Report of Investigation
into the Collision between
the Hong Kong registered
container ship *Josco Lily*
and the Chinese fishing vessel *Lu Rong Yu Shui 285*
in the Yellow Sea
on 9 April 2012
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 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.
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1. **Summary**

1.1 At about 1739 local time (UTC+8) on 9 April 2012, the Hong Kong registered container ship *Josco Lily* (the container ship) collided with the People’s Republic of China registered fishing vessel *Lu Rong Yu Shui 285* (the fishing vessel) in an approximate position 36°11.3’N 124°14.6’E, in the Yellow Sea.

1.2 The container ship departed from Dalian, China to Osaka, Japan at 0440 on 9 April 2012. At 0915 on the same day, the container ship encountered heavy fog. Company procedures for ship navigating under restricted visibility were taken by the bridge team. At 1712, the bridge team consisted of only the junior and less experience Third Officer and one Able-Bodied Seaman (AB) when the senior officers went for their meal. The Third Officer detected the fishing vessel moving at a speed of about 7 to 8 knots and steering at a course of about 290°. At about 1730 when the fishing vessel was about 3 nautical miles away from the container ship, he made a succession of small alternations (five degrees) of course to port. When the distance reduced to about 0.6 to 0.8 nautical mile, the Third Officer found the fishing vessel turning towards the bow of his ship. The Third Officer ordered rudder port 10 then port 20 while the ship’s speed of 15 knots was maintained and whistle was blown. At about 1739 when the ship’s heading was on 109°, the container ship collided with the fishing vessel.

1.3 Prior to the accident, the fishing vessel was on her return trip back to Shi Dao, Shan Dong, China on 9 April 2012. The ship’s radar was on but the bridge team of the fishing vessel did not detect the container ship on radar until 1730 on 9 April 2012. When the container ship was about three nautical miles away on her port bow. At about 1733 hours, the Master of the fishing vessel put main engine control to the neutral position for the next three to four minutes prior to the container ship striking at the port side of his ship in way of the engine room and bridge.

1.4 At the time of the collision, the weather was foggy, the visibility was about 50 meters, the wind was southeasterly force about 4 on the Beaufort scale and the sea state was slight.

1.5 Following the collision, the fishing vessel took in water in engine room, she was suffered damage on its port side but remained afloat safely. She was finally towed by the container ship to the port of Shi Dao, Shan Dong, China. One crewmember of the fishing vessel was missing and the other ten were rescued. The container ship was suffered minor scratches to paintwork with indentation at the top side of the bulbous bow and no crew on board was injured.
The investigation revealed the following contributory factors:

(i) The navigating Officer of the Watch (OOW) of the container ship did not comply with Rule 6 (Safe speed), Rule 8 (Action to avoid collision) and Rule 19 (Conduct of vessels in restricted visibility) of International Regulations for Preventing Collisions at Sea (COLREGS). The container ship did not proceed at a safe speed so as to take proper and effective action to avoid collision in a timely manner. Based on scanty radar information, the OOW first made a succession of small alteration of the course to port until finally he substantially changed course to port. The succession of small alterations of course was not readily apparent to the fishing vessel either observing visually or by radar. The OOW did not call the Master even though the movement of the fishing vessel could cause concern afterwards. In restricted visibility, the OOW made an alteration of course to port for a vessel forward of the beam which was against the Rule 19 of COLREGS; and

(ii) The bridge team of the fishing vessel did not comply with Rule 5 (look-out) of COLREGS. They did not maintain a proper and effective look-out so they failed to make a full appraisal of the situation and of the risk of collision. Consequently, they did not take effective action of collision avoidance.
2. Description of the vessels

