



**Report on the Investigation of
the Xinhairun Striking wharf and portal crane
No.403 at berth No.8 of Shanghai Baoshan Port
Company
on 17 July 2004**

Shanghai MSA, China
190# Siping Road, Shanghai, China
Tel.:+86-021-53931500

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Glossary of Abbreviations and Acronyms

AIS - Automatic Identification System

Collision Regulations - International Regulations for Prevention Collisions at Sea

GPS - Global Positioning System

HSC - High Speed Craft

IMO - International Maritime Organization

SOLAS - Safety of Life at Sea Convention

VHF - Very High Frequency

1. Summary

About 2303LT July 17th 2004, M.V. XINHAI RUN, which pertained to Shanghai Xinhai Shipping Co., Ltd of Orient International Group, contacted with the wharf and the portal crane NO.403 at berth NO.8 of Shanghai Baoshan Port Company when getting alongside with the berth NO.2 of Baoshan Container Company carrying 150TEU. Then scraped M.V. CHANGXIN, M.V. HAIGANG5 & M.V. ZIHANG58 because of inertia. Resulted in the damage to portal crane NO.403 & the four vessels involved to different extent.

2. Particulars

2.1. XINHAI RUN

Ship owner: Shanghai Xinhai Shipping Co., Ltd of Orient International Group

Port Registry: ShangHai

Type: Container Ship

When Built: June 1985

Where Built: Japan

LOA: 120.80M

GT: 6734

Module Breadth: 20.80M

NT: 3610

Module Depth: 10.50M

DW: 9586

Main Engine: Type/7UEC45L Number/1

Power/5324KW

2.2. Portal Crane

Owner: Shanghai Baoshan Port Company

Type: M1033/1625

Code: 403

Application Date: December 1990

2.3. CHANGXIN

Ship Owner: Hong Kong ChangXin International Shipping (Group)Co., Ltd

Flag State: Cambodia

Type: General Cargo Ship

When Built: 1980

Call sign: XUAN7

LOA: 57.06M

GT: 1037

Module Breadth: 11.00M

NT: 741

Module Depth: 6.20M

DW: 1624

Main Engine: Type/9SLH633 Number/1

Power/1600KW

2.4. ZIHANG58

Ship Owner/Manager: AnHui HuaiYuan HuaiHe Shipping Company

Port of Registry: BengBu

Type: Container Ship

When Built: November 2002

Where Built: GaoYou, JiangSu

Registered Code: 2002W2108485

Hull Materials: Steel

LOA: 59.50M

GT: 1251

Module Breadth: 12.56M

NT: 701

Module Depth: 4.06M

DW: 1700 (Limitation: 72TEU<full> / 108TEU<vacant>)

Main Engine: Type/Diesel Number/2 Power/220*2KW

2.5. HAIGANG5

Ship Owner/Manager: ShangHai Harbor FuXing Shipping Service Company

Port of Registry: ShangHai

Type: Tug

When Built: January 1993

Where Built: ShangHai

Registered Code: 1993M0000009

Hull Materials: Steel

LOA: 32.10M

Call sign: BTJ1

Module Breadth: 8.80M

GT: 276

Module Depth: 3.90M

NT: 83

Main Engine: Type/6L25HX Number/2 Power/1103*2KW

3. Environmental conditions

Weather: Cloudy

Visibility: 5 NM

Wind Force: 5-6

Wind Direction: SE

Tide: Strong Flood Stream

Current Speed: 3-4 Kt.

4. Narrative

About 1000LT July 15th 2004, M.V. XINHAI RUN departed from Osaka, Japan. It's next port was berth NO.2 of ShangHai BaoShan Container Company, ETA was 2300LT July 17th on schedule. 1610LT July 17th, arrived at buoy S6; 2010LT anchored at WuSong anchorage NO.3; 2035LT weighed anchor & went on sailing. Two radars(common), one GPS, two VHF phones (on CH06 & CH71) were power on. 2120LT arrived at light buoy NO.64, draft fore 3.1M/aft 4.7M, awaiting the departure of M.V. JINMANHAI from berth NO.2 of ShangHai BaoShan Container Company. 2250LT M.V. XINHAI RUN passed M.V. JINMANHAI at green light buoy A73 with

course 240°, slow ahead. 2300LT arrived at BaoShan pool with the lamp post at the gate of the breakwater bow abeam, course 278°, switched to full ahead. Weather condition at that time was: cloudy, wind SE/5-6, strong Flood Stream, current speed 3-4 Kt., good visibility. Master stood at the middle of the bridge, not affected by the lamplight from the wharf. 2301LT, when the lamp post at the gate of the breakwater was middle abeam, M.V. XINHAIRUN got deflection to portside resulted from the strong Flood Stream from stern, then stopped engine, thruster to starboard. But master found that the ship went on turning left, then hard starboard. 2302LT, when the ship was 35M away from berth NO.8 of Shanghai Baoshan Port Company and the angle between port shipboard & berth NO.8 was 15°, master informed chief officer who was keeping watching at the ship bow to drop both anchors by mobile interphone, full astern at the same time. 2303LT the port bow contacted with the wharf and portal crane NO.403 at berth NO.8 of Shanghai Baoshan Port Company (contact angle was about 35°), then scraped M.V. ZIHANG58 at berth NO.9, M.V. HAIGANG5 at berth NO.7 & M.V. CHANGXIN at berth NO.6-7 because of inertia.

Portal crane NO.403 was shifted from berth NO.9 to berth NO.8 which had no vessel to get alongside, 1250-1270M (cab facing to south). 2300LT, duty driver left the crane after furled the arm to minimum extent, shut down the general power & appropriately tucked iron chocks under the wheels.

