

Final Report

COLLISION

EXPLORER

AND

A WOODEN COASTER

OFF SERAYA BUOY

SINGAPORE TERRITORIAL WATERS

22 MARCH 2018

MIB/MAI/CAS.039

Transport Safety Investigation Bureau
Ministry of Transport
Singapore

24 July 2020

The Transport Safety Investigation Bureau of Singapore

The Transport Safety Investigation Bureau (TSIB) is the air and marine accidents and incidents investigation authority in Singapore. Its mission is to promote aviation and marine safety through the conduct of independent investigations into air and marine accidents and incidents.

TSIB conducts marine safety investigations in accordance with the Casualty Investigation Code under SOLAS Regulation XI-1/6 adopted by the International Maritime Organization (IMO) Resolution MSC 255(84).

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SYNOPSIS

On the night of 22 March 2018, the Singapore registered bunker tanker Explorer was enroute to the anchorage from Pasir Panjang container terminal after supplying bunkers, when she was involved in a collision with a small boat (wooden coaster of primitive build), near Seraya buoy, that resulted in the latter to break up and sink. All the nine crew of the wooden coaster were rescued by a passing tug soon after.

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

The incident occurred in fair weather with party cloudy sky and good visibility. The sea state was calm and easterly wind was light less than five knots.

The investigation revealed that the wooden coaster was not manned by qualified crew and operated with non-standard navigational lights and had not maintained a proper lookout. The Explorer too did not maintain a proper lookout despite having the Chief Officer as a part of the Bridge team and the workload for navigation was on the Master, who did not notice the presence of the wooden coaster until very near to the time of collision.

VIEW OF VESSELS

EXPLORER



WOODEN COASTER (Being Salvaged)



DETAILS OF VESSEL

Name	Explorer (EXP)	Referred to as a wooden coaster (WC)
IMO No.	8911580	N.A
Flag	Singapore	N.A ¹
Classification Society ²	Nippon Kaiji Kyokai (Class NK)	N.A
ISM RO ³ for Safety Management Certification (SMC ⁴)	ClassNK	N.A
Ship Type	Oil tanker	Wooden coaster of primitive build
Builder	Kanmon Shipbuilding Co. Ltd. Japan	Not known
Year	1989	Not known
Owner/Company ⁵	Equatorial Marine Fuels Management Pte. Ltd.	Not known
Gross tonnage	738	Less than 50 (Approximate) ⁶
Length overall	61.70m	Less than 20m
Breadth moulded	10.20m	Less than 5m
Depth moulded	21.0m	Less than 2m
Mean draught	3.9m	Not known
Main Engine(s)	Hanshin 6EL40RG x 330PS	Not known
Propeller	1 x Right-hand propeller	1 x propeller

¹ Submitted documentation to indicate statutory certificates were issued by Indonesia. The investigation team could not verify the authenticity of these certificates.

² Classification Society also referred to as a Recognised Organisation (RO), which means an organisation that has been assessed by a flag State and has the delegation of authority to perform statutory certification and services on behalf of the flag State.

³ Flag Administration approved RO for issuance of Safety Management Certificate.

⁴ SMC means a document issued to a ship which signifies that the Company and its shipboard management operate in accordance with the approved safety management system.

⁵ Responsible for the operation of the ship to carry out all duties and responsibilities imposed by the ISM Code.

⁶ Based on TSIB's evidence gathering after the WC was salvaged.

1 **FACTUAL INFORMATION**

- 1.1.1 All times used in this report are local time (LT) unless otherwise stated. LT is eight hours (H) ahead of Coordinated Universal Time (UTC⁷).
- 1.1.2 The investigation team conducted interviews, reviewed the event logs/ documents and statements from the EXP's bridge team as well as interviewing the crew of the WC and correlated information from Singapore Port Operations Control Centre (POCC).
- 1.2 Information obtained from the bridge team⁸ of EXP
- 1.2.1 On 22 March 2018, the bunker tanker EXP cast off from a container ship (YM Intelligent) berthed at Pasir Panjang container terminal (P04) at about 2150H and was headed for Raffles Petroleum Anchorage (ARP), under the conn of the Master, who was assisted by the Chief Officer. After passing abeam of the car carrier berth (P14), the Master recalled slowing down to give way to a vessel crossing ahead⁹.
- 1.2.2 According to the Master, at about 2212H, the EXP's speed was close to about two knots when an unlit boat was seen to approach from its starboard bow. The Master recalled sounding the ship's air horn¹⁰ and put the engine to half astern to avoid the (faster) boat, but the unlit boat collided with the EXP's starboard bow.