2.1 Josco Lily (远丽)

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flag</td>
<td>Hong Kong, China</td>
</tr>
<tr>
<td>Port of Registry</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>IMO No.</td>
<td>9342671</td>
</tr>
<tr>
<td>Call Sign</td>
<td>VRBZ7</td>
</tr>
<tr>
<td>Type</td>
<td>Container Ship (fully cellular)</td>
</tr>
<tr>
<td>Year of Built</td>
<td>2006</td>
</tr>
<tr>
<td>Gross Tonnage</td>
<td>9,590</td>
</tr>
<tr>
<td>Length (Overall)</td>
<td>142.70 m</td>
</tr>
<tr>
<td>Main Engine</td>
<td>MAN B &amp; W 6S46MC-C</td>
</tr>
<tr>
<td>Engine Power</td>
<td>10710 HP</td>
</tr>
<tr>
<td>Service speed</td>
<td>18.0 knots / 124.5 RPM</td>
</tr>
<tr>
<td>Bow Thruster (CPP)</td>
<td>1000 HP</td>
</tr>
<tr>
<td>Classification Society</td>
<td>China Classification Society</td>
</tr>
<tr>
<td>Shipbuilder</td>
<td>Dae Sun Shipbuilding &amp; Engineering Co., Ltd. (S. Korea)</td>
</tr>
<tr>
<td>Registered Owner</td>
<td>Josco Lily Shipping Co., Ltd</td>
</tr>
<tr>
<td>Ship Manager</td>
<td>Jiangsu Ocean Shipping Co., Ltd, China</td>
</tr>
<tr>
<td>Persons onboard</td>
<td>20</td>
</tr>
</tbody>
</table>

Figure 1 – Josco Lily (远丽)
The navigational equipment on board the container ship consisted of one set each of standard magnetic compass, gyro compass, nautical charts and nautical publications, Global Positioning System (GPS), Automatic Identification System (AIS), Voyage Data Recorder (VDR), speed log, echo sounder, operational mode indicator (rudder, propeller, thrust and pitch) and daylight signaling lamp as well as two sets of Very High Frequency radios (VHF) and two radars.

2.2  *Lu Rong Yu Shui 285* (鲁荣渔水285)

2.2.1 Ship Information

<table>
<thead>
<tr>
<th>Flag</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port of Registry</td>
<td>Shi Dao, Shan Dong province</td>
</tr>
<tr>
<td>Type</td>
<td>Fish Factory Ship / Fish Carrier</td>
</tr>
<tr>
<td>Year of Built</td>
<td>2009</td>
</tr>
<tr>
<td>Gross Tonnage</td>
<td>145</td>
</tr>
<tr>
<td>Length</td>
<td>32.37 m</td>
</tr>
<tr>
<td>Breadth</td>
<td>6.20 m</td>
</tr>
<tr>
<td>Engine</td>
<td>Diesel engine</td>
</tr>
<tr>
<td>Engine Power</td>
<td>330 KW x 1</td>
</tr>
<tr>
<td>Owner</td>
<td>Shan Dong Xin Fa Fishery group Co.</td>
</tr>
<tr>
<td>(山东鑫发渔业集团有限公司)</td>
<td></td>
</tr>
<tr>
<td>Persons onboard</td>
<td>11</td>
</tr>
</tbody>
</table>

Figure 2 - *Lu Rong Yu Shui 285* (鲁荣渔水285)
3. **Sources of Information**

3.1 Information provided by Maritime Safety Administration of Wei Hai, Shan Dong, the People’s Republic of China, included:

a) The statement of the Master, the Chief Officer, the Third Officer, the Chief Engineer and the duty rating of *Josco Lily*.

b) The statement of the Master, Chief Engineer and Chief Officer of *Lu Rong Yu Shui 285*.

c) Analysis report of the VDR of *Josco Lily* and the radar screen snapshot.

d) Damaged condition of *Lu Rong Yu Shui 285* with photos.

3.2 Information provided by the Master of *Josco Lily* and the management company.
4. Outline of Events

4.1 Account of Josco Lily (the container ship)

4.1.1 At 0440 on 9 April 2012, the container ship Josco Lily departed from Dalian, China to Osaka, Japan. She carried about 8,000 tons of containers and her departure draft were 7.0 meters forward and 8.2 meters aft. Ship’s navigational equipment and other machinery were all in normal working condition.

