

PRE-PURCHASE ASSESSMENT **FINAL REPORT**

BULK CARRIER

MV SINOTECH MARINE



IMO NO.	*****
Port of Registry	Majuro
Year of Built	01-May-12
Builder Yard	CSSC GUANGZHOU LONGXUE SHIPBUILDING CO. LTD.
Classification	Class NK
Vessel State	In Service / Trading
Date of Inspection	27 th of Dec 2019
Port of Inspection	Qinzhou, China
Inspection Company	Sinotech Marine
Inspection Type	Pre- Purchase Inspection
Client	Confidential

NOTES TO READER

This assessment report has been prepared and issued by SINOTECH Marine Hong Kong for the sole use of the SINOTECH Marine's Customer. The purpose of this report is to offer an independent evaluation of the condition of the subject vessel, as found during the superficial Inspection of the vessel and in the independent opinion of the attending Surveyor/Inspector. The report is subject to any restrictions applied to the access of information, vessel areas, and/or records as described here in the report, and it is also subjected to the level of cooperation extended by the Ship Crew to the surveyor during the inspection. All details are given in good faith, and without guarantee. This report has been prepared and issued by SINOTECH Marine Corporation Hong Kong Ltd. to its Customer in accordance with the SINOTECH Standard Terms and Conditions which are available on our website www.sinotechmarine.com.

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Preamble

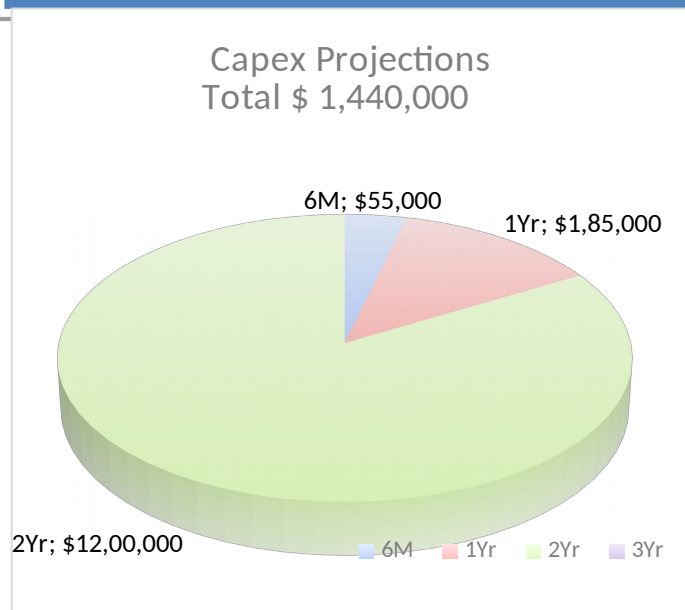
MV ***** was inspected by Sinotech Marine appointed surveyor for pre-purchase condition assessment at Qinzhou, China. MV ***** is a Bulk Carrier ship, registered at MAJURO. The final report for assessment of condition is based on superficial inspection by the surveyor, information shared by ship's crew and documents and records provided. This report should be read in continuation of the Preliminary Report submitted earlier. Objective of the report is to provide thorough condition assessment and grading of the various areas of subject ship.

Capex Forecast

Major Capital Expenses in next 3 years in USD

Items	Estimated Cost
Forthcoming Compliance	\$690,000
Upgradation	\$200,000
(Repair or Maintenance)	
Dry-Docking (2021)	\$550,000
Estimated Total	\$1440,000

Cost Break up

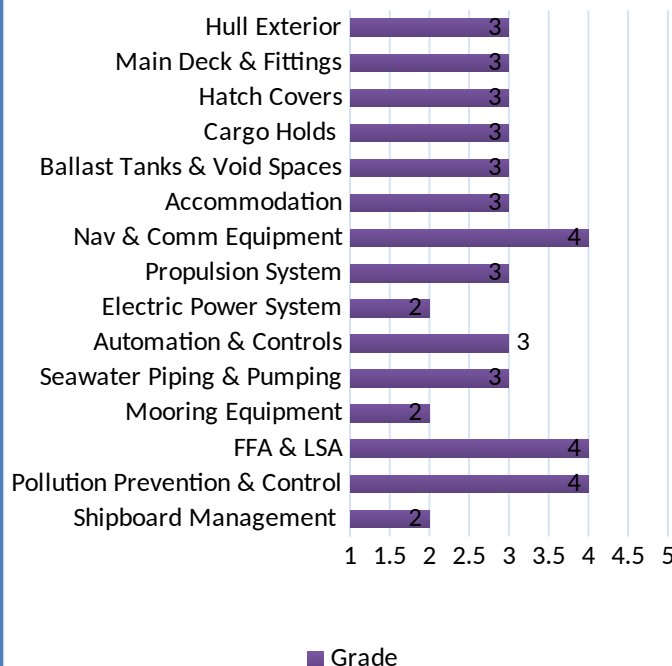


Description of the Grades

1	Unsatisfactory	Condition of inadequate strength or operational efficiency. Immediate extensive repair or renewal required to restore vessel serviceability.
2	Poor	Significant defect or damage present that require remedial action.
3	Fair	Obvious wear & tear, and other moderate deficiencies, require some level of corrective actions or repair works
4	Good	Non-significant wear & tear or minor defect, no immediate corrective action required
5	Very Good	Unimpaired condition without wear or deviation from original strength or operating efficiency

Average Vessel Grade 3.0/ 5.0 (Fair)

Vessel Grading



Areas of Concerns, Recommendations & Features

DEFECTS CATEGORIES

Critical Defect Urgent Remedial Action Required		Significant Defect May lead to a high future cost	Minor Defect, low cost defect, could be an Industry recommendation	A good Design or operational feature of the ship.
1	Description	Action-Timeline		Approx. Cost US\$
	Aux Engine No 2 not in use, assume lack of spares, no records on the performance, overhaul records etc, may lead to a major complete overhaul or repairs	<6M		\$20,000
	Aux Engine No 1 performance is unsatisfactory. Overhauling	<6M		\$10,000
	Chain Locker Repair to be carried out - Condition of Class	<1yr		\$20,000
	Main Engine and Aux Engine lack of spare parts mainly consumable spares for routine Maintenances.	<6M		\$15,000
	BWTS installation to comply with IMO requirement	<2 Yrs.		\$650,000
	Certification for Inventory of Hazardous Materials.	<1yr		\$10,000
	Retrofit additional Condenser, Chiller in the fuel line to use low sulphur fuel oil safely	<1Yr		\$30,000
	Main Engine Unit Decarbonization all units exceeding normal interval. Running hours manipulated.	<1yr		\$60,000
	Engine Room Various Leakages and Maintenance	<1yr		\$20,000
	Miscellaneous Deck De-rusting and Painting and upgradation	<1Yr		\$20,000
	Lube oil analysis of all machineries	<6M		\$10,000
	Intermediate survey by IWS	<1 yr.		\$25,000

Total Approximate Cost of Up-gradation (additional Cost): **\$890,000**

(The above cost is indicative cost for the up gradation in addition to routine maintenance and surveys and opinion of surveyor subject to actual determination of scope and repair location)

FUEL OIL CONSUMPTIONS

MACHINERY CONSUMPTION

Condition	Speed in Knots	% Load/ RPM	Ship's Logs		Charter Party	
			MT/Day		MT/day	
			FO	DO	FO	DO
Ballast	12	95 RPM	29.5	0.2		
Loaded	11.3	95 RPM	32.5	0.2		
Idle @ Port			2.5	Nil	2.5	Nil
Active @ Port			3.5	Nil	3.5	Nil
Laden @ Eco Speed	10.5 – 11.5	85 RPM	25	0.2	25	0.2
Ballast @ Eco Speed	11 – 11.5	85 RPM	25	0.2	25	0.2

Comments

- Above data as advised verbally by Chief Engineer but not shown any record. Buyer to request seller to provide the evidence for above consumptions.

LUBE OIL CONSUMPTIONS

Machinery	Lube oil	Amount (Liters/day)	Remark
Main Engine	MARINE D 3005	30	
Main Engine	TALUSIA UNIVERSAL	150	85 rpm
Diesel Generators	AURELIA TI 3030	15	

Comments

- Above lube oil consumptions as verbally reported by Chief Engineer –supporting document not presented.

Load	FUEL CONSUMPTION IN MT/DAY	RPM
MCR		
NCR		
75%	29	95
50%		

Comments

- Ship Crew could not find the Sea Trial Report or Sea Trial Record onboard. Buyer to request sellers to provide the sea trial report to know the designed speed and fuel consumptions.