M.V. CHANGXIN departed from Busan, South Korea, carrying 1029.601T rolled steel. 1540LT July 17th 2004 got alongside with berth NO.6-7 of Shanghai Baoshan Port Company; 1630LT started discharging; 2306LT that day, it's bow was collided by the bow of M.V. XINHAIRUN.

0820LT July 17th 2004, M.V. ZIHANG58 departed from NanTong with 48TEU on board; 1500LT got alongside with berth NO.2 of BaoShan SCT for discharging; 2200LT finished discharging and shifted to berth NO.9; 2306LT it's port stern was scraped by the port stern of M.V. XINHAIRUN.

2240LT July 17th 2004, tugboat HAIGANG5 got alongside with berth NO.7 of Baoshan Port Company after convoyed M.V. JINMANHAI to the gate of BaoShan pool, prepared to convoy M.V. CHANGXIN for it's departure; 2305LT M.V. HAIGANG5 was flipped out of it's berth after it's starboard bow was collided by the bow of M.V. XINHAIRUN, resulted in the break of after line and fore line.

5. Consequences

5.1. Shanghai Baoshan Port Company

5.1.1. Portal crane NO.403 (type:M1033/1625): snapped & broke down, the upper part (above the revolution platform) of it pressed on the cover board of hatch NO.1&NO.2 of M.V. XINHAIRUN, three truckles of the nether part were lifted away from the ground, one truckle crushed into the platform with a gradient angle 45°. The portal crane NO.403(type M1033/1625) was evaluated by ShangHai ZhiXin Assets Appraisal Co., Ltd. on August 13th 2004, it's primary value is RMB4,400,000¥ & net value is 1,892,000¥.

5.1.2. Wharf: The platform was partly damaged by the impact of portal crane NO.403. On August 5th 2004, the test station of Designing Academe NO.9 of CSSC performed a test to the damaged wharf, and worked out a repairing plan which would cost about RMB294,126¥ on August 9th 2004.

5.2. XINHAIRUN

Fore mast broke down, and the accessorial Radar, GPS, DF, NAVTEX, INM/C, VHF, antenna & link line of AIS, anemoscope/ dogvane, sub electric compass, siren, bridge, partial baluster of compass deck, starboard & back cabin wall of compass deck, cover board of hatch NO.1-2 were damaged. The total repair expenses of these were RMB700,000¥ according to the evaluation of ShangHai FangKe Shipping Technology Service Co., Ltd.

5.3. CHANGXIN

The bow, bow deck, baluster, bulwark, vent-pipe, bow pole, starboard baluster of boat deck, 2 shackles of port anchor were damaged. One fore line was broken. Gangway drop into the river. The total repair expenses were RMB87,174¥ according to the evaluation of ShangHai YueZhi Insurance Surveyors & Adjusters Co., Ltd.

5.4. HANGGANG5

Starboard baluster of deck on 2,3 floor & antenna were transfigured. Concave at three places on the hull astern. A horn & 2 cables were damaged. The total repair expenses were RMB6,576 ¥ according to the evaluation of ShangHai PuJiang Shipping Safety Technology Service Department.

5.5. ZIHANG58

Concave of port bulwark, protrusion of fresh water cabin, damage to ribbing of engine room & starboard sailor cote. Tow cables were broken. The total repair expenses were RMB26,977 ¥ according to the evaluation of ShangHai PuJiang Shipping Safety Technology Service Department.

6. Analysis

After receiving report of the accident, ShangHai MSA (Maritime Safety Administration) dispatched prowl car NO.12 for commanding & organizing, patrol craft HAIXUN1061 for watching & rescue, tow tugboats HAIGANG23 & HAIGANG28 for salvage to M.V. XINHAI RUN. 0054LT July 18th 2004, M.V. XINHAI RUN got alongside with berth NO.2 of ShangHai BaoShan Container Company.

Investigators from ShangHai MSA had performed investigation to the seafarers involved & relevant parties.

6.1 Insufficient estimation of wind & current, and manoeuvring error.

The weather condition was Wind SE/5-6, Strong Flood Stream/3-4 Kt when M.V. XINHAI RUN was entering the port. 2301LT, when the lamp post at the gate of the breakwater was middle abeam, M.V. XINHAI RUN got deflection to portside. Under the condition of no aid & wardship from tugboat, master ordered to stop engine, hadn't taken full account of the fact that the pool was three-sides close & room limited, so the current was blocked. When the vessel was marching forward in the pool, the water molecule group ahead of it didn't spread around as in the sea or in the river but hustled

forward, caused the hoist of water level ahead & the increase of resistance; Otherwise, the vessel left an eddy behind of it when it was marching forward, but current around the eddy couldn't completely fill it up in time, so a truss of converse gravitation came into being. At the same time, the current press angle out of the pool was rather large, which brought certain effect to the stern. Master hadn't considered that the vessel should keep available speed to enhance the helm impact during the process of entering the pool. When he found the vessel kept on turning left, master ordered hard starboard and used thruster without a view to the helm impact at that time. He hadn't taken other helpful measures such as dropping anchor, dallied over the last chance to avoid collision, so resulted in the final occurrence of the accident.

Insufficient estimation of wind & current, and manoeuvring error from master of M.V. XINHAIRUN were the main causes of the accident. Based on the general analysis to the causes, M.V. XINHAIRUN which pertained to Shanghai Xinhai Shipping Co., Ltd of Orient International Group should be fully responsible for the accident.