舟山市拍船网船舶
评估咨询有限公司

TECHNICAL REPORT

技术状况报告

编号：CJPG-JS-23-KY-309

Place of Inspection: Dongguan Dongzhou Intl Petrochemical

Date of Inspection: June 13th, 2023

Date of Issue: June 16th, 2023

Technical Report of MV "XING HAI HUA 728"

1. Statement

Entrusted by the customer, we organize the surveyor to have conducted a technical condition inspection of "XING HAI HUA 728" and issue the technical report based on the onboard condition and the ship information provided by the transferor (ship owner). This report is intended for the sole use of a better knowledge of any potential clients. The report is subject to any access restrictions as described herein, and always subject to the level of cooperation and completion of all technical files afforded to the surveyors during the inspection itself. All details in this report are given in good faith, and without any guarantee.

2. Particulars

Ship Name	XING HAI HUA 728	Flag	China
Type of Ship	Oil Tanker	PoR	Taizhou
LOA	150.00m	IMO	9563500
LBP	140.40m	Class	CCS
Waterline length	143.80m	GRT/NRT	11656/6527
MLB	23.00m	Shipbuilder	Zhejiang Zhenxing Ship Repairing and Building Co., Ltd
MLD	12.50m	Date of Keel laying	October 16th, 2007
Summer draft	8.800m	Date of Delivery	September 6th, 2009
DWCC	15967t	Model of M/E	Shaanxi Diesel Engine 8PC2-6/2L
Light Displacement	5800.34t	Rated Power/Rated Speed /No.	4400kW×520r/min×1set

Liquid tank	14（including slop tank）	Design capacity	19742.2m³（including slop tank）
Cargo pump qty. /Capacity	3 sets，750m³/h/set	Actual capacity	20170.514m³（including slop tank）

Note: The above data comes from the ship certificates provided by the owner and is for reference only.

3. Brief Description

● Overview

The ship was built as an oil tanker with single engine and single propeller, equipped with bow thruster, suitable for loading oil with a flash point≤60℃. The cargo hold is double bottom and double hull, total 12 oil tanks and 2 slop tankers.

According to the loading manual, the ship is designed to load 0.73t/m³ petrol, 0.825t/m³ diesel fuel, 0.925t/m³ heavy oil, which can load two types of cargo oil at the same time, but the slop tank can only load petrol and diesel oil. According to the owner, the slop tank is not currently used for loading cargo oil).

The cargo oil tanks and slop tanks of this ship are equipped with epoxy special coating, and the cargo oil tanks are equipped with stainless heating coils. The ship is equipped with 1 set crane of 40kN×14.5m on the main deck.

The cargo pump room of the ship is equipped with 2 sets of 750m^3/h cargo pumps and 1 set of 500m^3/h cargo pump, 1 set of 70m^3/h stripping pump, 2 sets of 400m3/h ballast pumps. The power of the cargo pump is provided by 3 sets of 315KW motors in the engine room

The engineer room of the ship is equipped with 1 set 160m^3/h tank cleaning pump, one set of washing water heater and 4 sets of portable tank cleaning machines.

The ship is equipped with a cargo control room on the poop deck for remote control of cargo pumps, ballast pumps, and all valves located in the cargo tanks and ballast tanks. And the ship is equipped with 1 set of cargo level telemetry system and 1 set of ODME system.

The cargo oil tank of the ship adopts an independent ventilation system. Each of the 12 cargo oil tanks and 2 slop tanks on the ship is equipped with a separate ventilation pipe, and there is a P/V

valve at the end of each ventilation pipe.

Three 12-inch diameter oil pipeline outlets are equipped on the port and starboard side of the main deck of the ship, with 1m distance between the outlets. The distance from bow to outlet flange is 68m for front joint and 70m for rear joint. The center distance from the main deck to the flange outlet is 1.5m, the distance from the center point of the flange outlet to the upper edge of the drip tray is 0.82m, and the distance from the side railing to the outlet flange is 4m.

● Class notation

★ CSA　Oil Tanker, Double Hull;F.P.≤60℃; Ice Class B; Loading Computer (S, I)

★ CSM　MCC

● Liquid tank capacity

According to loading manual of this ship, the designed capacity is distributed as follows:

No.	Cargo Compartment	Capacity (m^3)
1	NO.1 Cargo Tank（P&S）	1052.1×2
2	NO.2 Cargo Tank（P&S）	1716.3×2
3	NO.3 Cargo Tank（P&S）	1793.7×2
4	NO.4 Cargo Tank（P&S）	1793.7×2
5	NO.5 Cargo Tank（P&S）	1793.7×2
6	NO.6 Cargo Tank（P&S）	1395.6×2
7	Slop Tank（P&S）	329.5×2
	Total	19749.2
	98% Capacity	19354.22

According to the tank capacity verification report of the National Metrology Station, the actual capacity of the ship as follows:

No.	Cargo Compartment	Capacity (m^3)
1	NO.1 Cargo Tank（P）	1076.527
2	NO.1 Cargo Tank（S）	1068.473
3	NO.2 Cargo Tank（P）	1767.283
4	NO.2 Cargo Tank（S）	1766.903
5	NO.3 Cargo Tank（P）	1821.258
6	NO.3 Cargo Tank（S）	1824.021
7	NO.4 Cargo Tank（P）	1816.509
8	NO.4 Cargo Tank（S）	1826.345
9	NO.5 Cargo Tank（P）	1818.850
10	NO.5 Cargo Tank（S）	1820.825
11	NO.6 Cargo Tank（P）	1423.414
12	NO.6 Cargo Tank（S）	1438.129
13	Slop Tank（P）	337.103
14	Slop Tank（S）	364.874
	Total	20170.514

● Major Equipment

Engine Machinery

Machinery	NO.	Model	Parameter	Manufacturer
Main Engine	1	8PC2-6/2L	4400kW×520r/min	Shaanxi Diesel Engine
Gearbox	1	GWC7085	3.003：1	Chongqing Gearbox Co.,Ltd
Propeller	1	Fixed	Copper, diameter 4300mm	--
Main Generator	3	1FJ2 451-4SB42	450kW×400v×811A	Wuxi Fenxi Motor

Diesel Engines of Main Generator	3	TBD604BL6	530kW×1500r/min	Henan Diesel Engine
Emergency Generator	1	1FC2 282-4SB43	120kW×400v×216.5A	Cummins
Diesel Engines of Emergency Generator	1	6CTA8.3-GM155	155kW×1500r/min	
Steering Gear	1	DYCH-Ⅱ-350/28	350kN·m	Nanjing Dongsheng Marine Equipment Co., Ltd
Windlass	2	1YMX58	55kW	Wenling Hangtai
Oil-fired boiler	1	LSK10_0.7	0.7MPa×10000kg/h×190 ㎡	Wuxi Waylit
Exhaust boiler	1	LFL120_0.7	0.7MPa×600kg/h×120 ㎡	Wuxi Waylit
bilge water separator	1	CYSC107A-3.0	3.0m³/h，≤15ppm	Wuhan Jinding Electromechanical
Sewage treatment plant	1	WCBJ159	30 persons, 2.31m³/d	Wuhan Jinding Electromechanical
Cargo pump drive motor	3	Y400-6-H	315kW×380v×565A	Shandong Huali Electric Motor
1#、2# Cargo pump	2	2HM9800/150	750m³/h×0.8MPa×980rpm	Huanggong Machinery
3# Cargo pump	1	2HM7000/160	500m³/h×0.8MPa×1450rpm	Huanggong Machinery
Stripping pump	1	2HM1400/58	70m³/h×0.8MPa×1450rpm	Huanggong Machinery
Ballast pump	2	200CWL–18	400m³/h×21m×1450rpm	Foshan Shunde
Tank cleaning pump	1	--	160m³/h×1.0MPa×2950rpm	--
P/V vent valve	15	CF200	--	Taixing Lanjie

Oil discharge monitoring and control system	1	RD-ODME	AC 220V×1Ø×50Hz	Shanghai Rongde Engineering Equipment Co.,Ltd

