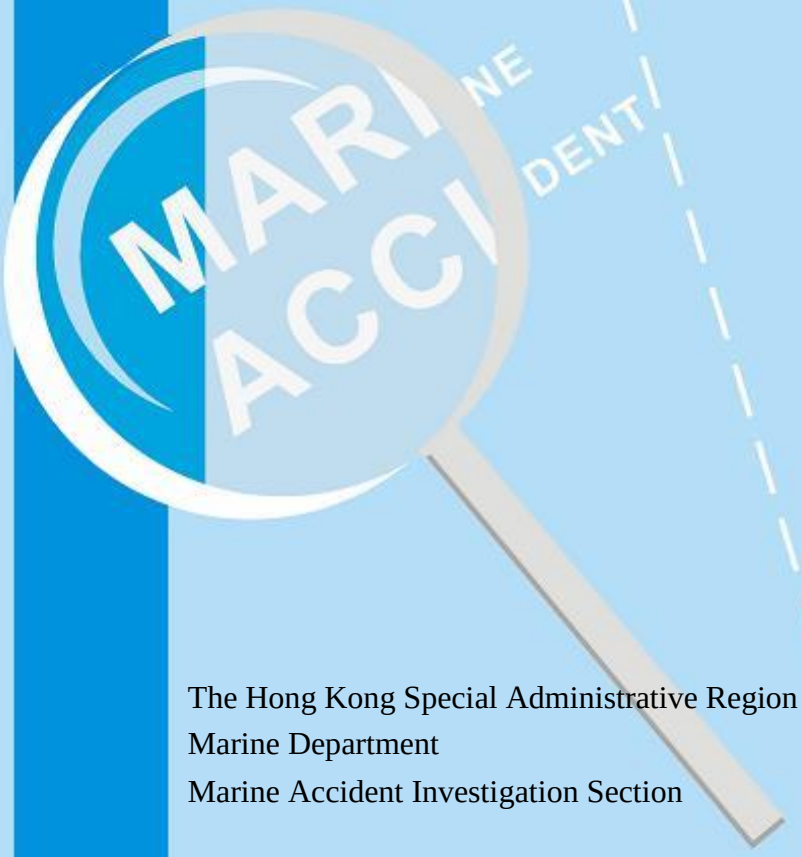
Report of investigation into the fatal man overboard accident happened on board the Marshall Islands registered bulk carrier "*Win Win*" at the South West Lamma Anchorage, Hong Kong on 24 February 2018



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

30 October 2019

Purpose of Investigation

The purpose of this investigation conducted by the Marine Accident Investigation and Shipping Security Policy Branch (MAISSPB) of Marine Department is to determine the circumstances and the causes of the incident with the aim of enhancing the safety of life at sea and avoiding similar incidents in future.

It is 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.

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Summary

At about 2010 hours on 24 February 2018, a fatal man overboard accident happened on board the Marshall Islands registered bulk carrier "*Win Win*" (*the vessel*). *The vessel* anchored at the South West Lamma Anchorage, Hong Kong for receiving bunker from a local bunker barge, "*Feoso Master*" (*Feoso*). *Feoso* was moored alongside the port side of *the vessel*. An able-bodied seaman (AB1) whilst assisting in connecting the bunker hose from *Feoso* to *the vessel'*s bunker manifold fell overboard from the opening at the port side of *the vessel*'s main deck (*the opening*) where the bunker hose passed through. AB1 was rescued by the crew of *Feoso* and airlifted to a local hospital subsequently. He was pronounced dead in the hospital on the same day.

The investigation identified that after the hinged gate at *the opening* opened, no proper safeguard was put in place thus leading to this accident. The prevailing on board requirement and procedure for the implementation of the drug and alcohol policy failed to control and identify the consumption of alcohol by AB1 before work. AB1 under the effect of alcohol failed to notice the danger and fell overboard through *the opening*.

1. Description of the vessels

1.1. *The vessel* (Figure 1)

Particulars of *the vessel*

Ship name	:	*Win Win*
Flag	:	Republic of the Marshall Islands
Port of registry	:	Majuro
IMO number	:	9219018
Type	:	Bulk carrier
Year built, shipyard	:	2001, Ishikawajima Harima Heavy industries Co. Ltd.
Gross tonnage	:	84,448
Net tonnage	:	56,237
Summer deadweight	:	170,085 tonnes
Registered length	:	278.10 metres
Breadth	:	45.00 metres
Engine type, power	:	Sulzer 6RTA72 diesel engine, MCR 16,040 kW
Classification society	:	Bureau Veritas
Registered owner	:	Delos Shipholding S.A.
Management company	:	FML Ship Management Ltd.
Minimum number of crew	:	16