4.1.2 At 0915 on 9 April 2012, the container ship encountered heavy fog and instant actions of navigation in foggy weather were taken which included vessel navigated at safe speeds, main engine stood-by, additional crew arranged for enhanced lookout and master stationed on the bridge.

4.1.3 At 1550, the Chief Officer came on bridge to take over the duty of watchkeeping from the Second Officer. At 1650, Master left the bridge for his meal. At 1712, the Third Officer came on the bridge to relieve the Chief Officer for his meal. Then the duty personnel on bridge were the Third Officer as navigating Officer of the Watch (OOW) and one Able-Bodied Seaman (AB). Weather at that time was foggy, visibility was about 100 meters and wind was southeast at force 4. Vessel was on a course of about 150°, manually steered by the AB. Ship’s speed was about 15 knots. All navigational aids were working normally. Navigational lights were on. Both radars on board were on with the port side radar displayed as north up, off center, range scale 6 miles and radar track function on with trail 6 minutes, while the starboard radar on 12 miles range scale. Several fishing vessels around were detected by the radars.

4.1.4 At about 1720, the OOW observed two small echoes on the radar screen at about 6 nautical miles on port bow about 10° and their true bearing was 139.9°. The distance between the two echoes was about 1 nautical mile. These two echoes were believed to be fishing vessels because their identities could not be found from the ship’s Automatic Identification System (AIS). The OOW observed the closer fishing vessel moving at a speed of about 7 to 8 knots and a course of about 290°. Based on this scanty radar information, the OOW judged that the fishing vessel would intend to cross his bow. At about 1730 when the closer fishing vessel was about 3 nautical miles away from the container ship, the OOW made a succession of small alternations (five degrees) to port. When the distance reduced to about 0.6 to 0.8 nautical mile, the OOW found the fishing vessel (later identified as Lu Rong Yu Shui 285) turning towards the bow of his ship. The OOW ordered rudder port 10 then port 20 while the ship’s speed was maintained and whistle was blown. At about 1739 when the ship’s heading was on 109°, the container ship collided with the fishing vessel. The OOW estimated that the angle of impact
between his ship and the fishing vessel was about 20° to 30°.

4.1.5 At 1740, the Master of the container ship came on bridge and ordered to slow down the ship’s speed, put rudder hard to port to turn the vessel around, and maneuvered the vessel with the assistance of bow thruster to bring her coming closer to the fishing vessel. Thereafter, the fishing vessel was finally got alongside to the starboard side of the container ship. The Master of the fishing vessel boarded the container ship and reported that one of his crewmembers was missing. Search and rescue operation was commenced and the accident was reported to the ship management company and China Maritime Search and Rescue Center.

4.1.6 The container ship switched on her search lights to search for the missing crewmember in the vicinity of the scene of accident. Due to the dense fog, her rescue boat was not safe to be launched into the water. After several hours of searching, the missing crewmember still could not be found. At 2310, after reporting the latest situation to the shipping company and the China Maritime Search and Rescue Center, and agreed by the Master of The fishing vessel, the searching and rescue operation was stopped. The container ship was instructed to proceed towards Shi Dao, Shan Dong with the fishing vessel under towed on her port side, to assist the local maritime authorities in their investigations. The container ship arrived at the outer anchorage of Shi Dao at 1030 on 10 April 2012.

4.2 Account of Lu Rong Yu Shui 285 (the fishing vessel)

4.2.1 At 1030 on 4 April 2012, the fishing vessel Lu Rong Yu Shui 285 departed from Shi Dao, Shan Dong China with a crew of 11 on board, destined for Korea Exclusive Economic Zone to purchase fish. She arrived there on 5 April 2012 and by 9 April 2012, she had loaded about 25,000 kg of portunid crabs and a small amount of fish and shrimp on board. The fishing vessel started the return voyage back to Shi Dao at 0800 on 9 April 2012.