⁷ UTC – Coordinated Universal Time, is the primary time standard by which the world regulates clocks and time.

⁸ The EXP was not required to be fitted with a Voyage Data Recorder under the regulations she was certified. Typical composition was the Master and Chief Officer. According to information obtained by the bridge team during the interviews, being a small vessel, it was common for bunker tanker Master to steer the vessel and Chief Officer to use the engine telegraph as per Master's orders.

⁹ Referred to in the Master's statement as the Cypress Galaxy. Based on the playback of POCC's recording, there was no evidence of this vessel in the vicinity. Instead at 2209H the EXP was heard responding to a VHF call from the Pilot onboard the Sinar Johor, who was passing abeam of Pasir Panjang berth 17 (P17). The Pilot requested a starboard to starboard passing with the EXP. The EXP's Master was heard acknowledging the request and indicated that the EXP would pass the Sinar Johor's stern.

¹⁰ One long blast.

1.2.3 The following entries were noted in the bell book for the EXP –

Time	Full Astern	Half Astern	Slow Astern	Stop Engine	Slow Ahead <small>11</small>	Half Ahead	Full Ahead <small>12</small>
2145	X						
2147					X		
2150				X			
2152		X					
2155				X			
2200					X		
2205				X			
2210				X			
2215					X		
2217				X			
2219		X					
2223				X			

1.2.4 After the collision, the boat was seen to drift astern of the EXP and came into a second contact with it's starboard side aft. The Chief Officer reportedly investigated the EXP for damages with the assistance of some deck crew. At 2221H the Master informed POCC¹³ that the EXP might have collided with a wooden boat in position 01°16.9'N 103°44.9'E.

¹¹ 200 RPM

¹² 250 RPM

¹³ Based on VHF recording obtained by the investigation team.



Figure 1 – The EXP's starboard bow with minor scratches – annotated by TSIB

- 1.2.5 The collision did not result in any injuries onboard the EXP. In the opinion of the Master the collision did not result in any damages to the EXP (other than a few scratches) and the Master decided to continue the passage. The Master did not establish¹⁴ whether the other boat needed assistance.
- 1.3 Information obtained from the crew of WC
- 1.3.1 On the evening of 22 March 2018, the WC departed Jurong Port JL1B and was bound for Thailand. According to the Skipper, the WC had eight other crew members, one of whom was an engineer, one was a deck crew (for lookout) while the remaining were general workers (for assisting in the loading/ unloading of cargo).
- 1.3.2 The Skipper informed the investigation team that WC was provided with a GPS route with pre-entered waypoints on a mobile phone application which had some charts inserted in the base layer. On the day of the occurrence, the WC's route was to keep the Seraya buoy on the starboard side when approaching Pasir Panjang container terminal.

¹⁴ On being enquired of the duty to assist under MPA's Port Regulations Part II Regulation 5 and SOLAS V/33, as amended, the Master informed the investigation team that since POCC had been informed, the Master did not consider staying on-site. These regulations put the onus on the Master or person-in-charge to ensure persons in need of assistance or in distress receive assistance. The Master may be released of this obligation when being made aware that persons in distress have received assistance. At 2250H, Police Coast Guard arrived on-site and confirmed that a wooden coaster had sunk near Seraya buoy. According to POCC, a tug boat (Sunlight Poseidon) recovered the crew (nine Indonesian nationals) of the WC, from the water. None of the crew were injured. The Master of EXP was not aware that the tug had rescued the persons of the WC from the water.

