

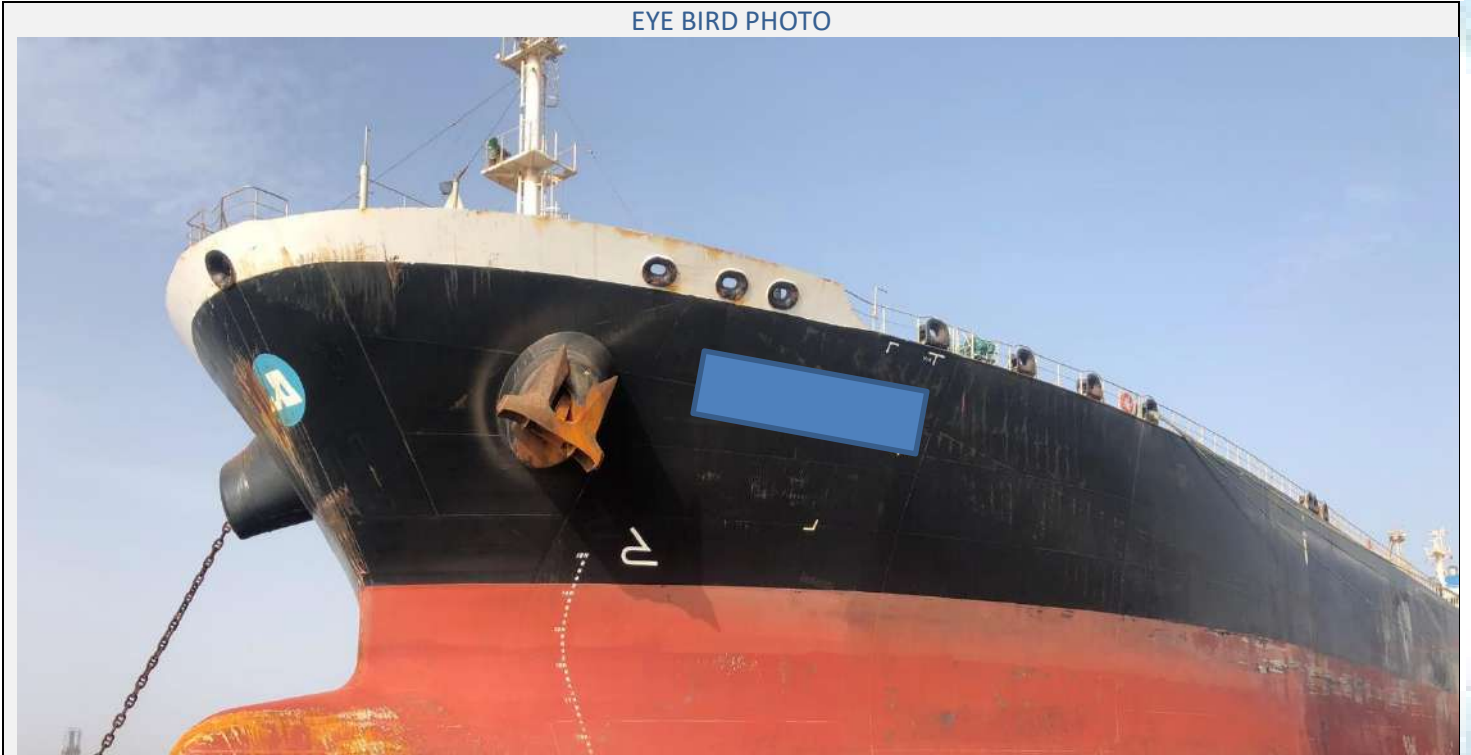
PRE-PURCHASE ASSESSMENT

FINAL REPORT

TANKER (OIL/CHEMICAL)

MT SINOTECH MARINE

EYE BIRD PHOTO



IMO NO.	555555555
Port of Registry	BERGEN
Year of Built	MARCH 2013
Builder Yard	STX OFFSHORE & SHIPBUILDING/KOREA
Classification	DNV – GL
Vessel State	LOADING CARGO
Date of Inspection	15/02/2020
Port of Inspection	MONGSTAD / NORWAY
Inspection Company	SINOTECH MARINE, HONG KONG
Inspection Type	PRE-PURCHASE
Client	CONFIDENTIAL

SINOTECH

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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C- Preamble

MT XXXXXX was inspected by Sinotech Marine appointed surveyor for pre-purchase condition assessment at Mongstad, Norway.

MT XXXXXX is a Tanker for Oil ship, registered at Bergen. 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.

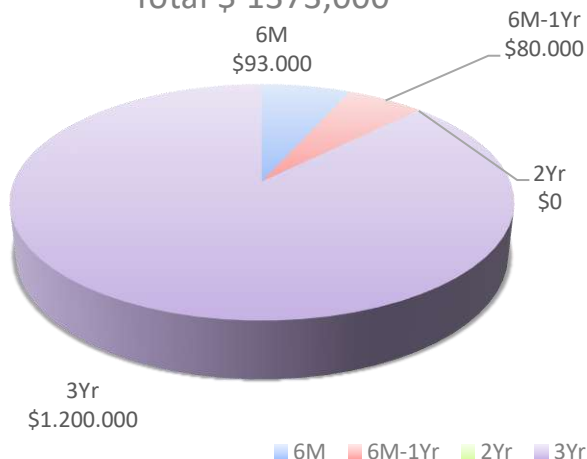
Capex Forecast

Major Capital Expenses in next 3 years in USD

Items	Estimated Cost
Forthcoming Compliance	\$690,000
Upgradation (Repair or Maintenance)	\$133,000
Dry-Docking (2022)	\$550,000
Estimated Total	\$1,373,000

Cost Break up

Capex Projections
Total \$ 1,373,000

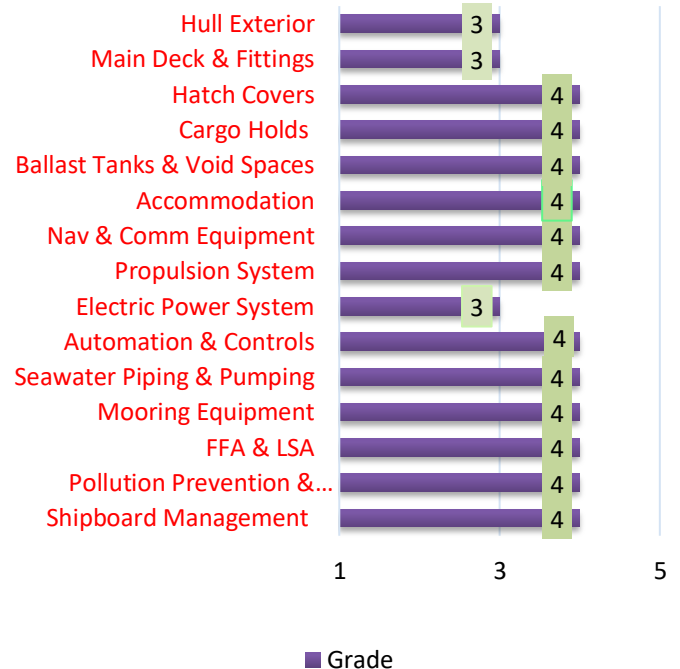


Description of the Grades

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 3.8 (Fair-Good)

Vessel Grading



D- Defects, Concerns & Recommendations

DEFECTS CATEGORIES

Critical Defect <i>Urgent Remedial Action Required</i>	Significant Defect <i>May lead to a high future cost</i>	Minor Defect, low cost <i>defect, could be an Industry recommendation</i>	<i>A good Design or operational feature of the ship.</i>
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Severity	Description	Action-Timeline	Approx. Cost US\$
Significant	Shipside external hull paint damages	6	300,000.00
Significant	Full deck areas are having scattered rust. Regular maintenance sighted.	6	200,000.00
Significant	Hard rust found in all hatch bulkheads from tank top to about 10 meters vertical height.	6	
Significant	All Australian ladders including railings are rusted moderately	6	10,000.00
Critical	All fairleads are ceased	6	
Significant	There is a dent of about 2 cm. in the forecastle deck in front of port hose pipe.	6	
Significant	All mooring winches, windlass is rusted moderately	6	20,000.00
Critical	Moderate Hydraulic leakage noticed from Fwd. stbd. mooring winch, Hyd. power pack unit in the forecastle store, Ram of Hatch #4 (Port side).	6	15,000.00
Significant	L/B davit found rusted.	6	