Communication and navigation equipment

Equipment	NO.	Model	Manufacturer
AIS	1	FA-150	FURUNO
GPS	1	JLR-7700MKⅡ	JRC
Magnetic Compass	1	SR-16RPSK	TOKYO KEIKI
Magnetic compass (backup)	1	SR-16RPSK	TOKYO KEIKI
Gyro Compass	1	DH-Ⅲ	四四二 Factory
Bearing Compass	3	19-Ⅰ	四四二 Factory
Electronic Chart	1	HM-5817	XINUO
Echo Sounder	1	JFE-380	JRC
Radar	2	JMA-9122-6XA JMA-9132-SA	JRC
Speed Log	1	JLN-205	JRC
MHF	1	FS-2570	FURUNO
VHF	2	FM-8800S	FURUNO
C Station	1	--	FURUNO
NAVTEX	1	SNX-300	SAMYUNG
TWO-WAY VHF	3	SR-102	ACR
SART	2	Pathfinder 3 SART	ACR
EPIRB	1	VEP8	CETC

4. Class Status and Surveys

- **Statutory Certificates or Documents of Compliance**

No.	Certificates Description	Issue Date	Expiry Date
1	Certificate of Registry	2021.05.04	2026.05.03
2	Transportation Business License	2023.03.31	2024.03.15
3	Minimum Safe Manning Certificate	2021.05.04	2026.05.03
4	Classification Certificate	2022.08.02	2024.09.05
5	Seaworthiness Certificate	2019.08.16	2024.09.05
6	Load Line Certificate	2019.08.16	2024.09.05
7	Tonnage Certificate	2019.01.25	--
8	Oil Pollution Prevention Certificate	2019.08.16	2024.09.05
9	Air Pollution Prevention Certificate	2019.08.16	2024.09.05
10	Sewage Pollution Prevention Certificate	2020.10.30	2024.09.05

Note:

(1) The approved business scope of this ship's Transportation Business License is for domestic coastal refined oil transportation, with an expiration date of March 15th, 2024.

(2) The last intermediate survey has been completed on August 2nd, 2022 in Ningbo, with next special survey due date of September 5th, 2024.

(3) The energy efficiency data record form of this ship is submitted for each voyage, with the latest submission being the 2307th voyage and the submission date being June 12th, 2023.

- **Minimum Safe Manning Requirement**

Grade/Capacity	STCW	People	Grade/Capacity	STCW	Crew
Master	Ⅱ/2, Ⅴ/1-1	1	Chief engineer	Ⅱ/2, Ⅴ/1-1	1
Chief officer	Ⅱ/2, Ⅴ/1-1	1	Second engineer	Ⅱ/2, Ⅴ/1-1	1
Second officer	Ⅱ/1, Ⅴ/1-1	1	Third engineer	Ⅱ/1, Ⅴ/1-1	1
Third officer	Ⅱ/1, Ⅴ/1-1	1	Fourth engineer	Ⅱ/1, Ⅴ/1-1	1
Assistant officer	--		Engineer	--	--
Sailor	Ⅱ/4, Ⅴ/1-1	3	Mechanic	Ⅱ/4, Ⅴ/1-1	3
	--		Part time GMDSS restricted operator	--	--
GMDSS Operator	Ⅱ/2, Ⅴ/1-1	1 full-time or 2 part-time	Full time GMDSS unrestricted operator	--	--
Special requirements or conditions: The continuous sailing time of this ship exceeds 36 hours.					

- **FSC Inspection Records in the past 36 months**

No.	Date	Place of Inspection	Deficiencies / Action Code	Note
1	2023.04.20	Rizhao	1550-17/10，1282-17/10，0610-17/10，0260-16，1885-99，0725-16	3 items unclosed
2	2023.02.08	Qingdao	0745-17/10，0730-17/10，1480-17/10，1499-17/10，0630-17/10，1423-17/10，1835-17/10	Closed
3	2022.11.30	Dongguan	1885-17，1825-99，1840-16，1230-16，1835-16，2535-18	6 items unclosed
4	2022.08.26	Dalian	1423-17/10，1020-16，1480-17/10，1524-99，1671-17/10	2 items unclosed
5	2022.05.19	Dalian	0610-17/10，0628-17/10，1551-17/10，1623-16/10，1825-17/10	Closed

6	2022.03.13	Dalian	0741-17/10，0725-15/10，0745-17/10，1730-17/10，0745-17/10	Closed
7	2021.12.06	Dongguan	1840-17/10，1820-17/10，1840-17/10，0610-17/10，1820-16/10，1150-16/10，1825-17/10，1820-30/10，0745-30/10	Closed
8	2021.11.29	Panjin	1480-17/10，1541-17/10，0710-17/10，1836-17/10，0745-17/10，0899-17/10，0860-17/10	Closed
9	2021.06.19	Dalian	1220-99，1541-17/10，0660-17/10，0820-17/10，1480-17/10	1 item unclosed
10	2021.02.11	Shenzhen	1782-99/10，0899-17/10，0610-30/10，0745-17/10，0725-17/10，0745-30/10，0745-30/10，1799-17/10，1799-17/10	Closed
11	2021.01.21	Ningbo	0725-17/10，0741-17/10，1651-17/10，1840-17/10，1730-17/10，1410-17/10，0610-17/10	Closed

Note: The above deficiencies come from the FSC inspection report in the past 36 months, with 5 detained items (closed). During the inspection, there were still 12 deficiencies that were not closed (without a re-inspection report), some deficiencies were rectified on board.

5. Performance Records

- **Speed and Fuel Consumption**

The fuel oil consumed by the main engine is 180CST, 120CST and MGO.

Condition	RPM	Speed kn	Fuel Consumption（t/d）	Design Speed kn
Ballast	460	12.8	14.6	13.0
Laden	460	12.3	14.7	

The fuel oil consumed by the auxiliary engine is MGO.

Condition	Working unit	Fuel Consumption（t/d）
At sea	1 set	0.92
At port	1 set	0.80
Loading	1 set	0.80
Discharging	2 sets	1.36

- **Last 10 Ports and Cargos**

Berth Time	Port	Cargo	Loading capacity（t）
2023.06.01	V2307	petrol	13865.782
2023.04.18	V2306	petrol	13959.187
2023.03.29	V2305	petrol	13779.876
2023.03.14	V2304	diesel oil	14998.292
2023.02.25	V2303	light fuel oil	14253.807
2023.02.04	V2302	diesel oil	13985.256
2023.01.13	V2301	diesel oil	13030.34
2022.12.22	V2214	petrol	13363.282
2022.12.11	V2213	diesel oil	12923.209
2022.12.04	V2212	light fuel oil	14777.91

- **Hull thickness measurement**

The ship was underwater hull thickness measurement during the special survey on July 2019. The structure thickness measurement in the 0.4L area of the midship is as follows:

NO.	Location	Original thickness（mm）	Corrosion rate（%）	Ultimate corrosion rate（%）
1	**Main deck**			
1.1	Main deck	12/14	3.3	20
1.2	Deck longitudinal	10/14	4.0	25
3	**Ship side**			
3.1	S strake	14	2.9	20
3.2	E-L strake	12/14	3.3	20
3.3	Side Longitudinal	11/12	3.6	25
2	**Hull bottom**			
2.1	K strake	15	2.7	20
2.2	A-C bottom Plate	13	3.1	20
2.3	D bilge	13	3.1	20
2.4	Bottom longitudinal	14	2.9	25
2.5	Bottom girder	12/14	3.3	25
4	**Cargo tank**			
4.1	Inner bottom	14/16	2.9	20
4.2	Inner bottom longitudinal	14	2.9	25
4.3	Inner shell plate	12/14	3.3	20
4.4	Inner shell longitudinal	11/12	3.6	25

4.5	Side ballast tank platform	10	4.0	25
4.6	Longitudinal bulkhead	14/16	2.1	20
5	**Fore peak**			
5.1	Bulkhead	10/12/14	3.0	20
5.2	Bulkhead stiffener	12	2.5	25

Note:

(1) The main deck within the 0.4L area of this midship was found corrosion rate of 4% at the deck longitudinal.