- 1.3.3 When approaching the Seraya buoy off Pasir Panjang container terminal, the Skipper recalled the WC being hit by a tanker from the WC's port side, causing the WC to take on water. Soon after the collision, all crew found themselves to be in the water, and were recovered by a tug boat (later identified to be the Sunlight Poseidon).
- 1.3.4 According to the Skipper, the WC was fitted with four navigation lights, namely, the masthead light, two sidelights (port and starboard) and a sternlight. On being probed, the Skipper added that the bulbs for these lights were of the 'Zero watt' type, and that prior to departing JL1B, all four lights were working satisfactorily.
- 1.3.5 When asked, the Skipper confirmed that the WC was fitted with a VHF and an AIS¹⁵ transponder. The Skipper added that the WC would be navigated using an application (app) installed on the mobile phone, together with visual aids along the coast of Malaysia, when bound for Thailand.
- 1.3.6 The Skipper could not provide details of the qualification that the Skipper or the deck crew held. When probed further, the Skipper demonstrated very basic knowledge of COLREGs¹⁶, adding that usually the WC would pass astern of all vessels to avoid a collision. The Skipper could not explain why the EXP had not been sighted prior to the collision.
- 1.4 Information obtained from POCC¹⁷
- 1.4.1 About two minutes prior to the collision, when the EXP was passing P13 on the port beam, a tug boat (Noble Star) crossed the EXP's bow from starboard to port. At this time, the EXP's speed was reduced to about 3.4 knots from 5.5 knots. By 2213H, the EXP was on an approximate heading of 210°T (changed about 15° to port). The EXP's heading until the collision remain unchanged, and the speed was about 5.5 knots.
- 1.4.2 About two minutes prior to the collision, the WC was on a SE'ly course and at a speed of about 5.7 knots. Just prior to the collision the WC was on the EXP's starboard bow, at an approximate distance of 1.6nm with little change in speed, crossing from the EXP's starboard to port.
- 1.4.3 The operators in the relevant sector of POCC, monitor traffic movement in general, by scanning the area which has traffic ranging from small harbor craft, to tug boats to

¹⁵ Automatic identification system is an automatic tracking system that uses transponders on ships and is used by vessel traffic services.

¹⁶ The International Regulations for Preventing Collisions at Sea 1972, published by the International Maritime Organization.

¹⁷ Based on playback data.

small tankers to piloted vessels. The management of traffic by the operators is usually for vessels of significant interest such as piloted vessels approaching or leaving the terminals.

- 1.4.4 The operator's display system has an automated function to provide a warning if two vessels are coming in close proximity with a potential risk of collision. However, because of frequent changes of course and speed by smaller vessels these warnings would normally disappear. Attention to smaller vessels, which can be many in number at any given time in the area, is not actively focused on, as small vessels¹⁸ are able to (and usually) maneuver swiftly.
- 1.4.5 The operator's screen was reviewed and it was established that there was no collision warning triggered in the system for the two vessels. The course and speed of the WC remained unchanged prior to the collision. The target data on POCC's system is typically a combination of radar signals and AIS data. In the case of the WC's target data, this was predominantly¹⁹ based on the AIS transmission.
- 1.4.6 After conducting an interview of the operator at POCC, it was confirmed that immediately prior to the collision, there was no communication between the operator and/or the two vessels involved.

¹⁸ Small vessel movements in the port of Singapore is very common, and it is further established that small vessels do not typically impede the passage of other vessels (relatively bigger) and avoid them by either course or speed alterations.

¹⁹ Wooden hull craft typically has lower radar signature compared to that of a steel hull.

1.5 EXP's bridge team matrix

Designation	Master	Chief Officer
Qualification	Deck Officer Class 2 STCW II/2, IV/2 ²⁰ Issued 2014 (The Master also held Pilotage Exemption ²¹ for licensed bunker tankers)	Deck Officer Class 3 STCW II/2, IV/2 ²² Issued 2016
Certification Authority	Indonesia	Indonesia
Nationality	Indonesian	Indonesian
Age	33	45
Experience in Rank	3 years	4 years [0.5 year as Master on vessel less than 500 GT)
Period with Company	2.5 years	1.7 years
Period on board (rotation)	Since July 2015	Since September 2016

Table 1

1.5.1 Total²³ nine Officers and crew of Indonesia and Myanmar nationality. The statutory certificates for all the crew were valid at the time of occurrence. The records of hours of rest and work documented by the Officers were as per their Company's SMS and indicated that the rest hours were following the 'Hours of rest' requirements²⁴.