Total Approximate Cost of Up-gradation (additional Cost): \$823,000

(The above cost is indicative up-gradation cost may be required in addition to cost of vessel routine maintenances. It is an independent opinion of surveyor and/or Sinotech marine Technical team for reference only. Above cost may vary and will be subjected to determination of actual scope and Shipyard assigned)

E- VESSEL PERFORMANCE

MAIN ENGINE PERFORMANCE CONSUMPTION

Condition	Speed in Knots	% Load	Ship's Logs		Charter Party	
			MT/Day		MT/day	
			FO	DO	FO	DO
Ballast	13,0 – 13,5	Not mentioned	25 - 30		24,0 – 28,8	
Loaded	13,0 – 13,5	Not mentioned	26 - 32			
Idle @ Port			6,5			
Active @ Port			8,0	16,0		
Laden @ Eco Speed	12,0 – 12,5	Not mentioned	24 - 27		23,9 – 25,7	
Ballast @ Eco Speed	12,0 – 12,5	Not mentioned	20 - 22		20,2 – 21,5	

VESSEL IS NOT OPERATED AT REDUCED RPM

FIGURES VERIFIED FROM ENGINE LOGBOOK AND LOG ABSTRACT

CHARTER PARTY FIGURES VERBALLY INFORMED BY MASTER

VOYAGE ABSTRACTS ARE NOT DECLARED

MAIN ENGINE CONSUMPTION

LOAD	FO (MT/Day)	RPM
MCR	31	117
NCR	28	107
67%	Not Mentioned	
52%	Not Mentioned	

AUX ENGINE CONSUMPTION

CONDITION	LOGBOOK	
	FO (MT/Day)	DO(MT/Day)
At sea	3,5	
Idle at port	6,5	
Active at port	13,0	16,0
IG Generator At Port		12,0

AUX BOILER CONSUMPTION

CONDITION	LOGBOOK	
	FO (MT/Day)	DO(MT/Day)
At sea	Nil	
Idle at port	6,5	
Active at port	13,0	16,0

LUBE OIL CONSUMPTION

MACHINERY	LUBE OIL	AMOUNT (LITERS/DAY)	REMARK
Main Engine	Cylinder Oil	152	
Main Engine	System Oil	30	
Diesel Generators	Each	15	

RECENT VOYAGES RECORD

VOYAGE	ORIGIN		DESTINATION		CARGO
	PORT	DATE	PORT	DATE	
BALLAST	LOME	28/01/2020	MONGSTAD	13/02/2020	BALLAST
LADEN	IMMINGHAM	7/01/2020	LOME	21/01/2020	UNLEADED GASOLINE
BALLAST	LOME	17/12/2019	IMMINGHAM	31/12/2019	BALLAST
LADEN	VADINAR	24/08/2019	LOME	20/09/2019	GASOIL
BALLAST	FUJAIRAH	17/08/2019	VADINAR	21/08/2019	UNLEADED GASOLINE

RECENT PSC RECORD					
DATE	MOU	PORT	DETAINED	DEFICIENCIES	SEVERITY/CODE
29/04/2019		AR Rauais	No	1	
22/03/2019	Tokyo MoU	Zhanjiang	No	6	
11/06/2018	Tokyo MoU	Gwangyang, S. korea	No	Nil	
22/03/2018	Indian Ocean MoU	Mombasa, Kenya	No	Nil	
12/02/2018	Tokyo MoU	Novorossiisk, Russia	No	Nil	
13/04/2017	Paris MoU	Thisvi Port, Greece	No	Nil	

F- VESSEL ASSESSMENT QUESTIONNAIRE

1. HULL EXTERNAL

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
1.1	Are Draft Marks/Plimsoll Marks clearly visible and well maintained without rust?	Yes	
1.2	Is the Paint Coating on External Hull found in satisfactory condition?	No	Drydock will due on December 2020, so vessel hull suffers for fender scratch and loose rust
1.3	<i>Is the External Hull found in satisfactory condition in respect of corrosion damage and indentation?</i>	No	
1.4	<i>Were the Tips of the Propeller blades, Rudder Stock and Rudder Horn visible? Is the condition satisfactory?</i>	Yes	
1.5	<i>Were the Hull Anodes visible?</i>	No	Due to vessel cargo operation, no anodes were visible
1.6	<i>Were ICCP Current and Voltage within Normal range?</i>	Yes	Noted in working condition
1.7	Were any Sea Chests visible noted and in satisfactory condition?	No	Due to vessel cargo operation, sea chest was not visible

Comments

- Vessel hull seems in satisfactory condition, a multiple load line assigned for the vessel but only one load line marking permanently applied.

2. FORECASTLE & POOP DECKS

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
2.1	Does the Mooring Machinery on the Forecastle deck appear in good condition with no significant oil leakages?	Yes	
2.2	Are Fair Leads, Capstans and Rollers appeared in good condition?	Yes	A few rollers need maintenance
2.3	Are the Hydraulic Pipes and Control Valve blocks in good condition?	Yes	
2.4	<i>Is the Control Lever held in neutral position, when there is no operation?</i>	Yes	
2.5	<i>Do the Brake arrangements of Windlass and Mooring winches appear in order?</i>	Yes	Brake liner needs maintenance
2.6	<i>Are Anchor Chains in good condition no visible sign of significant wear or crack/fretting or twisting or any other damages?</i>	Yes	
2.7	<i>Do the Anchors sit properly in the Hawse Pipe and are Cable Stoppers properly seated?</i>	Yes	
2.8	<i>Do the Forward and Aft Masts appear in good condition?</i>	Yes	
2.9	<i>Is the general condition of Deck Plating and Coating in good condition?</i>	No	

Comments

- Mooring arrangement and deck coating have loose rust, but last maintenance have been not done accordingly

3. MAIN DECK AND FITTINGS

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
3.1	Is the condition of the Deck Plating and Coating found satisfactory?	Yes	
3.2	<i>Is the condition of Piping and Electrical Conduits on Deck noted satisfactory?</i>	Yes	
3.3	<i>Are Sounding Pipes, Caps, Air Ventilators, Flaps, Plugs, Air Pipes in good condition, rust free, and freely operating?</i>	Yes	
3.4	<i>Are Weather Tight Doors, Stores, and Hatch Opening covers, are in good condition, providing apparently enough sealing?</i>	Yes	Some Weathertight doors seal channel have corrosion
3.5	<i>Are Cross-decks Area and Mast Houses being accessible and well maintained?</i>	Yes	
3.6	<i>Are Bunker-davit, Lifeboat Davit, and Provision Crane Structures in good condition and apparently in operational state?</i>	Yes	A cosmetic maintenance is required
3.7	Is the vessel fitted with Stanchions for Carriage of Logs ? Are Log lashing materials enough and in good condition, if applicable to vessel type?	Yes	
3.8	<i>Are Accommodation Gangways and Pilot Ladders free of rust, damage, wire condition is good, Turntable rotating smoothly, no jerky movement, safety net in place and well-greased?</i>	Yes	
3.9	<i>Are Deck save-alls in good condition and rated capacity marked?</i>	Yes	
3.10	<i>Are the Forecastle Stores, Deck Paint Stores, Bosun's Stores, and Shelters in good condition?</i>	Yes	Paint store was in poor condition
3.11	<i>Are Bulwark on Port and Starboard sides in good condition?</i>	Yes	
3.12	<i>Are cargo manifolds, piping, valves, pressure gauges, save-all trays, drain plug in good condition?</i>	Yes	