LOAD	CONDITION	LOGBOOK	
		FO (MT/Day)	DO(MT/Day)
AUX ENGINE	At sea	2.5	
	Idle at port	2.5	
	Active at port	3.5	
AUX BOILER	At sea	Nil	
	At port	1.5	

VESSEL CONDITION ASSESSMENT

1.0 HULL EXTERNAL

1	QUESTIONNAIRE	YES/NO	ASSESSMENT
1	Are Draft Marks/ Plimsoll marks clearly visible and well maintained without rust?	Yes	
1.1	Is the paint coating on external hull found in satisfactory condition?	Yes	
1.2	Is the external hull found in satisfactory condition in respect of corrosion damage and indentation?	Yes	However, observed isolated fender damage
1.3	Were the tips of the propeller blades, rudder stock and rudder horn visible? Is the condition satisfactory?	No	Not inspected.
1.4	Were the Hull Anodes visible?	No	
1.5	Were ICCP current and voltage within Normal range?	-	Reported to be working satisfactorily
1.6	Were any visible Sea Chest visible noted and in satisfactory condition?	-	Not visible

Comments

- Due to restriction at terminal, pictures of bow and some other areas was not allowed.
- Vessel Port side alongside. Top side and partially Boot top areas were inspected. Top side coating condition can be rated good, boot top on the vertical side over all satisfactory, however observed isolated mechanical damage sustained due to fenders and tug handling etc.
- Starboard side visually checked over the ship side from main Deck and observed the condition like Port side). As the Vessel discharge was partial and slow so external hull below the water line could not be checked.
- Draft marks forward and aft clearly visible including the mid-section (the mid draft marks and Plimsoll mark.
- Vessel Engine logbook shows very high slip during the last loaded passage South America to China, and it appears hull may have fouled.

2.0 FOC'SLE & POOP DECKS

2	QUESTIONNAIRE	YES/NO	ASSESSMENT
2.1	Does the mooring machinery of the foc'sle deck appear in good condition with no significant oil leakages?	Yes	
2.2	Are fair leads, capstans and rollers being in good condition?	Yes	
2.3	Are the hydraulic pipes and control valve blocks in good condition?	Yes	
2.4	Is control lever held in neutral position, when there is no operation?	Yes	
2.5	Do the brake arrangements of Windlass and mooring winches appear in order?	Yes	
2.6	Are anchor chains in good condition no visible sign of significant wear or crack/fretting or twisting or any other damages?	Yes	
2.7	Do the anchors sit properly in the hawse pipe and are cable stoppers properly seated?	Yes	
2.8	Does the forward and aft mast appear in good condition?	Yes	
2.9	Is the general condition of deck plating and coating in good condition?	Yes	
3.0	Are the chain lockers in good condition without damage?	No	

Comments

There is a condition of class for the damage in the port chain locker.

3. MAIN DECK AND FITTINGS

3	QUESTIONNAIRE	YES/NO	ASSESSMENT
3.1	Is the condition of the deck plating and coating satisfactory?	Yes	Appeared satisfactory. Deck was covered with cargo dust, random locations were swept and checked coating condition - observed in good condition.
3.2	Is the condition of deck piping and electrical conduits on deck noted satisfactory?	Yes	
3.3	Are sounding pipes, caps, air ventilators, flaps, plugs, air pipes in good condition, rust free, and freely operating?	Yes	Operation not checked only physical appearance checked
3.4	Are weather tight doors, stores, and hatch opening covers, are in good condition, providing apparently enough sealing	Yes	Packing condition good, should seal well in closed condition
3.5	Are cross decks areas and mast houses being accessible and well maintained?	Yes	Appears maintained but cannot confirm 100 percent due to dusty cargo all over the deck
3.6	Is Bunker-davit, lifeboat davit, and provision crane structures in good condition and apparently in operational state?	Yes	Reported in operational state
3.7	Is the vessel fitted with stanchions for carriage of logs? Are Log lashing materials sufficient and in good condition, if applicable to vessel type?		N/A
3.8	Are accommodation gangways and pilot ladders free of rust, damage, wire condition is good, turn table rotating smoothly, no jerky movement, safety net in place and well-greased?	Yes	Turn table rotation could not be confirmed. Rest all in order for Port side (in use) gangway
3.9	Is deck save-all in good condition and of rated capacity?	Yes	Rated capacity marked
3.1	Are the forecastle stores, deck paint stores, bosun's stores, and shelters in good condition	Yes	Well kept
3.11	Are bulwark on port and starboard sides in good condition?	Yes	Cosmetically maintained as well

Comments

- Cargo discharge was in progress at the time of inspection, so main deck was dirty due to magnesium ore dust covering entire deck. Few random locations swept to have a look at the deck plating, appears good and various section maintenance has been carried out and in progress.
- Various fitting checked, maintained and well lubricated as required.
- Hydraulic pipes lines are intact and free from any visible leakages; however, all are protected with *denso* tape.
- Conduit pipelines and junction boxes are in good order with the expansion bellows maintained satisfactorily.
- Fire Main line condition appears good which runs from forward to Aft on the main deck starboard side, fire hydrants appears sealing well and no obvious leaky stains below the hydrants over the Fire Main.

4.0 CARGO CRANES & GEARS

4	QUESTIONNAIRE	YES/NO	ASSESSMENT
4.1	Are Jibs, jib rests, sheaves, cable drums and pulleys of cargo cranes apparently in good condition and free of rust, pitting, deformation or any other kind of damage?		N/A
4.2	Are Hydraulic systems of the cargo cranes in good condition free of oil leakages, any alarm on the control panel such as overheat/overload etc.?		N/A
4.3	Is there any significant sign of damage/ defect/ excessive rust /oil leakage /damage to lips sealing /deformation		N/A
4.4	Whether Crane operation was being used during the inspection? If Yes, is the operation was smooth with normal load/ normal lube oil temperature/normal electric current/normal level noise and vibrations?		N/A
4.5	Are the Operator cabins in tidy condition with operator controls working normal/ limit switches operational?		N/A
4.6	Is the slewing gear of Cargo cranes in good condition with no visible sign of damage/ wear /deformation? Are records of rocking test and annual cargo survey available on-board?		N/A
4.7	Are Hoisting & Luffing Drums in good condition with no visible sign of defect in brake operation, apparently normal brake bands (please observe brake tightness setting, does not exceed maximum limit), drum collar, and actuator?		N/A
4.8	Are the Cargo Cranes fitted with fine LO filters while filter element showing normal level of filtering element?		N/A
4.9	Is the vessel grab fitted? If so, advise number and type		N/A
4.1	If vessel is not grab fitted does main deck space allow the fitting of grabs.		N/A

5. CARGO HOLDS AND HATCH COVERS

5	QUESTIONNAIRE	YES/NO	ASSESSMENT
5.1	Are there any sign significant Coating damages like hard rusting, loose rusting, peel off, blisters, material wastage, and pitting etc.?	No	
5.2	Is there safe access to the cargo holds with appropriate warning stenciled as required?	Yes	
5.3	Is there any visible sign of damage to the coating or structure or frames found on the Side Plating and Bulkheads of the cargo holds?	No	
5.4	Are the Twin Decks in the cargo holds in good condition (if applicable)?	No	
5.5	Are structural frames in the way of cargo holds in good condition?	Yes	
5.6	Is the cargo-hold Lighting (Isolation switch) is in good condition?	Yes	
5.7	Is the tank top in good condition without any visible damage, loose rust and deformation?	-	Could not be confirmed, as cargo in hold.
5.8	Are cargo holds ladders in good condition free of any visible damage?	-	Could not be confirmed, as cargo in hold.
5.9	Are the Bilge wells clean and clear of any cargo deposit/obstruction, filters in place?	-	Could not be confirmed, as cargo in hold.
5.10	Are the anodes inside the cargo holds in good condition?	No	
5.11	Is the cargo-hold bilge pumping arrangement visibly in good condition and working	-	Duct keel and enclosed space entry was restricted
5.12	Are cargo holds ingress alarms tested regularly and records of test results are maintained?	Yes	
5.13	Are cargo holds suitable to load clean cargoes like grain, sugar, salt, rice etc.?	Yes	
5.14	Is the top hopper in a good condition?	Yes	Basis photograph produced by Ship-staff
5.15	Is the bottom hopper in good condition?	Yes	Basis photograph produced by Ship-staff
5.16	Are cargo holds fitted with firefighting system?	No	
	Applicability of Regulation 10.7.1.3 & 10.7.2 of Chapter II-2	Yes	As confirmed by the vessel
5.17	Is hatch cover coaming in good condition without any significant sign of damage/deformation of brackets/excessive rust/damaged coating/wasted	Yes	

	channels?		
5.18	Are water tightness tests by hose carried out regularly with satisfactory test results?	Yes	Before last grain loading
5.19	Does the result of last Ultra Sonic Test of hatch cover show satisfactory water tightness of the hatches?	No	No records
5.20	Are hatch covers operated by hydraulic motors and ram-type actuators? If yes, Is there any visible sign of oil leakage, poor condition of flexible hoses?	No	
5.21	Are hatch covers operated by variable frequency electric motors? If yes, are the chains and pulleys in good condition?	No	
5.22	Is there an emergency hatch opening arrangement in place?	No	As reported by ship-staff
5.23	Is the water draining Channels on hatch covers clear? Are non- return valves, Pontoons trackways, wheel and assembly in good condition?	Yes	Some Non return valve checked, found in satisfactory condition
5.24	Are operation controls units of the hatch cover apparently in good condition without oil leakage?	Yes	
5.25	Is the hatch cover structure top or underside free from rust, deformation, damage or wastage?	Yes	
5.26	Are there cement holes available in the hatch covers? Which hatch cover has extra strengthening for landing of the helicopter (if applicable)?	Yes	Hatch cover No. 2
5.27	Does the vessel have a sludge lifter davit?	No	

Comments

- Cargo holds inspected from the hatch cover coaming due to discharge operation in progress. Hatch covers 1, 3, 4, 5, & 7 were inspected as was in open condition.
- Hatch cover panels all inspected except cargo hold 2 and 4 which had cargo for next port of call.
- Side rolling-type operated by Hydraulic motor on a rack and pinion Mechanism.
- Under side of each hatch cover were grit ballasted and painted during the last Dry docking in May 2017, however few locations have scattered rust spot which is not a great cost of concern now.
- Hatch cover packing are in good condition with even "set in" within the allowable compression factor of 4-6 mm which indicates the touch pads and touch brackets are well within the wear down limits.