²⁰ Including STCW Reg, V1-1.3 Oil tanker/s only. Held training certificates for Bridge Resource Management.

²¹ Issued by MPA, which allows holders to operate bunker tankers of more than 300 GT within the Port of Singapore without a Pilot. Holders of such an exemption are familiar with the Port waters, and the nature of traffic.

²² Including STCW Reg, V1-1.3 – Oil tanker/s only. Held training certificates for Bridge Resource Management.

²³ One Master, One Chief Officer, One Chief Engineer, One Second Engineer, Four deck ratings and a cook.

²⁴ Maritime Labor Convention (MLC) 2006 provides guidelines on minimum number of hours of rest required for seafarers on merchant ships. Same establishment of rest periods for watchkeeping personnel contained in the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended (STCW Convention).

1.6 WC's post salvage inspection

1.6.1 After the WC was salvaged, the investigation team examined the wreck and noted signs of a hole²⁵ on the port side (see **figure 2**, below the waterline – circled in yellow).

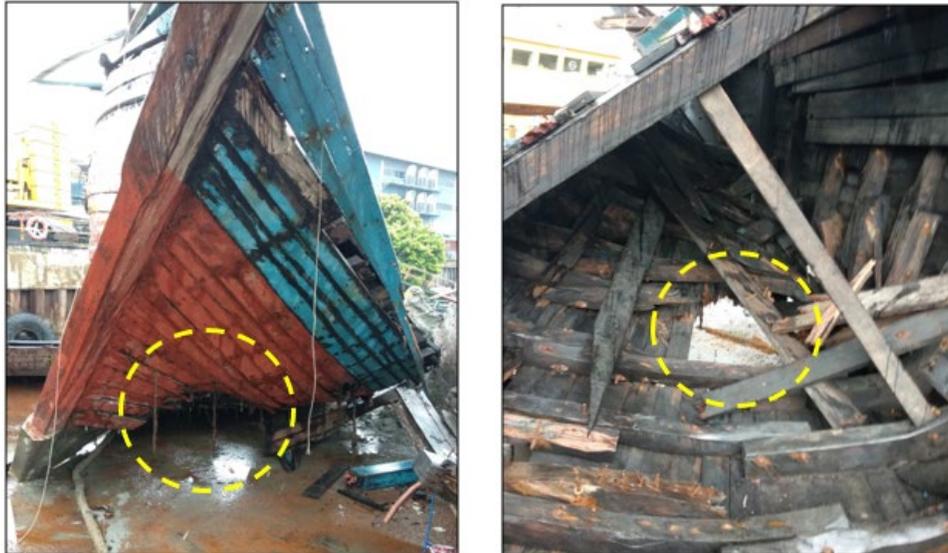


Figure 2 – WC's view from the outside and inside showing a hole on the port side

1.6.2 The Skipper's position was on a chair (height of about 0.8m) behind the steering wheel looking out from the three windows in front. A slightly smaller set of windows were found on the starboard and port side of the steering structure. The side windows had sliding panels to open/close them. At the time of the inspection of the wreck, it was observed that these panels were partially open on the port side.

