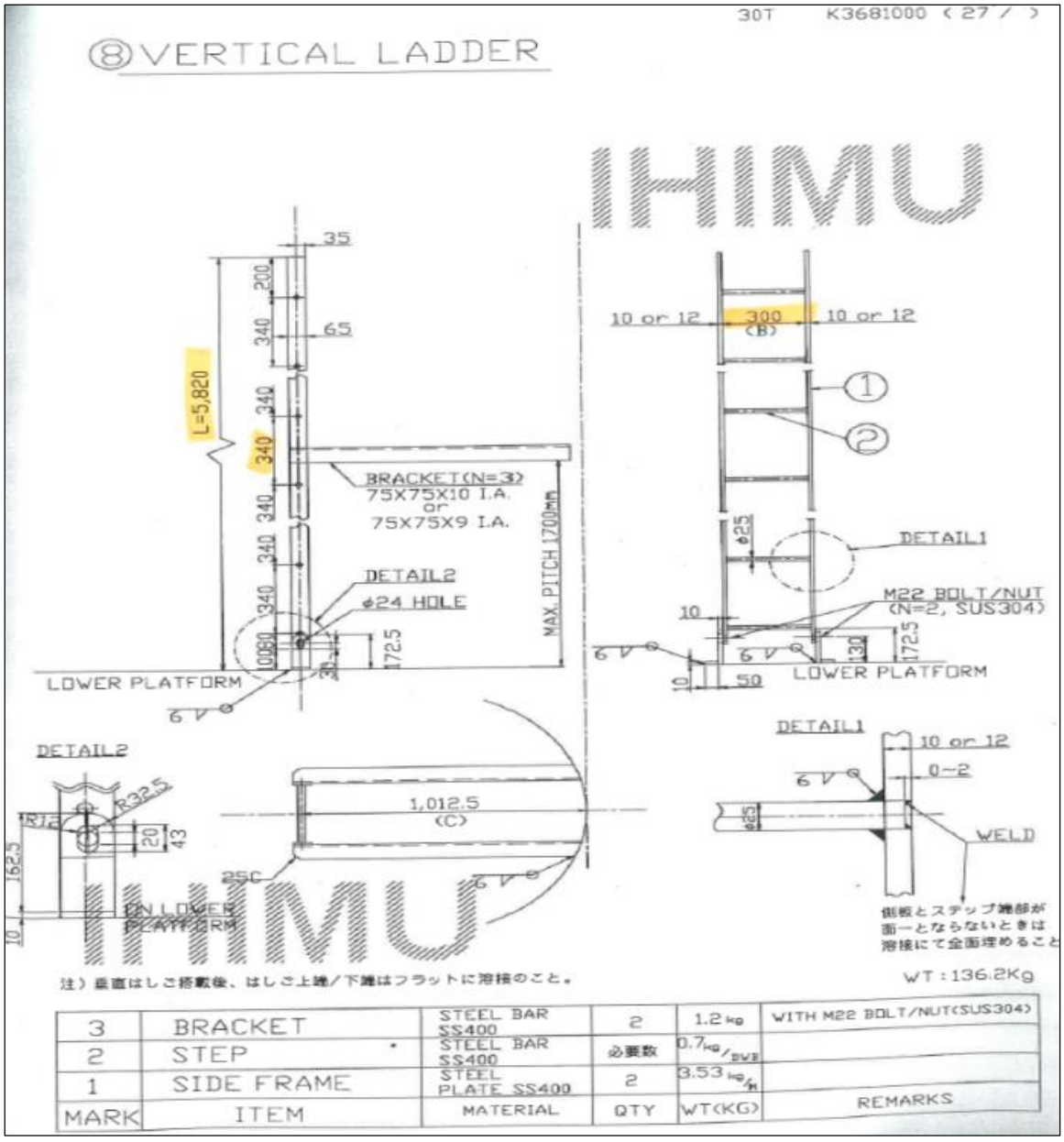

Fig.3 – Drawing of the internal access ladder of ship crane

5.8 Similar access ladders were fitted to other ship cranes and without guard rings. Thus, a person climbing up or down the vertical ladder would have a risk of falling sideway.

