IDWAL

PRE-PURCHASE
INSPECTION

PTI RHINE

IMO Number: 9313462

INSPECTED AT SINGAPORE, SINGAPORE
1st MAY 2021

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INSPECTION SUMMARY

Singapore, Singapore

01 May 2021

Status: Standing by

5 Hours Aboard

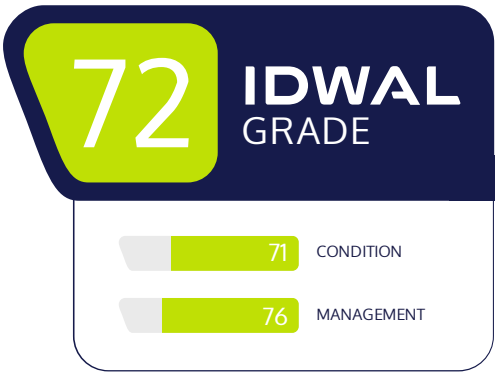
Limited documents provided

The PTI RHINE is a 51271 DWT, 30068 Gross Tonnage, Malta flagged, Chemical Tanker vessel built to a good standard by STX Shipbuilding - Jinhae, in South Korea under Det Norske Veritas (DNV) (IACS) supervision and was delivered on the 9th of February 2007. The vessel is now Classed with Korean Register of Shipping (KR) (IACS).

A Pre-purchase Inspection of the vessel was conducted on the 1st May 2021 in Singapore by Idwal.

Good cooperation was provided by the ship's crew with no access provided to the cargo tanks. A ballast tank was able to be entered and inspected. The vessel was anchor, standing by at the time of inspection.

The vessel was found to be in good overall condition, but with an IDWAL Grade below the industry average for vessels of a similar age, type and size but with a few notable items found during the inspection. These are reported specifically in the notable items section of this report.



VESSEL PARTICULARS

Ship Name	PTI RHINE
Previous Name	St. Johannis
IMO Number	9313462
Port of Registry	Valletta
Ship Type	Chemical Tanker
Flag	Malta
Classification Society	Korean Register
Registered Owner	Triple H No 1 Ltd
Technical Manager	G-Marine Service Co Ltd
Shipbuilder	STX Shipbuilding - Jinhae
Delivery Date	09/02/2007
Dead Weight	51271.00 MT
Gross Tonnage	30068.00 MT
Net Tonnage	13602.00 MT
Length Overall	183.00 m
Breath	32.20 m
Depth	19.10 m
Summer Draught	13.14 m
CallSign	9HA4456
MMSI	249974000
TEU	N/A

The onboard management was found to be good with the Safety Management system found to be well implemented and the vessel generally well maintained. The vessel was found to provide a safe working environment. However, the Port State Control (PSC) history was found to be fair with 28 deficiencies and 0 detentions in the 11 inspections conducted in the past three years.

Given the good condition of the vessel it is estimated that the OPEX levels are likely to be as per industry norms for vessels of a similar age, type and size.

KEY NOTABLE ITEMS

	Description	Action / Timeline	Estimated Cost [USD]
✖	The vessel is not equipped with a Ballast Water Treatment System (BWTS)	Under IMO regulations this will not be required until IOPP renewal survey due by 9th of February 2022. However, if the vessel wishes to trade to the USA, a BWTS may have to be installed by the vessel's next 'out-of-water' dry docking.	**$600,000.00**
✖	Soft patch observed on no.2 me lt cooler's sea water line.	It is recommended that permanent repairs are undertaken at the earliest opportunity.	**$2,000.00**
✖	Deformity in way of port side anchor chain in bosun store approximately 0.6m in diameter.	It is recommended that this is further investigated and repaired at the earliest opportunity.	**$2,000.00**
✖	Reported that main engine cylinder liners and piston crowns (except no.2 unit) were defective.	It is recommended that this is further investigated and verified at the earliest opportunity.	**$0.00**
✖	Limited documents provided.	These have since been requested, however have not ben submitted for review.	**$0.00**
−	Hydraulic oil leakages from fwd mooring winches.	It is recommended that the source of the leakage is identified and repaired at the earliest opportunity.	**$1,000.00**
−	Weeping corrosive staining on accommodation superstructure.	It is recommended that these areas are treated and restored at the earliest opportunity.	**$1,000.00**
−	Engine control room air con was defective and inoperative at the time of the inspection.	It is recommended that this is repaired at the earliest opportunity.	**$1,000.00**
−	Localized areas of corrosion concentrated on piping arrangements on deck such as hydraulic, steam and cargo lines as well as corrosion on cable trays.	It is recommended that these areas are treated and restored at the earliest opportunity.	**$1,000.00**
−	Brake lining;'s on several mooring winches were worn beyond an acceptable parameter.	It is recommended that the linings are renewed at the earliest convenience.	**$500.00**
−	Localized areas corrosion with signs of scaling concentrated on catwalk operational gratings.	It is recommended that these are treated and restored at the earliest opportunity.	**$500.00**

⊖	Main engine had traces of minor oil observed in way of fuel pump and cylinder heads.	It is recommended that the source of the leakage is identified and repaired at the earliest opportunity.	**$500.00**
⊖	Load line markings were partly illegible.	It is recommended that this is refreshed at the earliest opportunity.	**$500.00**
⊖	Cargo hose handling crane's hydraulic cylinder had a minor leakage from hydraulic inlet line at top part of cylinder.	It is recommended that this is rectified at the at the earliest opportunity.	**$500.00**
⊖	No.3 WBT (S) access hatch cover's rubber seal had hardened as well as localized corrosion on retaining channels.	Access hatches to be re-furbished when possible.	**$250.00**
⊖	Several tank vent heads in way of bunkering station were missing securing bolts.	It is recommended that new ones are procured and fitted at the earliest opportunity.	**$200.00**
⊖	High pitch rubbing sound from sewage treatment plant motor, reportedly due to defective motor bearing	It is recommended that this is further investigated and repaired at the earliest opportunity.	**$0.00**
⊖	Bilge Overboard valve was not secured against unauthorised opening with no signage or warnings seen to be posted due to no lock or seal sighted	Rectify this issue and ensure a means of securing from unauthorised opening to be implemented as soon as practical as well as appropriate signage or warnings to be posted.	**$0.00**
⊖	Evidence of holing and diminution on fittings in way of monkey island.	It is recommended that these areas are renewed at the earliest opportunity.	**$0.00**
⊖	Oxygen line for hot work remained pressurized despite not being in use.	It is recommended that crew are reminded to release pressurized gas from line after each use.	**$0.00**
⊖	Expansion joint for deck piping was misaligned.	It is recommended that the expansion joint is adjusted at next available opportunity.	**$0.00**
⊖	Excessive ice formation on piping arrangement of cold provision room	De-frost and rectify root cause of excess ice build-up	**$0.00**
⊖	Last inspection date for PV valves on weather deck were not marked.	It is recommended that these are stencilled at the earliest opportunity.	**$0.00**
✓	The vessel holds an Inventory of Hazardous Materials (IHM) statement of compliance issued by class which has been required for entry into EU ports since 31 December 2020.	Positive.	
✓	The vessel's stern tube is fitted with an Environmentally Acceptable Lubricant (EAL) so is VGP compliant in this respect for trading to the USA.	Positive.	

GRADING DATA

Category	Grade
VESSEL CONDITION	
Overall Build Quality	80
Hull Condition	80
Foc'sle & Poop deck	60
Main Deck & Fittings	60
Ballast Tanks & Void Spaces	70
Galley & Accommodation	70
Navigating Bridge & Communications Equipment	80
Engine Room Machinery & Machinery Spaces	60
Fire & Safety Appliances	80
Lifesaving Equipment	80
Safe Working	80
Pollution Control	60
Onboard Management & Crew Motivation	80
Cargo Systems	60
VESSEL MANAGEMENT	
Forthcoming Regulatory Compliance	60
Crew Welfare	80
Crew Performance	60
HSEQ Systems	80
Management Systems (ISM/PMS/FRA)	70
Classification & Certification	100
Vetting/ PSC performance/ Records	60

OVERALL BUILD QUALITY

80

The overall build quality was found to be good with the vessel built to IACS standards and Rules. Steel plating was found to be fabricated to a good standard, well aligned and was free from general distortion, and the quality of welding was seen to be good with no significant pitting and with good profile in general. Fittings and pipework were generally well laid out, with pipework and electrical conduits well placed for ease of maintenance and repair. Bridge equipment was found to be provided by reputable, well known manufacturers with good global support capabilities as was the engine room equipment. The accommodation was found to be outfitted to a high quality and is equipped with a Gym and En-suite for all crew members.

HULL

80

The hull was seen to be in a good overall condition, with the hull able to be inspected from all round at the anchorage. The vessel was found to be free of both major and minor structural defects and had only minor surface and scattered corrosion, up to approximately 10% of the surface area, mainly located on anti-fouling and lower boot top layers. Hull markings were partly obscured with no marine fouling observed. It was particularly noted that the load line markings were partly illegible. It is recommended that this is refreshed at the earliest opportunity. The vessel's last out of water bottom survey was carried out on 10-jun-20, with the vessel's next out of water bottom survey due by 09-feb-22.