4.2.2 Before the accident, the fishing vessel was sailing at a speed of about 8 knots, and on a course of 308°. The visibility was about 50 meters due to dense fog. The Master and the Chief Officer were on the bridge navigating the vessel and additional persons one each at bow and aft deck were arranged to assist in the look-out duty. At about 1730, one container ship (later identified as Josco Lily) detected by the radar was on port bow about three nautical miles. The Master made a starboard turn and reduced ship’s speed to five knots. At about 1733, the Master put main engine control at neutral position. After three to four minutes, the container ship struck at the port side of the fishing vessel in way of the engine
room and bridge. Thereafter, the container ship continued pushing the fishing vessel in the forward direction for about 2 minutes before separating apart. The time of collision was at about 1739 in position approximately 36° 11’ N  124° 14’ E in the Yellow Sea. At the time of the collision, the fishing vessel heeled to starboard severely and almost all her cargo on board and some stores kept on deck went overboard. The wheelhouse and part of the ship structure were seriously damaged. The engine room took in a lot of seawater resulting in the cutting off of ship electrical and propulsion power. Distress signal was sent out. The Master made head count and found one crew member missing and some of the crew members injured. At about 1820, the crew were rescued by another fishing vessel in the vicinity, *Lu Hai Shui 0038* (鲁海水 0038). Request for assistance to search for missing crew member was made to other fishing vessels in the vicinity. At 0000 on 10 April 2012, the fishing vessel was towed by the container ship and at 1030 on 10 April 2012, both vessels arrived at the outer anchorage of Shi Dao.
Figure 3 - Location of incident

36° 11.3’ N 124° 14.6’ E
5. **Analysis of Information**

5.1 **Certification and Experience of Personnel**

*Josco Lily*

5.1.1 The container ship was manned by a Master, three deck officers, four engineers, one electrical engineer and 12 ratings. The nationality of all crewmembers was Chinese.

5.1.2 The Master of the container ship held a valid Master Certificate of Competency issued by the People’s Republic of China and a Class 1 Licence (Deck Officer) issued by the Marine Department of the Government of Hong Kong Special Administrative Region. He held the Master certificate since 1987 and he signed on the container ship as Master on 15 October 2011.

5.1.3 The OOW, the Third Officer, of the container ship held a valid Third Mate Certificate of Competency issued by the People’s Republic of China and a Class 3 Licence (Deck Officer) issued by the Marine Department of the Government of Hong Kong Special Administrative Region. He gained a total of 21 months of sea services on board ocean going vessels, including four months as deck cadet, five months as AB and 12 months participating in the watchkeeping duties. He joined the container ship on 26 November 2011 as Training Third Officer and served as the Third Officer since 18 February 2012.

5.1.4 The duty AB of the container ship held a valid navigational watch-keeping certificate issued by the People’s Republic of China. He had taken watchkeeping duty on board the container ship since 9 March 2012.

It is considered that the Master of the container ship was certificated with appropriate experience. However, despite the Third Officer was certificated, it was his first time on ship serving as a navigating officer and his working experience as the Third Officer by the time of this accident was less than 2 months, he might need some guidance or supervision by his supervisors on board in keeping navigation watch in some peculiar sea conditions such as in a situation of restricted visibility and/or heavy traffic conditions.

*Lu Rong Yu Shui 285*

5.1.5 There was limited information available regarding officers’ certificates of the fishing vessel. The fishing vessel was manned by 11 Chinese crewmembers/fishermen. According to the statements of the Master, Chief Officer and Chief Engineer of the vessel, they all held relevant Certificate of Competency for fishing vessel issued by China Authority.
5.2 Certification of the vessels

5.2.1 All statutory certificates of the container ship issued by China Classification Society on behalf of the Marine Department of Hong Kong Special Administrative Region were valid. There was no evidence to indicate that the engines and/or equipment onboard the container ship had failed prior to the accident.