5.9 At the time of the accident, the internal of the trunk of the No.2 ship crane was clear from any obstruction and adequately illuminated. The internal ladder for the No.2 ship crane was also in satisfactory condition without damage.

Fig.4- The vertical ladder outside and the driving cabin of the No.2 ship crane

Shipboard procedures

5.10 The ship management company had established procedures, plans and instructions, including checklists as appropriate, for key shipboard operations concerning the safety of the personnel, ship and protection of the environment according to the requirements of the International Safety Management Code (ISM Code), such as the "ship/shore safety checklist" and the "ship/shore agreement for ship cranes handover."

Weather condition

5.11 The vessel was mooring alongside a berth under a good weather condition. The wind was southwesterly of force 3 on the Beaufort wind scale. It was reported it was slight sea with small swells and no apparent movement of *the vessel*. Condition of weather did not consider as contributing factor to the accident.

The most probable cause of the accident

5.12 There was no witness to the accident. The crane operator was found lying on the bottom of the trunk of the No.2 ship crane and sustained fatal injuries. There was a water ballast tank valves control block located at the bottom of the trunk beside the vertical ladder.

5.13 It was deduced that the crane operator lost his grabbing on the ladder and fell sideway to the bottom while climbing down the internal vertical ladder. He hit against the water ballast valves control block and was killed (Refer to Fig.5).

5.14 It was probable that the crane operator did not stay alert to avoid falling from height when climbing on a vertical ladder.

Fig.5- Beside the vertical ladder, the water ballast tank valve control block located on the bottom of the access trunk of the No.2 ship crane.

6. Conclusions

6.1 On 7 July 2015, the Hong Kong registered bulk carrier *Vienna Wood N (the vessel)* was moored alongside a berth in the port of Rèunion, an insular region of France, to discharge cargo.

6.2 After the completion of cargo discharge inside No.2 cargo hold at about 2145, the crane operator of the stevedores company, who operated the No.2 ship crane, left the control cabin of the ship crane. About 30 minutes later, his body was found lying on the bottom of the crane trunk. The crane operator was certified dead on board.

6.3 There was no witness to the accident. It was deduced that the crane operator lost his grabbing on the ladder and fell down to the bottom of the crane trunk, while climbing down the internal vertical ladder. He fell to his death as he hit against the water ballast tank (WBT) valves control block.

6.4 The investigation into the accident revealed the main contributory factor as follows:

- the crane operator did not take necessary precautions as he did not stay alert to avoid falling from height when climbing on a vertical ladder which was not fitted with guard rings to prevent falling sideway.

6.5 The following safety issue was also found in the investigation:

- the vertical ladder without fitting of guard rings could not protect a person from falling sideway in case of losing grabbing on the ladder.

7. Recommendations

7.1 A copy of the investigation report of the accident should be provided to the management company and the master of *"Vienna Wood N"* informing them of the findings of the investigation.

7.2 The management company should issue safety instructions to all vessels instructing all masters and crew, as well as reminding all other personnel working on board ships, that precaution should be taken to avoid falling from height while climbing a vertical ladder. The management company may consider fitting guard rings on the vertical ladders of the similar ship crane on all vessels under their management in order to prevent re-occurrence of similar accident.

7.3 A Hong Kong Merchant Shipping Information Notice is to be issued to promulgate the lessons learnt from the accident.

8. Submission

8.1 In the event that the conduct of any person or organization is criticized in an accident investigation report, it is the policy of the Marine Department that a copy of the draft report in entirely or in part, should be given to that person or organization so that they can have an opportunity to express their comments on the report or offer evidence not previously available to the investigating officer.

8.2 Copy of the draft report has been sent to the following parties for comments:

(a) the management company, the master of *"Vienna Wood N"*;

8.3 No submission was received from above parties.