NOTABLE ITEMS

Description	Estimated Cost [USD]
Issue: Load line markings were partly illegible. **Corrective Action:** It is recommended that this is refreshed at the earliest opportunity.	$500

FOC'SLE & POOP DECK

60 The Foc'sle and poop decks were seen to be in a fair condition overall. This is to a large extent due to deformity in way of port side anchor chain in bosun store approximately 0.6m in diameter. As well as hydraulic oil leakages from fwd mooring winches. It was also identified that brake lining;'s on several mooring winches were worn beyond an acceptable parameter. The decks were found to be free of structural defects had only minor spot and scattered corrosion, up to approximately 5% of the surface area, mainly located on mooring stations. Deck fittings were found to be in a good condition with fairleads and mooring rollers free to turn when tested. All Hydraulic windlass(es) and winches were reported to be fully operational but were, however, not free of hydraulic leakage with oil leakages from fwd mooring winches. Mooring machinery was in good condition however, band brake thicknesses were minimal, and require replacement. Clutching and gearing arrangements were sufficiently greased. Mooring ropes were in a good condition, however, anchor chains were in a fair condition, due to anchors chain signs of diminution. No UTM report provided to verify to what extent. Mooring practices were seen to be good and snap-back zone warnings were seen to be posted at the entrances to mooring areas as per industry best practice. The forward mast was found to be in a good condition. The bitter end release arrangements were seen to be clear and unobstructed and the emergency towing booklet seen to be available near to the Foc'sle.

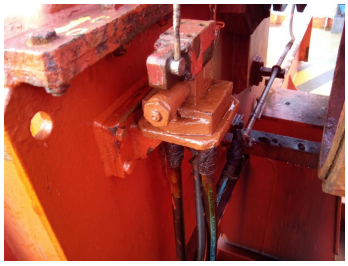
NOTABLE ITEMS

Description	Estimated Cost [USD]
Issue: Deformity in way of port side anchor chain in bosun store approximately 0.6m in diameter. **Corrective Action:** It is recommended that this is further investigated and repaired at the earliest opportunity.	$2,000

Issue: Hydraulic oil leakages from fwd mooring winches.

Corrective Action: It is recommended that the source of the leakage is identified and repaired at the earliest opportunity.

$1,000



Issue: Brake lining;'s on several mooring winches were worn beyond an acceptable parameter.

Corrective Action: It is recommended that the linings are renewed at the earliest convenience.

$500

MAINDECK & FITTINGS

60

The main deck was seen to be in a fair condition overall. This is to a large extent due to localized areas of corrosion concentrated on piping arrangements on deck such as hydraulic, steam and cargo lines as well as corrosion on cable trays. As well as an expansion joint for deck piping was misaligned. Furthermore, it was found that several tank vent heads in way of bunkering station were missing securing bolts. Additionally, it was noted that there were localized areas corrosion with signs of scaling concentrated on catwalk operational gratings. with the deck found to be free of structural defects and had only minor spot and scattered corrosion, up to approximately 10% of the surface area, mainly located on external tank framing. Deck fittings were found to be in a good condition with pipework and fittings free of leakages. However, deck mooring machinery was found to be in a fair overall condition due to leakages on fwd mooring mooring winch. The accommodation ladders and gangways were in a good overall condition, with no notable defects found, as were provisions lifting appliances.

NOTABLE ITEMS

	Description	Estimated Cost [USD]
−	**Issue:** Localized areas of corrosion concentrated on piping arrangements on deck such as hydraulic, steam and cargo lines as well as corrosion on cable trays. **Corrective Action:** It is recommended that these areas are treated and restored at the earliest opportunity.	$1,000

Issue: Localized areas corrosion with signs of scaling concentrated on catwalk operational gratings.

Corrective Action: It is recommended that these are treated and restored at the earliest opportunity.

$500

Issue: Several tank vent heads in way of bunkering station were missing securing bolts.

Corrective Action: It is recommended that new ones are procured and fitted at the earliest opportunity.

$200

Issue: Expansion joint for deck piping was misaligned.

Corrective Action: It is recommended that the expansion joint is adjusted at next available opportunity.

$0

BALLAST TANKS & VOID SPACES

70

Ballast tanks were deemed to be in a fair to good overall condition. This is to a large extent due to No.3 WBT (S) access hatch cover's rubber seal had hardened as well as localized corrosion on retaining channels No.3 WBT (S) were entered for inspection however no photographs of previous tank entries were provided for review The inspected ballast tanks were found to be generally free of significant structural defects and had only minor spot and localised corrosion, up to approximately 15% of the surface area, mainly located on bulkheads and structural member such as longitudinals and web frames. Ballast tank fittings such as ladders and pipework were seen to be in a good overall condition with Anodes seen to be depleted up to 30%. Tanks were seen to have a minimal amount of mud/sediment accumulation but were free of any signs of staining from sewage or marine fouling. Ballast control systems such as valves and gauges were reported to be fully operational and all ballast pumps were in good working order and in good visual condition.

NOTABLE ITEMS

Description	Estimated Cost [USD]
Issue: No.3 WBT (S) access hatch cover's rubber seal had hardened as well as localized corrosion on retaining channels. **Corrective Action:** Access hatches to be re-furbished when possible.	$250

GALLEY & ACCOMMODATION

70

The accommodation and galley areas were seen to be in a fair to good condition overall. This is to a large extent due to excessive ice formation on piping arrangement of cold provision room, As well as weeping corrosive staining on accommodation superstructure. The floor and wall coverings found to be in good condition and upholstery and furniture found to be free from deterioration and defects. The levels of housekeeping and cleanliness was found to be good with levels of hygiene also seen to be good in the sanitary facilities. The hospital was seen to be well equipped and ready for use with drugs and controlled substances locked away and properly logged. The Air Handling Unit (AHU) was found to be maintaining a comfortable temperature and was seen to be in good condition with no defects. The galley equipment was deemed to be in a good overall condition with all equipment reportedly in good working order. The galley was found to be in a hygienic condition with the galley hoods also found to be kept clean. The vessel's walk-in cold rooms were found to be clean and hygienic with temperatures at the required levels. Provisions machinery, pipework and door seals were seen to have defects due to excessive ice formation on piping arrangement of cold provision room. The external superstructure was found to be free of structural defects and had only minor surface and spot corrosion, up to approximately 3% of the surface area, mainly located on accommodation superstructure. The external superstructure fittings were seen to be in a good overall condition with all external accommodation doors in good working order and properly closing.

NOTABLE ITEMS

Description	Estimated Cost [USD]
Issue: Weeping corrosive staining on accommodation superstructure. **Corrective Action:** It is recommended that these areas are treated and restored at the earliest opportunity.	**$1,000**

Issue: Excessive ice formation on piping arrangement of cold provision room

Corrective Action: De-frost and rectify root cause of excess ice build-up

$0

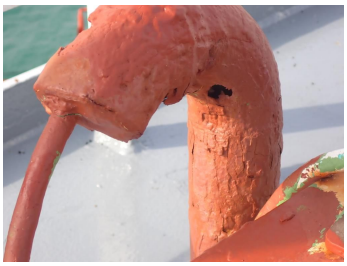
NAVIGATING BRIDGE & COMMUNICATIONS EQUIPMENT

80

The Bridge, navigation and communications equipment were found to be in a good condition overall with housekeeping found to be good and with all bridge equipment reported to be fully operational. The vessel's VDR was found to be free from any unanticipated alarms with collection instructions posted nearby and with the Bridge Navigation Watch Alarm System (BNWAS) reported to be fully operational. The vessel's primary means of navigation, as listed on form E of the safety equipment certificate is a dual ECDIS system which were found to be up to date. RADAR blind sectors were seen to be posted near the RADARs with the compass deviation card up-to-date and available near to the helm. The compass deviation log was found to be satisfactory, with no major deviations and generally up-to-date. The vessel is licensed to cover GMDSS sea areas A1, A2, and A3 and had a valid shore-servicing agreement in place. The radio batteries were seen to be well maintained and in good condition and the EPIRB, SART and VHF handheld batteries were all in date as required. Berth-to-berth passage plans were seen to be signed by all navigating officers and nautical publications were provided in Paper format. Master's standing and night orders were found to be signed by all navigating officers with the bridge log book correctly filled in and the GMDSS logbook also up to date and correctly filled in. The Monkey island was found to be in a good overall condition with the mast, aerials and antennas seen to be satisfactory and free of defects.