Comments

- Some manholes have missing bolts. Deck remain lack of maintenance and last paint applied on deck was unsatisfactory

4. CARGO PUMPING SYSTEM (OIL / CHEMICAL)

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
4.1	Cargo carriage and operation in compliance with the relevant requirements of IMO, flag State, classification society, port authorities, e.g. SOLAS, MARPOL, Operation Manual, etc.?	Yes	
4.2	Cargo tank level indicators, high liquid level alarms and overflow control , etc. properly maintained and operates satisfactorily; indicators/gauges/meters and alarms at cargo control station or in cargo control room function properly; calibration & inspection of the instrument carried out and records properly maintained	Yes	
4.3	<i>Inert gas system (for tankers DWT > 20000) including inert gas generator, inert gas blower, scrubber room ventilation system, deck water seal, remote and automatic control valves, interlocking system between soot blower and shut-off valve on gas supply line, measuring system, alarm system and safety device properly maintained, operates satisfactorily and alarms in control panel function properly</i>	Yes	Inert gas log checked
4.4	<i>Oil Discharge Monitoring Equipment (ODME) properly maintained and manual & auto means of discharge working satisfactorily; records of ODME operation properly maintained; Oil/Water Interface Detector properly maintained and the unit is operating satisfactorily; calibration & inspection of the equipment carried out and records properly maintained (Reg. 31 & 32 of MARPOL Annex I, as amended)?</i>	Yes	Do not comply bio-products
4.5	<i>Tank cleaning system (for tankers DWT > 20000), e.g. (OW) system, including piping, pumps, valves and deck machines properly maintained and free of leaks, the system arranged and operates satisfactorily as outlined in Operations and Equipment Manual (Reg. 33 of MARPOL Annex I, as amended)?</i>	Yes	
4.6	<i>Electrical and mechanical remote operating and shut-off device for cargo pumps, bilge pumps, ballast pumps and stripping pumps properly maintained?</i>	Yes	
4.7	<i>Prewashing system for noxious liquid substances properly maintained and operates satisfactorily, e.g. prewashing machines, tank washing pipelines and wash water heaters; stripping system properly maintained and operates satisfactorily? (For Chemical Tankers)</i>		Vessel is oil tanker only
4.8	<i>Closing devices of windows, door and other openings of wheelhouse and of those on exposed bulkheads of superstructures and deckhouse as required maintained in good condition?</i>	Yes	
4.9	<i>Identification marks of pipe lines including pumps and valves; air pipes and high velocity pressure-vacuum relief valves properly maintained and operate satisfactory; fixed or portable trays or insulation for deck protection against cargo leakage properly maintained; pump discharge pressure gauges provided outside pump rooms properly maintained; water ballast tanks maintained in good condition without leakage; air pipes maintained in good condition without heavy corrosion and leakage (for Chemical Tankers)?</i>	Yes	Deck piping identification shall be improved
4.10	Fixed and portable gas detecting instruments and associated alarms, and gauging devices for oxygen density properly maintained and operate satisfactorily;	Yes	

	calibration & inspection of the instruments carried out and records properly maintained?		
4.11	Are PV settings and alarm set points clearly displayed?	Yes	
4.12	<i>Are PV Valves tested on a regular basis and are all flame screens apparently intact and free from deposits.?</i>	Yes	PV valves are stainless steel
4.13	<i>Is the liquid level in the PV breaker correct and is it suitably protected against cold weather?</i>	Yes	Fixed fire ext. applied
4.14	<i>Is appropriate cargo specific information including Material Safety Data Sheets available on board?</i>	Yes	
4.15	<i>Are cargo sampling routines implemented and is the cargo sample locker good?</i>	Yes	
4.16	<i>Are chemical suits and breathing apparatus in good condition?</i>	Yes	
4.17	<i>Documentation and certificates of oil tankers available e.g. Damage stability booklet, Oil discharge Manual and Record book, COW Manual, SOPEP Manual, Ship Structure Access Manual and Enhanced Survey file?</i>	Yes	All manuals are in good order, original onboard and class approved
4.18	<i>Documentation and certificates for chemical tankers available, e.g. Damage Stability Booklet, Chemical Operation Manual, P&A Manual (MARPOL I/14), Shipboard Marine Pollution Emergency Plan (MARPOL II/17), Cargo Record Book (MARPOL II/15), Oil Record Book Parts I & II, Enhanced Survey Records & associated documents, Cert for Carriage of Dangerous Chemicals in Bulk (BCI or IBC Code), Cert for Carriage of Noxious Liquid Substances in Bulk (NLS), Exemption Certificates, IBC Code or BCI Code, etc.</i>		Vessel is oil tanker only

Comments

- Vessel documentation on cargo pump appears in good condition. apparently pumping system have no issues. only, no.4 starboard side tank cleaning heater flange was leaking water

5. CARGO TANKS AND PIPING (OIL / CHEMICAL)

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
5.1	Hull construction, cargo tanks and piping on weather decks maintained in good condition?	Yes	
5.2	Cargo tanks without leakage and damage. Piping and associated fittings for cargo transfer, fuel oil, ballast, air pipes, inert gas and all other piping on weather decks and in cargo pump room maintained in good condition without heavy corrosion or leakage, etc.?	Yes	
5.3	Type approval hoses properly maintained?	Yes	
5.4	<i>Earthing between hull structures and cargo tanks properly maintained?</i>	Yes	
5.5	<i>Electrical installations in hazardous areas properly maintained, e.g. interlocking device, explosion-proof lights, etc.</i>	Yes	
5.6	<i>Fixed fire extinguishing arrangements for cargo area on weather decks and pump room properly maintained; testing of audible alarm for release of CO₂ in pump room carried out and found satisfactory; additional fireman's outfits (at least 4 sets of fireman's outfits with 200% spare air cylinders provided for each unit) properly maintained; inspection of the arrangement & equipment carried out and records properly maintained</i>	Yes	Liquid foam fitted
5.7	<i>Emergency towing arrangements for tankers DWT > 20000, properly maintained; for tankers constructed on or after 1 July 2002, both ends of the tanker capable of rapid deployment without main power on vessel</i>	Yes	
5.8	<i>Equipment for inerting /padding/drying properly maintained and operates satisfactorily</i>	Yes	
5.9	<i>Protection of cargo pump room maintained in good condition, e.g. bilge alarm, gas monitoring system, temperature sensor, inter-lock system, etc.; ventilation system for compartments and enclosed spaces in cargo areas properly maintained</i>		Vessel no have pump room
5.10	<i>Is additional anti-pollution equipment specific for chemicals carried, as appropriate, available and in apparently good condition?</i>	Yes	
5.11	<i>Are cargo tank coatings in good condition and free from significant defects which could impair cargo worthiness?</i>	Yes	According to tank inspection reports and few photos from owners
5.12	Is there a cargo compatibility table readily available?	No	Cargo compatibility checked on stability booklet
5.13	<i>Are cargo pump emergency stops properly located and regularly tested?</i>	Yes	Records available
5.14	<i>Are deck cargo piping, manifolds and relevant deck equipment suitably marked and in apparently in good condition?</i>	Yes	
5.15	<i>Are spill trays and save all areas in good condition and free from cargo?</i>	Yes	Filled with only rainwater
5.16	<i>Is the cargo pump room clean and tidy and are bilges free from cargo? Is the floor plating in good condition and well secured?</i>		Vessel no have pump room
5.17	Are cargo tank heating coils regularly pressure tested and reportedly free of leaks?	Yes	Only slop tanks fitted with heating coils