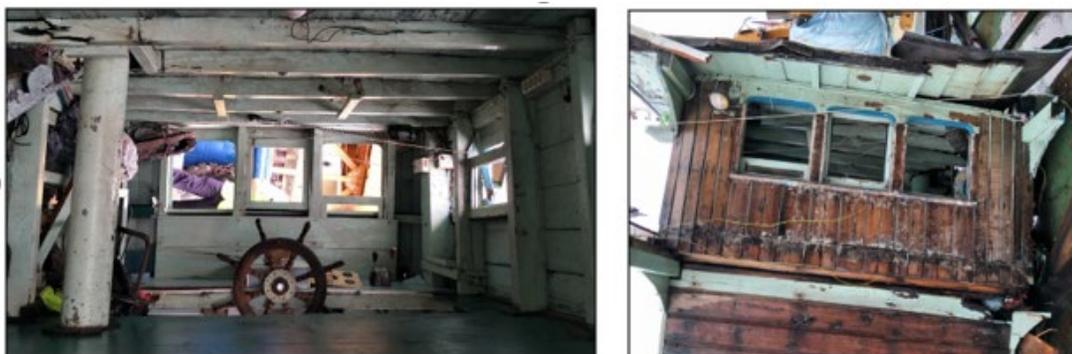


Figure 3 - The steering position (located at the aft end of the WC) and the three windows (viewed from front) facing forward for visual navigation

²⁵ Deemed as the location of impact by EXP's bulbous bow.

1.6.3 The starboard side 'green' light fitted to the steering structure, was found connected to a DC 24V source. A similar light (red) was fitted on the port side. The bulbs fitted were confirmed to be of 'Zero watt' type, and not normally found in marine usage. The masthead light could not be found during the inspection of the wreckage²⁶.



Figure 4 – Zero-watt green bulb on the starboard side - annotated by TSIB

1.6.4 The engine throttle was found in the “astern” position.



Figure 5 – Engine throttle position (annotated by TSIB)

²⁶ The mast on top of the steering structure was found to be broken when salvaging the craft from the seabed.

1.7 Bridge layout of EXP and SMS on navigation procedures

1.7.1 The layout of the EXP for a vessel of this size consisted of a steering console behind the conning position on the centreline of the vessel. To the left of the steering column, fixed to the overhead deck was a radar and a VHF radio. There was a Pilot chair next to the steering console. To the right of this position was the engine telegraph that was located about 1.5m away from the steering console.

1.7.2 The telegraph column had a press button and tooth-gear mechanism which needed to be pressed in order to move the telegraph to other positions (ahead or astern). Two hands were required to operate the telegraph. (see **figure 6**)

1.7.3 The Master added that the radar range ring was set at 1nm, which was used to estimate the distance of other vessels from the EXP. Estimation of bearing could be done visually and that the EBL (Electronic Bearing Line) on the radar was not used. A pair of binoculars were available for use on the bridge.