(2) The 4% corrosion rate was found at the top platform in the side ballast tank.

(3) The 3% corrosion rate was found at the top of the bulkhead in the fore peak.

(4) The corrosion rate of the structures above this ship is less than 5%.

6. Technical Status

6.1 Hull Structure Condition

The paint of the shell plate was found basically complete, and the ship's name, port of registry, load line and draft mark were found clear and full painted.

The overall condition of the shell plate was found general good, without significant corrosion.


NO SMOKING
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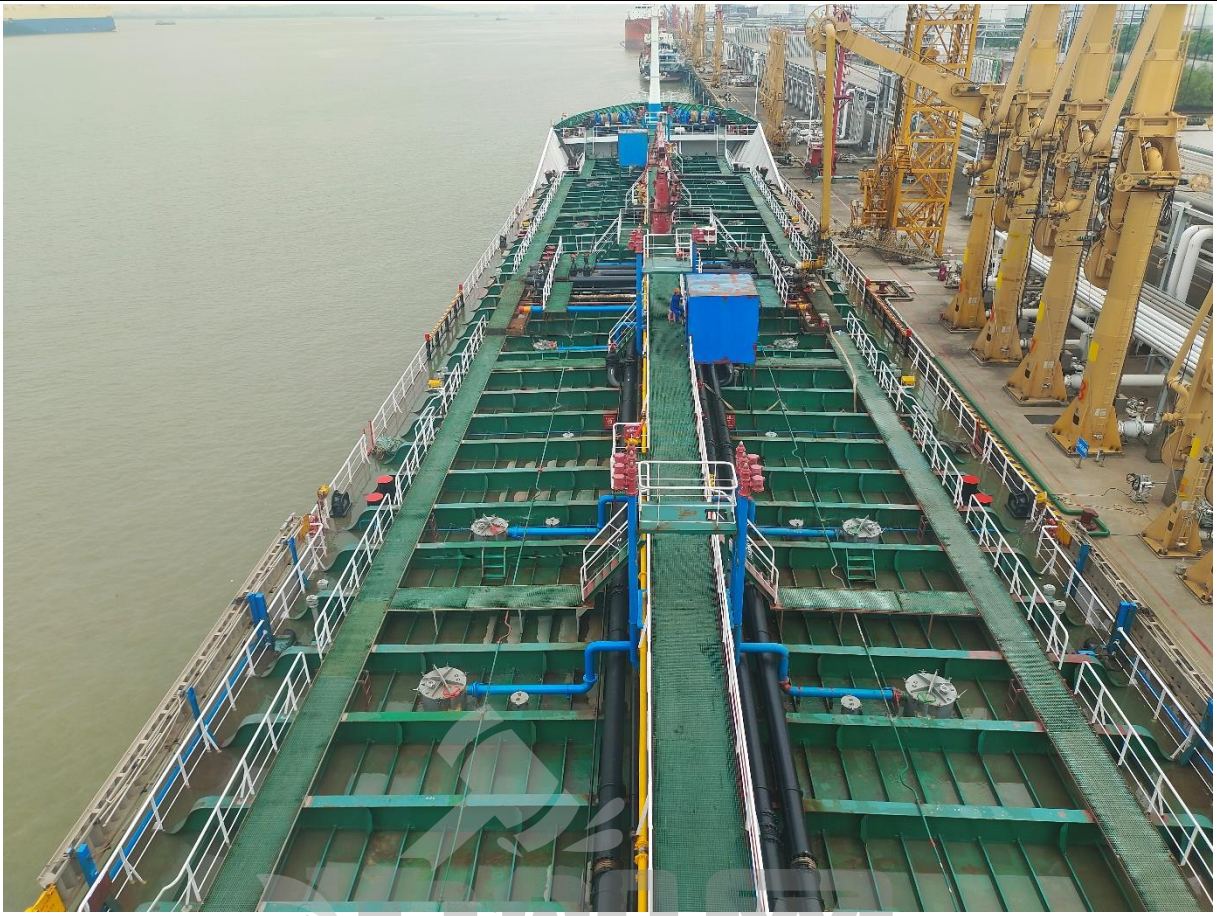
6.2 Bow thruster room and equipment

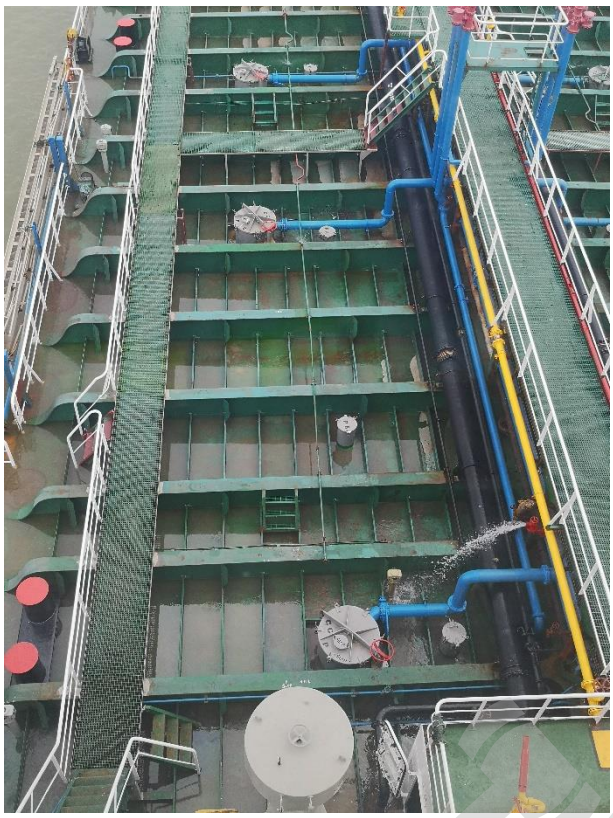
This ship is equipped with a bow thruster and an emergency fire pump device in the bow thruster room. The bow thruster room is equipped with a lifeline, and the ladder structure was found complete and free of rust. The bow thruster room is equipped with main and emergency lighting, with complete lighting fixtures and normal lighting. No significant water accumulation was found to be piled up in the bow thruster room. The housing, base, and bolts of the bow thruster motor were found to be free of rust, and operating instruction was posted next to the power distribution panel. The power supply of the emergency fire pump is supplied by the main and emergency power sources, and the distribution box was found in a constantly lit state. The housing of the emergency fire pump motor was found to be free of rust, with intact paint on the pipeline, no leakage. The inlet and outlet valves were found in a normally opening state, with a small amount of rust on the flange of the outlet.

6.3 Cargo tank and control system

6.3.1 Cargo tank structure and pipeline

During the inspection, the ship was in an unloading state and did not meet the conditions for entry inspection, so the specific situation inside the tank was unknown. The paint condition of the deck gangway was found intact, the grille and side railing structures were found basically intact. The paint condition of the deck longitudinal was found intact and free of rust on the weld joint and the drain hole. The faceplate of the strong beam was found spot rust, without significant rust or crack at the chamfer toe end. The paint on the deck pipelines in the cargo hold area was found intact, without significant rust on the flange interface. The P/V vent pipe and vent valve were found to be free of significantly rusted. No significant rust was found on the edges of the cargo cover, the hand-wheel, and the hand-wheel screw. The sealing condition of the observation hatch cover and washing hatch cover was found general good, without significant odor of oil and gas leakage.





