



Report of Investigation
into the Collision Between a
Panamanian Vessel
“Chang Shin” and a PRC Vessel
“You Shun” with One Fatality
on 23 March 2006



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

Purpose of Investigation

This incident is investigated, and published in accordance with the IMO Code for the Investigation of Marine Casualties and Incidents promulgated under IMO Assembly Resolution A.849(20). 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 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	2
2 Description of the Vessels	3
3 Sources of evidence	6
4 Outline of events	7
5 Analysis of evidence	9
6 Conclusions	12
7 Recommendations	13
8 Submissions	13

1. Summary

- 1.1 At about 0924 on 23 March 2006, the Panamanian registered general cargo ship *Chang Shin* collided with the Chinese registered bulk carrier *You Shun* at a position 22° 08.73'N, 113° 53.80'E, bearing 210°T and at a range of about 0.8 nautical mile (n.m.) from Tai A Chau Lighthouse. At the time of the accident, the weather condition was foggy and there was a light breeze with a poor visibility of less than 740 metres. The bow of *Chang Shin* and the port quarter of *You Shun* both sustained very serious damage. A crew member on board *You Shun* was seriously injured and was sent to hospital in China for medical treatment. The carpenter was found missing after the collision and his body was discovered subsequently inside the engine room on 28 March 2006.
- 1.2 The investigation revealed that the following causes contributed to the collision:
 - 1.2.1 The Master of *Chang Shin* had contravened the Collision Regulations (COLREGS) by not leaving the traffic lane at the termination of the lane of the Traffic Separation Scheme and also not keeping a proper lookout by radar.
 - 1.2.2 The Master of *You Shun* had failed to comply with COLREGS by not reducing the speed of or stopping the vessel to allow more time to assess the situation or to avoid collision.

2. Description of the vessels

2.1 *Chang Shin*

Port of Registry	:	Panama
Call Sign	:	3FVH8
IMO No.	:	9176474
Type	:	General Cargo Ship
Builder	:	Shin Kurushima Dockyard Co., Ltd., Japan
Year of Built	:	1998
Gross Tonnage	:	4,737
Net Tonnage	:	2,905
Length Overall	:	100.52 metres
Breadth	:	19.2 metres
Maximum Draft	:	7.228 metres
Main Engine	:	AKASAKA DIESEL
Engine Power	:	3,088 kW
Service Speed	:	13.2 knots

Chang Shin is a general cargo ship classed with China Classification Society. The accommodation and the main machinery space are situated aft. She has 2 cargo holds served by 4 derricks and each derrick has a safe working load of 25 tonnes. The navigational equipment consists of a magnetic compass, a gyrocompass, a speed log, an automatic identification system (AIS), two radars with Automatic Radar Plotting Aids (ARPA), a Global Positioning System (GPS) receiver and an echo sounder, etc. *Chang Shin* is presently engaged in a run between Taiwan, Hong Kong and Mawan in China.



Figure 1 – Photograph showing the damages on the bow of *Chang Shin*

2.2 *You Shun*

Port of Registry	:	Guangzhou, People's Republic of China (PRC)
Call Sign	:	BRTQ
IMO No.	:	Nil
Type	:	Bulk Carrier
Builder	:	Namura Shipbuilding Co., Ltd., Japan
Year of Built	:	1975
Gross Tonnage	:	16,080
Net Tonnage	:	9,004
Length Overall	:	177.03 metres
Breadth	:	22.9 metres
Maximum Draft	:	10.41 metres
Main Engine	:	SULZER 7RND 68 11550P.S Diesel Engine
Engine Power	:	8492.60 kW
Service Speed	:	15 knots

You Shun is a bulk carrier classed with China Classification Society. She has totally 5 cargo holds. The accommodation and the main machinery space are situated aft. The navigational equipment consists of a magnetic compass, a gyrocompass, a course recorder, two radars with Automatic Radar Plotting Aids (ARPA), an echo sounder, a Global Positioning System (GPS) receiver, a Differential Global Positioning System (DGPS) receiver, etc. *You Shun* is engaged in coastal voyages between ports in China.