6.0 BALLAST TANKS

6	QUESTIONNAIRE	YES/NO	ASSESSMENT
6.1	Is there USCG approved Ballast Water Treatment System fitted on-board?	No	
	If no, is there written approval granted by USCG for the due date of installation of BWTS on-board?		
6.2	Are tanks and void spaces free from significant damage, pitting, wastage and Scaling?	No	
	Please advise tanks inspected in the comments.		
6.3	Is the Coating of the ballast tanks apparently in good condition free from significant sign of hard rust, wastage, damage, peeled-off, blister etc.	Yes	2S, 6S and fore peak
6.4	Are anodes installed and active with suitable amount remaining?	Yes	
6.5	Are steel structure and Stringer Plates, Brackets & Girders inside ballast tanks are free from buckling/fractures/doublers/temporary repairs?	Yes	
6.6	Is there significant deposit of mud or oil contamination inside ballast tanks?	No	
6.7	Are the bunker pipelines and sounding pipes passing through ballast tanks are in good condition free from any leakage?	No	
6.8	Is manhole covers, seals and ladders in good condition?	Yes	
6.9	Is ballast tanks remote operation valve in good condition and no sign of leakage of oil?	Yes	
6.10	Is the record of Ballast Pump operation and capacity test are maintained? Is Ballast pump capacity compliant with requirements?	Yes	Documents was not available for verification, but verbally informed that it met requirements
6.11	Is ballast tank bilge eductor in good condition?	Yes	
6.12	Is Ballast valve control panel and hydraulic pipeline in good condition?	Yes	
6.13	Is the Fore peak tank free of excessive mud deposit, buckling, fracture, doublers, temporary repairs or any other kind of damage, and fitted with active anodes?	Yes	
6.14	Did you inspect Top side ballast tank on either side of the ship? Please list the name of the Ballast tanks inspected.	Yes	2S, 6S

7.0 ACCOMMODATION

7	QUESTIONNAIRE	YES/NO	ASSESSMENT
7.1	Is the general condition of Accommodation superstructure good free from visible damage, buckling, fracture, and rusting?	No	
7.2	Is the accommodation maintained well from the MLC perspective?	Yes	
7.3	Are accommodation sky doors and watertight doors in good condition?	Yes	
7.4	Are common areas in the accommodation such as Mess-rooms, Dayrooms, Galley, Alley ways, offices and staircases clean, tidy and maintained in good condition?	Yes	
7.5	Are the galleys clean and free of roach and rodent infestation?	Yes	
7.6	Are self-closing devices fitted on fire doors and in good condition and closing the doors fully?	Yes	
7.7	Are the laundry and sanitary places clean, tidy and maintained in good condition?	Yes	
7.8	Is Cooking range in good condition without any low insulation alarm?	Yes	
7.9	Are Waste Commutator dispenser fitted with appropriate mesh and arrangements to protect disposal in ports?	-	Not confirmed by Galley staff.
7.1	Is the dry provision and refrigerated rooms clean, tidy and maintained in good condition?	Yes	
7.11	Are the temperatures of the refrigerated rooms maintained at correct levels and equipment working in good condition?	Yes	
7.12	Is the hospital and toilet clean, tidy and organized and medicine locker maintained in good condition with proper arrangement for disposal of expired medicines?	-	Not shown by Ship-staff
7.13	Are the refer room alarms regularly tested and records maintained on-board?	Yes	
7.14	Is the air-con room clean, tidy and well maintained? No abnormal noise, current, leakage of oil or water, dampers moving freely, condensation drains clear?	Yes	
7.15	Are records of air-con leakage test maintained? Is there kit available for collection of refrigerants, if applicable? Records of refrigerant re-charge maintained on-board?	No	

7.16	Condition of flooring (Tiling and cement) found in good order?	Yes	
7.17	Is there evidence of unkempt wiring and/or exposed wiring noted within the acc. space?	No	
7.18	Is the Medical locker well maintained without any expired medicines?	No	Medical locker not shown during inspection
7.19	Is the Air con blower room in good condition?	Yes	
7.20	Is the Blower room drain clear with no sign of debris?	No	Debris noted of the present cargo heavy dust
7.21	Is there a dedicated Garbage station with proper color coding for the segregation of the cargo?	No	Needs improvement
7.22	Is the Coating inside the accommodation bulkhead normal?	Yes	

Comments

- Accommodation without any structural or major concern however in need of better housekeeping.

8.0 NAVIGATION & COMMUNICATION SYSTEM

8	QUESTIONNAIRE	YES/NO	COMMENTS
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8.1	Is the Navigational Equipment in good condition?	Yes	
8.2	Is the vessel provided with two ECDIS?	Yes	
8.2	Is the Communication Equipment, General Emergency Alarm and Public address system in good condition and regularly tested?	Yes	
8.3	Are Emergency batteries in good condition and their current and voltage in normal range?	Yes	
8.4	Does the vessel use paper charts as the primary means of navigation?	Yes	
8.5	Is the inventory of charts and publications up to date?	Yes	
8.6	Does the vessel do paperless navigation?	Yes	
8.7	Are all charts and publications digitized?	Yes	
8.8	Is the BNWAS alarm operational?	Yes	Confirmed by Master
8.9	Are the Navigation lights operational and tested regularly?	Yes	
8.10	IS the Emergency communication equipment, SAT-C, GMDSS in normal operational condition	Yes	
8.11	Does the Ship e-mail system operate in normal condition?	Yes	
8.12	Are the Radars operational and maintained in good condition without any alarm on the panel?	Yes	
8.13	Are the required GMDSS walkie-talkies available with spare battery?	Yes	
8.14	Is the SART in good condition with valid battery life?	Yes	
8.15	Is the EPIRB in good condition with valid battery life?	Yes	
8.16	Is the SAS Alarm regularly tested and recorded?	Yes	
8.17	Are the watch keeper Binoculars in good condition?	Yes	Confirmed by Master

Comments

- Navigation Equipment all in good working order and kept ON during inspection and confirmed by Master

9.0 LIFE SAVING APPLIANCES

9	QUESTIONNAIRE	YES/NO	ASSESSMENT
9.1	Are Lifeboats with their engine & davits in good condition without any sign of damage, corrosion, wastage, rust and deformation?	Yes	LSA and FFA appear to be maintained in good with Emergency preparedness as confirmed by Master
9.2	Is the Rescue boat & Davit in good condition without any sign of damage, corrosion, wastage, rust and deformation?	Yes	
9.3	Does the qty of LSA equipment meet the required qty. per regulation?	Yes	
9.4	Are the EEBD in good condition and deployed at appropriate location?	Yes	
9.5	Is the Emergency escape route well equipped and illuminated?	Yes	
9.6	Are the Life rafts & Davit in normal condition without any sign of visible damage?	Yes	
9.7	Is the Life Raft Hydrostatic release mechanism not expired and in good condition?	Yes	
9.8	Are Sign, Symbols & tutorial in place for operation of lifeboat, life rafts and other lifesaving appliances?	Yes	

Comments

- Even though the cargo discharge operation was in progress with lot of dust settlement all over, the overall visual condition appeared normal.