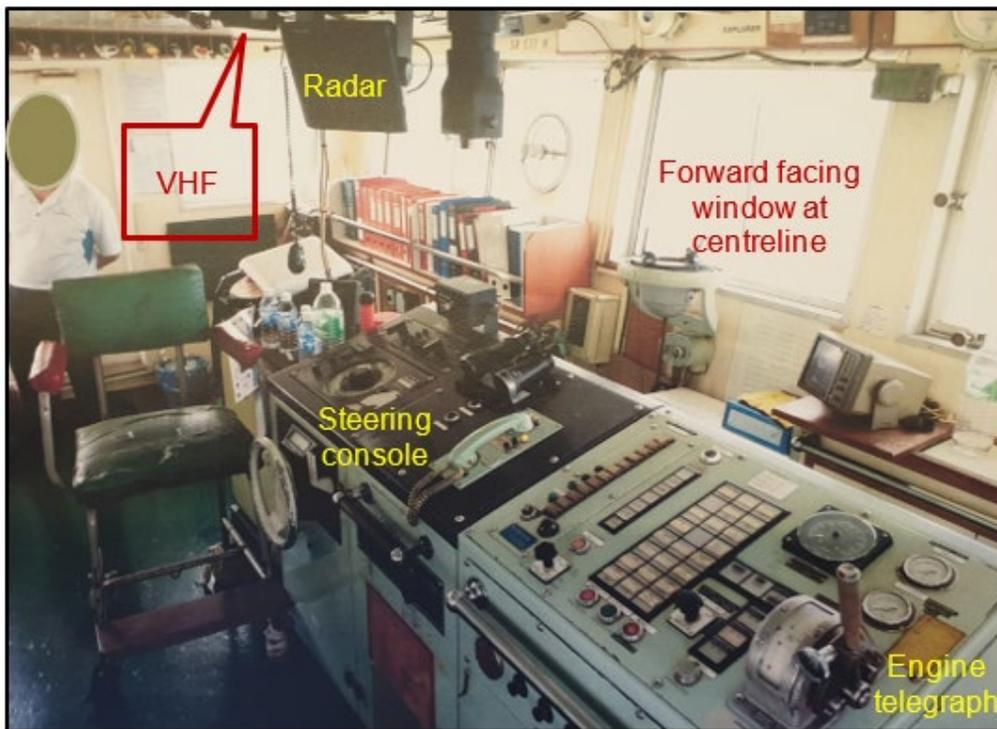


Figure 6 – Steering console and engine telegraph

1.7.4 The Master of EXP informed the investigation team that while steering, if the telegraph had to be operated by the Master (who would typically²⁷ also steer the ship), it could

²⁷ The Master informed the investigation team that prior to the collision the EXP was being steered by the Chief Officer and the Master was standing next to the steering console.

only be done by stretching across or moving towards the telegraph.

- 1.7.5 Prior to the collision, the Chief Officer had been near the chart table (making some logbook entries) at the aft part of the bridge, recalling that the presence of the WC was noticed²⁸ by the Chief Officer for the first time when the Master exclaimed – “why the boat suddenly come”, referring to the WC which was on the EXP’s starboard bow about 6-7m away.
- 1.7.6 The Chief Officer added that the EXP’s horn (short blast) was sounded by the Master just prior to the collision, and further confirming that the Master had been steering the EXP since departing P04. The Chief Officer estimated the EXP’s speed at the time of the collision to be about six knots and that the RPM was set to 250, which was only reduced to 200 momentarily when encountering a tanker²⁹ passing the EXP’s path from the port to the starboard bow (later identified to be the Sinar Johor), when the EXP was passing P13.
- 1.7.7 As per the Company’s SMS, when a vessel is underway, one of the three bridge watch (BW) conditions (set by the Master, as appropriate) were required to be met. BW I – One deck officer on the bridge, BW II – Two deck officers on the bridge and BW III – Three³⁰ deck officers on the bridge.
- 1.7.8 The SMS further stipulated that in clear weather and higher density of traffic, the BW condition may be II or III. For BW II (as was on this day), the conning officer (in this case the Master) was required to be assisted with one more deck officer (in this case the Chief Officer), whose role was, to operate the radar, operate the engine telegraph, collision avoidance (advice), plotting of close targets and reporting of data of these targets to the conning officer, in addition to maintaining bridge logs and records.
- 1.7.9 Prior to the collision, the Chief Officer was not monitoring the presence of the vessels near the EXP, did not operate the telegraph and was not actively involved in the navigation of the EXP.

²⁸ The Chief Officer could not recall whether the WC had any navigation lights, but after the WC touched the EXP’s starboard side poop deck, a yellow light was noticed on the WC’s stern.

²⁹ Assessed to be the Cypress Galaxy.

³⁰ This was typically be on vessels with an additional officer, which would ply on 30-mile limit international voyages.

1.8 Location of occurrence and angle of impact

1.8.1 The incident occurred about 0.1nm west of Pasir Panjang container terminal at the eastern edge of the East Jurong Channel, near Seraya buoy, indicated by a red circle below. The red arrow is the approximate route of the WC and the green arrow indicates the approximate route of the EXP.

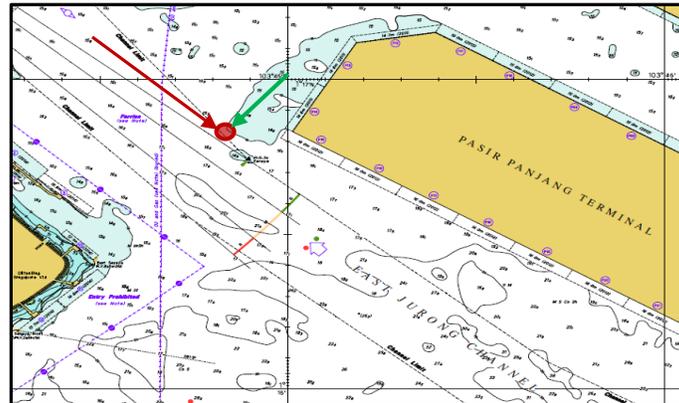


Figure 7 – Relevant section of chart 4034 (not to scale) - annotated by TSIB

1.8.2 According to the crew of the EXP, the angle of impact and subsequent movement of the WC was as follows. The EXP is depicted in blue and the WC is depicted in orange.