Figure 2 – Photograph showing the damages on port quarter of *You Shun*

3. Sources of Evidence

- 3.1 Report of Marine Accident and ship's documents provided by the Master of *Chang Shin*;
- 3.2 Report of Marine Accident and ship's documents provided by the Master of *You Shun*;
- 3.3 Statements provided by the Master and Third Officer of *Chang Shin*;
- 3.4 Statements provided by the Master and Third Officer of *You Shun*;
- 3.5 The Vessel Traffic Centre (VTC), Marine Department; and
- 3.6 The Hong Kong Observatory.

4. Outline of events

4.1 Account of *Chang Shin*

- 4.1.1 At about 0700 on 23 March 2006 *Chang Shin* departed from Mawan in Shekou to Hong Kong with a cargo of about 1000 tonnes of steel coils on board. After the Shenzhen pilot disembarked at about 0739, her engine was increased from half ahead with a speed of about 8.5 knots to full ahead with a speed of about 10 knots. The weather was overcast with a visibility of about 1 nautical mile and there was no wind and calm sea. The Master, the Third Officer and the Quarter Master were on the bridge. Both radars were switched on. The Master and the Third Officer were on visual watch and radar watch.
- 4.1.2 At about 0830, when the vessel was at a position east of Mayou Light Vessel, the visibility deteriorated to about 70 metres. However, the fog signal was not switched on, nor the engine was put on standby although the Chief Engineer was informed that due to poor visibility, the request of engine would be required any time. The vessel's speed was increased to sea speed of about 13 knots.
- 4.1.3 At about 0843, *Chang Shin* altered course to port to 164°T to join the Lantau Channel No. 3 Traffic Separation Scheme. When Gui Shan Bei Light Vessel was abeam to port, *Chang Shin* altered course to port to 122°T. At 0917, *Chang Shin* altered course to port to 085°T with a view to proceeding to South West Lamma Anchorage in Hong Kong.
- 4.1.4 At about 0923, the Master observed visually a vessel i.e. *You Shun* bore dead ahead on her bow at a distance of about 10 metres and *You Shun* was on a course of about 265°T. In order to avoid collision, *Chang Shin* altered course to hard to starboard. At about 0924, the port bow of *Chang Shin* struck the port quarter of *You Shun*. *Chang Shin* stopped engine and reported to Gui Shan VTS about the collision.
- 4.1.5 *Chang Shin* dropped anchor and wait for government authorities to board the vessel to carry out investigation. At about 1700, Hong Kong Marine Department officials boarded the vessel. At about 1745, Hong Kong Marine Police officers boarded the vessel and at about 1800, Guangdong Maritime Safety Administration officials boarded the vessel.

4.1.6 The bow and bulbous bow of *Chang Shin* sustained heavy damage (Figure 1).

4.2 Account of *You Shun*

4.2.1 *You Shun* was anchored at a position 22° 08.73'N, 113° 53.80'E in the vicinity of Dazhizhu Dao at 1725 on 22 March 2006. At about 0843 on 23 March 2006, *You Shun* commenced heaving anchor and when anchor was up at 0850, she proceeded on a course of 010°T and her speed was increased from slow ahead of about 5 knots to full ahead of about 9 knots. Her next port was Whampoa in China.

4.2.2 At 0912, *You Shun* altered course to port to 310°T. At 0916, the Master observed a target on the radar with a bearing of 10° on her port bow and was at a range of 2.5 nautical miles. The radar range was put on 3 nautical miles. There was a southerly wind of force 3-4 and the visibility was 0.3 nautical mile. The Master, the Third Officer, the Quarter Master and a sailor were on the bridge.

4.2.3 At about 0920 *Chang Shin* was observed on the radar at a distance of 1 nautical mile from *You Shun* and the former vessel altered course from 126°T to 100°T with a speed of about 12 knots. As *You Shun* found that there was a risk of collision with *Chang Shin*, *You Shun* took avoiding actions by altering course to hard to starboard and reduced her speed from full ahead to slow ahead. *You Shun* called *Chang Shin* on Channels 09 and 16 but there was no response.