Figure 1: *The vessel*

1.2. *Feoso* (Figure 2)

Particulars of *Feoso*		
Ship name	:	*Feoso Master*
Certificate of ownership number	:	B139903
Class / Category / Type	:	II / A / Oil carrier
Year of construction	:	2013
Gross tonnage	:	1,418
Net tonnage	:	539
Registered length	:	48.45 metres
Breadth	:	16.00 metres
Engine power, type	:	2 x Cummins KTA 38-M2, diesel engine, each 895 kW @1800 rpm
Registered owner	:	Chiao Chi shipbuilding Ltd.
Minimum number of crew	:	6

Figure 2: *Feoso*

2. Sources of evidence

2.1 The accident investigation report from the management company of *the vessel.*

2.2 The Maritime Administration of the Republic of the Marshall Islands.

2.3 The notes of interview from the crew of *Feoso*.

2.4 The weather report from the Hong Kong Observatory.

2.5 The autopsy report from the Department of Health, Hong Kong.

3. Outline of events

(All times were local time GMT + 8 hours)

3.1 At about 1945 hours on 24 February 2018, *the vessel* anchored at the South West Lamma Anchorage in Hong Kong for receiving 2100 metric tons heavy fuel oil bunker.

3.2 After *Feoso* was tied alongside the port side of *the vessel* at 2000 hours, the bosun, AB1 and another able-bodied seaman (AB2) gathered together at the port side of the main deck near the bunker manifold for connecting the bunker hose of *Feoso* to *the vessel*.

3.3 Near the bunker manifold at the port side of *the vessel*, there was a pneumatic motor driven davit used for lifting bunker hose from bunker barge. A hinged gate and a hose support were fitted on the shipside railing to facilitate bunker operation (Figure 3). At the material time, the hinged gate was opened to allow the passing of the bunker hose.

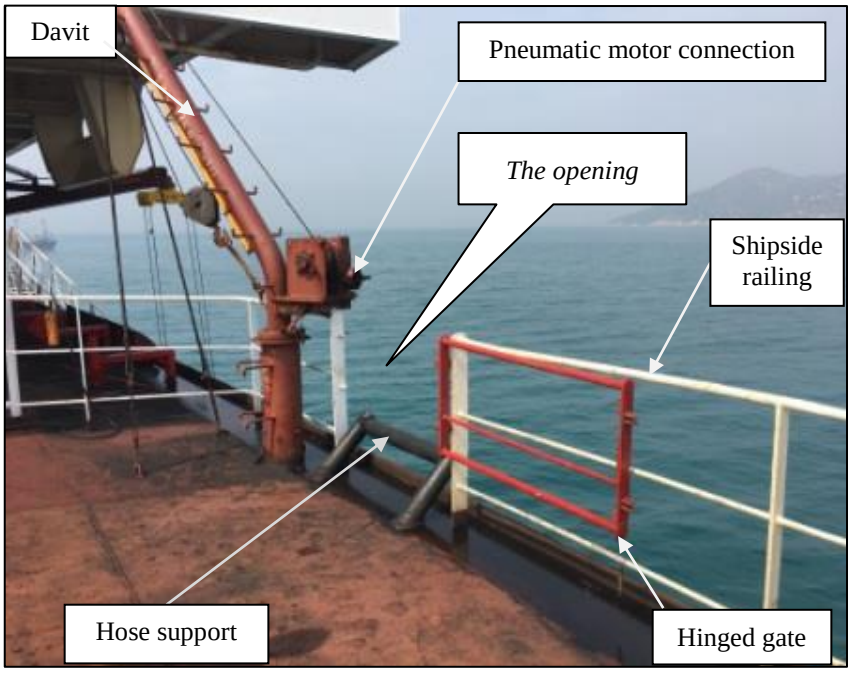

Figure 3: The davit and shipside fittings for bunker operation

3.4 The bosun and AB2 stated that whilst connecting the bunker hose, they saw AB1 walking close to the shipside and fell overboard through *the opening* accidentally. The bosun raised the emergency alarm and broadcasted the accident through the public address system of *the vessel*.

3.5 The crew of *Feoso* were alerted by a loud bang from the sea. They immediately checked around the shipside and found that a person was afloat in the sea without safety gear. They rescued him out of the water and applied first aid.

3.6 The master of *the vessel* instructed the chief officer, the second officer and the bosun to go to *Feoso* to render assistance. At the same time, the accident was reported to the Marine Department and the Marine police. A helicopter of the Government Flying Service arrived and airlifted AB1 to the hospital. However, AB1 was pronounced dead on the same day in the hospital.