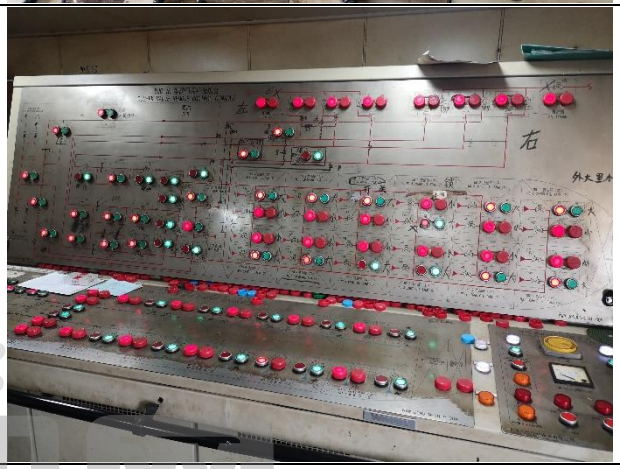
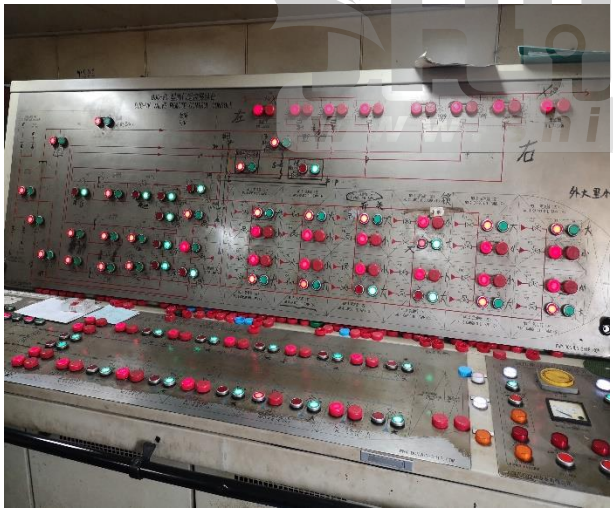
6.3.2 Cargo tank monitoring system

● The monitoring room is equipped with a monitoring console for cargo oil level, temperature and pressure in the tank and combustible gas alarm system of the pump room. The real-time monitoring indicator light was found constantly working, and the last pump room gas detection test record was on May 12th, 2023.

● The monitoring room is equipped with valve remote control console for cargo oil tank pipeline, cargo pump room pipeline, and ballast water pipe valve remote control, hydraulic pump station remote control unit operation console. The indicator light button shows that the valve of the 1 # cargo oil pump pipeline is open, the valves of the 3 # and 4 # cargo oil tanks are open, the regulating valve of the ballast water tank is open, and the ship is in the unloading state.

● The monitoring room is equipped with an ODME device, and the inspection is valid until June 3rd, 2024. The ship's oil pollution prevention certificate records that the system has been recognized in accordance with MEPC.108 (49).




6.4 Cargo pump room and pipeline

The opening and closing of the pump room door was found interlocked with the fan and lighting inside the room. The ventilation grille blades in the pump room were found to be free of rust, and the ventilation can be closed externally. The handle of the fire gate was found intact. The watertight bulkheads separating the pump room from the engine room are equipped with fireproof insulation dressings without damaged. The paint on the pump body was found intact without significant

corrosion. The sealing of the pipeline flange was found intact without large gaps, and the bolts were found no significantly corroded. The hand-wheel screw rod of the sea chest was found general good, with a small amount of rust on the valve box. The checkered plates were found to be basically free of oil stains, no signs of leakage at the bottom of the bulkhead, and no significant oil stains at the bottom of the pump room.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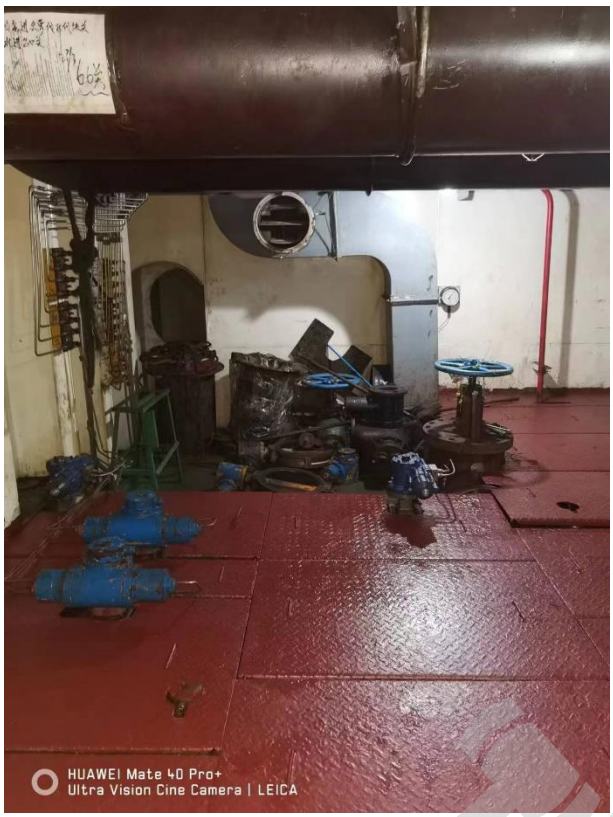


6.5 Main Deck and Deck Machinery

The ship is equipped with each set windlass on port and starboard of the forecastle deck, the body structure and base bolts were found intact. No significant corrosion was found on the brake wheel and clutch gear. The hydraulic pipeline was found to be free of damage and no significant oil leakage. The paint of the bollard on the forecastle deck was found intact and slightly worn. The guide pulley was found no notches and can rotate freely. The ship is equipped with each set winch on the port and starboard of the main deck aft, and the winch body structure and base bolts were found significant corrosion, but no thinning on structure. The brake band was found without thinning, and no deformation on the winch roller, and the mooring rope was found to be free of damage. The paint condition of the winch body was found general, with obvious rust. The guide pulley was found no notches and can rotate freely.

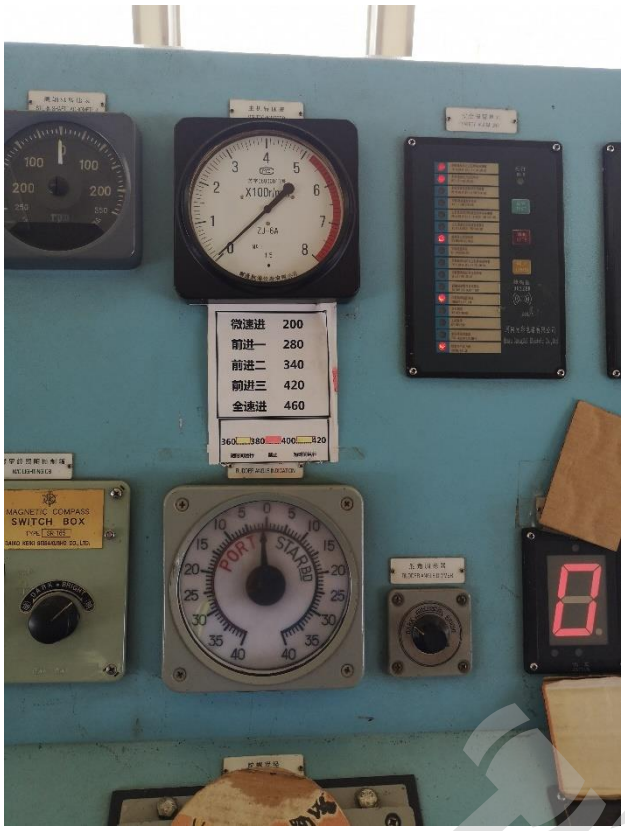





6.6 Bridge Equipment

The watertight condition of the front window in the wheelhouse was found good, with good appearance on the rotating window, and the ceiling was found intact without deformation. The navigation and communication equipment of this ship were found imported from Japan, with intact appearance. This ship is equipped with a gyro compass and a bearing compass, the reading was found consistent and no bubbles inside the compass. The readings of the autopilot, rudder angle indicator of this ship were found consistent and near zero.