10. FIRE FIGHTING APPLIANCES

10	QUESTIONNAIRE	YES/NO	ASSESSMENT
10.1	Is the Fire detection system in good condition without any abnormal alarm?	Yes	
10.2	Is the Fixed firefighting system in good condition with last service records available on-board?	Yes	Last annual done in early 2019
10.3	Is the Emergency fire pump in satisfactory condition?	Yes	
10.4	Are the Deck fire hydrants free of rust and can be easily opened? Any leaking hydrants sighted?	Yes	Apparently in normal condition
10.5	Is the Fire line on deck in good condition without soft patches?	No	
10.6	Is the Engine room fire line in good condition?	Yes	
10.7	Is the Engine room fire hydrant free of rust and eased?	Yes	Apparently in normal condition
10.8	Are the Foam monitors in good condition?	Yes	
10.10	Is the cargo hold fire detection system operative?	-	Not provided
10.11	Do the cargo holds have a fixed firefighting installation?	-	Not provided
10.12	Is the deck Fire line deck isolation valve in good condition?	Yes	
10.13	Does the vessel have a designated "Heli-deck "and is their enough FFA as per Heli-deck requirements?	Yes	Kept in the SOPEP locker at the time of inspection

Comments

- Firefighting appliances appeared in normal condition and no major concerned noted.

11. ENGINE ROOM & ELECTRICAL SYSTEM

11	QUESTIONNAIRE	YES/NO	ASSESSMENT
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	Main Engine		
11.1	Is the Main Engine Performance normal at optimal loads? (Please confirm no abnormal alarm from the alarm history record, abnormal generation of sludge, abnormal FO & LO consumption etc.)	Yes	Sufficient record not made available to Surveyor. However, based on one ME performance data sheet dated November 19, the performance is normal.
11.2	Are the Main Engine Control (Remote Telegraph, local Telegraph, & Governor System, Cylinder Lubricator systems) in apparently good operating condition?	Yes	
11.3	Are Main Engine Safeties such as shut-downs, slow-downs, and various overload alarms are not by-passed and /or de-activated?	Yes	As reported by Chief Engineer
11.4	Is the ER operated in UMS mode with dead man alarm operational?	Yes	As reported by Chief Engineer
11.5	Are the fuel consumption & cylinder oil consumptions as recorded in the Engine logbook in normal ranges as compared with Sea Trial data/ Charter Party data?	No	As reported by Chief Engineer, however same could not be verified as record with-held by Master.
11.6	Is the Main engine structure in good condition, free of any sign of significant damage and free of oil and exhaust leakages?	No	Minor leaks visible
11.7	Are the Crank case relief doors in good condition and free of oil deposit or any error alarm on the Oil mist detector?	Yes	
11.8	Is the Main Engine Safety control system in operational condition and tested regularly?	Yes	As reported by Chief Engineer
11.9	Are the Main Engine bracings in the normal condition without any sign of damage?	Yes	Appeared normal
11.10	Are the Main Engine high pressure fuel pipes in good condition, any leakages noted from HP pumps or pipes?	Yes	
11.11	Is the condition of Main Engine Exhaust manifold and uptake in good condition?	Yes	Sign of leakage from expansion bellow at T/C outlet
11.12 a	Are the foundation bolts and chocks of the ME in good condition?	Yes	As reported by Chief Engineer
11.12 b	Is the area under the Main Engine flywheel clear of any leakage, deposit? Is the ME Crank Shaft sealing free of oil leakage?	Yes	however, area around observed to be dirty
11.13	Is the main Engine Air Distributor in normal condition?	Yes	As reported by Chief Engineer

11.14	Is the Automatic air control valve in normal operational condition?	Yes	As reported by Chief Engineer
11.15	Is the Turning gear in good condition and with no visible sign of damage to gears?	Yes	
11.16	Is the Engine control console in operational condition with no alarm?	Yes	
	Aux Engines		
11.17	Is the Aux engine Performances satisfactory?	No	<ol style="list-style-type: none"> 1. Two Aux Engine are operated at sea, 2. From the records the Aux Engine No 2 has not been operated since 9th of Oct 2019. 3. Last entire voyage from Brazil to China Aux Engine 1 & 3 has been operated. 4. Aux Engine performance recorded in Nov 2019 of both Aux Engine 1 and 3 about 56 percent with Exhaust temp and Fuel rack in higher side of No 1 However AE No 3 performance is relatively satisfactory. 5. No performance record for AE 2
11.18	Is there any overdue maintenance of Aux. Engines? If yes, please state in the comments with running hours since last overhaul.	Yes	<p>As per attached AE maintenance/ running hours record –</p> <ol style="list-style-type: none"> 1. Fuel pump overhaul overdue for all Generators 2. Limited overhaul data entered for AE 2
11.19	Is there any sign of leakage of LO, FO or cool water Aux. engine, particularly from fuel pump, cylinder heads, and flywheel areas?	Yes	
11.20	Are the Running parameters of Aux engine within normal ranges as per the records?	No	

11.21	What is the Color of Aux Engine exhaust observed at funnel uptake	Yes	Appeared improper combustion
	Stern Tube		
11.22	Does the shaft seal use air-guard technology?	Yes	
	If air-guard sealing in use does the vessel have the relevant exemption certificate on board		
11.23	Is there any visible abnormality or sign of damage to intermediate shaft (such as crack, rust, corrosion, overheating on the surface), deformation, and intermediate shaft bearing found?	No	
11.24	Is the shaft earth voltage within normal range?	Yes	
11.25	Is stern tube bearing temperatures in the logbook within normal range?	Yes	
11.26	Is Tail shaft monitoring approved?	No	Vessel does not have shaft monitoring notation.
	Aux Boiler		
11.27	Is the Boiler burner operation found normal with no leakage or sign of damage with normal parameters?	Yes	
11.28	Are the Boiler mountings (Safety valve, apparently in normal condition and tested regularly?	Yes	-
11.29	Is the boiler water level remote indicator, low alarms and shut down, flame failure alarm and fuel shut apparently okay and tested regularly as per records?	Yes	As reported by Chief Engineer
11.30	No abnormal alarm on the control panel of boiler found?	Yes	
11.31	Aux boiler structure including furnace, uptake, foundation, insulation in normal condition with no visible sign of damage?	Yes	
11.32	Are the boiler water test results in normal range with chemical levels maintained?	Yes	
11.33	Is there evidence that aux boiler requires to be run at sea?	Yes	At Eco Speed in cold conditions
	Miscellaneous Items		
11.33	Is the Workshop kept tidy and clean?	No	

11.34	Are the Spare & Storerooms in tidy and clean condition?	No	
11.35	Is the Purifier room free of oil leakages and purifiers operating in normal condition with no sign of abnormality	Yes	
11.36	Is the Refer & Air con. plant operating in normal condition?	Yes	
11.37	What type of the Refrigerant is in use on-board? Is the refrigerant collection kit available on-board?	No	No collection Kit seen.
11.38	Records of regular leakage testing and re-charging available on-board?	No	
11.39	Is the Tank Top Clean, free of any leakage or deposits?	No	Observed sea water leakages
11.40	Are Bilge wells free of any sign of oil contamination?	No	Observed light traces.
11.41	Is the Engine room operated under UMS mode? Are operation & records of alarms maintained?	Yes	
11.42	Are Quick closing valves and arrangement in good condition and operation regularly tested?	Yes	
11.43	Is the Emergency escape free of any obstruction, and well equipped for evacuation <	Yes	
11.44	Are the Auxiliary machineries such as LO coolers, FW Coolers, FO Heaters, LO Heaters, Fuel Oil and LO filters, LO and FO pumps, Cooling water pumps in good condition and free of leakage and no visible sign of any damage?	No	Observed leakages
11.45	Are the engine room various pumps running normal with current and load within acceptable ranges?	Yes	As per records on board
11.46	Are the general Fuel oil piping's in the engine room in good condition? Any evidence of oil stained lagging of the fuel piping?	Yes	Observed oil stained lagging of fuel oil lines and purifier room
11.47	Does the ship have min Critical spares as per the class requirement?	No	
11.48	Is the Main air bottles structure in good condition?	Yes	
11.49	Are the Main air compressors operating normal with temperature and pressure normal and cutting off in auto?	Yes	
11.50	Are Airline valves in normal condition?	Yes	
11.51	Is the Main switch board in normal condition with insulation check of domestic and HV system normal?	Yes	

11.52	Is the Emergency generator and switch board in good condition with normal voltage and current levels?	Yes	
11.53	Is the Alarm monitoring system operational and in normal condition?	Yes	

Comments

- Surveyor was objected by the accompanying ship-staff and could not take pictures for all affected area that reflected poor upkeep.