3.7 The accident scene is depicted in Figure 4 below.

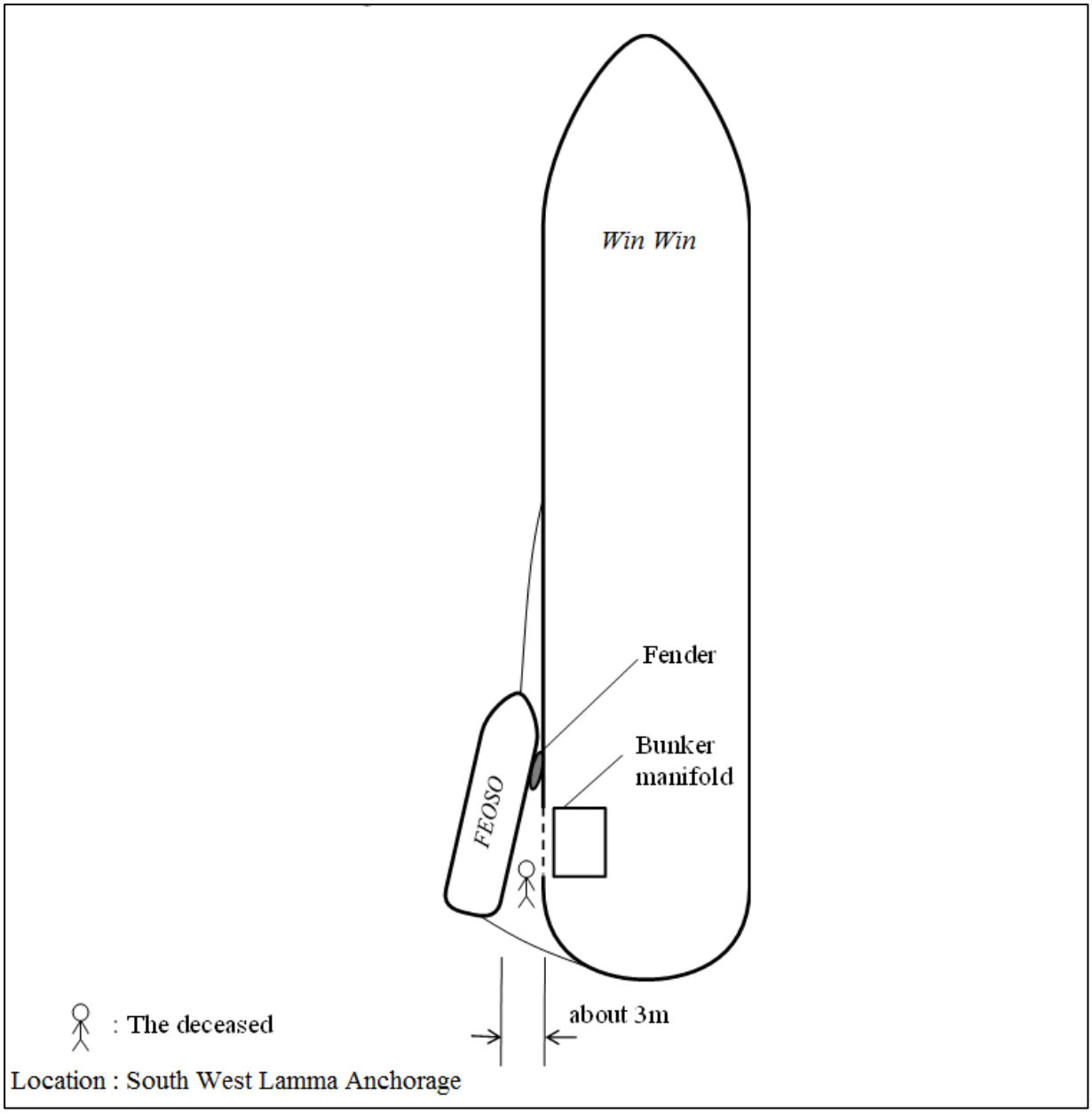

Figure 4: Scene of the accident

4. Analysis

Ship's manning and certification

4.1 *The vessel* was manned by a total of 23 Indian and Ukrainian crew. They possessed valid certificates of competency or certificates of proficiency according to the manning requirements set out by the flag administration.

4.2 AB1 had worked as seaman for 6 years and joined *the vessel* in November 2017.

Fatigue

4.3 There was no evidence showing that AB1 suffered from fatigue at work

Weather and sea conditions

4.4 At the time of the accident, the weather was fair with wind of Beaufort force 3. The state of sea was calm with slight swell. The visibility was good. Weather and sea conditions should not be the contributing factors to the accident.