5.18	<i>If vapour returns system fitted in good condition? Is the vapour manifold clearly marked?</i>	Yes	
5.19	<i>Are the manifolds fitted with drain lines and purge points and having valves and caps fitted?</i>	Yes	
5.20	<i>Has the ship been recently inspected by OCIMF-SIRE and /or CDI recently? Please state results in remark?</i>	Yes	We had no opportunity to see the report, verbally declared that few remarks are noted

Comments

- According to tank inspection reports and few photos obtained from owners, cargo tanks are in satisfactory condition. cargo tanks have no heating system. only fitted with tank cleaning heater. tank cleaning machine have one nozzle only

6. BALLAST TANKS

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
6.1	Is there USCG approved Ballast Water Treatment System fitted on-board? If no, is there USCG Approval for the extension of due date of installation of BWTS on-board?	No	Next dd after 1 April 2018: 26 May 2022 (it is recommended to be clarified by uscg)
6.2	Are Ballast tanks and void spaces free from significant damage, pitting, wastage and Scaling? <i>Please advise tanks inspected in the comments.</i>	Yes	1-S Wing and double bottom tank; and 3-S Wing and double bottom
6.3	<i>Is the Coating of the ballast tanks apparently in good condition free from significant sign of hard rust, wastage, damage, peeled-off, blister etc.</i>	Yes	
6.4	<i>Are anodes installed and active with suitable amount remaining?</i>	Yes	All intact
6.5	<i>Are Steel Structure and Stringer Plates, Brackets & Girders inside ballast tanks are free from buckling/fractures/doublets/temporary repairs?</i>	Yes	
6.6	<i>Is there no significant deposit of mud or oil contamination inside ballast tanks?</i>	No	Slight mud
6.7	<i>Are the bunker pipelines and sounding pipes passing through ballast tanks are in good condition free from any leakage?</i>	Yes	
6.8	<i>Is manhole covers, seals and ladders in good condition?</i>	No	Lack of maintenance
6.9	<i>Is ballast tanks remote operation valve in good condition and no sign of leakage of oil?</i>	Yes	
6.10	Is the record of Ballast Pump operation and capacity test are maintained? Is Ballast pump capacity compliant with requirements?	Yes	

6.11	<i>Is ballast tank bilge eductor in good condition?</i>	Yes	
6.12	<i>Are Ballast valve control panel and hydraulic pipeline in good condition?</i>	Yes	
6.13	<i>Is the Fore peak tank free of excessive mud deposit, buckling, fracture, doublets, temporary repairs or any other kind of damage, and fitted with active anodes?</i>	Yes	According to tank inspection report
6.14	<i>Did you inspect Top side ballast tank on either side of the ship? Please list the name of the Ballast tanks inspected.</i>	Yes	1-S Wing and double bottom tank; and 3-S Wing and double bottom

Comments

- Vessel have de-harmonization, but subject to BWTS until 26 May 2022. it is projected that there is enough place in engine room, bilge floor. ballast tanks are 'I' shaped. during the inspection, we had chance to inspect 1s wing - DBT and 3 p wing - DBT tanks. tanks are in good condition; a major upgrade have been done during last maintenance. anodes were fully intact but there was some pitting on stiffeners.

7. ACCOMMODATION

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
7.1	Is the general condition of Accommodation superstructure good free from visible damage, buckling, fracture, and rusting?	Yes	
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	Some weather tight doors are corroded on seal channels
7.4	<i>Are common areas in the accommodation such as Mess-rooms, Dayrooms, Galley, Alley ways, offices and staircases clean, tidy and maintained in good condition?</i>	Yes	
7.5	<i>Are the galleys clean and free of roach and rodent infestation?</i>	Yes	
7.6	<i>Are self-closing devices fitted on fire doors and in good condition and closing the doors fully?</i>	Yes	
7.7	<i>Are the laundry and sanitary places clean, tidy and maintained in good condition?</i>	Yes	
7.8	<i>Is Cooking range in good condition without any low insulation alarm?</i>	Yes	
7.9	<i>Are Waste Commutator dispenser fitted with appropriate mesh and arrangements to protect disposal in ports?</i>	Yes	
7.10	<i>Is the dry provision and refrigerated rooms clean, tidy and maintained in good condition?</i>	Yes	
7.11	<i>Are the temperatures of the refrigerated rooms maintained at correct levels and equipment working in good condition?</i>	Yes	
7.12	<i>Is the hospital and toilet clean, tidy and organized and medicine locker maintained in good condition with proper arrangement for disposal of expired medicines?</i>	Yes	
7.13	<i>Are the refer room alarms regularly tested and records maintained on-board?</i>	Yes	Provision room lobby door lock is broken
7.14	<i>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?</i>	Yes	
7.15	<i>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?</i>	Yes	
7.16	<i>Condition of flooring (Tiling and cement) found in good order?</i>	Yes	
7.17	Is there evidence of unkempt wiring and/or exposed wiring noted within the acc. space?	Yes	
7.18	Is the Medical locker well maintained without any expired medicines?	Yes	

7.19	<i>Is the Air con blower room in good condition?</i>	Yes	Positive pressure was enough
7.20	<i>Is the Blower room drain clear with no sign of debris?</i>	Yes	
7.21	<i>Is there a dedicated Garbage station with proper color coding for the segregation of the cargo?</i>	Yes	Station found dirty with oily rags
7.22	Is the Coating inside the accommodation bulkhead normal?	Yes	

Comments

- Accommodation in general found very clean condition, however the cabin assigned to us have broken vacuum system for toilet

8. NAVIGATION & COMMUNICATION SYSTEM

#	QUESTIONNAIRE	YES/NO	COMMENTS
8.1	Is the Navigational Equipment in good condition?	Yes	
8.2	Is the vessel provided with two ECDIS ?	Yes	
8.3	<i>Is the Communication Equipment, General Emergency Alarm and Public address system in good condition and regularly tested?</i>	Yes	
8.4	<i>Are Emergency batteries in good condition and their current and voltage in normal range?</i>	Yes	
8.5	<i>Does the vessel use paper charts as the primary means of navigation?</i>	Yes	
8.6	<i>Is the inventory of charts and publications up to date?</i>	Yes	
8.7	<i>Does the vessel do paperless navigation?</i>	No	
8.8	<i>Are all charts and publications digitized?</i>	Yes	
8.9	<i>Is the BNWAS alarm operational?</i>	Yes	
8.10	<i>Are the Navigation lights operational and tested regularly?</i>	Yes	
8.11	Is the Emergency communication equipment, SAT-C, GMDSS in normal operational condition	Yes	Equipment visually checked and GMDSS logbook is in good order
8.12	Does the Ship e-mail system operate in normal condition?	Yes	

8.13	<i>Are the Radars operational and maintained in good condition without any alarm on the panel?</i>	Yes	
8.14	<i>Are the required GMDSS walkie-talkies available with spare battery?</i>	Yes	
8.15	<i>Is the SART in good condition with valid battery life?</i>	Yes	
8.16	<i>Is the EPIRB in good condition with valid battery life?</i>	Yes	
8.17	<i>Is the SAS Alarm regularly tested and recorded?</i>	Yes	
8.18	Are the watch keeper Binoculars in good condition?	Yes	

Comments

- Bridge generally found in clean condition and majority of equipment seen as working in order.

9. LIFE SAVING APPLIANCES

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
9.1	Are Lifboats with their engine & davits in good condition without any sign of damage, corrosion, wastage, rust and deformation?	Yes	The cosmetics of the equipment shall be improved
9.2	Is the Rescue boat & Davit in good condition without any sign of damage, corrosion, wastage, rust and deformation?	Yes	Starboard side lifeboat assigned as L/B
9.3	<i>Does the qty of LSA equipment meet the required qty. per regulation?</i>	Yes	
9.4	<i>Are the EEBD in good condition and deployed at appropriate location?</i>	Yes	Random checked
9.5	<i>Is the Emergency escape route well equipped and illuminated?</i>	Yes	
9.6	<i>Are the Life rafts & Davit in normal condition without any sign of visible damage?</i>		No David for L/R and rescue boat
9.7	<i>Is the Life Raft Hydrostatic release mechanism not expired and in good condition?</i>	Yes	
9.8	Are Sign, Symbols & tutorial in place for operation of lifeboat, life rafts and other lifesaving appliances?	Yes	

Comments

- LSA random checked and in good visual condition. there is one breathing apparatus compressor located in engine room. safety certificates are in order.