12. POLLUTION PREVENTION & CONTROL

12.0	QUESTIONNAIRE	YES/NO	ASSESSMENT
12.1	Is an approved Incinerator fitted on-board and apparently in operational condition with no visible damage to body, furnace, refractory, burner and fan?	Yes	
12.2	Is an approved Sewage Treatment plant installed and operational on-board? State make and type.	Yes	
12.3	Records of test and dosing available on-board?	No	Did not see the records but Chief Engineer confirm they keep the records.
12.4	Is there a sewage holding tank fitted on-board with content level indicator?	Yes	
12.5	Is there an approved Sewage discharge connection with standard coupling available on board?	Yes	
12.6	Does the OWS Piping appear tamper free?	Yes	
	Is an Isolation valve between ER and hold bilges provided, was it noted shut and lashed /Sealed?		
12.7	Is the Oil Record Book as applicable properly filled-up and up to date?	Yes	
12.8	Is the engine room & deck free of oil leakages posing potential risk to pollution?	Yes	
12.9	Is there Bunkering & Oil transfer procedure in place and displayed?	Yes	
12.10	Is an approved OWS installed apparently in good condition with 15 PPM monitor calibrated and 3-way valve functional test records available?	Yes	

12.11	Check MEPC code of compliance of the 15 ppm monitoring equipment,	Yes	
12.12	Is there provision for the retrieval of alarm data of the OWS equipment?	Yes	
12.13	Are there any tamper proof seals fitted in the piping of the OWS and flanges on pipe leading to overboard?	Yes	
12.14	Is the operation and test procedure for the OWS clearly identified and displayed near the equipment?	Yes	
12.15	Is deck Scupper plugs in place and no sign of potential pollution risk? Are the plugs visibly in good condition?	Yes	
12.16	Is there a class approved SOPEP/ SMPEP and a VRP, with an updated IMO coastal state contact listing on-board?	Yes	
12.17	Are Deck save-alls fitted with drain plugs as required?	Yes	
12.18	Is the SOPEP equipment available and maintained in good condition?	Yes	
12.19	Does the SOPEP locker carry such inventory?	Yes	Posted in the room.
12.20	Is the Garbage record book up to date?	Yes	
12.21	Are receipts for garbage discharge available?	Yes	
12.22	Is the list of ODS equipment, records of regular leakage test available in the PMS?	No	
12.23	Is there a fuel change over procedure in place for vessel operation in Emission Control Areas and records of fuel change over maintained as per MARPOL - Annex-VI requirements?	Yes	
12.24	Is there proper segregation of garbage with placards describing the color coding in place and appropriate storage on-board?	Yes	

13. SHIP MANAGEMENT

13	QUESTIONNAIRE	YES/NO	ASSESSMENT
13.1	Is the Shipboard Safety Management System effectively implemented? Are Internal ISM audits	No	Poor Management of PMS records

	regularly carried out?		
13.2	Is there an effective Planned Maintenance System on board and updated by the crew regularly? Which PMS system is currently in use on-board?	No	PMS application name not disclosed by Ship-staff. No PMS records are available
13.3	Is there a procedure for reporting Defects & keeping follow-up on pending Corrective actions?	No	No record of defects presented.
13.4	Are records of Non-conformity, accidents, near misses, root cause analysis and corrective actions maintained on-board?	Yes	As reported by Master
13.5	Are the SOLAS equipment test records maintained on-board?	Yes	As reported by Master
13.6	Is the MARPOL equipment testing records maintained on-board?	Yes	As reported by Master
13.7	Does the Crew compliment on-board comply with the requirements of the Safe Manning Certificate issued by Flag State?	Yes	
13.8	Are the Critical operation contingency plans in place and displayed in common areas with duties of the responsible crew members?	Yes	
13.9	Is there an approved stability booklet on-board and in use?	Yes	
13.10	Do you find records of Superintendent inspections and follow-up available on-board?	No	
13.11	What nationalities of crew on-board and common language of communication among them? Please list them in the remark column.	Yes	English is the common language, Ukrainian officers and Filipino crew.
13.13	Are critical records like Oil Record Book, Garbage Record Book, Ballast water record book, Engine Logbooks, and Deck Logbooks maintained as required?	Yes	
13.14	Are the records of crew familiarization, handing and taking over reports of Master/Chief Engineer prior joining of senior staff available on-board?	Yes	Not presented by Master reported
13.15	Is the record of defects found during PSC Inspection and corrective actions maintained on-board?	Yes	As reported by Master

Comments

- Overall vessel management is not efficient. Shipboard Planned Maintenance is not properly managed. There is no proper record of the machinery running hours. Vessel PSC record is not good. There is no lube oil analysis by the shore lab. Last lube oil analysis was done in Jan 2019 almost year ago.

CLASS SURVEY POSITION

CLASS SURVEY STATUS

Survey	Survey Date	Renewal date	
		From	To
Special Survey	14/05/2017		21/05/2022
Intermediate Survey	21/05/2022	21/02/2020	21/08/2020
Annual Survey	29/03/2019		21/08/2020
Dry-docking	14/05/2017		13/05/2020
IWS Survey			13/05/2020
Tail shaft withdrawal	14/5/2017 Partial Survey carried out		21/05/2020
Boiler Survey	14/05/2017		13/05/2020
ESP Survey	21/05/2020		
CAP Rating	N/A		
IOPP Survey	21/05/2022		21/05/2022
De-harmonization	No		
Change of Class/ Withdrawal	No		
Condition of Class	<ul style="list-style-type: none"> Vessel has ONE Condition of Class as per Class report dated December 2, 2019. Condition of Class is for damage to Chain Locker Port fwd. at Fr 252, issued on 02 Nov 2018 with due date for repairs on 13th May 2020 		
Memos/Recommendations	Nil		
UT Gauging Survey Result	Normal – no abnormal diminution. UT gauging was carried out from 19 th to 24 th April 2017 at 1 st Special survey. Vanguard Marine Tech. Co. Ltd carried out UT measurement		

MAINTENANCE POSITION

Total Running Hours

Main Engine	Aux. Engine #1	Aux. Engine #2	Aux. Engine # 3

15677	27347	28288	29485
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Comment

- In the ME maintenance document shown to the Surveyor, one of the documents reads ME running hours as 15,677 and the other mentions it as 43,489. Understandably the vessel owner has changed, however the record should be reconfirmed with the Owner.

MAIN ENGINE

ME RUNNING HOURS SINCE LAST OVERHAUL					
Cylinder unit	Piston	Cylinder Cover	Exhaust	Cylinder liner	Main bearing
No. 1					
No. 2					
No. 3					
No. 4					
No. 5					

Comment

- In the ME maintenance document shown to the Surveyor, all the running hours read 15677 – which is a possible error. The running hours overhaul record should be requested to Owner. No proper record onboard.

Main Engine Liner Wear					
Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
No record available	No record available	No record available	No record available	No record available	N/A

- Liner wear limit – 3.5 mm

AUX. ENGINE

AE Running Hours since last overhaul		
Aux. Engine #1	Aux. Engine #2	Aux. Engine #3

1641	NO RECORDS	3355
------	------------	------

AE#2 Running Hour since last overhaul not known.

TURBOCHARGERS

Turbocharger Running Hours since last overhaul			
ME	AE #1	AE#2	AE#3
15677	1566	174	2529

LO ANALYSIS & WATER TESTING REPORT

Lube Oil Analysis Report						
Lube Oil Lab Analysis Results (N=Normal, W= Abnormal)	Main Engine	A/E #1	AE #2	AE #3	S/Tube	Hydraulic
	N	N	W	N	N	N
	21/01/2019	21/01/2019	21/01/2019	21/01/2019	21/01/2019	21/01/2019
	Comment – Old LO analysis report Jan 2019 cannot reflect the current condition.					
Water Analysis Results (N=Normal, W= Abnormal)	Main Engine	A/E #1	AE #2	AE #3	Boiler	
	N	N	N	N	N	
	20/12/2019	20/12/2019	20/12/2019	20/12/2019	20/12/2019	

1. UT Gauging Report	
UT gauging was carried out from 19 th to 24 th April 2017 at 1 st Special survey. Vanguard Marine Tech. Co. Ltd carried out UT measurement	
Any requirement of the steel renewal stated in the report?	No

Diminution of Cargo Hold tank tops, lower hoppers?	As new
Diminution in Ballast tanks?	As new
Diminution of Hatch Covers?	As new
Diminution of lower portion of the corrugated bulkhead in Cargo holds?	As new
Any abnormal diminution observed?	No

2. Tasks Carried Out in the last Dry-Docking Survey		
Job Name	Yes/ No	Remark
Ship's hull	Yes	
Chain Locker	Yes	
Cargo Holds Treatment	Yes	
ME overhauled	No	
ME turbocharger overhauled	No	
Aux. Engines & Equipment	No	
Ship's plating Ultrasonic Thickness Measured	Yes	
Steering Gear and Rudder inspected	Yes	
Sea Chest	Yes	
Tail Shaft and Propeller	No	

Comment

- Dry dock work job table filled as reported verbally by ship-staff
- No supporting document produced and same should be requested from the Owners.