The AIS static information of this ship was found consistent with the actual situation, and the MMSI, IMO number, and call sign were found consistent with the actual ship. This ship is equipped with C station (441219129), medium/high frequency and NBDP. The emergency lighting of the ship was found working normal and has one set of backup power supply. The radar transponder battery is valid until March 2025, the battery of EPIRB is valid until November 2025, and the inspection of the hydrostatic release device is valid until December 2025.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前进一 280
前进二 340
前进三 420
全速进 460
MAGNETIC COMPASS
SWITCH BOX
PORT
STARBD


D8—Ⅲ
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正常工作
照明亮度
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自动识别仪
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00 在航 01 锚泊 02 失控 05 靠泊
AIS 状态及时更改
AIS Pilot Plug


坦克王
TANKEWANG ELECTRIC APPLIANC
JRC
GPS NAVIGATOR JLR-7700MKⅡ


SNX-100
NAVTEX RECEIVER
SAMYUNG

6.7 Accommodation area

This ship is equipped with a crew mess room and an officer mess room. The indoor lighting was found intact, and the decoration condition was found general good, without deformed or damaged. No crack was found on the side window glass.

The cleanliness of the kitchen was found good, and the kitchen facilities were found complete. The stove, dining table, and sink are all made of stainless steel. The range hood is a mechanical exhaust type, without a large amount of oil stains on the filter mesh.

This ship is equipped with a food cold store, with complete door locks, and temperature gauges and alarm light nearby the door. The refrigeration compressor in the cold store was found in normal working condition, without significant damage to the insulation laying and pipeline wrapping.

6.8 Engine Room and Machinery

6.8.1 Main Engine

The main engine was found to be free of significant oil stain, and the explosion-proof cover of the crankcase was removed during the inspection. The nameplate of the main engine was found clear and complete, without significantly loose of the pipeline joints.

The appearance of the main engine turbocharger was found intact, and the packaging material for the exhaust pipe was found basically intact. Obvious oil contamination was found at the

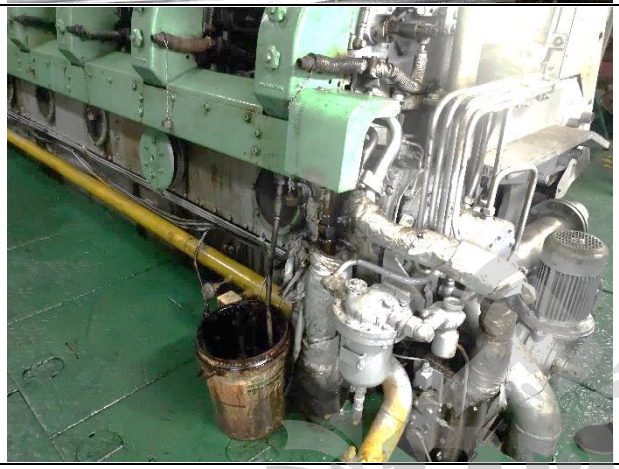
high-pressure oil pipe fuel leakage alarm device, and the residual oil pipe was found not connected to the residual oil tank.

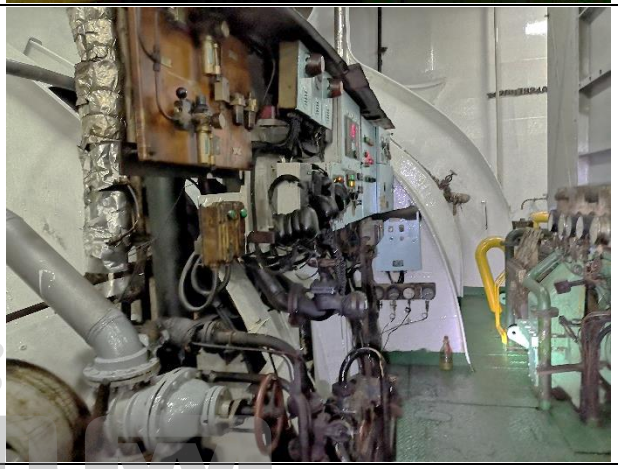
Emergency operation machine is set beside the main engine. The Tachometer was found in the zero state, the safety alarm unit and the order indicator were found in the constant state, and all instruments were free of damage.

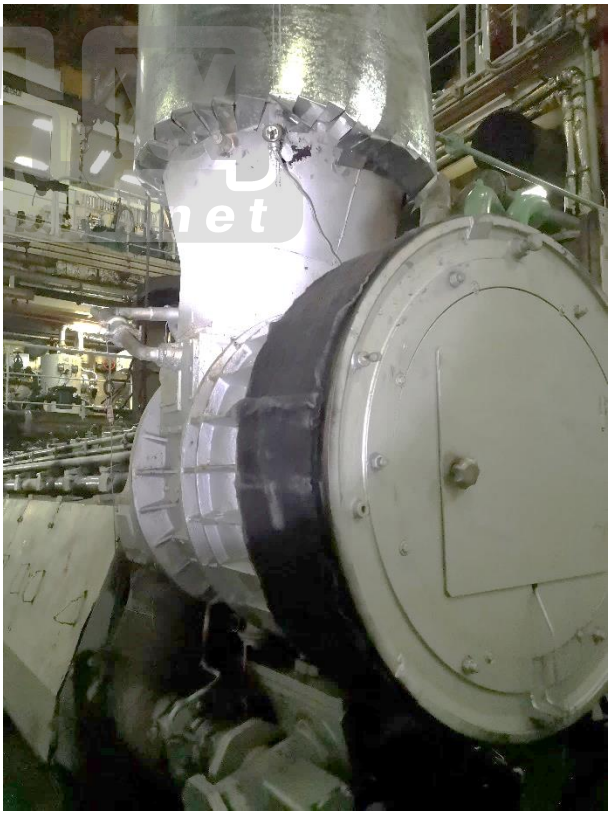
The tail shaft seal adopts oil lubrication, and the liquid level in the lubricating oil tank was found at a high level.

According to the report provided by the owner, the main engine has been in operation for 4289.7 hours after cylinder maintenance, and some of the high-pressure oil pumps of the cylinders have been replaced recently.

缸号	缸套	活塞头	高压油泵	主轴承	连杆轴承	吊缸后运转时间
1	10818	10818	752.1	10818	10818	4289.7
2	10818	10818	4289.1	10818	10818	4289.7
3	10818	10818	2189.1	10818	10818	4289.7
4	10818	10818	4289.1	10818	10818	4289.7
5	10818	10818	4289.1	10818	10818	4289.7
6	10818	10818	2189.1	10818	10818	4289.7
…	10818	10818	4289.1	10818	10818	4289.7
备注	增压器拆检后运转时间：					







6.8.2 Steering Gear Room

The cleanliness of the steering gear was found general good, without significant leakage at the joints, valves, and cylinder fillers of the pipeline. A small amount of oil accumulation was found in the floor drip tray.

The both ends of the steering gear oil cylinder is equipped with relief valves and pressure gauges, and the pressure gauge was found normal and in the zero position.

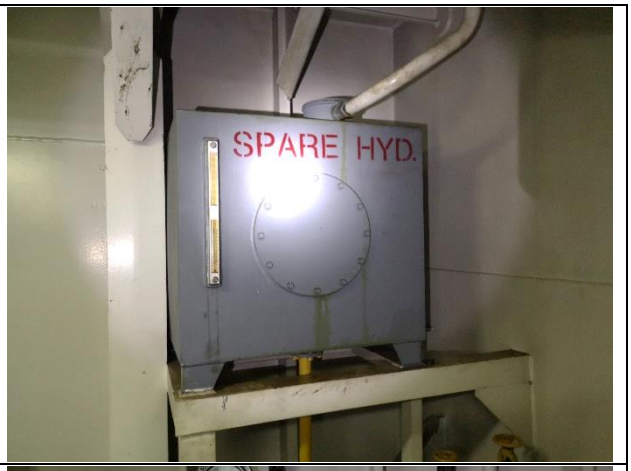
The Level sensor of the steering gear standby hydraulic oil tank was found complete, and the standby hydraulic oil was sufficient.

