

M.V “NING HAI TUO 4002”

Technical Report

【 CJPG-JS-23-KY-324 】



1. Summary

Entrusted by the customer, our company organizes the surveyor to inspect the technical condition of "NING HAI TUO 4002" and issue the technical report according to the ship data provided by the customer. The report reflects the ship's technical status at the time of inspection and is for reference only. In case of any discrepancy, the current situation of the ship shall prevail, and our company shall not assume legal liability. The specific report is as follows:

2. Principal Particulars

Ship Name	NING HAI TUO 4002	PoR	Nanjing, China
Type of Ship	Tug	IMO	9676462
LOA	62.00m	Class	CCS
LBP	57.64m	Trading Area	A1+A2+A3
MLB	12.60m	Date of Keel laying	April 20th, 2012
MLD	6.00m	Date of Delivery	March 12th, 2013
Gross Tonnage	1406	Shipbuilder	Zhejiang Fangyuan Ship Industry Co., Ltd
Net Tonnage	421	Model of M/E	Zibo Diesel Engine LC8250ZLCZ-11
Bollard Pull	56.4T	Rated Power/Rated Speed /No.	1617kW×750r/min×2 sets

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

3. Ship Description

3.1 Class notation

★ CSA, ★ CSM, BRC

3.2 Overview

The ship was built as an ocean tug with single deck, two engines and two propellers, with a total of 5 watertight transverse bulkheads and a fixed pitch propeller. It was delivered on March 12th, 2013, and was built by Zhejiang Fangyuan Ship Industry Co., Ltd. It is mainly used for ocean towing and related operations, with a designed free speed of 12.5 kn. The NOx emission standard of the main and auxiliary engines meet TIER II.

3.3 Major Equipment

◆ Engine Machinery

Machinery	NO.	Model	Parameter	Manufacturer
Main Engine	2	8250ZLCZ-11	1617kW×750r/min	Zibo Diesel Engine
Gearbox	2	--	3.9524:1	Hangzhou Advance Gearbox Group
Main Generator	2	1FC5 406-6TA42-Z	300kW×400V	CSIC
Diesel Engines of Main Generator	2	Z6170ZLD	330kW×1000r/min	Zibo Diesel Engine
Boiler	2	LZY0.5/60-0.7 GFL40-0.7	0.9 MPa 0.8 MPa	--
Domestic Sewage Treatment Plant	1	WCBX-20B	0.70kg/d 1.4m ³ /d	Wuhan Zhongzhou Env .Protection Equipment
Hydraulic Towing Winch	1	MHYW600/1700	Rated load: 600KN×5m/min Light load: 40KN×40m/min Brake force: 1700KN	Jiangsu Malide Machinery

◆ Communication and navigation equipment

Equipment	NO.	Model
Gyro Compass	1	DH-2G
Magnetic Compass	1	CGY-165
Radar	2	FAR-2117/FAE-28X7
INMARSAT C	1	FURUNO-FELCOM-15
INMARST F	1	-
SSB	1	SAMYUMG-SRG-1150DN
VHF-Radiotelephone	2	FM-8800D/8800S
GPS	1	GP-150
Weather Facsimile	1	FAX-408
Anemometer	1	CZ-05
Echo Sounder	1	DS-2008
Autopilot	1	THD2001A-ZT
Radio Station	1	SAMYUMG-SRG-1150DN
EPIRB	1	SEP-406
NEVTEX	1	SNX-300
Wave Recorder	1	/
Electronic Chart	1	GPS-XL-2118C

◆ Cargo Hold Capacity

Fuel oil tank	426.68m ³
Ballast tank	488.97m ³
Lubricating oil tank	13.55m ³
Fresh water tank	195.28m ³
Diesel oil tank	166.81m ³

4. Class Status and Surveys

4.1 Statutory Certificates or Documents of Compliance

No.	Certificates Description	Issue Date	Expiry Date
1	Classification Certificate	2023.03.23	2028.03.11
2	International Air Pollution Prevention Certificate	2023.03.23	2028.03.11
3	International Anti-Fouling System Certificate	2023.03.23	--
4	International Energy Efficiency Certificate	2023.03.23	--
5	International Oil Pollution Prevention Certificate	2023.03.23	2028.03.11
6	International Sewage Pollution Prevention Certificate	2023.03.23	2028.03.11
7	International Tonnage Certificate	2019.02.22	--
8	Certificate of Registry	2013.03.21	--

Note: the above certificates are all valid.