VESSEL CERTIFICATES

CERTIFICATES DETAIL

Certificate Name	Survey/Issue Date	Expiry Date
Registry Certificate	9/12/2017	-
Radio Station License	13/03/2017	13/03/2017
International Tonnage Certificate	4/08/2017	21/05/2022
Suez Canal Tonnage Certificate	4/08/2017	21/05/2022
Certificate of Class	4/08/2017	21/05/2022
International Load Line Certificate	4/08/2017	21/05/2022
Cargo Ship Safety Construction Certificate	4/08/2017	21/05/2022
Cargo Ship Safety Equipment Certificate	9/08/2019	21/05/2022
Cargo Ship Safety Radio Certificate	4/08/2017	21/05/2022
International Oil Pollution Prevention Certificate (MARPOL Annex-1)	4/08/2017	21/05/2022
International Air Pollution Prevention Certificate (MARPOL Annex VI)	4/08/2017	21/05/2022
International Sewage Pollution Prevention Certificate (MARPOL Annex IV)	4/08/2017	21/05/2022
Minimum Safe Manning Document	4/08/2017	
International Anti-Fouling Certificate	9/07/2018	
Fitness Certificate for carriage of Solid Bulk Cargoes	4/08/2017	21/05/2022
International Energy Efficiency Certificate	27/02/2017	
Ballast Water Management Statement of compliance – Exchange Method	4/08/2017	21/05/2022
Last Right Ship Inspection (If any)	None	
EAL Compliance Statement	4/08/2017	

RECENT VOYAGES			
VOYAGE	ORIGIN	DESTINATION	

	PORT	DATE	PORT	DATE	CARGO
LADEN	PECEM	7/11/2019	QINZHOU	21/12/2019	Magnesium ore
LADEN	HAYPOINT	7/11/2019	PECEM	30/10/2019	Coal
BALLAST	ZHOUSHAN	16/08/2019	HAYPOINT	31/08/2019	Ballast
LADEN	RIO GRANDE	13/06/2019	ZHOUSHAN	4/08/2019	Soya Bean
LADEN	PUERTO DRUMMOND	17/04/2019	HUASCO	22/05/2019	Coal

RECENT PSC RECORD

DATE	MoU	PORT	DETAINED	DEFICINCIES	SEVERITY/ CODE
6/08/2019	Tokyo MoU	Zhoushan	No	4	
28/03/2019	Paris MoU	Dunkirk	No	Nil	
25/10/2018	Tokyo MoU	Vostochnny	No	2	
31/07/2018	Vina Del Mar MoU	Sepetiba Bahia, Brazil	No	Nil	
28/04/2018	Tokyo MoU	Fremantle, Australia	Yes	5	

SUB-DIVISION

Name of decks in Accommodation and Engine room. (Accommodation- Sub-divisions)	Name of transverse Bulkhead on the hull (Hull sub-divisions)
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NAV DECK	Collision bulkhead FWD of CH 1
DECK E	Between CH 1 and CH 2 (AFT of CH 1)
DECK D	Between CH 2 and CH 3 (AFT of CH 2)
DECK C	Between CH 3 and CH 4 (AFT of CH 3)
DECK B	Between CH 4 and CH 5 (AFT of CH 4)
DECK A	Between CH 5 and CH 6 (AFT of CH 5)
UPPER DECK	Between CH 6 and CH 7 (AFT of CH 6)
	ENGINE ROOM BULKHEAD AFT OF CH 7

Conclusion

The below mentioned comments are based strictly on the result of Inspection and survey based on the visual inspections of the surveyor and limited to the extent of information as presented to him during the inspection.

Based on Surveyors assessment of apparent condition of Hull & Machinery and the documents shown, the vessel MV RESURGENCE currently presents herself in a fair condition, and scores 3.1 / 5 on SINOTECH MARINE SCALE.

Below are items of concern which require due diligence prior to considering purchase of the vessel.

- Vessel has a Recommendation as per Class report dated December 2, 2019. It is for damage to Chain Locker Port Fwd. at Fr 252, issued on 02 Nov 2018 with due date for repairs on 13th May 2020
- The Fuel consumption /speed could not be ascertained based on documents produced by vessel. More information should be requested from Owner including corrected ME running hours, maintenance record and ME performance analysis.
- Even though limited ME running data record was shown to Surveyor, it revealed very high slip in last voyage > 20 % slip. It is suspected that vessel might be fouled.
- It was observed that two generators are required to take normal sea-going load. The generator performance does not appear to be satisfactory.
- The attached LO report is old – January 2019 and cannot reflect the latest condition. Recent LO analysis report to be requested from Owner.
- The overall condition of Engine room is fair, as observed multiple leakages.
- Vessel does not hold a Class-issued Inventory of Hazardous Materials (IHM) certificate which will be required for entry into EU ports from 31 December 2020.
- Vessel is not installed with BWTS system, IOPP renewal date is in May 2022. USCG exemption certificate was not produced to Surveyor – information withheld. Same to be requested from Owner.
- The vessels' preparedness for IMO 2020 Change over for Low Sulphur – needs to be ascertained such as installation of additional Condenser, chillers etc.
- The vessel has had poor PSC record (which includes, AMSA inspections), having 16 deficiencies and 1 detention over seven PSC inspections in last 21 months.
- There are discrepancies in the ME running hours and overhaul record.
- Electronic copies of various certificates / documents were not provided.
- No documents shown for last Dry-docking jobs.
- Buyers are suggested to request the sellers to provide the Sea Trial Report to know the designed speed and consumption in clean hull condition.

It was noted that vessel had change of ISM manager last year, most of the ship records were taken away by previous manager. A large part of vessel operational history is unknown. Running hours and maintenance records are unknown. It appears new crew has manipulated the machineries running hours as reference point. Vessel has issue with ISM management. Overall vessel condition suggest that vessel lacks maintenance and condition does not well corresponds to her age of 8 years. However, vessel can be restored to good condition with moderate maintenance and repairs.

Appendix

1. MACHINERY LIST

MACHINERY DETAILS

Machinery	Sets	Maker & Model	Rating
Main Engine	1	MAN B&W HHM /5S60MC-C MK8	10260 kW
Turbocharger	1	ABB TPL 77-B12 MAN	
Generators	3	YANMAR / 6EY18ALW	
Alternator	3	NYUNDAI / HFJ7 502-84K	
Shaft Generator	N/A		
Aux Boiler	1	AALBORG /MISSION OC	
Incinerator	1	CSSC /GS500C	
Oily water separator	1	JOWA /JOWA 3SEP OWS	5 M3 / hr.
Reefer Plant	1	SABROE /SBO 41	
Air Condition Plant	2	SABROE /CMO 26	
Air Compressor	2	J.S. SAUER &SOHN /WP200	
Cargo Cranes	N/A		
Grabs	N/A		
Ballast Pumps	2	NANIVA /FEWV-400 D	1500 m3/hr.
Hatch Covers	14	TTS Hua Hai / side rolling to open	
Cathodic Protection	2	MARINPRESS	150 Amps
Windlass	2	HATLAPA /1795117	

Winches	6	HATLAPA /2849016	
Anchor	3	High holding capacity AC 14	
Anchor Chain	2	Dia. 84 mm, Port chain 13 lengths and stbd. side 12 lengths (1 length 27.5 meters), including the spare anchor	
Lifeboats	1	JANGSU JIAOYAN MARINE EQUIPMENT CO., LTD - FREE FALL LIFEBOAT/MODEL JY-FN-6.80	
Sewage Plant	1	NANJING LUZHOU MACHINE CO. LTD /SIC 2	

2. NAVIGATION EQUIPMENT LIST

NAVIGATIONAL EQUIPMENT DETAIL

Machinery	Sets	Maker & Model
Standard Compass	1	SPERRY MARINE / 2060
Gyro Compass	1	SPERRY MARINE / NAVIGAT X MK1 MOD 10
Radar	2	SPERRY MARINE / Vision Master
GPS	2	SIMRAD /MX510
Echo Sounder	1	SPERRY MARINE /ES-5000
ECDIS	2	JRC / JAN-9201S
BNWAS	1	IS STEINSOHN
NAVTEX Receiver	1	FURUNO / NX-700
Speed Log	1	SPERRY MARINE /NAVIKNOT 450D
GMDSS (MF/HF Radio)	1	SPERRY MARINE /CU5100
VDR	1	Voyage master /Voyage master III VDR
AIS	1	KODEN/KAT - 100 /Class A inland transceiver
VHF	2	SPERRY MARINE /CU5000