NOTABLE ITEMS

Description	Estimated Cost [USD]
Issue: Evidence of holing and diminution on fittings in way of monkey island. **Corrective Action:** It is recommended that these areas are renewed at the earliest opportunity.	$0



ENGINE ROOM, MACHINERY & MACHINERY SPACES

60 The Engine room and machinery were found to be in a fair overall condition. This is to a large extent due to Reported that main engine cylinder liners and piston crowns (except No.2 unit) were defective. It is recommended that this is further investigated and verified at the earliest opportunity. At the time of the inspection, it was found that Soft patch observed on No.2 ME LT cooler's sea water line. Moreover, the engine control room air con was defective and inoperative at the time of the inspection. Furthermore, it was found that main engine had traces of minor oil observed in way of fuel pump and cylinder heads. It is recommended that the source of the leakage is identified and repaired at the earliest opportunity. There were no significant defects reported or observed and with the engine room generally found to be very clean. During the inspection the Auxiliary Engines and purifiers were seen running. Bilges and tank tops were generally free of oil or water. Pipework was seen to be in good overall condition, free of leaks, temporary repairs and significant corrosion with pipework lagging seen to be all clean and intact. Housekeeping was seen to be to a good overall standard with the vessel found to be equipped with adequate critical spares as recommended by Class or manufacturers which were seen to be neatly stowed and secured. A review of the latest lube oil analysis reports provided showed no areas of concern. The Main Engine was reported to be fully operational but was seen to be in a fair overall condition due to traces of minor oil observed in way of fuel pump and cylinder heads. A review of the latest Main Engine performance report provided showed no areas of concern. A review of the latest engine running hours showed that the Bearings and Cylinder Liners overhaul schedules are subject to Condition Based Monitoring (CBM) and therefore no dedicated overhaul intervals are provided and Cylinder heads and Pistons overhauls were within the service hours. Propulsion systems, such as shafts, gearing and bearings were in good working order with no defects reported or sighted. The 3 Auxiliary Engines were reported to be fully operational and were seen to be in good condition, with no major visible defects. A review of the latest Auxiliary engines performance report provided showed no areas of concern. Auxiliary engines running hour data was not provided on board the vessel but has been requested from the vessel manager/owner. The vessel's steam boiler was found to be fully operational and in good condition. The boiler safety valves were seen to be satisfactory and free of tampering. Auxiliary machinery, including purifiers, pumps, coolers etc. were in good working order and seen to be well maintained and clean. The steering gear was seen in good working order, free of leakage with emergency steering instructions seen to be posted nearby. The machinery spaces are not operated in unmanned mode, with a full watch kept at sea and the alarm and control system was seen to be free of any serious alarms. Electrical distribution systems including the main switchboard were in good working order and switchboard insulation readings were adequate. It was also noted lube Oil (LO) analysis result, dated September 2019 stated that No.1 and No.3 auxiliary engines were at critical levels for high viscosity, insoluble, sodium, vanadium, iron and nickel. A copy of this LO report was not provided when requested at the time of the inspection.

NOTABLE ITEMS

Description	Estimated Cost [USD]

Issue: Soft patch observed on no.2 me lt cooler's sea water line.

Corrective Action: It is recommended that permanent repairs are undertaken at the earliest opportunity.

$2,000

Issue: Reported that main engine cylinder liners and piston crowns (except no.2 unit) were defective.

Corrective Action: It is recommended that this is further investigated and verified at the earliest opportunity.

$0

Issue: Engine control room air con was defective and inoperative at the time of the inspection.

Corrective Action: It is recommended that this is repaired at the earliest opportunity.

$1,000

Issue: Main engine had traces of minor oil observed in way of fuel pump and cylinder heads.

Corrective Action: It is recommended that the source of the leakage is identified and repaired at the earliest opportunity.

$500

FIRE & SAFETY APPLIANCES

80 Fire and safety appliances were found to be in a good condition overall and generally free of fire hazards with all firefighting equipment seen to be regularly serviced and inspected. The fire detection and alarm system was found to be fully operational and was free of signs of tampering and alarms. The vessel is fitted with CO2 and Water Spray fixed firefighting in the engine room, Deck Foam for the cargo areas and Galley CO2 in the accommodation. Fixed firefighting systems were all reported to be in good working condition with operating instructions clearly posted. The main and emergency fire pumps were reportedly fully operational and both were found to be in a good condition, free of leakages. The fire main and ancillaries such as hydrants and valves were in good overall condition, free of defects. Fire extinguishers were all in good condition and all portable equipment were positioned in accordance with the fire plan. Firefighting outfits and associated equipment were all in good condition with BA equipment found fully charged and ready for use. The emergency generator was not tested during the inspection, but was reported to be in good working order and in a good overall condition. Remote shutdown emergency devices such as quick closing valves, machinery stops and ventilation dampers were deemed to be in a good overall condition with no defective shut down equipment. The fire doors were found to be in good condition, closing effectively and free from any unauthorised "hold-open" arrangements.

LIFESAVING EQUIPMENT

80

Lifesaving appliances were seen to be in a good overall condition with all equipment regularly serviced and inspected as required. The vessel is fitted with 2 davit launched lifeboats, which were seen to be in good overall condition externally and internally. The lifeboat engine(s) was not tested during the inspection, but was reported to be in good working order. The vessel has no dedicated rescue boat and uses a designated davit launched lifeboat instead. The vessel is equipped with 5 life rafts, which were found to be in good condition with Hydrostatic Release Units (HRUs) in date and correctly rigged. Davits and lowering arrangements were found to be in good condition overall with evidence of regular maintenance, servicing and inspection sighted and evident. Ancillary lifesaving equipment such as lifejackets, immersion suits and EEBD's etc. were found to be in good condition and ready for immediate use with man overboard smoke and light signals seen to be in date. Embarkation ladders were found to be in a good, well maintained condition though the pyrotechnics and line throwing apparatus were seen to be appropriately stored and within their expiry dates.

SAFE WORKING

80

Safe working was deemed to be fair to good overall. This is due to an oxygen line for hot work remained pressurized despite not being in use. It is recommended that crew are reminded to release pressurized gas from line after each use. No unsafe practices observed during the inspection and the vessel presenting a generally safe working environment. Hazards were seen to be clearly marked and external walkways adequately coated with non-slip paint and free of trip hazards. Adequate PPE was seen to be worn by crew at all times and portable gas detection meters were provided and calibrated. Hazardous substances were seen to be generally safely managed with appropriate Material Safety Data Sheets provided. Risk Assessments (RA) were seen to be up to date and satisfactory with enclosed space entry procedures followed and an effective Permit To Work (PTW) system in place. Main and emergency exits were clearly identified and unobstructed with all IMO signage seen to be satisfactory. Pilot ladders and boarding arrangements were seen to be in a good safe condition with clear pilot boarding instructions posted. Regular drills were conducted on board with the last drill conducted on the 29-apr-21, which was an abandon ship drill.

NOTABLE ITEMS

Description	Estimated Cost [USD]
Issue: Oxygen line for hot work remained pressurized despite not being in use. **Corrective Action:** It is recommended that crew are reminded to release pressurized gas from line after each use.	$0

POLLUTION CONTROL

60 Pollution control was deemed to be fair overall. This is to a large extent due to no bilge Overboard valve was not secured against unauthorised opening with no lock or seal sighted. Rectify this issue and ensure a means of securing from unauthorised opening to be implemented as soon as practical as well as appropriate signage or warnings to be posted. Moreover, it was found that high pitch rubbing sound from sewage treatment plant motor, reportedly due to defective motor bearing. It is recommended that this is further investigated and repaired at the earliest opportunity. The vessel was found to be generally free of pollution hazards. The vessel does hold a Class-approved Inventory of Hazardous Materials, which will be required for entry into EU ports from the 31st of December 2020. The vessel's Oily Water Separator (OWS) was found to be fully operational and in good overall condition, with no obvious defects. The OWS was not tested during the inspection though the 15ppm Oil Content Meter (OCM) was seen to be calibrated. The bilge overboard was not protected against unauthorised opening though no signs of tampering to the oily water treatment system were found. SOPEP equipment was found to be well stocked and neat with an accurate list of equipment posted nearby. The vessel is not fitted with a Ballast Water Treatment System (BWTS), which will be required before the next International Oil Pollution Prevention (IOPP) certificate renewal date on the 09-Feb-22, though may be required by the next out-of-water docking if the vessel intends on trading in the USA. The vessel's stern tube is fitted with an Environmentally Acceptable Lubricant (EAL) so is VGP compliant in this respect for trading to the USA. The vessel's sewage treatment plant was found to be fully operational but was seen to be in fair overall condition due to high pitch rubbing sound from sewage treatment plant motor, reportedly due to defective motor bearing. Garbage segregation was found to be good, with adequate, labelled containers and garbage seen to be well sorted and containers seen to be made of approved non-combustible materials. The vessel's incinerator was found to be fully operational and in good overall condition, with no obvious defects. The vessel complies with IMO 2020 regulations by employing the use of Very Low Sulphur Fuels Oils (VLSFO) with a sulphur content of less than 0.5%. It was also noted several documents including but not limited to Garbage Record Book (GRB), Oil Record Book (ORB) and Emission Control Area (ECA) change-over log were requested, however were not submitted for review.