4.2 Class Survey Records

The last special survey has been completed on March 23rd, 2023 in Ningbo.

4.3 Performance Records

According to the information provided by the owner, after returning to China in December last year, the ship has been berthing at the port of Da'mao island, Zhoushan. It has been suspended for more than half a year since the inspection date, and the special survey has been completed during this period. According to the log book, the operating speed is 10 kn. According to the engine log, the ship entered the ship dock on March 8th. On April 21st, two main engines operated for 3 hours each, and two main generators operated for 3 hours each, consuming a total of 0.72 tons MGO. On April 22nd, the pneumatic operating valve of the right main engine was replaced. No latest FSC reports were found on board, only on-site inspection records of June 9th and August 26th, 2021 were retained, without rectification records.

5. Technical Status

5.1 Hull Structure Condition

The condition of the shell plate above the waterline was found general good, with intact paint. The ship's name, port of registry, draft mark, bow thrust mark and other markings on the hull was found clear and full painted. The condition of the shell plate below the waterline was unknown.





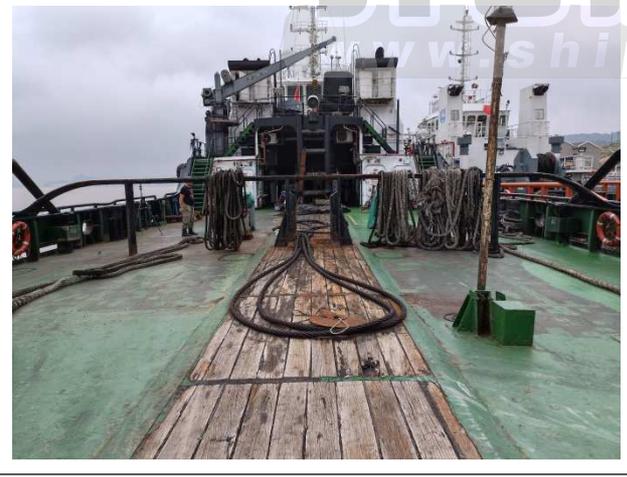
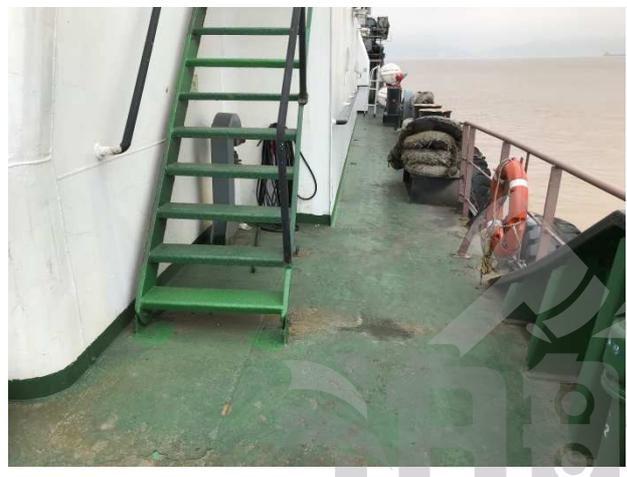
5.2 Main Deck and Deck Machinery

The overall condition of the main deck and gangway was found general. No obvious deformation was found on the bulwarks of both sides, and the pipes, ventilation ducts, and other structures on the main deck were found intact.