5.2.2 The fishing vessel had valid Certificate of Ownership. She passed the last statutory survey on 15 November 2011.

5.3 Weather and Visibility

5.3.1 According to the Master of both vessels and the navigating OOW of the container ship, at the time of the collision, the weather was foggy. The visibility was about 50 meters. The wind was southeasterly force 4 on the Beaufort scale. The sea state was slight.

5.3.2 The foggy weather resulted in the difficulty for both vessels’ lookout duty and contributed to the inconsistency in the collision avoidance actions.

5.4 Actions taken by the container ship

5.4.1 Until the time of collision occurred, the container ship maintained a speed of 15 knots at all times. Considering the traffic condition (several fishing vessels around were detected by radar) and the poor visibility (foggy weather, visibility of 50 meters) at that time, she could not take proper and effective action to avoid collision and be stopped within a distance appropriate for the prevailing circumstance and condition. Therefore the container ship failed to comply with Rule 6 (Safe speed) of COLREGS.

5.4.2 On 9 April 2012, after the Third Officer of the container ship took over the watchkeeping duty from the Chief Officer, and at about 1721, he acquired the target of a fishing vessel on the radar (Figure 5 and 6). He observed that the target was about 6 nautical miles away moving at a speed of about 7 to 8 knots, course about 290°. However, he did not properly use radar for plotting or systemic observation of that target. As such, he did not obtain the information of the Closest Point of Approach (CPA) and the Time of Closest Point of Approach (TCPA). He did not make a full appraisal of the situation. Instead, based on scanty radar information, he estimated the target would pass ahead his ship from port to starboard.
Figure. 5 - At 1721, the target (*Lu Rong Yu Shui 285*) was acquired and the EBL (Electronic Bearing Line) crossed on it which showed bearing of 139.9°.

Figure. 6 - At 1727, the target bearing was not changed but the range closer which indicated risk of collision existed.
5.4.3 At 1730, when the target was 3 nautical miles away, the Third Officer ordered a succession of small alterations (5 degrees) of course to port until the range between them shortened to 0.6 to 0.8 nautical mile prior to altering course substantially to port, but it was too late. The collision happened at 1739.

5.4.4 The collision avoiding action was neither effective nor appropriate as a succession of small alterations of course would not be readily apparent to the fishing vessel observing, and the action of alteration course to port for a vessel forward of the beam should be avoided. The Third Officer did not comply with Rule 8 (Action to avoid collision) and Rule 19 (Conduct of vessels in restricted visibility) of COLREGS.

Figure 7- At 1730, target bearing was remained no change and the range was about 3 nautical miles.

5.4.5 Despite actions taken by the container ship at 1730 and thereafter, the bearing of the fishing vessel remained almost unchanged because the action of the container ship had been counteracted by the action taken by the fishing vessel, which altered course to starboard almost at the same time.
5.5 Actions taken by the fishing vessel

5.5.1 According to the statements of the Master of the fishing vessel, the weather was foggy and visibility was 50 meters. Before the collision, the fishing vessel was proceeding at a speed of about 8 knots and the ship’s radar was on. However, the bridge team did not detect the container ship by radar until at about 1730 when the target was about 3 nautical miles away. They neither made proper use of the radar nor made systematic observation of the target. It is considered that the bridge team of the fishing vessel did not maintain a proper and effective look-out and failed to comply with Rule 5 (look-out) of COLREGS.

5.5.2 At the time of 3 to 4 minutes before the collision, the Master pulled the speed control lever of the main engine to neutral. That action reduced the rudder steering effect and not considered helpful to collision avoidance.
5.6 Calling the Master of the container ship by the OOW

5.6.1 Chapter VIII of the STCW Code stipulates standards in performing navigational watch. The officer in charge of the navigational watch shall notify the master immediately if the traffic conditions or the movements of other ships are causing concern or when in doubt as to what action to take in the interest of safety. Additional assistance on the bridge is important to safe navigation under these circumstances.