NOTABLE ITEMS

Description	Estimated Cost [USD]
Issue: The vessel is not equipped with a Ballast Water Treatment System (BWTS) **Corrective Action:** Under IMO regulations this will not be required until IOPP renewal survey due by 9th of February 2022. However, if the vessel wishes to trade to the USA, a BWTS may have to be installed by the vessel's next 'out-of-water' dry docking.	$600,000

Issue: High pitch rubbing sound from sewage treatment plant motor, reportedly due to defective motor bearing

Corrective Action: It is recommended that this is further investigated and repaired at the earliest opportunity.

$0

Issue: Bilge Overboard valve was not secured against unauthorised opening with no signage or warnings seen to be posted due to no lock or seal sighted

Corrective Action: Rectify this issue and ensure a means of securing from unauthorised opening to be implemented as soon as practical as well as appropriate signage or warnings to be posted.

$0

Issue: The vessel holds an Inventory of Hazardous Materials (IHM) statement of compliance issued by class which has been required for entry into EU ports since 31 December 2020.

Corrective Action: Positive.

$

Issue: The vessel's stern tube is fitted with an Environmentally Acceptable Lubricant (EAL) so is VGP compliant in this respect for trading to the USA.

Corrective Action: Positive.

$

ONBOARD MANAGEMENT & CREW MOTIVATION

80

Onboard management was found to be good overall. The paper-based Safety Management System (SMS) was deemed to be functioning and well implemented in general, with Permits to Work (PTW), risk assessments and procedures understood and followed. Onboard management was found to deal with accidents, near misses and deficiencies in an effective manner and regular safety committee meetings were carried out on board. The PMS system was found to be kept up to date with no critical overdue work orders. A paper based Planned Maintenance System (PMS) was in place, with no dedicated or approved software. However, the Port State Control (PSC) history was found to be fair with 28 deficiencies and 0 detentions in the 11 inspections conducted in the past three years. The vessel's flag is targeted by the United States Coastguard (USCG) and therefore will likely be subject to increased scrutinization by port state control (PSC). Security access controls were deemed to be satisfactory with the vessel conforming to International Ship and Port Security (ISPS) standards. The Master and crew were prepared for the inspection and provided good cooperation but with limited documents provided.

CARGO SYSTEMS

60

The cargo systems were assessed to be in fair condition overall. This is to a large extent due to last inspection date for PV valves on weather deck were not marked. As well as cargo hose handling crane's hydraulic cylinder had a minor leakage from hydraulic inlet line at top part of cylinder. It is also prudent to note that the No.5 COT (P) temperature sensor was defective. It is recommended that this is repaired at the earliest opportunity. Cargo tanks were not permitted to be entered during the inspection due to the loaded condition of vessel and no inspection photographs or inspection reports were provided for review but have been requested from the vessel owner/manager. The vessel is equipped with 6 cargo tanks, and can carry up to 6 segregations of cargo. Hydraulically driven deep well cargo pumps are fitted, which were fully operational and in good condition. The vessel has ejectors for cargo stripping, which were in full working order and in good condition as observed. Cargo pipework was in a good condition and save alls were free of cargo residue. The hose handling crane was in full working order though was in a fair condition due to minor leakage in way of hydraulic inlet line at top part of cylinder. The Cargo Control Room (CCR) was seen in a good condition with all Emergency Shutdown Devices in good working order, though issues were identified with the monitoring systems such as COT 5P temperature sensor defective. The Inert Gas (IG) system was in full working order and in good condition as observed. Pressure-Vacuum valves were in a good condition with operating pressures clearly marked. The vessel is not fitted with a mast riser. The vessel is fitted with a Vapour Emission Control Sytem (VECS), which was seen to be in a good overall condition. Gas monitoring instruments were provided on board and were adequately calibrated as required. A Class-approved loading computer is installed on board. No information has been provided concerning the vessel last SIRE inspection or whether the vessel is enrolled on the Condition Assessment Programme (CAP).

NOTABLE ITEMS

	Description	Estimated Cost [USD]
−	**Issue:** Cargo hose handling crane's hydraulic cylinder had a minor leakage from hydraulic inlet line at top part of cylinder. **Corrective Action:** It is recommended that this is rectified at the at the earliest opportunity.	$500

Issue: Last inspection date for PV valves on weather deck were not marked.

Corrective Action: It is recommended that these are stencilled at the earliest opportunity.

$0

NOTES TO THE READER

This report is intended for the sole use of the recipient and is designed to offer a condition evaluation of the subject vessel, as found on the day of the survey and in the opinion of the surveyor concerned. The report is subject to any access restrictions as described herein, and subject always to the level of cooperation afforded to the surveyor during the inspection itself. All details are given in good faith, and without guarantee. This report has been prepared and issued by Idwal Marine Services Ltd to its Customer in accordance with the General Terms and Conditions of Idwal Marine Services Ltd, a copy of which can be obtained at www.idwalmarine.com.

OPERATIONAL DATA

Operational Data Condition

Does the vessel have an Exhaust Gas Cleaning System (EGCS)? ☒ No

Total High Sulphur Fuel Oil (HSFO) capacity:	m^3
Total Marine Gas Oil (MGO), Diesel Oil (DO), Very and Ultra Low Sulphur Fuel Oil (VLSFO and ULSFO) capacity:	1,804.4 m^3
Total Fresh Water capacity:	401.6 m^3
Total Ballast Capacity:	24,155.5 m^3
Total Bilge water capacity:	41 m^3
Total sludge and residues capacity:	14.6 m^3

Main Engine Fuel Consumption

Engine Order	Speed (knts)	Ballast Consumption (mt/24hrs)	Loaded Consumption (mt/24hrs)
Full Speed	13	23.6	26.3
Eco Speed	11.5	22.5	23

Auxiliary Engine Fuel Consumption

Engines Running	In Port Consumption (mt/24hrs)	At Sea Consumption (mt/24hrs)
1	2.8	2.8
2	7.2	

Additional fuel consumption: *55 mt/24hrs*

Comments on additional consumption (Why): *24 Hours heating of cargo IGG consume 4-6MT for inerting. HPP engine (Framo pump) consume 2.8 - 3.8MT*

Lube Oil Consumption

Machinery	Consumption (ltrs /24hrs)
Main Engine Crankcase	20
Main Engine Cylinder	240
Auxiliary Engines (Per Engine)	10

Class Surveys

Were all Class and Statutory certificates valid? ☑ Yes

Is the vessel on the Extended Dry Docking (EDD) program? ☒ No

Is the vessel on the Enhanced Survey Program (ESP)? ☑ Yes

Does the vessel have an In Water Survey Class notation? ☒ No

Survey	Date Last Completed	Date Next Due
Main / Special / Renewal	24-may-2,017	09-Feb-22
Intermediate	10-jun-2,020	
Annual	01-jan-2,021	
Bottom in dry dock	10-jun-20	09-feb-22

What was the location of the last out-of-water docking?	*No information provided.*
Is the vessels last dry dock report provided and attached?	☒ No
Provide details of works done in last dry dock	*No information provided.*
Does the vessel intend to dry dock before the next scheduled bottom survey?	☒ No
Has the vessel remained with the same flag since build?	☒ No
Please provide details of previous flags	*Hong Kong, China*
Has the vessel remained with the same Class since build?	☒ No
Please provide details of previous Class societies	*DNV - Det Norske Veritas*
Does the vessel have any Conditions of Class or Recommendations of Class?	☒ No
Does the vessel have any Class Memos, Observations or Additional Requirements?	☒ No

The cost for the next out of water bottom survey or dry docking based on a far eastern shipyard and includes all survey and normal maintenance costs is approximately estimated at:	1,100,000
What was the status of the vessel at the time of inspection?	Standing by

OVERALL BUILD QUALITY

Overall Build Quality Condition

Has the vessel been built to the standards and Rules of an IACS-member Class Society? ☑ Yes

Under what IACS Class society supervision was the vessel built?	Det Norske Veritas (DNV) (IACS)

Is the vessel less than 5 years old?Is the vessel less than 5 years old ☒ No

Did the vessel provide Ultrasonic Thickness Measurement (UTM) reports?	No, not available
Was steel plating seen to be fabricated to a good standard, free of waving, distortion, setting in and with good alignment?	Good
Was the quality of welding seen to be of a good standard, free from undercut, pitting, excess spatter, defects and with satisfactory profile?	Good
Are fittings and pipework well-laid out allowing good access for easy maintenance and repair?	Well laid out

Were the ballast tanks seen to have stripe coating on frame edges and around lightning holes? ☑ Yes

Is Bridge equipment provided by reputable, well known manufacturers with good global support capabilities?	All equipment from reputable manufacturers
Is Engine Room machinery provided by reputable, well known manufacturers with good global support capabilities?	All equipment from reputable manufacturers

What was the quality of accommodation outfitting?	High quality of outfitting

Does the accommodation have extra facilities for crew comfort?