4.2.4 At 0925, *You Shun* observed *Chang Shin* was abeam to her port side and seeing that her port quarter might be struck by the bow of *Chang Shin*, *You Shun* altered course to hard to port and engine was increased to full ahead. Despite the above avoiding actions, her port quarter was struck by the bow of *Chang Shin*.

4.2.5 A mechanic was found trapped inside the accommodation at port quarter and the carpenter was found missing. At 0932, The Master reported the collision to Gui Shan VTS and requested assistance to rescue the mechanic and search for the carpenter. At 1015, officials from Guangdong Maritime Safety Administration boarded the vessel for investigation. At 1127 the mechanic was

free and sent to a hospital in Gui Shan Dao for medical treatment. The missing carpenter was not found after conducting a search and his body was discovered inside the engine room on 28 March 2006.

4.2.6 The port quarter of *You Shun* sustained very serious damage (figure 2).

5. Analysis of Evidence

5.1 Certification and Experience of Personnel

5.1.1 The Master of *Chang Shin* is holding a People's Republic of China (PRC) Master Certificate. Based on his PRC master certificate an endorsement certificate was issued by the Panama authority to enable him to take charge of *Chang Shin*. He has served at sea for almost 26 years with 1 year serving as master and more than 10 years as chief officer.

5.1.2 The Master of *You Shun* is holding a People's Republic of China Master Certificate enabling him to take charge of a vessel plying in the coastal and near-coastal areas of China. He has served at sea for almost 27 years with 13 years serving as master.

5.2 Certification of the vessels in collision

5.2.1 The statutory trading certificates of *Chang Shin* were issued by the Panama authority and that of *You Shun* were issued by the China Maritime Safety Administration respectively. Both the vessels' trading certificates were inspected and found valid.

5.3 Conditions of weather and visibility

5.3.1 It was reported that the weather was foggy with a poor visibility of about 740 metres at the time of collision. The wind was southerly with force 3.

5.4 Lookouts maintained by the Bridge Team of *Chang Shin*

5.4.1 The range setting of the two radars was adjusted at 3 nautical miles and 1.5 nautical miles respectively for navigation. The Master kept a radar watch on

the radar set at 3-nautical mile range and the Third Officer kept a radar watch on the radar set at 1.5-nautical mile range. The Master stated that he was not aware of the presence of *You Shun* on the radar before the collision. Before the collision, although the Third Officer had observed the target of *You Shun* on the radar with a relative bearing of 005° on starboard bow and at a range of 1.5 nautical mile, he did not report to the Master about the presence of *You Shun*.

- 5.4.2 Under the condition of restricted visibility, visual contact of *You Shun* was difficult. The lookout would be relying solely on the radars on board. As *You Shun* is a steel ship, due to the good radar wave reflective characteristic of the steel hull, the radars on board *Chang Shin* should be able to detect the returned echoes of *You Shun*. However, the Master of *Chang Shin* had not observed the presence of *You Shun* on the radar until 0923 when he observed the latter vessel visually at a distance of 10 metres from the bow. Although the Master of *Chang Shin* took avoiding action by altering course to hard to starboard, the collision could not be averted. In this connection, the failure of the Master of *Chang Shin* to observe the target of *You Shun* on the radar had contravened the Collision Regulations by not keeping a proper lookout by radar.

5.5 Actions taken by *Chang Shin*

- 5.5.1 Observations on the Marine Department VTC radar records revealed that at 0903 *Chang Shin* altered course to port from 168°T to 123°T. At 0918 *Chang Shin* altered course to port from 123°T to 085°T with a view to proceeding to the South West Lamma Anchorage in Hong Kong. Her speed was maintained at about 13 knots throughout the period. Her course has changed to 074°T and her speed has reduced from 13 knots to 6.5 knots at 0924 when colliding with *You Shun*.
- 5.5.2 After *Chang Shin* altered course to port from 168°T to 123°T at 0903, she proceeded along the outbound traffic lane of the Lantau Channel No. 3 Traffic Separation Scheme and under the requirement of the Collision Regulations, she should leave the outbound traffic lane at the termination of the lane. However, *Chang Shin* was found to have contravened the above rule by leaving at a location in the middle of the lane.