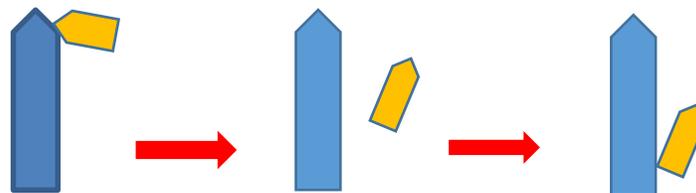


Figure 8 – Angle of Impact (not to scale) – *For illustration only*

1.9 Environmental and traffic condition

1.9.1 According to the log book records of the EXP, the weather was fair, partly cloudy sky with good visibility. A calm sea state and light easterly wind less than five knots.

1.9.2 Traffic in the vicinity was considered normal for the port of Singapore, with movements of bunker tankers, vessels arriving/approaching container and oil terminals in the vicinity, tug boats proceeding inbound and outbound.

2 ANALYSIS

2.1 The occurrence

2.1.1 The investigation team attempted to rationalise on whether either of the vessels had maintained a proper lookout, so that risk of collision could be assessed, and actions taken timely to avoid a collision.

2.1.2 The course and speed, however, remained nearly unchanged for both the vessels which suggested that both the vessels had likely not known the presence of each other until just prior to the collision. As a result, the actions taken by both the vessels were ineffective to avoid a collision.

2.1.3 The WC was a vessel of primitive build and wooden material. Such a material is likely to have a lower radar signature and may be difficult to detect by radar unless fitted with a radar reflector. There was no evidence to suggest that the WC had a radar reflector fitted. When analysing the wreck of the WC, the investigation team determined that the navigation lights of the WC were not compliant with the light specifications³¹ that would be required to be on vessels of this size.

2.1.4 In the absence of a radar reflector and proper navigation lights, it would have been difficult for the EXP or any other vessels to note the presence of the WC from afar. However, noting that the navigation lights of the WC were of appropriate colour (green on the starboard side and red on the port side), and likely displaying a masthead light, it would have still been possible for the EXP to visually sight the presence of a boat on EXP's starboard side, had a proper lookout been maintained, especially with the use of binoculars.

2.2 The WC's conduct of navigation

2.2.1 The position of the engine throttle for the WC that was found in the "astern" position could be indicative of the Skipper of the WC was either attempting to slow the WC prior to the collision or using the engines to clear away from the EXP after the collision.

2.2.2 In all probability, the Skipper of the WC had likely not been navigating with caution when approaching the Seraya buoy, until the WC was close to the EXP, especially considering the panels on the port side of the steering structure which had likely

³¹ COLREGs Rule 22(b) requires fitting of a masthead light (visibility 3nm), sidelight(s) and sternlight (visibility 2nm). As per COLREGs Rule 23, a power driven vessel underway (of the size of the WC) is required to exhibit, a masthead light, sidelights and a sternlight.

limited or blocked the view of the Skipper on the port side.