☑ Gym

☑ En-suite for all crew members

HULL

Hull Condition

What sections of the hull were inspected?	All round (at anchor)

Was the vessel free of any major structural damage or indentations? ☑ Yes

Was the vessel free of any minor structural damage or indentations? ☑ Yes

What was the level of Hull coating breakdown and corrosion?	Minor
Coating breakdown and corrosion was mainly located in the following areas:	on anti-fouling and lower boot top layers
The amount of surface area coating breakdown and corrosion was approximately:	10%

Type of coating breakdown and corrosion: ☑ Scattered ☑ Surface

What was the condition of the hull markings?	Partly obscured
What type of anti-fouling coating was applied?	No information provided.
What level of marine fouling was seen?	None

Were fenders installed on the hull? ☒ No

What were the vessels draughts?

Fwd: (m)	10.7
Aft: (m)	10.7

Was the upper sections of the rudder visible? ☒ No

MOORING DECKS

Mooring Decks Condition

Were the decks free of any structural damage or deformations?	☑ Yes	
What was the level of coating breakdown and corrosion observed on the decks?	Minor	
Coating breakdown and corrosion was mainly located in the following areas:	on mooring stations	
The amount of surface area coating breakdown and corrosion was approximately:	5%	
Type of coating breakdown and corrosion:	☑ Scattered	☑ Spot
What was the general condition of the deck fittings?	Good	
Were fairleads and mooring rollers free to move when tested?	☑ Yes	
Were all mooring machinery reported to be fully operational?	☑ Yes	
What type of windlass(es) and winches were fitted?	Hydraulic	
Were the windlass(es) and winches seen to be free of hydraulic oil leaks?	☒ No	*oil leakages from fwd mooring winches*
What was the condition of the mooring machinery?	Good	

What amount of band brake lining was seen to be remaining?	Minimal, requiring change
Please provide further details	*Windlass band brakes had only minimal thicknesses remaining*

Were clutching and gearing arrangements sufficiently greased? ☑ Yes

What condition were the visible sections of the anchor chains seen to be in?	Fair
Please provide further details	*anchors chain signs of diminution. No UTM report provided to verify to what extent.*
What type of mooring lines did the vessel have?	Rope
What was the condition of the mooring ropes / wires?	Good

Were safe mooring practices observed? i.e. no overlapping turns on split drum, chafing of lines or unsafe leading. ☑ Yes

What type of snap back warning signs/zones were posted?	Signs at the entrance to the mooring decks

Does the vessel have a forward mast mounted on the foc'sle? ☑ Yes

What was the condition of the forward mast?	Good
What was the condition of the bosun's store structure?	Minor instances of indentations
What was the condition of the bosun's store coatings?	Coatings fully intact with no corrosion

Was the condition of the bosun's store housekeeping?	Neat and tidy with items secured

Were the bitter end release arrangements seen to be clear and unobstructed?	☑ Yes
Was an 'emergency towing booklets/procedures' available near to the foc'sle?	☑ Yes

MAIN DECK AND FITTINGS

Main Deck and Fittings Condition

Were the decks free of any structural damage or deformations? ☑ Yes

What was the level of coating breakdown and corrosion observed on the decks?	Minor
Coating breakdown and corrosion was mainly located in the following areas:	on external tank framing
The amount of surface area coating breakdown and corrosion was approximately:	10%

Type of coating breakdown and corrosion: ☑ Scattered ☑ Spot

What was the general condition of the deck fittings e.g handrails, brackets, vent heads, walkways, lighting etc.?	Good

Does the vessel have mooring winches fitted on the main deck? ☑ Yes

What was the condition of the mooring winches?	Fair

Please provide further details *leakages on fwd mooring mooring winch*

Were deck equipment and pipework free of leakages? ☑ Yes

What was the condition of the accommodation ladders or gangways?	Good

Was the vessel fitted with a provision lifting appliance(s)? ☑ Yes

What was the condition of the provision lifting appliance(s)?	Good

Does the vessel carry any major spares on external decks e.g. propeller blades, anchor etc.

☒ No

BALLAST TANKS & SYSTEMS

Ballast Tanks and Systems Condition

Were ballast tanks entered?	☑ Yes
Please provide further details	*Tanks Entered: No.3 WBT (S)*
Were recent (last 12 months) ballast tank inspection photographs provided?	☒ No
Were the tanks free of any structural damage or indentations?	☑ Yes

What was the level of Ballast Tank coating breakdown and corrosion?	Minor
Coating breakdown and corrosion was mainly located in the following areas:	on bulkheads and structural member such as longitudinals and web frames
The amount of surface area coating breakdown and corrosion was approximately:	15%

Type of coating breakdown and corrosion:	☑ Localised	☑ Spot
Were ballast tanks coatings certified to PSPC standards?	☒ No	

What was the condition of ballast tank fittings (e.g. ladders, handrails, pipes & manhole seals)?	Good

Were the ballast tanks fitted with sacrificial anodes?	☑ Yes
Anode depletion:	*30%*

How much mud/sediment was seen inside the ballast tanks?	Minimal

Please provide further details %

Were the tanks seen to be free from any signs of staining from oil, sewage or marine fouling?	☑ Yes	
Were ballast tank manhole covers seen to be in good condition?	☒ No	*No.3 WBT (S) access hatch cover's rubber seal had hardened as well as localized corrosion on retaining channels*
Were the remote ballast control systems fully operational (e.g. valves, gauging etc)?	☑ Yes	
Were the ballast and/or anti-heeling pumps reported to be fully operational?	☑ Yes	

What condition were the ballast and/or anti-heeling pumps in?	Good

ACCOMODATION

Internal Accomodation Condition

Were accommodation spaces used for their assigned purposes?	☑ Yes
What was the condition of the flooring and wall coverings?	Good
What was the condition of the upholstery and furniture?	Good
What were the general levels of housekeeping and cleanliness?	Good
What was the level of hygiene of the sanitary facilities?	Good
Was all laundry equipment in good working order?	☑ Yes
Was the Hospital well equipped and ready for use?	☑ Yes
Were the drugs and controlled substance seen to be locked away and the associated log kept up to date?	☑ Yes
Was the Gymnasium seen to be clean and well maintained?	☑ Yes
Did the Air Handling Unit (AHU) maintain a comfortable temperature?	☑ Yes
What was the condition of the AHU?	Good

Galley Condition

Was the Galley maintained in a hygienic condition?	☑ Yes

Was all galley equipment operational?	☑ Yes	
What was the general condition of galley equipment?	Good	
Were the insides of Galley hoods clean?	☑ Yes	
What type of cold provisions stores does the vessel have?	Walk-in stores / Cold rooms	
Were provisions stores well organised with no provisions stored directly on the deck?	☑ Yes	
Were provisions stores clean and hygienic?	☑ Yes	
Were provisions stores at the required temperatures?	☑ Yes	
Were provision stores temperatures recorded and records kept nearby?	☑ Yes	
Were provisions machinery, pipework and door seals free of frosting and deterioration?	☒ No	*excessive ice formation on piping arrangement of cold provision room*
Were lock-in alarms or handles in good working condition?	☑ Yes	

External Areas Condition

Was the external Superstructure / Accommodation Block found to be free from damages?	☑ Yes	
Were accommodation external doors found to be in good condition and providing an adequate seal?	☑ Yes	
What was the level of external accommodation superstructure coating breakdown and corrosion?	Minor	
Coating breakdown and corrosion was mainly located in the following areas:	on accommodation superstructure	
The amount of surface area coating breakdown and corrosion was approximately:	3%	
Type of coating breakdown and corrosion:	☑ Surface	☑ Spot

What was the general condition of external superstructure fittings?	Good

BRIDGE, NAVIGATION AND COMMUNICATIONS EQUIPMENT

General Condition

Was all the bridge equipment reported to be fully operational?	☑ Yes
Was the bridge found to be clean and well maintained with good housekeeping?	☑ Yes
Was the view from the bridge clear and unobstructed?	☑ Yes
Was the vessel fitted with a Voyage Data Recorder (VDR)?	☑ Yes
Type of VDR fitted:	*VDR*
Was the VDR seen to be free from any unanticipated alarms?	☑ Yes
Were the VDR collection instructions posted and known to the Master?	☑ Yes
Was the vessels Bridge Navigation and Watch Alarm System (BNWAS) fully operational, and turned on when at sea?	☑ Yes
Normal time setting at sea	*12 mins*

Navigation Condition

	Primary	Secondary
What was the vessels primary & secondary means of navigation as listed on Form E?	ECDIS	ECDIS

Were the primary & secondary means of navigation found to be up to date?	☑ Yes

Latest update week	*17*

Was the Echo Sounder fully operational?	☑ Yes
Were the RADARs fully operational?	☑ Yes
Were the "blind sectors" posted near to the RADARs?	☑ Yes
Was an in-date compass deviation card posted near to the helm?	☑ Yes
Was a compass deviation log kept, up to date and free of any major deviations?	☑ Yes
Were azimuth rings (bearing diopters) found to be available on the bridge?	☑ Yes
Were the "blind sectors" posted near to the RADARs?	☑ Yes
Was an in-date compass deviation card posted near to the helm?	☑ Yes
Was a compass deviation log kept, up to date and free of any major deviations?	☑ Yes
Were azimuth rings (bearing diopters) found to be available on the bridge?	☑ Yes