5.6.2 In this incident, when the movement of the fishing vessel was causing concern where the radar bearing of the fishing vessel remaining almost the same but the range shortening from 6 to 3 nautical miles. This indicated that risk of collision existed. However, the OOW of the container ship did not notify his Master. Instead, he took actions on his own judgment until the collision occurred. Before and at the time of the collision, the Master was not on the bridge and was not informed of the situation.

5.6.3 Failing to inform the Master, the OOW would not be able to benefit from the Master’s knowledge, experience and judgment. Assistance would have certainly been rendered by the Master should he be called in ample time.

5.7 Fatigue and alcohol impairment

5.7.1 There was no evidence to suggest that alcohol or drugs were taken by any of the crewmembers involved in the collision.

5.7.2 The OOW on board the container ship declared that he had sufficient rest prior to reporting duty at 1710 on 09 April 2012. Fatigue was not a contributing factor in this incident.

5.8 Safety Management System

5.8.1 At 0915 on 9 April 2012, the container ship encountered heavy fog and proper actions were taken instantly as per requirement of company procedures which included: enhanced look-out and the Master stationed on bridge.

5.8.2 At about 1700 on the same day (i.e. about eight hour later), the visibility was still very poor (about 50 meters). After the Master left the bridge for meal, the other senior officer, i.e. the Chief Officer who was in charge of the watch still handed over the watch keeping duty to the Third Officer disregarding the low visibility condition and left the bridge for meal. Under such circumstance, the OOW in the bridge was the Third Officer who was junior and less experience.

5.8.3 In this incident, under a prolong period of navigating under foggy weather, the
Master of the vessel could not ensure sufficient bridge resource for safe navigation under restricted visibility at all times.

5.9 **Damage to the Vessels and Casualties subsequent to the collision**

5.9.1 The fishing vessel sustained damage to the hull and upper structure in way of the engine room and navigation bridge on the port side and indentations in several locations. A hole with perimeter about 3 meters was found at the accommodation (Figures 9 & 10). The fishing vessel took water into engine room but could remain safely afloat. One crewmember was missing and the other ten crewmembers were rescued.

5.9.2 The container ship sustained only some scratches to the paintwork and slight indentation on the top side of the ship’s bulbous bow (Figure 11). No crew injured was reported.

Figure. 9 - *Lu Rong Yu Shui 285* structure indentation / broken
Figure. 10 - *Lu Rong Yu Shui* 285 port side accommodation was found a hole.

Figure. 11 – *Josco Lily* incurred scratches to paintwork and slight indentation on the bulbous bow.
6. Conclusions

6.1 At about 1739 local time on 9 April 2012, the Hong Kong registered container ship *Josco Lily* collided with the People’s Republic of China registered fishing vessel *Lu Rong Yu Shui 285* in an approximate position 36°11.3’N 124°14.6’E in the Yellow Sea.

6.2 The container ship departed from Dalian, China to Osaka, Japan at 0440 on 9 April 2012. At 0915 on the same day, the container ship encountered heavy fog. Company procedures for ship navigating under restricted visibility were taken by the bridge team. At 1712, the bridge team consisted of only the junior and less experience Third Officer and one Able-Bodied Seaman (AB) when the senior officers went for their meal. The Third Officer detected the fishing vessel moving at a speed of about 7 to 8 knots and steering at a course of about 290°. At about 1730 when the fishing vessel was about 3 nautical miles away from the container ship, he made a succession of small alternations (five degrees) of course to port. When the distance reduced to about 0.6 to 0.8 nautical mile, the Third Officer found the fishing vessel turning towards the bow of his ship. The Third Officer ordered rudder port 10 then port 20 while the ship’s speed of 15 knots was maintained and whistle was blown. At about 1739 when the ship’s heading was on 109°, the container ship collided with the fishing vessel.