5.6 Actions taken by *You Shun*

- 5.6.1 Observations on the Marine Department VTC radar records revealed that between 0850 and 0912, *You Shun* maintained a course of about 010°T and her speed was increased from 0 knot to about 8 knots. At 0912 she altered course to port to 306°T and maintained a speed of about 8.5 knots. At 0922, she altered course to starboard and was heading 323°T with a speed of 1.5 knots after the collision.
- 5.6.2 When the Master of *You Shun* observed the target of *Chang Shin* on the radar with a bearing of 10° on her port bow at a range of 2.5 nautical miles at 0916, he should have slowed down or stopped his vessel in order to allow more time to assess the situation or to avoid collision. However, after *You Shun* had altered her course to 306°T at 0912, she maintained her speed at full ahead until 0922 when she reduced her speed to slow ahead and stopped engine at 0923. According to Marine Department VTC radar records, *You Shun* was still at a speed of 8.5 knots when the engine was ordered to slow ahead at 0922 and 6 knots when engine was ordered to stop at 0923 respectively.
- 5.6.3 The distance between *Chang Shin* and *You Shun* was only 0.54 nautical mile i.e. 1,000 metres and 0.2 nautical mile at 0922 and 0923 respectively.
- 5.6.4 VTC Radar Plot showing the collision tracks of *Chang Shin* and *You Shun* is shown in Figure 3.