Communication Condition

What GMDSS sea areas was the vessel licensed to cover?	☑ A1	☑ A2	☑ A3	☒ A4
Were the radio batteries seen to be in good condition?	☑ Yes			
Were the EPIRBs, SARTs and Emergency Hand Held VHF Batteries within their expiry dates?	☑ Yes			

	Battery expiry dates
EPIRBS	02/2,029
SARTs	10/21
VHF	03/25

Was a valid GMDSS shore servicing certificate seen to be posted near to radio equipment? ☑ Yes

What GMDSS sea areas was the vessel licensed to cover? ☑ A1 ☑ A2 ☑ A3 ☒ A4

Were the radio batteries seen to be in good condition? ☑ Yes

Were the EPIRBs, SARTs and Emergency Hand Held VHF Batteries within their expiry dates? ☑ Yes

	Battery expiry dates
EPIRBS	02/2,029
SARTs	10/21
VHF	03/25

Was a valid GMDSS shore servicing certificate seen to be posted near to radio equipment? ☑ Yes

Documentation Condition

Were berth-to-berth passage plans sighted and found to be signed by all navigating officers? ☑ Yes

What format were nautical publications provided in?	Paper

Were the Master's standing orders and night orders found to be signed by all navigating officers? ☑ Yes

Was the bridge log book up to date and correctly filled in?	☑ Yes
Was the GMDSS log book up-to-date and correctly filled in?	☑ Yes
Date of last test	*29-Apr-21*

External Condition

Was the Monkey Island found to be in good, well maintained condition?	☑ Yes
Were the main mast, aerials and antennas seen to be in good condition and free from damage?	☑ Yes
Were bridge wing manoeuvring controls fitted?	☑ Yes
Were the bridge wing manoeuvring controls reported to be fully operational and free from signs of water ingress?	☑ Yes
Were bridge wing engine speed and compass repeaters seen to be in good working condition?	☑ Yes

MACHINERY AND MACHINERY SPACES

General Condition

What equipment was seen running?	☑ Auxiliary Engines ☑ Auxiliary Boiler	☑ Purifiers ☑ Refrigeration Compressor
Was the engine room free of any significant defects, either reported by crew or observed?	☑ Yes	
What was the general cleanliness of the Engine Room?	Very Clean	
Were bilges and tank tops free of oil and water?	☑ Yes	
Was housekeeping to a good overall standard?	☑ Yes	
Was the vessel equipped with adequate critical spares as recommended by Class or Manufacturers?	☑ Yes	
Were spares neatly stowed and correctly secured?	☑ Yes	
Were all sounding pipe self-closing devices in good working order and sounding pipes capped?	☑ Yes	
Were recent copies of lube oil analysis reports provided for review?	☑ Yes	
Were there any areas of concern on the lube oil analysis reports?	☒ No	
Was the NOx Technical file kept up to date?	☒ No	*no information provided*
Were Chief Engineer Standing Orders clearly posted and signed by all engineers?	☒ No	*no information provided*
Were all machinery special tools provided and in good condition?	☑ Yes	

Main Engine Condition

Was the main engine in good working condition?	Yes
What condition did the Main Engine appear to be in?	Fair
Please provide further details	*traces of minor oil observed in way of fuel pump and cylinder heads*
Were Main Engine performance reports provided for review?	☑ Yes
Were the performance reports satisfactory?	☑ Yes

Main Engine Maintenance

Component	Condition Based Monitoring?	Overhaul Interval
Cylinder Heads		12,000
Pistons		12,000
Bearings	Yes	
Cylinder Liners	Yes	

	Unit Running Hours											
	1	2	3	4	5	6	7	8	9	10	11	12
Cylinder Heads	278	124	409	278	7,430	7,430						
Pistons	278	124	409	278	7,430	7,430						
Bearings	31,597	31,597	31,597	31,597	31,597	31,597						
Cylinder Liners	31,597	31,597	31,597	31,597	31,597	31,597						

Was there any overdue maintenance on the Main Engine Turbochargers? ☒ No

Propulsion

What type of propulsion does the vessel have?	Fixed Pitch Propeller (FPP)

Were the Propulsion systems, including shafts, machinery and electric motors, if relevant, in good working condition? ☑ Yes

What type of thruster systems does the vessel have? ☑ None

Power Generation

How many Auxiliary Engines does the vessel have?	3

Were the auxiliary engines in good working condition? ☑ Yes

What condition did the Auxiliary Engines appear to be in?	Good

Were Auxiliary Engines performance reports provided for review? ☑ Yes

Were the performance reports satisfactory?	☑ Yes

Auxiliary Engines Maintenance

		Auxiliary Engines			
Condition Based Monitoring?	**Overhaul Interval**	**1**	**2**	**3**	**4**

Does the vessel have a shaft generator?	☒ No

Auxiliary Machinery

Does the vessel have an Auxiliary Boiler?	☑ Yes
What type of boiler is fitted?	Steam
Was the boiler in good working condition?	☑ Yes
What condition did the Boiler appear to be in?	Good
Were boiler safety valves in satisfactory condition?	☑ Yes
Were all Auxiliary machinery and equipment such as purifiers, pumps, coolers etc. in good working condition?	☑ Yes
Did all Auxiliary Machinery and equipment appear in a well-maintained, clean condition?	☑ Yes
Was all engine room pipework free of leakages?	☑ Yes
Was all pipework free of temporary repairs?	☑ Yes
Was all pipework free of corrosion or soft patches?	☑ Yes

What condition was pipework lagging in?	Clean

Was the Steering gear in good working condition, free of leakages?	☑ Yes
Was the emergency steering communication equipment and gyro repeater working as required?	☑ Yes
Were emergency steering instructions posted nearby?	☑ Yes
Was the Engine workshop clean and tidy?	☑ Yes

ECR and Electrical

Was the Engine Control Room clean and tidy?	☑ Yes
Was the Engine Control and Alarm system free of any serious alarms?	☑ Yes
Does the vessel have an Unmanned Machinery Space (UMS) notation?	☒ No
Were all Electrical distribution systems in good working condition?	☑ Yes
Were Main Switchboard Insulation readings adequate?	☑ Yes
Were distribution and switchboard panels protected with approved rubber matting?	☑ Yes

FIRE AND SAFETY APPLIANCES

Fire and Safety Appliances Condition

Was the vessel free of fire hazards?	☑ Yes
Was all fire and safety equipment regularly serviced?	☑ Yes
Date of last service	01-DEC-20
Were all relevant Fire and Safety instructions correctly posted?	☑ Yes

What was the vessels Fixed fire detection systems?

	Engine Room	Cargo Holds	Accomodation
	☒ Flame	☒ Flame	☒ Flame
	☒ Smoke	☒ Smoke	☑ Smoke
	☒ Heat	☑ Heat	☒ Heat
	☑ Smoke & Heat (Combined)	☒ Smoke & Heat (Combined)	☒ Smoke & Heat (Combined)

Was the fire detection system reportedly fully operational?	☑ Yes
Was the fire detection system free of alarms or signs of tampering?	☑ Yes

What is the vessels Fixed firefighting systems?	Engine Room	Cargo Holds	Accomodation
	☑ CO2	☒ CO2	☒ Water Mist
	☒ Foam	☑ Deck Foam	☑ Galley CO2
	☑ Water Spray	☒ Water Spray	☒ Wet Chemical
	☒ None	☒ None	☒ None

Were all fixed fire fighting systems in good working condition?	☑ Yes
Were clear operating instructions posted for the fixed firefighting systems?	☑ Yes
Was the fixed firefighting system release protected against unauthorised operation?	☑ Yes
Was the main fire pump working?	☑ Yes
Was the emergency fire pump working?	☑ Yes
Was a fire pump tested during the inspection?	☒ No
Were the main and emergency fire pumps in good condition and free of leakages?	☑ Yes
What was the condition of the fire main and ancillaries such as pipework hydrants and valves?	Good
Does the vessel have a fire control station?	☑ Yes
Were all portable equipment in place as per the fire plan?	☑ Yes
Were all fire extinguishers in good condition?	☑ Yes
Were the firefighting outfits and associated equipment in good condition?	☑ Yes
Were the International Shore Connections on board?	☑ Yes
Location:	*Main deck.*

Was the BA equipment fully charged in good condition?	☑ Yes
Was the Emergency Generator tested during the inspection?	☒ No
Was the Emergency Generator in working order?	☑ Yes
Were Emergency Generator Starting instructions clearly posted?	☑ Yes
What was the condition of the Emergency Generator?	Good
Was the "18 hour" fuel level marked on the emergency generator fuel tank?	☑ Yes
Was the Quick Closing Valve system in good working order?	☑ Yes
Were fire doors in good condition, effectively closing and free from any unauthorised "hold-open" arrangements?	☑ Yes
Were all ventilation dampers remote closing positions well labelled and in good working order?	☑ Yes
Were all remote machinery shutdown systems well labelled and in good working order?	☑ Yes

LIFESAVING APPLIANCES

Lifsaving Appliances Condition

Were all Lifesaving Appliances regularly serviced? ☑ Yes

Date of last service:	01-Aug-2,019
How many lifeboats is the vessel equipped with?	2
What type of lifeboat is the vessel fitted with?	Davit launched