10. FIRE FIGHTING APPLIANCES

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
10.1	Is the Fire detection system in good condition without any abnormal alarm?	Yes	
10.2	<i>Is the Fixed firefighting system in good condition with last service records available on-board?</i>	Yes	Certificates are in order
10.3	Is the Emergency fire pump in satisfactory condition?	Yes	Equipment have loose rust
10.4	Is the Emergency generator in good condition?	Yes	
10.5	<i>Are the Deck fire hydrants free of rust and can be easily opened? Any leaking hydrants sighted?</i>	Yes	Few hydrostatic tests for portable extinguishers are overdue
10.6	<i>Is the Fire line on deck in good condition without soft patches?</i>	Yes	
10.7	<i>Is the Engine room fire line in good condition?</i>	Yes	
10.8	<i>Is the Engine room fire hydrant free of rust and eased?</i>	Yes	
10.9	<i>Are the Foam monitors in good condition?</i>	Yes	Foam level checked in order
10.10	<i>Is there record of Foam quality test & total QTY?</i>	Yes	
10.11	<i>Cargo Tank fire detection system?</i>	Yes	Fixed gas detector found in good order
10.12	<i>Is the deck Fire line deck isolation valve in good condition?</i>	Yes	
10.13	Does the vessel have a designated "Heli-deck" and is their enough FFA as per Heli-deck requirements?	No	

Comments

- Few hydrostatic tests for portable extinguishers are overdue. last calibration for fixed LEL detector not marked on equipment. vessel have additional ex-proof UHFS for fireman outfit

11. ENGINE ROOM & ELECTRICAL SYSTEM

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
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	
11.2	<i>Are the Main Engine Control (Remote Telegraph, local Telegraph, & Governor System, Cylinder Lubricator systems) in apparently good operating condition?</i>	Yes	
11.3	<i>Are Main Engine Safeties such as shut-downs, slow-downs, and various overload alarms are not by-passed and /or de-activated?</i>	No	
11.4	<i>Is the ER operated in UMS mode with dead man alarm operational?</i>	Yes	According to DNV-GL all system is in order
11.5	<i>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?</i>	Yes	The consumption is not recorded clearly
11.6	<i>Is the Main engine structure in good condition, free of any sign of significant damage and free of oil and exhaust leakages?</i>	Yes	
11.7	<i>Are the Crank case relief doors in good condition and free of oil deposit or any error alarm on the Oil mist detector?</i>	Yes	
11.8	Is the Main Engine Safety control system in operational condition and tested regularly?	Yes	
11.9	<i>Are the Main Engine bracings in the normal condition without any sign of damage?</i>	No	
11.10	<i>Are the Main Engine high pressure fuel pipes in good condition, any leakages noted from HP pumps or pipes?</i>	Yes	Slight leakage noted on hp pumps
11.11	<i>Is the condition of Main Engine Exhaust manifold and uptake in good condition?</i>	Yes	

11.12	<i>Are the foundation bolts and checks of the ME in good condition?</i>	Yes	
11.13	<i>Is the area under the Main Engine flywheel clear of any leakage, deposit?</i>	Yes	
	<i>Is the ME Crank Shaft sealing free of oil leakage?</i>		
11.14	<i>Is the Main Engine Air Distributor in normal condition?</i>	Yes	
11.15	<i>Is the Automatic air control valve in normal operational condition?</i>	Yes	
11.16	<i>Is the Turning gear in good condition and with no visible sign of damage to gears?</i>	Yes	
11.17	<i>Is the Engine control console in operational condition with no alarm?</i>	Yes	
	Aux Engines		
11.18	Is the Aux engine Performances satisfactory?	Yes	
11.19	<i>Is there any overdue maintenance of Aux. Engines? If yes, please state in the comments with running hours since last overhaul.</i>	No	
11.20	<i>Is there any sign of leakage of L.O, F.O or cool water Aux. engine, particularly from fuel pump, cylinder heads, and flywheel areas?</i>	No	
11.21	<i>Are the Running parameters of Aux engine within normal ranges as per the records?</i>	Yes	Running hours are close to each other
11.22	What is the Color of Aux Engine exhaust observed at funnel uptake		Light - black
	Stern Tube		
11.23	<i>Does the shaft seal use air-guard technology?</i>	Yes	No class attestation available
	<i>If air-guard sealing in use does the vessel have the relevant exemption certificate on board</i>		
11.24	<i>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?</i>	No	
11.25	Is the shaft earth voltage within normal range?	Yes	
11.26	<i>Is stern tube bearing temperatures in the logbook within normal range?</i>	Yes	

11.27	Is Tail shaft monitoring approved?	Yes	
	Aux Boiler		
11.28	<i>Is the Boiler burner operation found normal with no leakage or sign of damage with normal parameters?</i>	Yes	
11.29	<i>Are the Boiler mountings (Safety valve, apparently in normal condition and tested regularly?</i>	Yes	
11.30	<i>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?</i>	Yes	Boiler was working during the inspection
11.31	<i>No abnormal alarm on the control panel of boiler found?</i>	Yes	
11.32	<i>Aux boiler structure including furnace, uptake, foundation, insulation in normal condition with no visible sign of damage?</i>	Yes	
11.33	<i>Are the boiler water test results in normal range with chemical levels maintained?</i>	Yes	
11.34	Is there evidence that aux boiler requires to be run at sea?	No	No record found
	Miscellaneous Items		
11.35	Is the Workshop kept tidy and clean?	Yes	
11.36	Are the Spare & Storerooms in tidy and clean condition?	Yes	
11.37	<i>Is the Purifier room free of oil leakages and purifiers operating in normal condition with no sign of abnormality</i>	Yes	
11.38	<i>Is the Refer & Air con. plant operating in normal condition?</i>	Yes	
11.39	<i>What type of the Refrigerant is in use on-board? Is the refrigerant collection kit available on-board?</i>	Yes	
11.40	<i>Records of regular leakage testing and re-charging available on-board?</i>	Yes	
11.41	<i>Is the Tank Top Clean, free of any leakage or deposits?</i>	Yes	
11.42	Are Bilge wells free of any sign of oil contamination?	Yes	
11.43	<i>Is the Engine room operated under UMS mode? Are operation & records of alarms maintained?</i>	Yes	
11.44	Are Quick closing valves and arrangement in good condition and operation regularly tested?	Yes	

11.45	Is the Emergency escape free of any obstruction, and well equipped for evacuation	Yes	
11.46	<i>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?</i>	Yes	
11.47	<i>Are the engine room various pumps running normal with current and load within acceptable ranges?</i>	Yes	ME L/O pumps were running without leakage
11.48	<i>Are the general Fuel oil piping's in the engine room in good condition? Any evidence of oil stained lagging of the fuel piping?</i>	Yes	
11.49	<i>Does the ship have min Critical spares as per the class requirement?</i>	Yes	
11.50	<i>Is the Main air bottles structure in good condition?</i>	Yes	Safety valves are in good condition
11.51	<i>Are the Main air compressors operating normal with temperature and pressure normal and cutting off in auto?</i>	Yes	
11.52	<i>Are Airline valves in normal condition?</i>	Yes	
11.53	<i>Is the Main switch board in normal condition with insulation check of domestic and HV system normal?</i>	Yes	
11.54	<i>Is the Emergency generator and switch board in good condition with normal voltage and current levels?</i>	Yes	Emergency generator have coolant leakage
11.55	Is the Alarm monitoring system operational and in normal condition?	Yes	