The ship is equipped with one set 600KN hydraulic towing winch on the main deck, with a bollard pull of 56.4T. The appearance of the winch body was found intact without damage. One set windlass was installed on the forecastle deck, with a complete body, but the paint condition was found average and locally corroded. The structure of the outfitting components such as bollard and fairlead were found complete, and the paint condition was average.

One set crane with a lifting capacity of 10KN was installed on the forecastle deck, with a complete body structure and average paint condition.

Two sets hydraulic winches were installed on the main deck aft, with no damage to the body and poor paint condition.





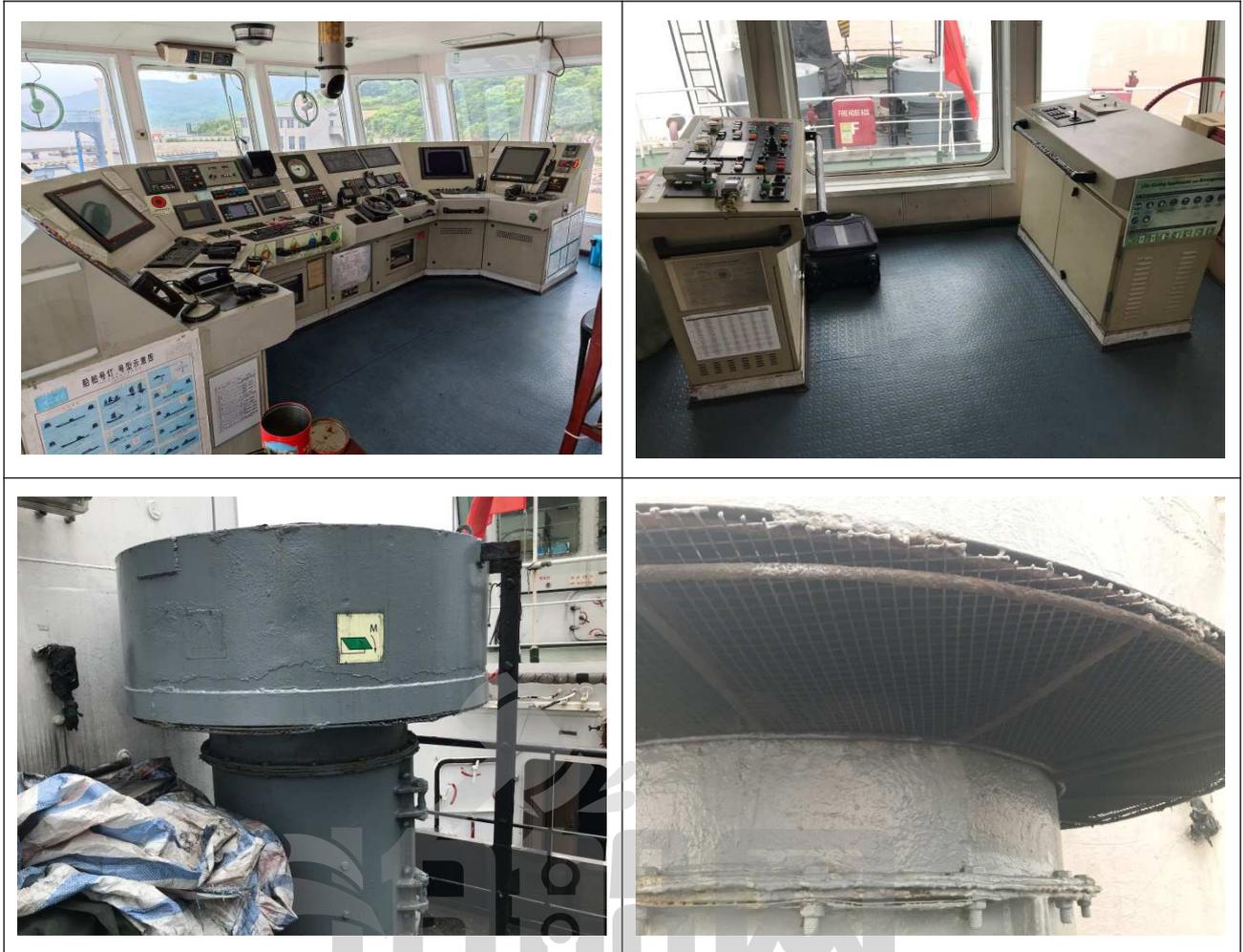
5.3 Superstructure Condition

The each deck of the superstructure was found basically flat. The structure of outdoor stairs, funnel and other facilities were found complete, with average condition paint. The condition of interior decoration was found general good, with intact insulation laying on the walkways and interior walls.