What was the external condition of the lifeboat(s)?	Good
What was the internal condition of the lifeboat(s)?	Good

Were Lifeboat Engines able to be tested? ☒ No

Were lifeboat engines in good working order? ☑ Yes

What was the condition of the rescue boat?	Good
How many life rafts does the vessel have?	5
What was the condition of the life rafts?	Good

Were Liferaft Hydrostatic Release Units (HRU) in date and correctly rigged? ☑ Yes

What was the condition of the Davits and lowering arrangements for the lifeboat(s), rescue boat and liferafts?	Good
What Date is the next Davit wire due for change?	11-Dec-21

Were legible launching/recovery instructions posted near to survival craft?	☑ Yes
Was evidence of regular maintenance, service and inspection of the launching appliances sighted and evident?	☑ Yes

What was the date of the last abandon ship drill?	29-Apr-21

Were all lifejackets, immersion suits, EEBDs and other lifesaving ancillary equipment in good condition and ready for use?	☑ Yes
Were Man Overboard Buoy (MOB) smoke and light signals in date?	☑ Yes
Were the embarkation ladders in a good, well maintained condition?	☑ Yes
Were pyrotechnics and line throwing apparatus available, stored in an appropriate container and within their expiry dates?	☑ Yes

SAFE WORKING

Safe Working Condition

Were any unsafe practices observed during the inspection?	☒ No
Did the vessel provide a safe working environment?	☑ Yes
Were all hazard markings clear?	☑ Yes
Were external walkways adequately coated with anti-slip paint and free of trip hazards?	☑ Yes
Are all hazardous substances including safely managed and stored with relevant Material Safety Data Sheets (MSDS)?	☑ Yes
Is Personal Protective Equipment (PPE) provided and worn by crew?	☑ Yes
Are 'Enclosed Space Entry' procedures implemented?	☑ Yes
Is an effective Permit To Work (PTW) process implemented?	☑ Yes
Date of last PTW:	01-May-21
Is an effective Risk Assessment (RA) process in place?	☑ Yes
Was evidence of the annual and 5-yearly inspections of both fixed and portable lifting equipment and appliances sighted?	☑ Yes
Are main and emergency exits clearly identified and unobstructed?	☑ Yes
Are sufficient portable oxygen and gas detection meters provided and regularly calibrated?	☑ Yes
Date of last calibration:	30-dec-20

What is the working language of the vessel?	English

Are standing orders, procedures, instructions and manufacturers' manuals written in a language which can be understood by the crew?	☑ Yes
Are all IMO signs correctly placed, and compliant with IMO requirements?	☑ Yes
Does the vessel have an adverse history of accidents and near-misses?	☒ No
Is the vessel equipped with an approved SOLAS training manual?	☑ Yes
Were the pilot ladders and boarding arrangements in a good, safe condition?	☑ Yes
Does the vessel have clear pilot boarding instructions posted?	☑ Yes
Are regular drills conducted on board?	☑ Yes

Last drill date	29-apr-21
Last drill type	abandon ship

POLLUTION CONTROL

General Condition

Was Pollution Control well implemented within the on board Safety Management System (SMS)?	☑ Yes	
Is the vessel free of pollution hazards?	Yes, with no hazards	
Were scuppers plugged in port as required?	☑ Yes	
Does the vessel have a Class approved Inventory of Hazardous Materials (IHM)?	☑ Yes	

Oil - Marpol Annex I

Is an Oily Water Separator (OWS) fitted?	☑ Yes	
Was the OWS reportedly operational?	☑ Yes	
What was the condition of the OWS?	Good	
Was the OWS Tested?	☒ No	
Was the 15ppm meter calibrated?	☑ Yes	
Date of calibration	*31-dec-2,020*	
Was the Bilge Overboard valve secured against unauthorised opening with adequate signage and warnings posted?	☒ No	*no lock or seal sighted*
Was the oily water treatment system including valves and pipework free of any signs of tampering, bypass, or modifications?	☑ Yes	

What was the condition of the SOPEP equipment?	Well stocked and neat	
Was a list of SOPEP equipment posted and accurate?	☑ Yes	
Was the Oil Record Book (ORB) up to date and correctly filled in?	☒ No	*no information provided*
Were previous bunkering checklists correctly filled out?	☒ No	*no information provided*
Were bunker samples correctly stored?	☑ Yes	
Does the vessel have a Ballast Water Treatment System (BWTS) fitted?	☒ No	*The vessel is not equipped with a Ballast Water Treatment System (BWTS)*
Date of International Oil Pollution Prevention (IOPP) certificate renewal	*09-feb-22*	
What regulation is listed on the Ballast Water Management Certificate?	D-1	
Was the Ballast Record Book up to date and correctly filled in?	☒ No	
Is the Vessel General Permit (VGP) compliant?	☑ Yes	*Due to the use of an EAL or the airseal arrangements in place for the stern tube, the vessel is considered VGP compliant in this regard for trade to the USA*
How is the vessel VGP Compliant? *Environmentally Acceptable Lubricant	☑ Stern Tube EAL	
Type of EAL	*Castrol Biostat 100*	

Sewage - Marpol Annex II

Was a Sewage Treatment Plant fitted?	☑ Yes
Was the Sewage Treatment Plant operational?	☑ Yes

What was the condition of the Sewage Treatment Plant?	Fair
Please provide further details	*high pitch rubbing sound from sewage treatment plant motor, reportedly due to defective motor bearing*

Does the vessel have a sewage holding tank? ☑ Yes

What was the condition of the Sewage Holding Tank?	Good

Garbage - Marpol Annex V

Does the vessel have a garbage management plan? ☑ Yes

How was the condition of Garbage segregation?	Good

Were Garbage containers of approved, non-combustible type? ☑ Yes

Was the Garbage Record Book (GRB) up to date and correctly filled in? ☒ No *No access granted.*

Air - Marpol Annex VI

Does the vessel have a valid IAPP certificate? ☑ Yes

Is the vessel compliant with IMO 2,020 Sulphur cap regulations? ☑ Yes

How does the vessel comply with IMO 2,020 regulations?	Use of Very Low Sulphur Fuel Oils (VLSFO), MGO, DO etc.

Does the vessel use Ozone Depleting Substances (ODS) as Refrigerant Gas? ☒ No

Was an Incinerator fitted? ☑ Yes

Was the Incinerator operational? ☑ Yes

What was the condition of the Incinerator?	Good

Does the vessel have an Emission Control Area (ECA) change-over log?	☒ No	*No access granted.*

ONBOARD MANAGEMENT

Onboard Management Condition

Does the vessel have a functioning Safety Management System (SMS)?	☑ Yes	
How was the SMS Implemented?	Paper Documents	
Were the officers familiar with, and allowed easy access to, the SMS?	☑ Yes	
Was the SMS well implemented on board, with Permits to Work, Risk Assessments and Safety procedures understood and followed?	☑ Yes	
Is the SMS system regularly reviewed by the Master?	☒ No	*no information provided*
Does the vessel management deal with accidents, near-misses and deficiencies in an effective manner?	☑ Yes	
Are regular safety committee and management meetings carried out on board?	☑ Yes	
Does the vessel have a valid MLC certificate?	☑ Yes	
Were Hours of Rest (ILO) records correct and up to date?	☒ No	*no information provided*
Are hours of maximum permissible work regularly exceeded?	☒ No	
Is an effective Planned Maintenance System (PMS) implemented and kept up to date?	☑ Yes	
What type of Planned Maintenance System (PMS) does the vessel have?	Paper	
Were there any critical overdue PMS work orders?	☒ No	

Port State Control (PSC) inspection history

No. of Inspections in Past three years:	11
No. of Deficiencies in Past three years:	28
No. of Detentions in Past three years:	0

Is the vessel flag targeted by Port State Authorities?	☑ Yes	
USCG:	Targeted	
Is an effective system of security access control, conforming to ISPS standards, in place upon boarding the vessel?	☑ Yes	
Type of access control	Single mean of access.	
Do the Master and Chief Engineer have an effective hand over procedures?	☒ No	*No access granted.*
Are random or specific drug and alcohol testing carried out?	☒ No	
Were the Master and crew prepared for the Inspection?	☑ Yes	
What level of cooperation was provided by the crew and Master?	Good	
Were documents provided as requested?	Limited documents provided	
What was the overall impression of the general management of the vessel?	Fairly managed	

VESSEL CAPABILITIES AND CARGO SYSTEMS - TANKER

Cargo Tanks

How many Cargo Tanks does the vessel have?	6
How many cargo segregations can the vessel carry?	6

Cargo Tank Capacity (m³)

COT No.1 combined	6,149.16 m^3
COT No.2 combined	9,246.06 m^3
COT No.3 combined	9,408.736 m^3
COT No.4 combined	9,407.59 m^3
COT No.5 combined	9,406.4 m^3
COT No.6 combined	8,487.97 m^3

Cargo Tank Capacity (m³)