Autopsy report

4.5 The autopsy report revealed that the direct cause of the death of AB1 was multiple injuries. They were in the form of laceration, multiple bruises, abrasions, fractures and severe injuries to internal organs.

4.6 Toxicological analysis revealed no significant findings of common drugs or poisons. However, the blood sample of AB1 detected alcohol at a level of 280 mg/100 ml, which was much higher than the level limit of 50 mg/100ml as stated in STCW Code[1] Section A-VIII/1 "Fitness for duty" for prevention of alcohol abuse by duty seafarer.

[1] STCW Code: the Seafarers' Training, Certification and Watchkeeping Code

4.7 The autopsy report indicated that the deceased had consumed alcohol before death.

The drug and alcohol policy of the management company

4.8 The safety management system (SMS) of *the vessel* implemented a drug and alcohol policy for all crew to follow. Section 3.1.4 "Alcohol Policy" of the SMS states that at no time should any crew of *the vessel* be allowed to perform a duty whilst under the effect or apparently under the effect of alcohol. To meet this policy, the SMS states that the maximum permitted breath/blood alcohol level is 40 mg/100 ml. Moreover, any alcohol test with result of a level exceeding 40 mg/100 ml in breath/blood will imply that the individual is under the effect of alcohol.

4.9 Section 3.9.14 "Alcohol Purchase, Distribution and Consumption" of the SMS states that no crew is allowed to purchase or bring alcohol outside other than ship's bond store, and a controlling officer will control the alcohol distribution on board that is limited to 2 cans per person per day.

4.10 Although the bosun and AB2 did not observe any abnormal behavior of AB1 on the job, the autopsy report revealed that the alcohol level of AB1 (280 mg/100 ml) when he was on duty had exceeded the allowable level stated in the STCW Code (50 mg/100ml) or in the SMS (40 mg/100 ml). It is apparent that the drug and alcohol policy as stated in paragraph 4.8 was ineffective. The company should find out the reasons why this was the case and should review its policy critically.

Analysis of the fall

4.11 At the material time of the accident, the hinged gate on the shipside railing was opened without temporary chain or rope to safeguard the crew from falling overboard. It was possible that AB1's safety alertness had dropped under the effect of alcohol, hence failed to notice the danger and fall overboard through *the opening*.

Management company's action after the accident

4.12 Two days after the accident, the management company took immediate action to conduct a safety meeting on board *the vessel* to brief all crew to apply safety precautionary measures, such as using ropes to guard *the opening* when the hinged gate is opened. The management company also conducted an investigation into the accident and decided to adopt corrective measures, such as (i) to inform its fleet about the findings and lessons learnt from the accident; (ii) to train all ship staff through case study of this accident during superintendents' ship visit; and (iii) to modify the design of the hose support of *the vessel* in the forthcoming dockings so as to block *the opening* permanently, etc.

5. Conclusions

5.1 At about 2010 hours on 24 February 2018, a fatal man overboard accident happened on board *the vessel*, which anchored at the South West Lamma Anchorage, Hong Kong.

5.2 *The vessel* was preparing to receive bunker from *Feoso* moored alongside her port side. The bosun, AB1 and AB2 were assigned to connect the bunker hose of *Feoso*. They gathered together on *the vessel*'s port main deck close to the bunker manifold.

5.3 When AB1 walked close to the shipside, he fell overboard through *the opening* of the shipside railing where a hinged gate was opened. The crew of *Feoso* rescued him out of the water. AB1 was airlifted to the hospital subsequently and was pronounced dead on the same day.

5.4 The investigation identified the following contributing factors to this accident -

(a) there was no proper safeguard at *the opening* of the shipside railing when the hinged gate was opened; and

(b) the existing onboard requirement and procedure for the implementation of the drug and alcohol policy failed to control and identify the consumption of excess alcohol by AB1 before work.

6. Recommendations

6.1 A copy of the investigation report should be sent to the ship management company and the master of *the vessel*, advising them of the findings of the investigation.

6.2 The management company should find out the reasons why the company's drug and alcohol policy failed to prevent alcohol abuse on board. It should also review and revise, if necessary, the current onboard requirement and procedure for the implementation of the drug and alcohol policy in the SMS to ensure effective implementation of the policy. The management company should provide intensive training to crew to enhance their safety awareness of man-overboard and the hazards of alcohol consumption on board to ensure the crew complying with the policy proactively. The management company should also conduct an internal audit on *the vessel* after the review in order to ensure that all crew will strictly follow the policy.

7. Submission

7.1. The draft investigation report had been sent to the following parties for their comments -

(a) the management company and the master of *the vessel*; and

(b) the Maritime Administration of the Republic of the Marshall Islands.

7.2. By the end of the consultation, no comment was received from the above parties.