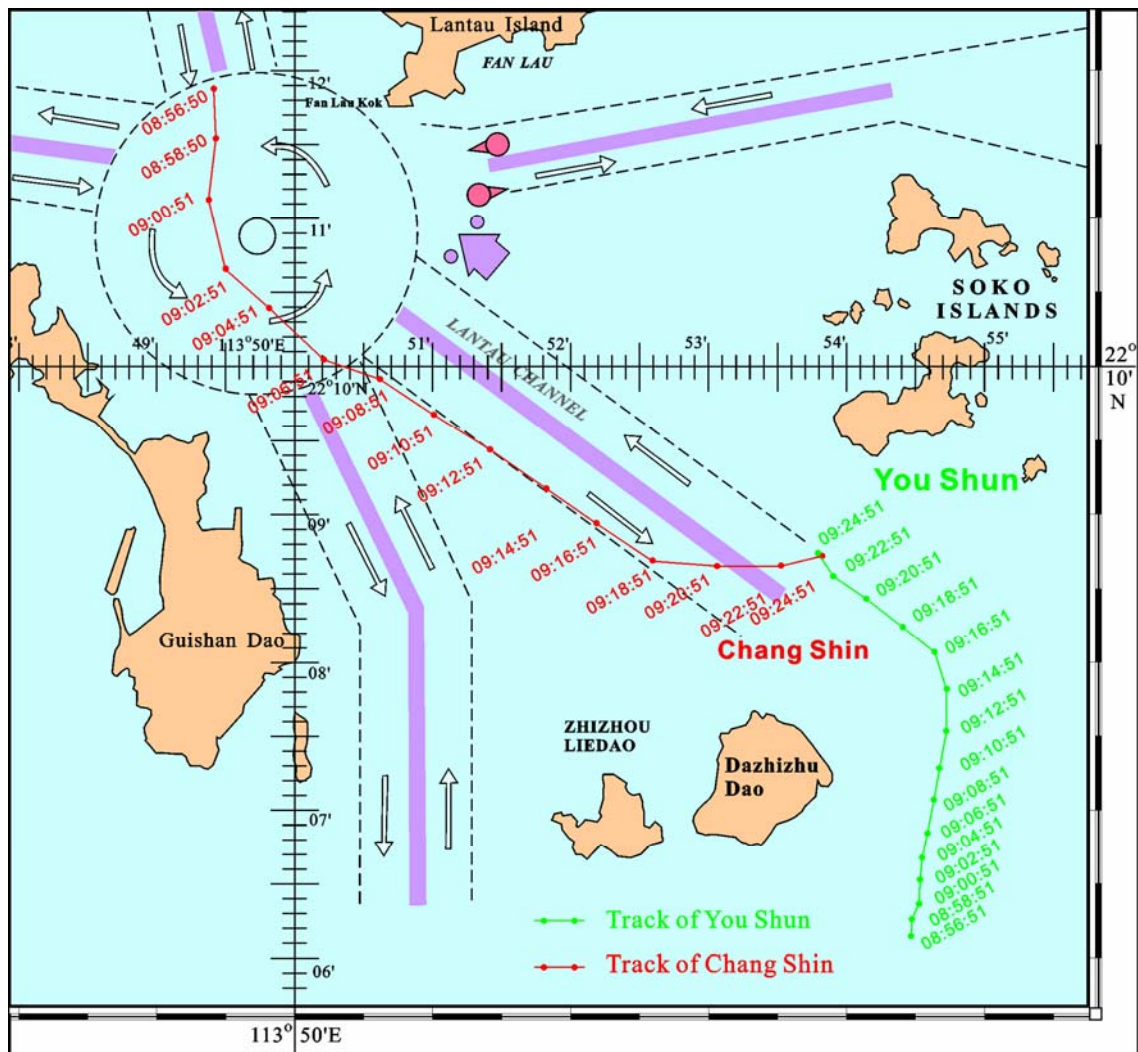


Figure 3- VTC Radar Plot showing the collision tracks of *Chang Shin* and *You Shun*

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 crew members involved in the collision.

5.7.2 There was no evidence to suggest that fatigue was an issue in this accident.

6. Conclusions

6.1 At about 0924 on 23 March 2006, the Panamanian registered general cargo ship *Chang Shin* collided with the Chinese registered bulk carrier *You Shun* at a position 22° 08.73'N, 113° 53.80'E, bearing 210°T and at a range of about 0.8 nautical mile (n.m.) from Tai A Chau Lighthouse.

- 6.2 At the time of the collision, the visibility was poor.
- 6.3 The bow and bulbous bow of *Chang Shin* sustained heavy damages whilst the port quarter of *You Shun* sustained very serious structural damages.
- 6.4 The investigation revealed that the following causes contributed to the collision: -
- 6.4.1 The Master of *Chang Shin* had contravened Rule 10(b)(iii) of COLREGS by leaving the Lantau Channel No. 3 Traffic Separation Scheme in the middle of the outbound traffic lane and Rule 5 of COLREGS by not keeping a proper lookout by radar.
- 6.4.2 The Master of *You Shun* had failed to comply with Rule 8(e) of COLREGS by not reducing her speed or stopping her engine when she observed the target of *Chang Shin* on the radar.

7. Recommendations

- 7.1 A copy of the report is to be sent to the Masters of *Chang Shin* and *You Shun* drawing their attention to comply with COLREGS for navigation at all times especially in restricted visibility.
- 7.2 The owner of *Chang Shin* should instruct their officers to follow the proper bridge procedures by maintaining an effective communication between the bridge team members so that radar information can be effectively conveyed to the Master for collision avoidance in time of restricted visibility.
- 7.3 A copy of the report is to be sent to the Maritime Safety Administration of Guangdong of PRC and Panama Maritime Authority informing them the findings of this report.

8. Submissions

- 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 relevant parts of the report is given to that person or organization so that he can have an opportunity to rebut the criticism or offer evidence not previously available to the investigating officer.

8.2 The relevant parts of the final draft of the report were sent to the following:

Master of *Chang Shin*

Master of *You Shun*

8.3 Submission was received from the Master of *You Shun* and the text of the draft was amended as appropriate according to the submission.