COT No.7 combined	m^3
COT No.8 combined	m^3
COT No.9 combined	m^3
COT No.10 combined	m^3
Slop Tank No.1	701.237 m^3
Slop Tank No.2	711.71 m^3
Total Capacity	53,518.863 m^3

Were the Cargo tanks able to be entered and inspected?	☒ No	*loaded condition.*
Were recent vessel cargo tank inspection photographs provided?	☒ No	
Were cargo tank structural members found to be free from damage (e.g. side plating, sumps and framing)?	☑ Yes	

Are the cargo tanks coated?	Fully coated

Were the cargo tank fittings such as ladders, hand rails and pipe guards etc. found to be free from damage?	☑ Yes

What was the level of cargo tank coating breakdown and corrosion?	Minor

What was the last cargo carried?	Gas oil
What is the next intended cargo to be carried?	no information provided

Are heating coils fitted?	☑ Yes	
Were all heating coils reportedly operational?	☑ Yes	
Is pipework passing through the tanks seen to be in good condition?	☑ Yes	
Does the vessel have any independent tanks, i.e. tanks located the deck?	☒ No	

Pumping and Piping Systems

What type of main cargo pumps are fitted?	Hydraulically driven deep well
What is the capacity of each of the deep well pumps?	600 m³/hr
What is the manufacturer of the deep well pumps?	Framo

Were deep well pump cofferdams regularly purged?	☒ No	*no information provided*
Were all the pumps fully operational?	☑ Yes	

What condition were the pumps in?	Good
What cargo stripping arrangements is the vessel fitted with?	Ejectors

Were stripping arrangements fully operational?	☑ Yes

What condition were the stripping arrangements in?	Good

Is pumping system oil condition monitoring carried out?	☒ No	*Frequency (months):*
Are spill trays and save all areas in good condition and free from cargo?	☑ Yes	
What condition was the cargo pipework in?	Good	
Are deck cargo piping, manifolds and relevant deck equipment suitably marked?	☑ Yes	
Are reducers, removable U-bends and cargo hoses, if carried, in good condition?	Yes	
Is the vessel fitted with Crude Oil Washing (COW) equipment?	☒ No	
Is the vessel fitted with a hose handling crane(s)?	☑ Yes	
Is the crane in full working order?	☑ Yes	
What condition was the crane(s) in?	Fair	
Please provide further details	*minor leakage in way of hydraulic inlet line at top part of cylinder*	

Monitoring and Safety Arrangements

Are tanker level monitoring systems in full working order?	☒ No	*COT 5P temperature sensor defective.*
Does the vessel have a dedicated Cargo Control Room (CCR)?	☑ Yes	
Is the CRR in good overall condition?	☑ Yes	
Are all cargo Emergency Shutdown Devices (ESD) in full working order?	☑ Yes	
Is the vessel fitted with an Inert Gas (IG) system?	☑ Yes	*Flue Gas and top up combustion generator*
Is the IG system in full working order?	☑ Yes	

What condition was the IG system in?	Good
What condition were the Pressure-Vacuum (PV) Breakers in?	Good
Were the operating pressures clearly marked on the PV Breakers?	☑ Yes
Is the vessel fitted with a Mast Riser?	☒ No
What condition was the Deck seal in?	Good
Is the vessel fitted with a Vapour Emission Control System (VECS)?	☑ Yes
Is the VECS in full working order?	☑ Yes
What condition was the VECS in?	Good
Is the vapour manifold clearly marked?	☑ Yes
Are hoses pressure tested and certificated?	☑ Yes
What condition were the hoses in?	Good
Are hoses regularly tested for continuity?	☑ Yes
If appropriate, are fire wires in good condition and properly rigged?	Yes
Is the vessel provided with suitable gas monitoring instruments?	☑ Yes
Are the monitoring instruments calibrated and records available?	☑ Yes
Does the vessel have a loading computer?	Yes, Class approved

Vetting

Is the vessel older than 15 years?	☑ Yes	
Is the vessel enrolled in a Condition Assessment Program (CAP)?	☒ No	*No data provided for reference.*

CARGO LIFTING APPLIANCES

Cargo Lifting Appliances Condition

MACHINERY AND EQUIPMENT APPENDIX

Engine room machinery and equipment

Main Engine(s)

Was the engine built under license or by designer?	Under licence
Manufacturer:	STX MAN B&W
Type:	6S50MC-C
Cylinders:	6
Power (MCR) (kW):	9,619
Speed (RPM):	127
Stroke (mm):	2,000
Bore (mm):	500

Diesel Generators / Auxiliary Engines

Number of Auxiliary Engines:	3
Manufacturer:	STX MAN B&W
Type:	6L23/30H
Cylinders:	6
Power (MCR) (kW):	960
Speed (RPM):	900
Stroke (mm):	300
Bore (mm):	230

Emergency Generator

Manufacturer:	STX
Power (MCR) (kW):	120

Shaft Generator

Manufacturer:	NA

Steering Gear

Type:	Rotary Vane
Manufacturer:	ROLL ROYCE

Bow Thruster

Manufacturer:	NA

Stern Thruster

Manufacturer:	NA

Boilers

Number of boilers:	1

Boiler 1

Manufacturer:	KANGRIM
Type:	MB061S10
Pressure (Bar):	7
Capacity (kg/hr):	18,000

Air Compressors

Number of start air compressors:	2
Number of service air compressors:	1

Start Air Compressor

Manufacturer & Type:	SPERRE HV2/200
Manufacturer & Type:	SPERRE HV2/200

Service Air Compressor

Manufacturer & Type:	TMC 26 EANA

Separators / purifiers

Number of fuel purifiers:	2
Manufacturer & Type:	ALFA LAVAL SA 830

Separator / Purifier 1

Manufacturer & Type:	ALFA LAVAL SA 830
Number of service air compressors:	1

Separator / Purifier 2

Manufacturer & Type:	ALFA LAVAL SA 825
Manufacturer & Type:	ALFA LAVAL SA 825

Ballast Pumps

Number of ballast pumps:	2
Manufacturer & Type:	FRAMO
Rated capacity (m^3/hr):	750

Fire Pumps

Manufacturer & Type of main fire pump:	SHIN SHIN SVS200F
Rated capacity (m³/hr):	275
Manufacturer & Type of emergency fire pump:	SHIN SHIN SVS200F
Rated capacity (m³/hr):	275

Fresh Water Generator (FWG)

Manufacturer:	ALFA LAVAL
Rated capacity (m³/24hrs):	25

Oily Water Separator (OWS)

Manufacturer:	B+V
Type:	TSP 5
Capacity (m³/hr):	5

Marine Growth Prevention - Hull

Manufacturer:	WILSON WALTON CORRPRO

Marine Growth Prevention - Seawater Systems

Manufacturer:	WILSON WALTON CORRPRO

Exhaust Gas Cleaning System (EGCS)

Manufacturer:	NIL

Ballast Water Treatment System

Manufacturer:	NIL

Navigational & Radio Equipment

Gyro Compass

Manufacturer:	YOKOGAWA
Type:	CMZ-700S

Auto Pilot

Manufacturer:	YOKOGAWA
Type:	PR500A-J-N2

RADARs (ARPA)

Manufacturer:	FURUNO
Type:	FAR-2,837

Echo Sounder

Manufacturer:	FURUNO
Type:	FE-700

Speed Log

Manufacturer:	FURUNO
Type:	DS-80

GPS

Manufacturer:	FURUNO
Type:	GP-90

ECDIS

Manufacturer:	TRANSAS
Type:	NAVI SAILOR 4,000

GMDSS

Manufacturer:	FURUNO
Type:	FELCOM-15

MF/HF Radio Equipment

Manufacturer:	FURUNO
Type:	FS-5,000T

Main Deck and Mooring Equipment

Mooring Machinery

Type:	Hydraulic
Manufacturer:	Oriental Precision Engineering.
Material of mooring lines:	PPL

Provision Lifting Appliance(s)

Manufacturer:	DONG NAM ENTERPRISE CO. ,LTD
SWL (t):	3
Reach:	10

Lifesaving and Firefighting Equipment

Lifeboats

Number of lifeboats:	2
Capacity:	28
Type:	Davit launched
Manufacturer:	ORIENTAL PRECISION & ENGINEERING

Rescue Boats

Number of rescue boats:	1
Manufacturer:	ORIENTAL PRECISION & ENGINEERING
Capacity:	28

Liferafts	**Number of passengers**
Accommodation Port side	16
Accommodation Port side	16
Accommodation Starboard side	16
Accommodation Starboard side	16
Foscle	6

Fixed Firefighting Systems - CO2

Manufacturer:	NK Co.Ltd
No. of bottles:	140

Fixed Firefighting Systems - Water Mist

Manufacturer:	TANKTECH
Capacity:	3.5

Fixed Firefighting Systems - Deck Foam

Manufacturer:	NK Co.Ltd
Capacity (m^3):	7.7

Firefighting outfits and Breathing Apparatus (BA)

Number of sets:	4
Manufacturer of BA:	Huayan Marine