Comments

- During the inspection, vessel was loading cargo and had ballast operation with no 3. generator was running without problem. also, aux. boiler was running. the only alarm noticed on automation system was abnormal stoppage of air condition unit

12. POLLUTION PREVENTION & CONTROL

#	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	<i>Is an approved Sewage Treatment plant installed and operational on-board? State make and type.</i>	Yes	
12.3	<i>Records of test and dosing available on-board?</i>	Yes	
12.4	<i>Is there a sewage holding tank fitted on-board with content level indicator?</i>	Yes	
12.5	<i>Is there an approved Sewage discharge connection with standard coupling available on board?</i>	Yes	
12.6	Does the OWS Piping appear tamper free?	Yes	OWS MEPC 107(49) is in use by C/E. Discharge. valve found locked
	Is an Isolation valve between ER and hold bilges provided, was it noted shut and lashed /Sealed?		
12.7	<i>Is the Oil Record Book as applicable properly filled-up and up to date?</i>	Yes	
12.8	<i>Is the engine room & deck free of oil leakages posing potential risk to pollution?</i>	Yes	
12.9	<i>Is there Bunkering & Oil transfer procedure in place and displayed?</i>	Yes	
12.10	<i>Is an approved OWS installed apparently in good condition with 15 PPM monitor calibrated and 3-way valve functional test records available?</i>	Yes	
12.11	<i>Check MEPC code of compliance of the 15-ppm monitoring equipment,</i>	Yes	MEPC 107(49)
12.12	<i>Is there provision for the retrieval of alarm data of the OWS equipment?</i>	Yes	
12.13	<i>Are there any tamper proof seals fitted in the piping of the OWS and flanges on pipe leading to overboard?</i>	Yes	
12.14	Is the operation and test procedure for the OWS clearly identified and displayed near the equipment?	Yes	
12.15	<i>Are deck Scupper plugs in place and no sign of potential pollution risk? Are the plugs visibly in good condition?</i>	Yes	
12.16	<i>Is there a class approved SOPEP/SMPEP and a VRP, with an updated IMO coastal state contact listing on-board?</i>	Yes	DNV-GL approved

12.17	Are Deck save-alls fitted with drain plugs as required?	Yes	
12.18	<i>Is the SOPEP equipment available and maintained in good condition?</i>	Yes	Kept available on starboard side of accommodation
12.19	<i>Does the SOPEP locker carry such inventory?</i>	Yes	
12.20	<i>Is the Garbage record book up to date?</i>	Yes	
12.21	<i>Are receipts for garbage discharge available?</i>	Yes	
12.22	<i>Is the list of ODS equipment, records of regular leakage test available in the PMS?</i>	Yes	
12.23	<i>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?</i>	Yes	
12.24	<i>Is there proper segregation of garbage with placards describing the color coding in place and appropriate storage on-board?</i>	Yes	

Comments

- General pollution prevention items were known by crew. vacuum system toilet works in general (except on cabin assigned to us), 15 ppm is used by C/E

13. SHIP MANAGEMENT

#	QUESTIONNAIRE	YES/NO	ASSESSMENT
13.1	Is the Shipboard Safety Management System effectively implemented? Are Internal ISM audits regularly carried out?	Yes	Superintendent was onboard
13.2	Is there an electronic Planned Maintenance System on board and updated by the crew regularly? Which PMS system is currently in use on-board?	Yes	Vertex Infosoftware
13.3	<i>Is there a procedure for reporting Defects & keeping follow-up on pending Corrective actions?</i>	Yes	
13.4	<i>Are records of Non-conformity, accidents, near misses, root cause analysis and corrective actions maintained on-board?</i>	Yes	
13.5	<i>Are the SOLAS equipment test records maintained on-board?</i>	Yes	
13.6	<i>Is the MARPOL equipment testing records maintained on-board?</i>	Yes	
13.7	<i>Does the Crew complement on-board comply with the requirements of the Safe Manning Certificate issued by Flag State?</i>	Yes	
13.8	<i>Are the Critical operation contingency plans in place and displayed in common areas with duties of the responsible crew members?</i>	Yes	
13.9	<i>Is there an approved stability booklet on-board and in use?</i>	Yes	Loading computer also approved
13.10	<i>Do you find records of Superintendent inspections and follow-up available on-board?</i>	Yes	Superintendent was onboard
13.11	<i>What nationalities of crew on-board and common language of communication among them? Please list them in the remark column.</i>	Yes	Working language is English
13.12	<i>Are critical records like Oil Record Book, Garbage Record Book, Ballast water record book, Engine Logbooks, and Deck Logbooks maintained as required?</i>	Yes	
13.13	<i>Are the records of crew familiarization, handing and taking over reports of Master/Chief Engineer prior joining of senior staff available on-board?</i>	Yes	
13.14	<i>Is the record of defects found during PSC Inspection and corrective actions maintained on-board?</i>	Yes	
13.15	Are the record of random drug and alcohol tests maintained on-board?	Yes	

Comments

- Vessel have an effective means of maintenance except for main deck.

G- VESSEL MAINTENANCE OVERVIEW

UT GAUGING REPORT

Please state company name carried out the latest UTG Inspection, Date of Inspection, Place of Inspection.:

Max. and Min Diminution?	Vessel last UTCM calculated at last renewal survey. All calculation is done in mm Max: 0,03 – min: 0
Any requirement of the steel renewal stated in the report?	Last drydock file not presented
Diminution of Cargo Hold tank tops, lower hoppers?	All calculations are done in mm Max: 0,03 - min: 0
Diminution in Ballast tanks?	All calculations are done in mm Max: 0,03 - min: 0
Diminution of Hatch Covers?	
Diminution of lower portion of the corrugated bulkhead in Cargo holds?	All calculations are done in mm Max: 0,03 - min: 0
Any abnormal diminution observed?	

TASKS CARRIED OUT IN THE LAST DRY-DOCKING SURVEY

Job Name	Yes/ No	Remark
Ship's hull	Yes	
Chain Locker	Yes	
Cargo Holds Treatment	No	
ME overhauled	Yes	
ME turbocharger overhauled	Yes	
Aux. Engines & Equipment	Yes	
Ship's plating Ultrasonic Thickness Measured	No	Yes
Deck Crane Load Test	No	
Deck crane rocking test	No	
Steering Gear and Rudder inspected	Yes	
Sea Chest	Yes	
Tail Shaft and Propeller	Yes	

ENGINES TOTAL RUNNING HOURS & RUNNING HOURS SINCE LAST OVERHAUL			
Machinery	Total Running Hours	Turbocharger Running Hours (Since last overhaul)	AE Running Hours (Since last overhaul)
Main Engine	36681	10601	-
Aux. Engine #1	22571	6205	6205
Aux. Engine #2	26654	9068	10413
Aux. Engine # 3	20223	6380	3705

MAIN ENGINE - CYLINDERS RUNNING HOURS SINCE LAST OVERHAUL						
Cylinder unit	Piston	Cylinder Cover	Exhaust	Cylinder liner	Main bearing	Line Wear in (mm)
No. 1	2348	2348	2348	36681	N/A	0,01
No. 2	10602	10602	27348	36681	N/A	0,011
No. 3	10602	10602	772	36681	N/A	0,014
No. 4	10602	10602	11317	36681	N/A	0,012
No. 5	1651	1651	1651	36681	N/A	0,014
No. 6	768	768	768	36681	N/A	0,011
No. 7	20379	20379	765	36681	N/A	0,01
No. 8						

- Liner wear limit – 3~4 mm

LUBE OIL & WATER TESTING ANALYSIS REPORT						
Lube Oil Lab Analysis Results (N=Normal, W=Abnormal)	Main Engine	A/E #1	AE #2	AE #3	S/Tube	Hydraulic
	W	W	W	W	W	W
	5/10/2019	5/10/2019	5/10/2019	5/10/2019	5/10/2019	5/10/2019
	Please write N for Normal and W for Abnormal condition of Lube oil as per the latest report onboard. Also mention date of sampling for each sample above.					
WATER ANALYSIS REPORT						
Water Analysis Results (N=Normal, W=Abnormal)	LT		HT		Boiler	
	N		N		N	
	16/02/2020		16/02/2020		16/02/2020	
	Please write N for Normal and W for Abnormal condition of Lube oil as per the latest report onboard. Also mention date of sampling for each sample above.					