6.3 Prior to the accident, the fishing vessel was on her return trip back to Shi Dao, Shan Dong, China on 9 April 2012. The ship’s radar was on but the bridge team of the fishing vessel did not detect the container ship on radar until 1730 on 9 April 2012. When the container ship was about three nautical miles away on her port bow. At about 1733 hours, the Master of the fishing vessel put main engine control to the neutral position for the next three to four minutes prior to the container ship striking at the port side of his ship in way of the engine room and bridge.

6.4 At the time of the collision, the weather was foggy, the visibility was about 50 meters, the wind was southeasterly force about 4 on the Beaufort scale and the sea state was slight.

6.5 Following the collision, the fishing vessel took in water in engine room, she was suffered damage on its port side but remained afloat safely. She was finally towed by the container ship to the port of Shi Dao, Shan Dong, China. One crewmember of the fishing vessel was missing and the other ten were rescued. The container ship was suffered minor scratches to paintwork with indentation at the top side of the bulbous bow and no crew on board was injured.
6.6 The investigation revealed the following contributory factors:

(i) The navigating Officer of the Watch (OOW) of the container ship did not comply with Rule 6 (Safe speed), Rule 8 (Action to avoid collision) and Rule 19 (Conduct of vessels in restricted visibility) of COLREGS. The container ship did not proceed at a safe speed so as to take proper and effective action to avoid collision in a timely manner. Based on scanty radar information, the OOW first made a succession of small alteration of the course to port until finally he substantially changed course to port. The succession of small alterations of course was not readily apparent to the fishing vessel either observing visually or by radar. The OOW did not call the Master even though the movement of the fishing vessel could cause concern afterwards. In restricted visibility, the OOW made an alteration of course to port for a vessel forward of the beam which was against the Rule 19 of COLREGS; and

(ii) The bridge team of the fishing vessel did not comply with Rule 5 (look-out) of COLREGS. They did not maintain a proper and effective look-out so they failed to make a full appraisal of the situation and of the risk of collision. Consequently, they did not take effective action of collision avoidance.
7. **Recommendations**

7.1 The owner / management company of *Josco Lily* should issue notice/circular to draw the attention of their Masters and Officers to the findings of this report and ensure that:

a) they strictly comply with COLREGS at all times, in particular, Rule 6 (Safe speed), Rule 8 (Action to avoid collision), and Rule 19 (Conduct of vessels in restricted visibility) as revealed by this accident investigation; and

b) they make proper use of radar facility and its information in collision avoidance.

7.2 The management company of *Josco Lily* should review the relevant procedures in its Safety Management System with respect to:

a) the instructions and guidance to their Masters and Officers on the circumstances when the navigating Officer of the Watch should call the Master; and

b) under a prolong period of navigating under foggy weather, the Master of the vessel should ensure sufficient bridge resource for safe navigation under restricted visibility at all times.

7.3 The Shipping Division of Marine Department should consider taking regulatory actions to ensure that the Company has taken appropriate measures to implement the recommendations made in the report of investigation into the accident.

7.4 The owner of *Lu Rong Yu Shui 285* should ensure that the Master and the navigating crew comply with COLREGS at all times, in particular, Rule 5 (Look-out) in COLREGS.

7.5 Hong Kong Merchant Shipping Information Note should be issued to promulgate lessons learnt from this accident.
8. **Submissions**

8.1 In the event that the conduct of any person or organization is commented in an accident investigation report, it is the policy of the Marine Department to send a copy of the draft report of investigation in part or in entirety to that person or organization for their comments.

8.2 The draft report in part has been sent to the following parties for comments:

   a) The owner/management company, the Master, Chief Officer and Third Officer of *Josco Lily*.

   b) The owner/Master of *Lu Rong Yu Shui 285*.

   c) The Maritime Safety Administration of Beijing, China

   d) The people’s Republic of China Ministry of Agriculture Fisheries Bureau (中華人民共和國農業部漁業局)

   e) Shipping Division (Ship Safety Branch) of Hong Kong Marine Department.

8.3 No submissions were received from the above parties.