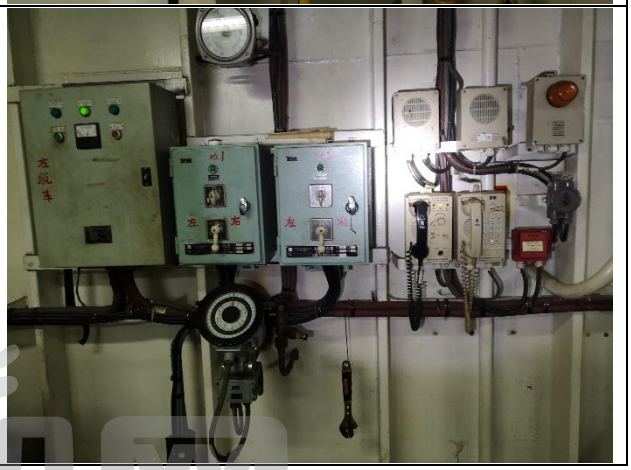
The steering gear room is equipped with anti-slip wooden grilles, and railings were set around the steering gear. The schematic diagram and operating instructions were posted.

The steering gear room is equipped with manual rudder and electrically controlled emergency rudder, as well as sound powered telephone, audible and visual alarm equipment, etc.

The emergency ladder was found set at the rear of the steering gear room, which leads to the main deck and is equipped with a lifeline.

The steering gear room is equipped with a compass, the reading was found clear and consistent with the compass readings on the bridge. The reading of the rudder angle indicator was found consistent with that of the bridge.

6.8.3 Main Generator

The ship is equipped with three sets main generators, and the overall appearance of the generator sets was found clean and good, with no significant oil stains on the chassis. The body paint was found to be free of damage, with no rust on the pipelines and components.

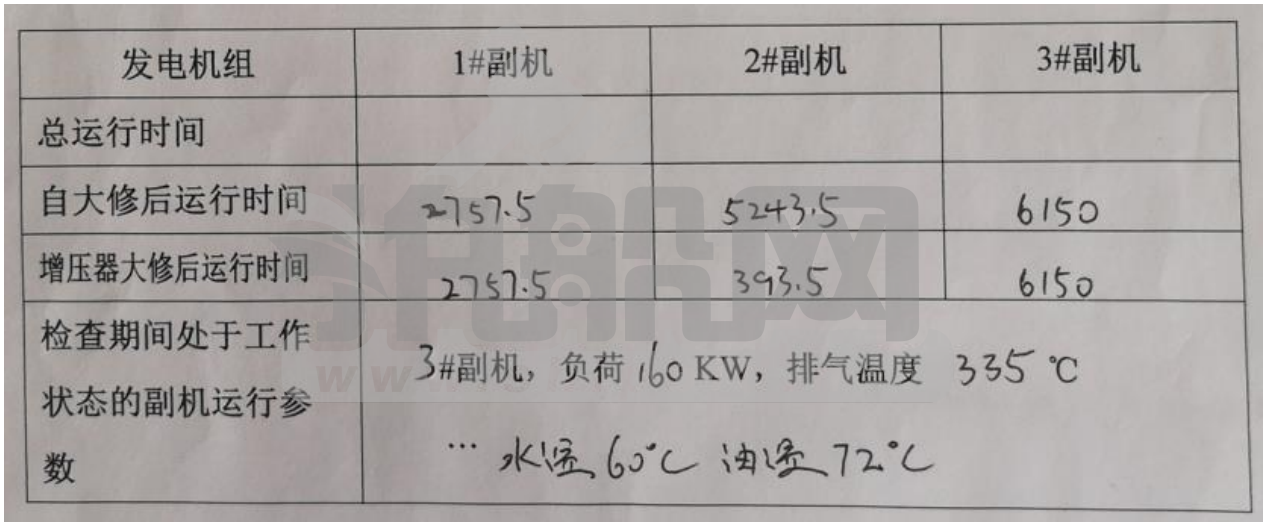
The three sets auxiliary engines were found supplied oil by the same oil tank and are equipped with isolation valves in areas that are easily accessible to personnel.

Three sets main generators can achieve parallel operation simultaneously. 1 set generator is used for navigation/berth and departure, and 2 sets generators are used for unloading liquid cargo.

During the inspection, the # 2 and # 3 generator units were found in running, and all monitoring parameters were found within the normal range, consistent with the data from the monitoring instrument nearby the main generator.

Item	#2 main generator	#3 main generator
Rotary speed（rpm）	1490	1511
Water temperature（℃）	60	61
Outlet temperature （℃）	51	54
Oil pressure（MPa）	0.45	0.46
Oil temperature（℃）	74	74
Voltage（V）	28	27.9

According to the report provided by the owner, the 1 # auxiliary engine has been undergone maintenance recently, while the other auxiliary engines have worked for 5243.5 hours and 6150 hours respectively.



发电机组	1#副机	2#副机	3#副机
总运行时间			
自大修后运行时间	2757.5	5243.5	6150
增压器大修后运行时间	2757.5	393.5	6150
检查期间处于工作状态的副机运行参数	3#副机，负荷 160 KW，排气温度 335 ℃ … 水温 60℃ 油温 72℃		



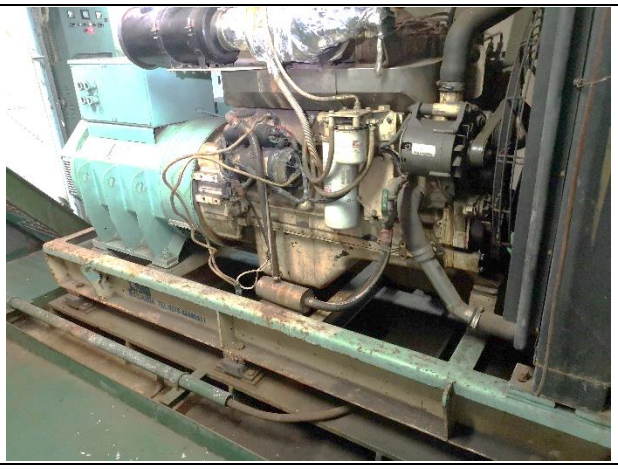



6.8.4 Emergency Generator

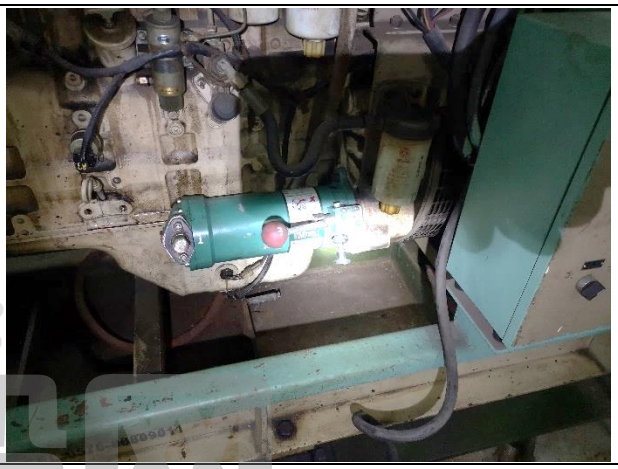
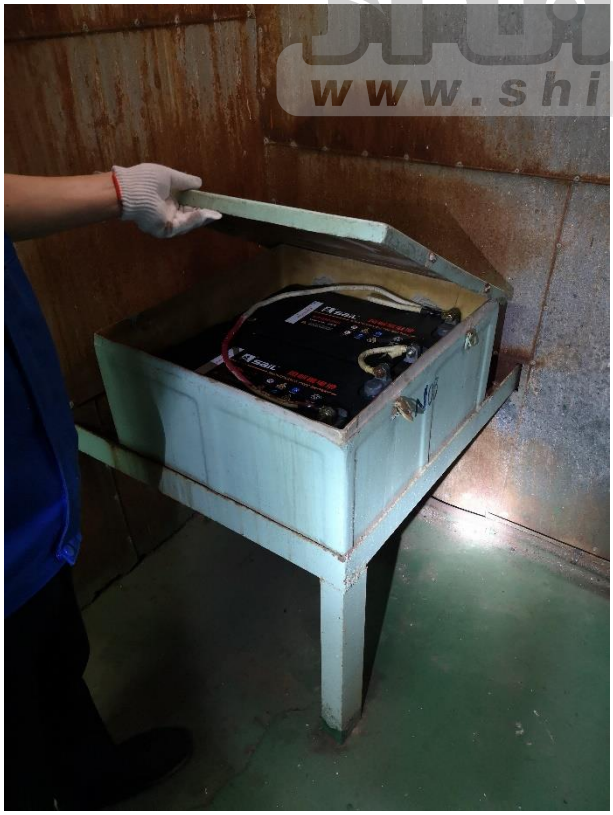
The emergency generator room's weathertight door and door frame were found slightly rusted, without significantly deformed on the waterproof adhesive strip. The quick opening device was found open and closed flexibly. The indoor lighting was found intact, with the fireproof laying material complete. The appearance of the emergency generator set was found clean, the insulation and wrapping of the exhaust pipe were found complete, and the ventilation grille was found complete.