- 2.2.3 The WC's Skipper's unfamiliarity with COLREGs and inability to provide any documentary evidence of competency to operate a craft suggests that the WC was manned by persons who were not qualified to operate a craft in Singapore waters.
- 2.3 The EXP's conduct of navigation
- 2.3.1 The EXP on the other hand was a certified bunker tanker, that met all statutory requirements for a vessel of its size, including the fitting of navigation lights. The EXP departed P04 under the conn of the Master. It was typical for the Master to steer the EXP and for the Chief Officer to operate the telegraph. Since the Chief Officer had been busy filling up logbooks and records on the chart table at the aft part of the bridge, it is likely that the Chief Officer was not involved in assisting the Master for navigation as expected from the SMS. When the EXP was approaching P13, the Master acknowledged the request from the piloted vessel (identified as Sinar Johor³², and not Cypress Galaxy) on letting the vessel pass ahead of the EXP.
- 2.3.2 This conversation was acknowledged while the EXP was being steered manually by the Master. To reduce the EXP's speed, the Master would have had to stretch across and use both hands to move the engine telegraph to slow ahead, and then return to the steering console to continue steering the EXP.
- 2.3.3 Subsequently, the EXP's speed was noted to have increased³³, as was evident from POCC's playback and the Chief Officer's observation. For this speed to have increased, again the Master would have had to stretch across and use both hands to move the engine telegraph to full ahead.
- 2.3.4 It is likely, that in this process, the Master's workload was relatively more, having to adjust speeds and lookout for other vessels in the vicinity. As a result, the Master could have been focusing primarily on the navigation of the EXP with respect to other bigger vessels in the vicinity. Proper lookout was thus not maintained by the Master or the Chief Officer (collectively the bridge team), to notice the presence of the WC and establish a risk of collision with the WC.
- 2.3.5 Notwithstanding the report to POCC, the Master of the EXP should have stayed near the position to ascertain whether the boat that it had collided with needed assistance,

³² Transiting the East Jurong Channel and abeam of P17.

³³ It is likely that this increase was to revert to EXP's planned passage.

instead of continuing on its passage.

2.4 Incidental observations

- 2.4.1 The information contained in the bell book of the EXP appeared to be inconsistent with the information obtained from POCC playback data, that indicated that the EXP's speed had not changed significantly, as implied by the entries. It is likely that these entries had been made after the collision.
- 2.4.2 The WC being a vessel of primitive wooden build was not fitted with a radar reflector. It is even more important for such craft navigating in a port of high traffic movement to be fitted with appropriate navigational lights for the safety of navigation.
- 2.4.3 It is important for the regulator of the port to have periodical checks in place for ensuring such craft do not pose a hazard to other vessels in the port.

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 course and speed for both vessels remained nearly unchanged until very close to the collision indicated that the bridge teams of the EXP and WC had likely not kept a proper lookout and did not recognise the presence of each other until both vessels came very close.
- 3.2 With the EXP's Chief Officer focusing on a non-navigation related task, the bridge team's workload was on the Master, who in addition to steering the EXP was communicating on the VHF and operating the telegraph for navigating the vessel with respect to the bigger vessels in the vicinity.
- 3.3 The Master of EXP continued the vessel's passage instead of staying near the location to check of the boat needed assistance.
- 3.4 The absence of a radar reflector and proper navigation lights on the WC, did not allow the bridge team of the EXP to monitor the presence of the WC to timely assess a risk of collision.
- 3.5 The WC was manned by persons who were not qualified to operate a craft in Singapore waters.
- 3.6 In addition to not maintaining a proper lookout on board the WC, the Skipper of WC had also not navigated the vessel with caution when approaching the Seraya buoy.

4 SAFETY ACTIONS

Arising from the occurrence, the following safety actions were taken.

4.1 The EXP's Company

4.1.1 Conducted a training on board covering the following areas:

- Reminding on the importance of maintaining proper bridge watch conditions taking into account traffic density, visibility and close proximity to dangers;
- Keeping a proper and effective radar watch, and requiring an additional deck crew on the bridge for extra lookout if needed;
- Checking with POCC to ascertain the movement of vessels for planning the passage.

4.2 The regulator of the port

4.2.1 Since October 2018, regular periodical checks during routine patrol had been initiated on wooden coasters by the regulator to ensure that such craft do not pose a hazard to safety of navigation within the port.

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 The EXP's Company

5.1.1 Ensure non-navigation related tasks are not carried out when the vessel is underway so that members of the bridge team could work closely together to maintain safety of navigation. **[TSIB-RM-2020-20]**

5.1.2 Ensure compliance with the obligation for a duty to assist for persons in distress. **[TSIB-RM-2020-21]**

- End of Report -