3. CARGO HOLDS & HATCH COVERS

CARGO HOLDS & HATCH DETAILS

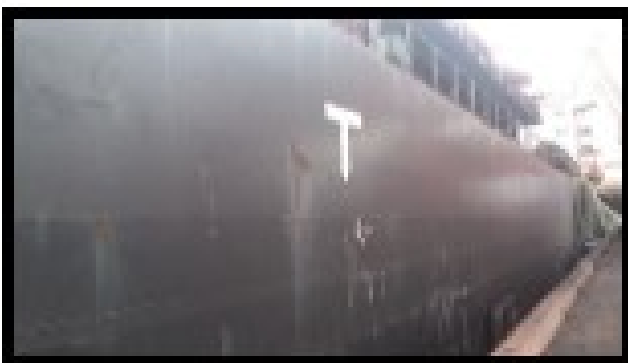
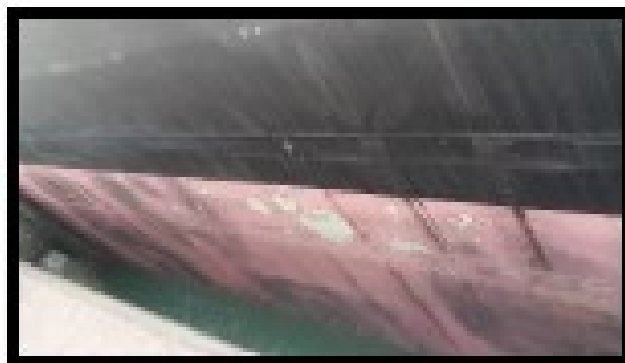
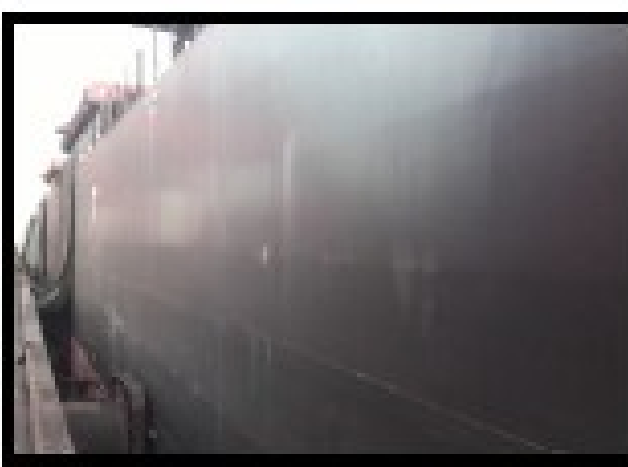
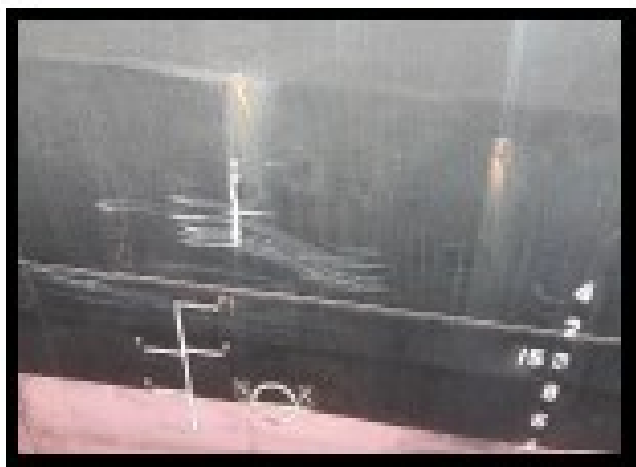
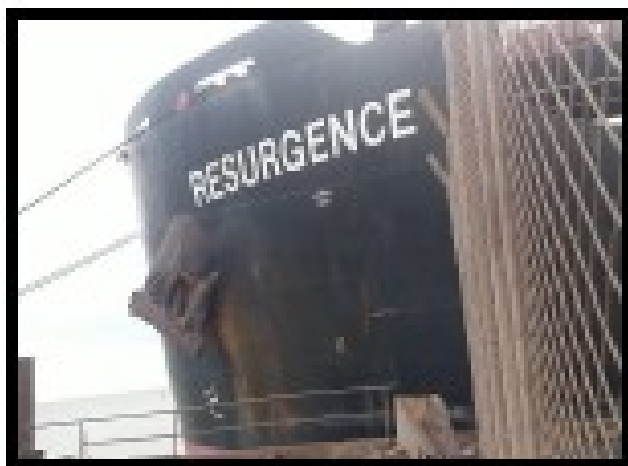
Cargo Hold	Capacities (M3)	Hatch Cover Size (L x B) in Meters	Load Capacities	Permissible load of Tank Top in T/ m^2	Permissible load of Hatch Cover
Hold 1	11696.4 m3	14960 x 13280	11696,4	NOT FURNISHED	N/A
Hold 2	14133.5 m3	16720 x 15000	14133,5	NOT FURNISHED	HELI PAD DESIGN FOR A MAX OF 4.0 MT
Hold 3	14137.2 m3	16720 x 15000	14137,2	NOT FURNISHED	N/A
Hold 4	14137.2 m3	16720 x 15000	14137,2	NOT FURNISHED	N/A
Hold 5	14137.5 m3	16720 x 15000	14137,5	NOT FURNISHED	N/A
Hold 6	14137.1 m3	16720 x 15000	14137,1	NOT FURNISHED	N/A
Hold 7	14744.2 m3	16720 x 15000	14744,2	NOT FURNISHED	N/A
Total	97123,1 m3				

4. TANK CAPACITIES

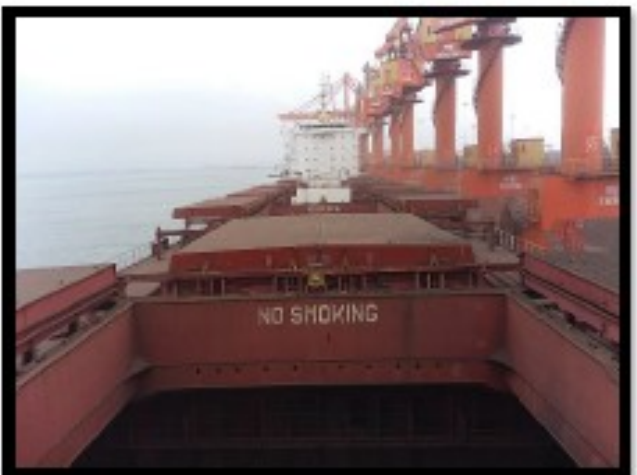
TANK	CAPACITIES
HFO Low Sulphur	1P / 412.2 m3, 1S / 412.2 m3
HFO Low Sulphur	2P / 566.8 m3, 2S / 566.8 m3
LSFO Settling tank	44.2 m3
LSFO Service Tank	29.9 m3
LSFO Overflow Tank	19.0 m3
MDO Tank-1	LS DO TK 108.4 m3
MDO Tank-2	D.O. storage / 70.3 m3
MSGO Tank	16.6 m3
Total Fresh Water Capacity	424 m3
Total Ballast Capacity	23949.7 m3
Total ME CC Lube Oil Storage 1 / 2	73.5 m3
Total CYL OIL LOW TBN Storage Capacity	51.4 m3
Total AE Crankcase oil capacity	23.6 m3