The liquid level of the oil tank which supply oil to the emergency auxiliary engine was found normal, and the steel wire of the quick closing valve was found to be free of significantly rusted. The emergency auxiliary engine can be started using two modes: battery and manual start. The main switch of the emergency distribution board is Schneider, the closing switch was found always on, as well as the grounding indicator light.

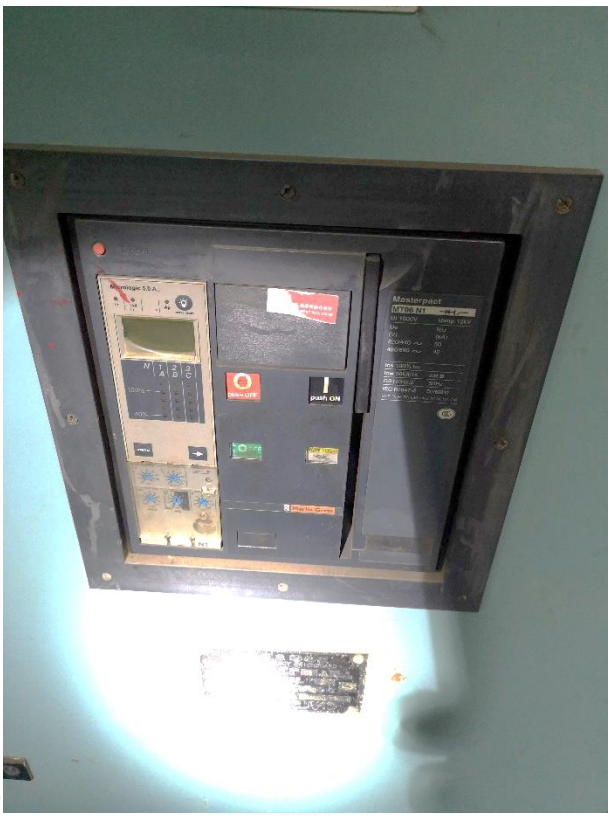




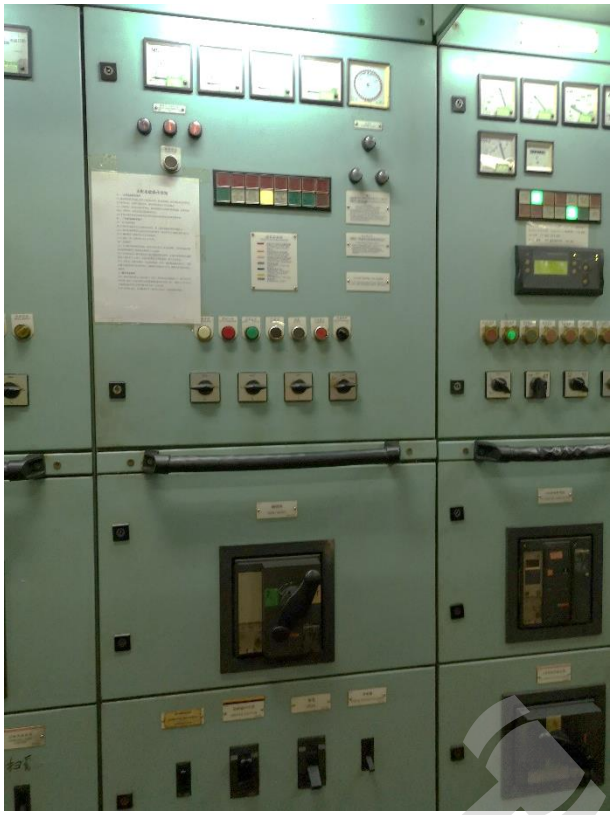




6.8.5 Engine Control Room

The self-closing door, indoor lighting fixtures, and fire insulation laying of the engine control room were found in good condition. The ship is equipped with 10 main switch boards in total, the main switch is Schneider, and the insulation pads was found set in the front and rear of the switch board. The appearance of all switches, indicator lights, and instruments was found normal.

There are three load switch boards for the cargo oil pump in the engine control room, and the # 1 pump group was found in normal operation, with the cargo oil pump operating procedures posted.




6.8.6 Boiler

The ship is equipped with exhaust boiler and oil-fired boiler in the engine room. The oil-fired boiler was found not to be used currently, but it is in a usable state.

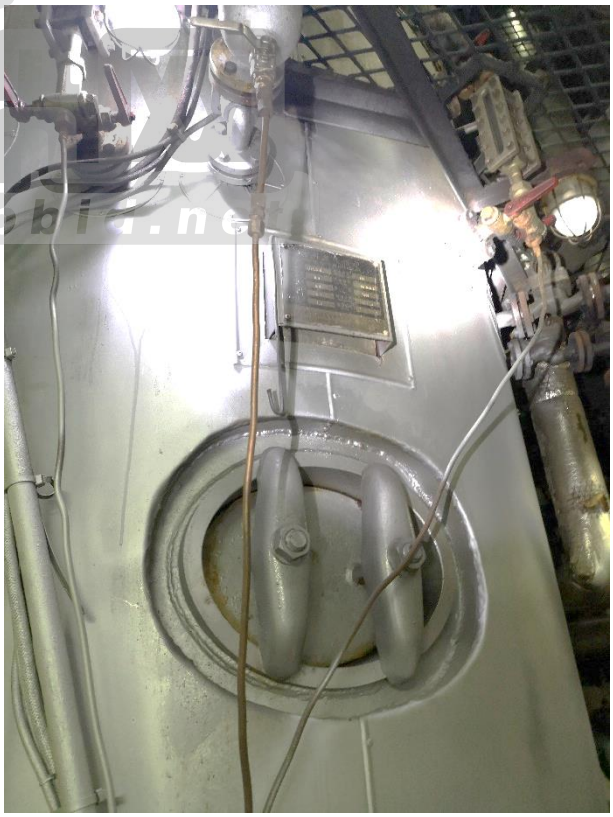
The exterior of the boiler body, exhaust pipe, and steam pipe were found all insulated and wrapped without obvious damage.

The boiler valve components were found no significant signs of water leakage, without significant leakage on the water supply pipeline.

The appearance of the boiler safety valve was found intact, without obvious corrosion or leakage.

The drip tray was found set below the combustion device of the oil-fired boiler, and set a combustion device control box with operating instructions posted.


燃油 辅助 锅炉



6.8.7 Anti-pollution equipment

The ship is equipped with an oil purifier and fuel supply unit in the engine room. A small amount of oil sludge was found on the chassis of the oil purifier, and the pressure gauge reading of the oil supply unit is 0.25MPa, without significant corrosion or leakage in the pipeline.

The ship is equipped with domestic sewage treatment device and bilge water separator in the engine room. The pipelines and valves were found to be free of rust, and the appearance of the control box and emission monitoring alarm was normal.







NO.1
消防泵

6.9 Firefighting and lifesaving equipment

6.9.1 Lifesaving equipment

The ship is equipped with one 26-person freefall lifeboat, and one 6-person rescue boat. The hull appearance was found to be free of crack, the thruster facilities were found intact, and the keel plate has not damaged.