The steel doors, windows of wheelhouse were found complete, and no obvious damage on the insulation laying. The bridge console and relevant equipment were found basically complete and clean.

The ventilation duct of engine room installed on the bridge deck was found complete, with average paint, and the ventilation hood and fire screen were found basically complete.





5.4 Engine Room and Equipment Condition

The cleanliness of the engine room was found general good, and no significant oil contamination attached to the equipment body. The arrangement of the cable rack was found neat, without obvious damaged on the insulation laying.

5.4.1 Main Engine

M/E: Zibo Diesel Engine LC8250ZLCZ-11, 1617kW×750r/min×2 sets

The cleanliness of the main engine was found general good, without obvious coating damage. The insulation of the pipeline was found basically intact, without significant oil stain in bilge.



5.4.2 Main Generator

The ship is equipped with two main generator sets in the engine room, the model is 1FC5 406-6TA42-Z, 300kW. The model of the diesel engine is Z6170ZLD, 330kW * 1000r/min. The cleanliness of the main generator sets was found general good, with basically intact paint on body and local rust. No significant oil stain was found on the base, and no significant rust on the pipelines and components.



5.4.3 Engine Control Room

The ship is equipped with a console and main switch board in the engine control room. The indoor condition was found complete and clean. The appearance of the monitoring instrument was found normal, all indicator lights and button protection devices were complete.



5.4.4 Steering Gear Room

The arrangement of the anti-slip wooden grille in the steering gear room was found complete, with oil leakage on the upper rudder bearing seat. The steering gear is hydraulic machinery type, with complete transmission connection structure, good paint, and a small amount of oil stain attached to the body. No rust was found on the equipment and pipelines.



5.4.5 Life Saving Equipment

This ship is equipped with a rescue boat with a seating capacity of 6 people, without cracking or damage. The structure of the support frame was found complete without significant corrosion.

This ship is equipped with 4 life rafts with a seating capacity of 20 people each. The body appearance and the hydro-static pressure release device were found intact, without damage, and the inspection marks were clear and complete.



6、 Conclusion

The ship was built as an ocean tug with single deck, two engines and two propellers, with a fixed pitch propeller. The trading area is A1+A2+A3, and the designed free speed is 12.5 kn. It was delivered on March 12th, 2013, and was built by Zhejiang Fangyuan Ship Industry Co., Ltd. The following conclusions were given against the ship certificates, technical drawings and inspection.

6.1 The last special survey has been completed on March 23rd, 2023 in Ningbo, and the certificate is valid until March 11th, 2028. According to the engine log, the ship entered the ship dock on March 8th. On April 21st, two main engines operated for 3 hours each, and two main generators operated for 3 hours each, consuming a total of 0.72 tons MGO.

6.2 The ship is equipped with one set 600KN hydraulic towing winch on the main deck, with a bollard pull of 56.4T. The appearance of the winch body was found intact without damage.

6.3 The condition of the shell plate above the waterline was found general good, with intact paint. The markings on the hull was found clear and full painted. The overall condition of the main deck and gangway was found general. No obvious deformation was found on the bulwarks of both sides. The arrangement of the deck machinery was found complete with local rust. The condition of interior decoration in the accommodation area was found general good, with intact insulation laying.

6.4 The cleanliness of the main engine was found general good, with basically intact on the insulation laying of pipeline. The oil leakage was found on the upper rudder bearing seat of the steering gear.