5. REFERENCE PICTURE

Hull External

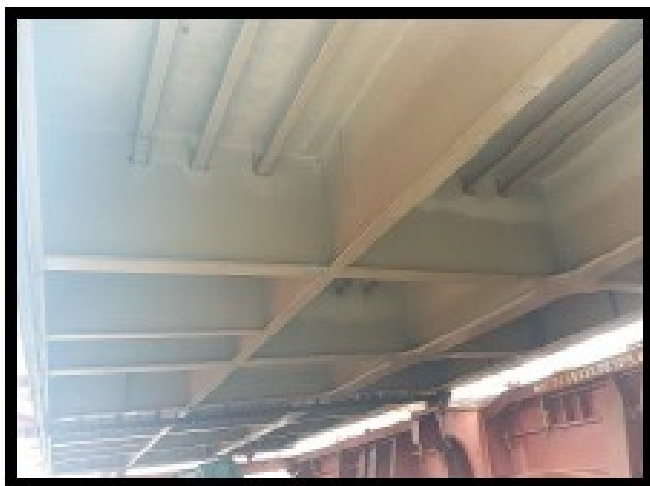


Main Deck

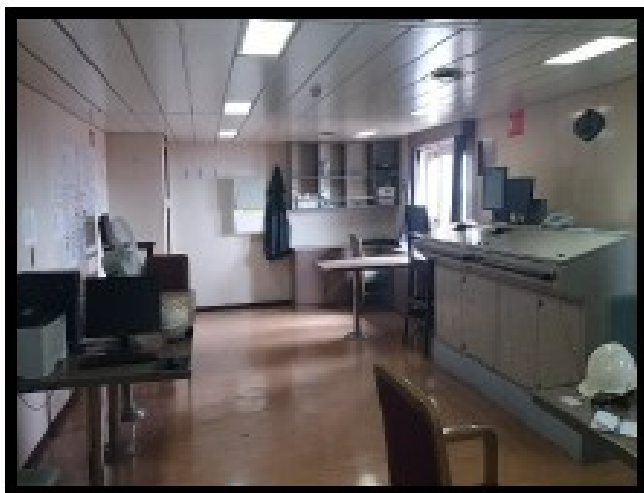


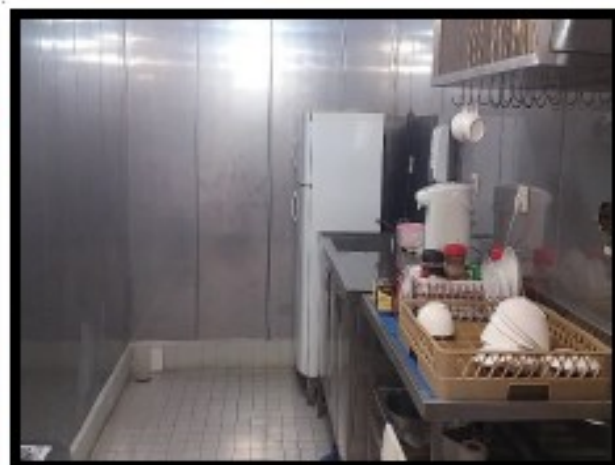
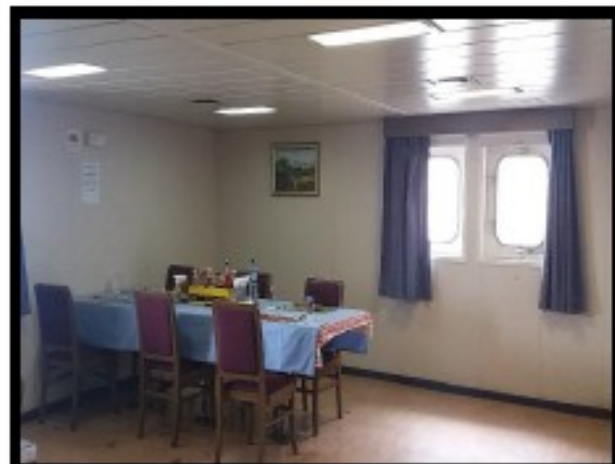


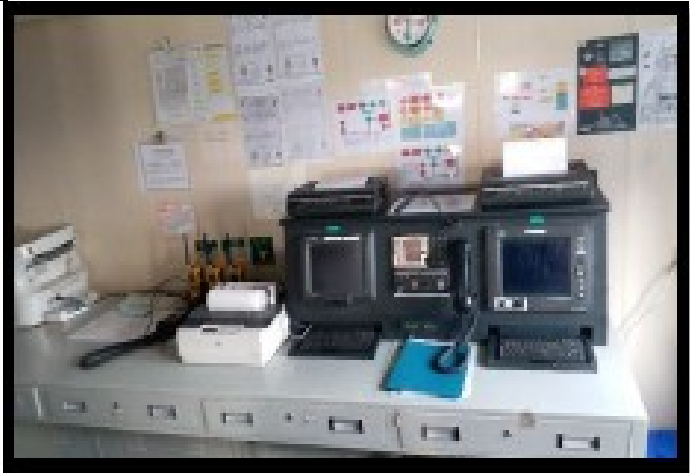
Hatch Covers Under side



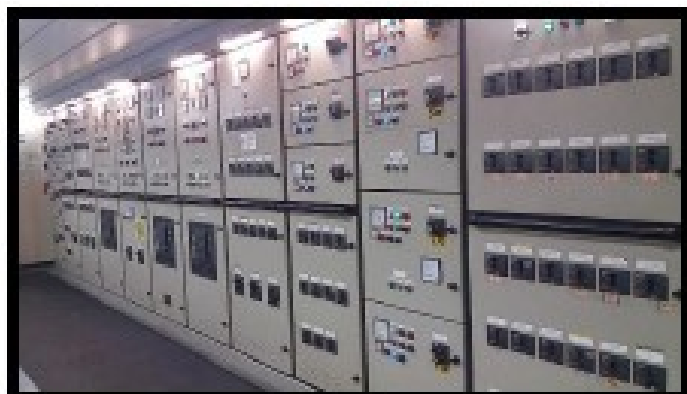
Accommodation & Bridge

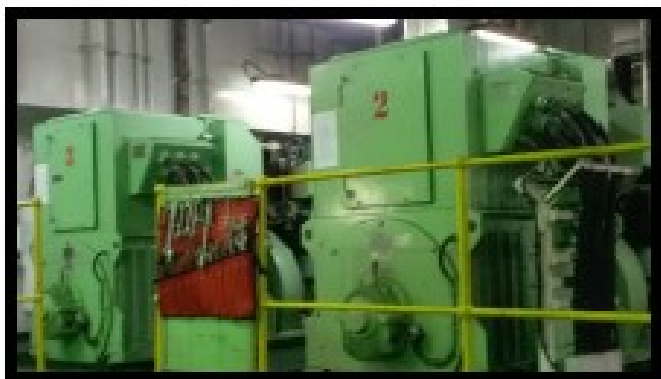




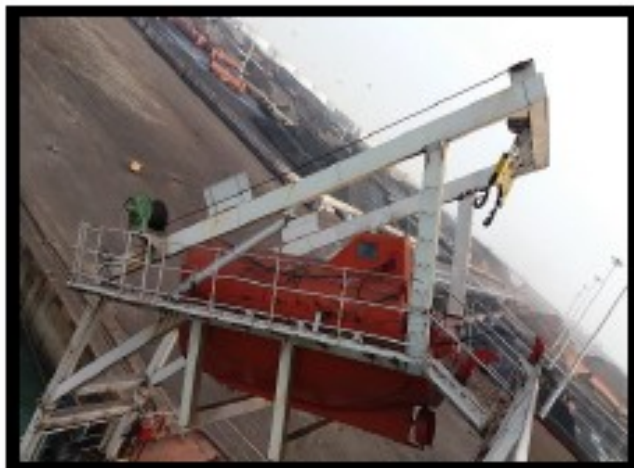


Engine Room

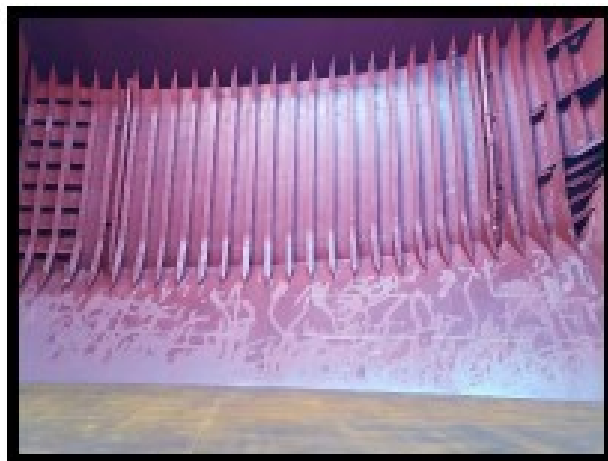
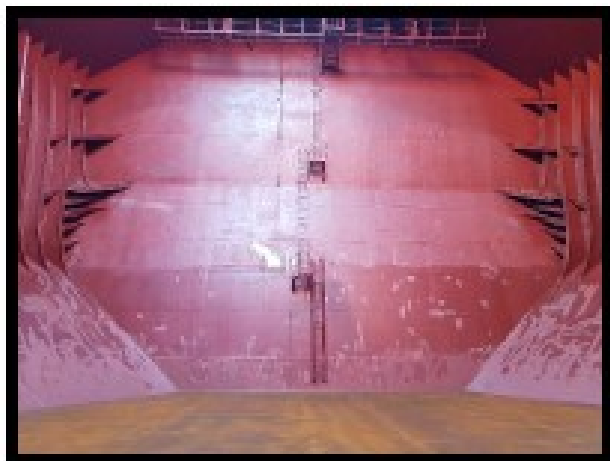


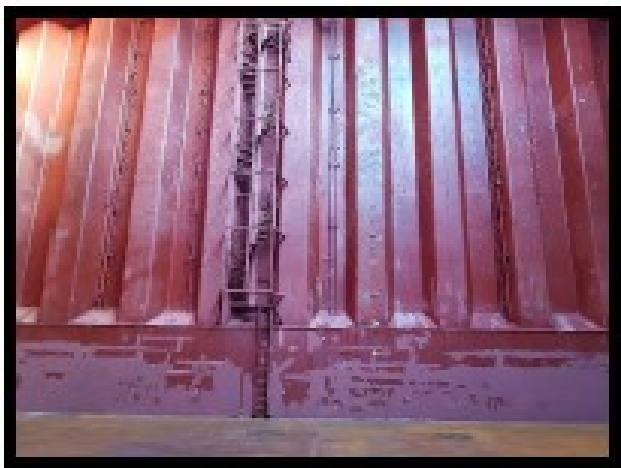


FFA & LSA



CARGO HOLDS





11. Disclaimer

Whilst every reasonable effort has been made to survey the vessel concerned in accordance with instructions, neither SINOTECH Marine Corporation (HK) LTD. nor the Inspector conducting the inspection, accept any responsibility whatsoever for failure to survey or inspect any item of hull or machinery that is not reasonable, accessible or available for inspection, or (in the case of machinery) opened up for inspection and having regard always to the condition of the vessel and its location, whether or not the machinery was seen in operation and the time available for the carrying out of the Survey.

This report is without prejudice to any stake holder of the vessel. This report contains facts observed by the inspector and information shared by the Master/ CE/ crew of vessel. No observation (indicating apparent damage to equipment or malfunction of machinery) in this report has been investigated to ascertain the cause or extent of damage/ defect. The inspector or his employer is not responsible for any claims based on interpretation of information in this report.



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