The roller groove of the lifeboat frame was found to be free of significant rust or thinning, without damage on the steel wire, and no rust on the lifting roller and release hook.

The ship is equipped with one inflatable life raft with 25-person and one life raft with 6-person. The release device of the life raft was found complete, the inspection marks were found clear and complete.

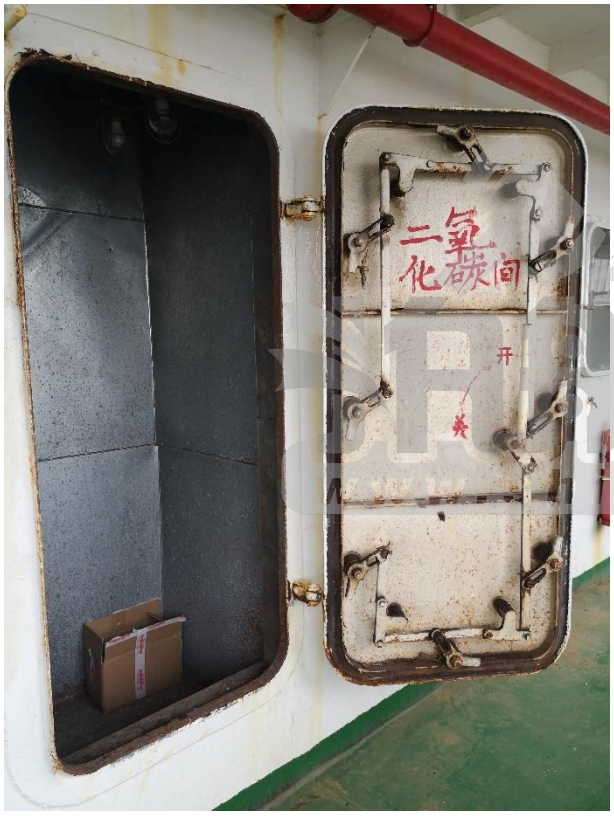
6.9.2 Firefighting equipment

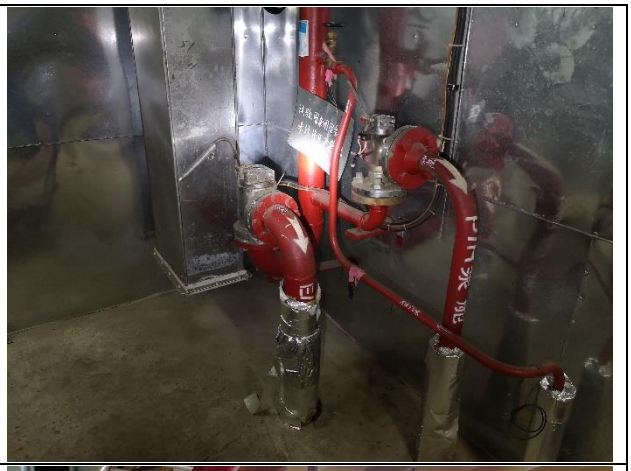
A small amount of rust was found on the sealing strip groove and door frame of the CO2 room, and the indoor fire protection was found complete. The CO2 cylinder release valve and the bottom of the cylinder were found to be free of corrosion, and the safety pin has been pulled out and is in an

instant usable state. The CO2 cylinder inspection marks were found complete, and the last maintenance was in April 2023, with an expiration date of April 2025.

The fire insulation in foam room was found laid in place, the foam generator and pipeline were found basically free of rust, and the inspection marks were found complete. The last maintenance was in April 2023, with an expiration date of April 2024.

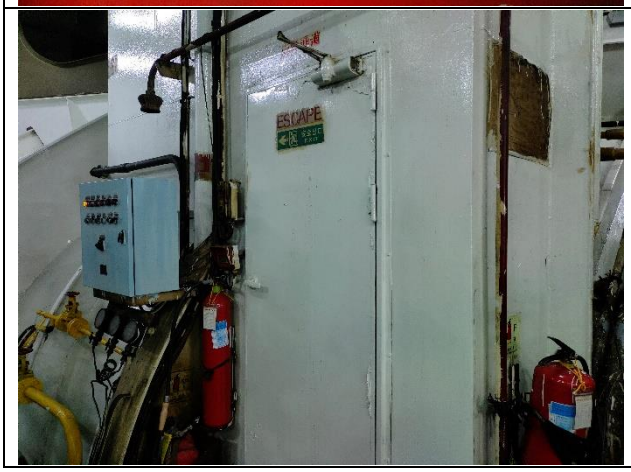
The self-closing door of the emergency passage in the engine room was found in a normally closed state, and the opening and closing of the self-closing device were normal. The fire separation structure inside the passage was found complete, the lighting was normal. The lifeline and ladder in the passage were found fully equipped.



泡沫站
FOAM STATION
F
泡沫间
严禁烟火
NO SMOKING AND FIRE WORK IN FOAM ROOM


固定式灭火装置
Fixed fire-extinguishing installation
宁波市海螺亚宁消防设备有限公司
NINGBO HAISHUYANING FIRE FIGHTING EQUIPMENT CO. LTD


ESCAPE


7. Conclusion

The ship of ocean-going designed was built as an oil tanker with single engine and single propeller and equipped with bow thruster, suitable for loading oil with a flash point≤60℃. The cargo hold is double bottom and double hull. It was delivered on September 2009, and was built under CCS classification by Zhejiang Zhenxing Ship Repairing and Building Co., Ltd. The total capacity of tank is 20170.514m³, the ship is operating domestic coastal refined oil transportation now. The following conclusions were given against the ship certificates, technical drawings and inspection.

(1) The last intermediate survey has been completed on August 2nd, 2022 in Ningbo, with next special survey due date of September 5th, 2024. The expiration date of the transportation business license for domestic coastal refined oil transportation is March 15th, 2024

(2) The SMS performance of the ship is average. 5 detained items have been closed, but still have some defects were no closed (without a re-inspection report), the detailed information of FSC inspection on this ship in the past 36 months can be seen in this report.

(3) Under laden condition, when the main engine speed reaches 460r/min, the speed is 12.3kn, and the fuel consumption is 14.7t/d. The fuel oil used by the main engine is 180CST, 120CST and MGO, mainly consumed 120CST currently.

(4) The paint condition of the shell plate was found intact. The corrosion rate of the 0.4L midship area and fore peak was found less than 5%.

(5) The gangway structure in the cargo tank area was found intact, the paint surface of the cargo oil tank cover was intact, with good sealing. The flange of the cargo oil outlet was found not rusted, as well as the P/V vent valve.

(6) The cargo tank and slop tank of this ship are equipped with epoxy special coating, and equipped with heating coils in the cargo tank.

(7) The cargo oil monitoring room is equipped with monitoring and alarm system for cargo oil tanks and pump rooms, as well as remote control systems for valves in each tank, and is equipped with ODME equipment.

(8) The cargo pump room of the ship is equipped with 2 sets of 750m³/h cargo pumps and 1 set of 500m³/h cargo pump. The cleanliness of the pump room was found good, the ventilation and lighting facilities were found complete, the pump flange was found to be free of significantly rusted.

(9) The paint condition of this ship's deck machinery was found basically intact, without rust or thinning on structure. The appearance of one set crane on the deck was found intact.

(10) The navigation and communication equipment of this ship were found imported from Japan, with intact appearance.

(11) Some of the high-pressure oil pumps of the cylinders have been replaced recently, and the explosion-proof cover of the crankcase was removed. Obvious oil contamination was found at the high-pressure oil pipe fuel leakage alarm device. The 1 # auxiliary engine has undergone maintenance recently, and the isolation valve for the oil tank was found located the place that is easily accessible to personnel. The oil-fired boiler was found not to be used currently, but it is in a usable state.

(12) The lifesaving and firefighting equipment on this ship was found within the inspection validity period and in good appearance condition.