H- VESSEL CERTIFICATES & CLASS STATUS

CERTIFICATES DETAIL		
Certificate Name	Survey/Issue Date	Expiry Date
Registry Certificate	18/03/2013	
Radio Station License	25/04/2019	
International Tonnage Certificate	31/12/2017	
Suez Canal Tonnage Certificate	31/12/2017	
Certificate of Class	06/02/2019	18/03/2023
International Load Line Certificate	31/12/2017	18/03/2023
Cargo Ship Safety Construction Certificate	31/12/2017	18/03/2023
Cargo Ship Safety Equipment Certificate	30/04/2019	18/03/2023
Cargo Ship Safety Radio Certificate	31/12/2017	18/03/2023
International Oil Pollution Prevention Certificate (MARPOL Annex-1)	31/12/2017	26/05/2022
International Air Pollution Prevention Certificate (MARPOL Annex VI)	31/12/2017	18/03/2023
International Sewage Pollution Prevention, Certificate (MARPOL Annex IV)	31/12/2017	18/03/2023
Minimum Safe Manning Document	29/04/2013	
International Anti-Fouling Certificate	31/12/2017	18/03/2023
Fitness Certificate for carriage of Solid Bulk Cargoes	N/A	
International Energy Efficiency Certificate	31/12/2017	
Ballast Water Management Statement of compliance (Exchange Method)	31/12/2017	18/03/2023
Last Right Ship Inspection (If any)	N/A	
EAL Compliance Statement	N/A	

CLASS SURVEY STATUS

CLASS CERTIFICATES

Survey	Survey Date	Renewal date	
		From	To
Special Survey	31/12/2017	18/12/2022	18/03/2023
Intermediate Survey	13/02/2016	18/12/2022	18/06/2021
Annual Survey	30/04/2019	18/12/2022	18/06/2020
Dry-docking	31/12/2017		31/12/2020
IWS Survey			
Tail shaft withdrawal	18/03/2013	18/06/2027	18/09/2028
Boiler Survey	31/12/2017		31/12/2020
ESP Survey	31/12/2017		
CAP Rating	N/A		
IOPP Survey	26/05/2017	26/02/2022	26/05/2022
De-harmonization	26/05/2017	26/02/2022	26/05/2022
Change of Class/ Withdrawal	N/A		
Condition of Class	N/A		
Memos/Recommendations	N/A		
UT Gauging Survey Result	23/12/2017		

I- DESIGN & EQUIPMENT

MACHINERY DETAILS			
Machinery	Sets	Maker & Model	Rating
Main Engine	1	STX- MAN B&W 7S 50 ME-B MARK 8.1 TIER II	
Turbocharger	1	STX- MAN TURBO / TCA-66	
Generators	3	2x MAN B&W 6L21/31 1x MAN B&W 5L21/31	
Alternator	3	HYUNDAI HIMSEN HFC7 508-84K	
Shaft Generator			
Aux Boiler	1	KANGRIM - PB0403AS13	
Exhaust Gas Economizer	1	KANGRIM - EM14RC12A4	
Propeller	1	STX DALIAN ENGINE - AEROLIFE, SOLID, FIXED PITCH, KEYLESS	
Incinerator	1	HMMCO - MAXI NG100SL WS	
Oily water separator	1	JOWA - 3SEP OWS 5.0M3/H	
Reefer Plant			
Air Condition Plant	1		
Air Compressor	1	DONGHWA PNEUMATIC - 2 x H73 / 1x NEX-22A	
Inert Gas Plant	1	KANGRIM -	
Cargo Pumps	12 + 2	FRAMO - 12x SD300 2x SD150	
ODME System			
Ballast Pumps	2	FRAMO - 2x SB400	
Tank Cleaning Machines	1	FRAMO - MA150/200	
Cathodic Protection	1	K.C. LTD. - MGP 6	
Deck Cranes			
Windlass	2	ORIENTAL - 28.9 FT x 9m/min	
Winches	4	ORIENTAL - 20ft x 15m/min	
Anchor	3	JIANGSU ASIAN STAR ANCHOR CHAIN	1 set is spare
Anchor Chain	2	JIANGSU ASIAN STAR ANCHOR CHAIN 330 METERS EACH	
Lifeboats	2	JIANGSU - JY-QFN-5.6	
Sewage Plant	1	IL SEUNG CO. - ISS 26N	

NAVIGATIONAL EQUIPMENT DETAIL

Machinery	Sets	Maker & Model
Standard Compass	1	TOKYO KEIKI - SH165 A1 MASS
Gyro Compass	1	TOKYO KEIKI - TG8000
Radar	2	FURUNO - FAR 2837S & FAR 282T
GPS	2	FURUNO GP150
Echo Sounder	1	FURUNO - FE700
ECDIS	2	TRANSAS - RS6B
BNWAS	1	HYUNDAI - HIWMS
NAVTEX Receiver	1	FURUNO - NX700
Speed Log	2	FURUNO - DS80 / RD20
GMDSS (MF/HF Radio)	1	FURUNO - FS2575C
VDR	1	FURUNO - VR3010
AIS	1	FURUNO FA150
VHF	3	FURUNO - 2xHS2003 & 1x FM8800S

CARGO TANKS CAPACITIES DETAILS

Cargo Tanks	Capacities m3
C.O. TANK 1 (P)	5630.1
C.O. TANK 1 (E)	5629.0
C.O. TANK 2 (P)	7112.9
C.O. TANK 2 (E)	7127.3
C.O. TANK 3 (P)	7124.8
C.O. TANK 3 (S)	7135.1
C.O. TANK 4 (P)	7123.8
C.O. TANK 4 (S)	7135.3
C.O. TANK 5 (P)	7132.0
C.O. TANK 5 (S)	7138.0
C.O. TANK 6 (P)	6896.3
C.O. TANK 6 (S)	6895.9
SLOP 1	1398.7

SLOP 2	1394.7
TOTAL CAPACITIES	84873,9

TANK CAPACITIES	
TANK	CAPACITIES
HFO High Sulphur	N/A
HFO Low Sulphur	885.2 m3 + 967.1 m3
HFO Settling Tank 1	48.4 m3
HFO Settling Tank 2	55.1 m3
HFO Service Tank	48.4 m3
HFO Overflow Tank	N/A
MDO Tank-1	150.6 m3
MDO Tank-2	287.1 m3 (converted tank) - no class letter seen
MSGO Tank	22.4 m3
Total Fresh Water Capacity	542.4 m3
Total Ballast Capacity	30234.1 m3
Total ME CC Lube Oil Storage 1 /2	30.6 m3
Total CYL OIL LOW TBN Storage Capacity	25.5 m3
Total CYL OIL HIGH TBN Storage Capacity	28.8 m3
CYL OIL Day tank Capacity (If Provided)	N/A
Total AE Crankcase oil capacity	Not Mentioned

VESSEL SUB-DIVISION	
Name of decks in Accommodation and Engine room. (Accommodation- Sub-divisions)	Name of transverse Bulkhead on the hull (Hull sub-divisions)
NAV - BRIDGE DECK	LFP TK (C)
C DECK	NO1-2 CARGO - BALLAST TK
B DECK	NO2-3 CARGO - BALLAST TK
A DECK	NO3-4 CARGO - BALLAST TK
1ST DECK	NO4-5 CARGO - BALLAST TK
2N DECK	NO6- SLOP CARGO - BALLAST TK
BILGE FLOOR	ER

• Shape of Stem:

Shape of Stern:

J- SURVEYOR CONCLUSION

External Hull

The MT "XXXXXXX" was inspected during at berth Mongstad Oil Refinery, Mongstad, Norway. The vessel was berthed from the port side. The antifouling paint was applied in dry dock in 23 December 2017. The vessel is due for next dry dock in December 2020, so the antifouling paint was sighted in fair condition and there were fender scratches and loose rust on hull. Even vessel have multiple load line, only one Plimsoll mark has been permanently marked and noted in good condition. Draft marks are noted in good visible condition. The shell plating steel appeared in a good condition with no major deformations or damage. The antifoul coatings in the boot-top and topside area were found in a fair condition and the thickness measurements from 2017 all measurement have been calculated in mm and the maximum diminution noted as 0.3mm almost equal to 1,25%.

Main Deck & Fitting

One hose crane is located between the manifolds that services both manifolds port and starboard. The pipelines sit on welded supports over the frames either side and the passage on starboard and port sides are clearly marked. A three-piece guard rail runs from the poop deck forward along the length of the main deck over the gunwale. The deck appeared in a mixed and fair condition due to on-going maintenance. Areas that had been upgraded with new paint coatings appeared also in a fair condition, because application of the new paint have not been done properly. A large portion of the main deck need to be chipped due to corrosion and occasional pitting. The structural integrity appeared good without deformations. The last drydocking works have not been declared. Many pipelines and supports were in good condition; a few supports were noted with soft scale corrosion. Cable trays and fire line were found good condition. Tank cleaning machine deck heaters found in good condition and the heater material is stainless steel. There are two deck houses on port & starboard side near manifold location noted in good condition. There are two mooring winches on the main deck, one forward and one aft. Each has a double drum for the mooring wire. The mooring winches are in the area of the deck where maintenance is necessary, as such, the winch appeared in a fair to good condition.

Cargo Pumping System

The cargo is carried in twelve (12) cargo tanks plus two (2) slop tanks. The cargo tanks are of epoxy tank coated steel construction. The tank layout is all cargo and slop tanks are divided into two tanks, both port and starboard, increasing the number of different clean segregated grades to a possibility of three (3). Cargo tanks have no arrangement for cargo heating and slop

tanks are fitted with stainless steel heating coils. The external components and the manhole entrances appeared in a fair to good condition. Tank inspection reports are asked for the vessel and all tanks were given a 'good' rating at PMS, but this could not be confirmed with an internal inspection because of the cargo operation. During the inspection, starboard side No.4 tank cleaning machine heater had water dripping from flange.

Ballast Tanks

The vessel currently complies with D-1 Ballast Water Exchange standard (BWE) and must comply with the D-2 standard (fitting of a ballast water treatment plant) at the next IOPP renewal. The terminal granted access for two ballast tanks. Ballast tank arrangement is L shaped and vessel noted as full double skin. We had opportunity to inspect 1S Wing and double bottom tank and 3S Wing - double bottom tanks. Both tanks noted in good condition. There was an obvious sign of previous maintenance have been done with epoxy paint and all anodes were intact. The bell mouth, bottom plug and sounding pipe found in good condition. Occasional pitting was noted on stiffeners, but general condition of the tanks is in good condition. There are no memoranda for ballast tanks on either ESP or class survey status.

Main Engine

The propulsion is from a B&W 7S50ME-B diesel 2-stroke single acting, direct reversable, Turbocharger, with a M.C.R. of 9,680 kW at 121.5 rpm and a CSR of 8,712 kW at 117.3 rpm. Speed and consumptions declared during the inspection. According to the logbook figures, M/E consumption is between 29 – 30 t/d. The consumptions were not written on logbook clearly. The engine housing had visible slight FO residue around the injectors. Maneuvering station found in clear condition; cylinder heads are in good condition. Main engine fuel leakage alarm found in working condition, but condition noted in fair condition. The Ch. Engineer Planned Maintenance System reports are kept properly together with performance reports. Lube oil analysis delivered during the inspection.

Generator

Ship's power is from three (3) auxiliary diesel engines. During the inspection no. 1 running with around 525kW and remain generators were in stand-by. During the inspection, HPU was working for ballast operation. The engines are designed with auto-start ignition for the standby engine and emergency engine. The emergency generator appeared in a good condition except there was cooling water leakage. Lube oil analysis delivered during the inspection.

SW piping, Coolers, Filters, Pumps & Main Switchboard

SW piping apparently in good condition, no corrosion noted on piping. ME SW pumps are in good condition and no leak sighted on seals. M/E coolers and filters are in visually good condition, random coolers were further examined for oil, fuel leakages and found in clean

condition. Engine room pumps are in visually good condition. During the inspection, M/E lubrication pumps were running in good condition. No significant leakage noted around pump seals. During the inspection No1. generator was running and there was no insulation alarm. All switchboards have isolation pad.

Steering Gear

The ROLLS ROYCE steering gear appeared in a good condition with all moving parts recently greased. The rudder is a spade rudder for standard maneuverability. There was slight oil leakage around the steering gear pistons. No previous information on neck clearances were found on board from the previous bottom survey. The chemical storage room locate at aft starboard side of the steering gear room and separated with steel cage. The various areas of the steering gear room were found in a good condition. The chemicals were adequately banded and secured on shelves.

Navigation & Communication Equipment

The Bridge is a good size with good visibility for watch keeping. There is a conning stand centrally for the helm, radars and ECDIS to port side on individual stands and the main remote-control station to starboard for the maneuvering. Aft – center side of the main console is the station for navigation, while communication is in the aft port side of the Bridge. A small pantry area is set-up port side aft for tea and coffee. The Bridge is noted to be a good size with good visibility for watch keeping. The wings are external to the wheelhouse. The bridge was found in a good condition. IMO Bookshelf program is in use to follow up updated IMO publications, Admiralty Charts and one ECDIS are in operational. The communication and navigation equipment all appeared intact and were reportedly in a good working condition.

Accommodation

The accommodation is built to European design with comfortable sized cabins and recreational areas. The accommodation was visually in a good condition. The fittings and furnishings were fair looked after with most intact. General minor wear was noted in-line with the age of the vessel. The linoleum flooring was quite good with general wear noted. The wet areas were in a good condition. The spare cabins including toilets were tidy and clean. The vacuum system for toilet was working, however the toilet that crew assigned for us was not working. The power sockets are European fittings of which appeared without burn marks, exposed wiring or any abnormal wear and tear. Accommodation found in clear condition in general.

MARPOL Equipment

Oil Spill Kit, Sewage Treatment Plant, 15ppm Oil filtering equipment, ODME unit are in good condition. 15 ppm is being used by Chief Engineer frequently as per Oil Record Book.

K- VESSEL PHOTOS

Hull External



Forecastle & Poop Deck



Main Deck & Fittings



Cargo Control Room & Cargo Pumping System



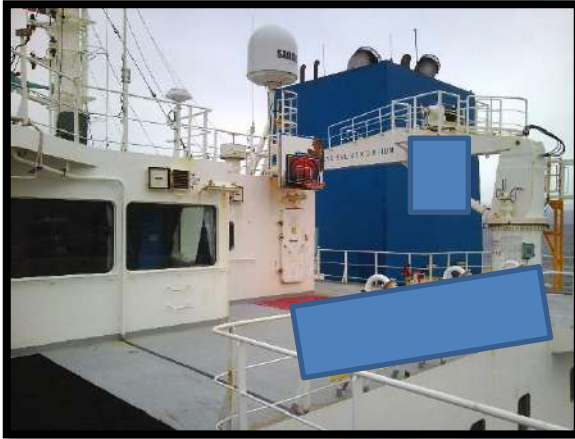
Ballast Tanks



Cargo Tanks



Bridge & Funnel



Engine Room & Machineries





LSA & FFA





Immediate Concerns



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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