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List of

Rpt. 4b. 22 JUL 1949

REPORT ON OIL ENGINE MACHINERY.

No. 106343

IN D.O.

Received at London Office

20 JUL 1949

Date of writing Report 5.7.49 When handed in at Local Office 5.7.49 Port of NEWCASTLE-ON-TYNE
No. in Survey held at NEWCASTLE & HEBBURN-ON-TYNE Date, First Survey 31.10.47 Last Survey 28.6.49
Reg. Book. 91776 on the Single M.V. LATIRUS Tons Gross 6475.65 Net 3608.86
Built at HEBBURN-ON-TYNE By whom built R.F.W. HAWTHORN LESLIE & CO. LTD. Yard No. 699 When built 1949
Engines made at NEWCASTLE-ON-TYNE By whom made R.F.W. HAWTHORN LESLIE & CO. LTD. Engine No. 4060 When made 1949
Donkey Boilers made at WALLSEND By whom made THE NORTH EASTERN MARINE ENG. CO. LTD. Boiler No. 3186 When made 1949
Brake Horse Power 2800 Owners THE ANGLO-SAXON PETROLEUM CO. LTD. Port belonging to LONDON
Nom. Horse Power as per Rule 566 MN Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES
Made for which vessel is intended OPEN SERVICE

ENGINES, &c. — Type of Engines HAWTHORN-WELLSPOOK-SUPERCHARGED 2 or 4 stroke cycle 4 Single or double acting SINGLE
Maximum pressure in cylinders 700 LBS/P. Diameter of cylinders 25 9/16 6.50 in. Length of stroke 14.00 in. No. of cylinders 6 No. of cranks 6
Indicated Pressure 135 LBS/P. Mean of bearings, adjacent to the crank, measured from inner edge to inner edge 8.44 in. Is there a bearing between each crank YES
Revolutions per minute 120 Flywheel dia 22.60 in. Weight 6000 Kg. Means of ignition COMPRESSOR Kind of fuel used DIESEL OIL
Crankshaft, dia. of journals as per Rule 4.42 in. as fitted 4.60 in. Crank pin dia 4.60 in. Crank webs Mid. length breadth 8.70 in. Mid. length thickness 2.67 in. Thickness parallel to axis 3.40 in. Thickness around eye holes 3.28 in.
Flywheel Shaft, diameter as per Rule 3.40 in. as fitted 3.40 in. Intermediate Shafts, diameter as per Rule 3.12 in. as fitted 3.50 in. Thrust Shaft, diameter at collars as per Rule 3.40 in. as fitted 3.28 in.
Main Shaft, diameter as per Rule 3.42 in. as fitted 3.70 in. Is the tube shaft fitted with a continuous liner YES
Copper Liners, thickness in way of bushes as per Rule 18.5 in. as fitted 19 1/2 in. Thickness between bushes as per Rule 13.9 in. as fitted 14.75 in. Is the after end of the liner made watertight in the propeller boss YES
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner YES
If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive YES
If two liners are fitted, is the shaft lapped or protected between the liners YES Is an approved Oil Gland or other appliance fitted at the after end of tube shaft NO
If so, state type YES Length of bearing in Stern Bush next to and supporting propeller 14.80 in.
Propeller, dia. 14'-0" Pitch 11'-9" No. of blades 4 Material MANGANESE whether moveable NO Total developed surface 62 sq. feet
Method of reversing Engines AIR SERVO MOTOR Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of lubrication FORCED Thickness of cylinder liners 5.5 in. Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled
Lagged with non-conducting material LAGGED If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned to the engine YES
Cooling Water Pumps, No. TWO JACKET COOLING Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES
Sanitary Pumps worked from the Main Engines, No. ONE Diameter 28 Tons Stroke PER HOUR Can one be overhauled while the other is at work YES
Pumps connected to the Main Bilge Line No. and size ONE GS PUMP 12" x 8 1/2" x 12" 100 TONS/HK ONE BILGE 6" x 6" x 6" 33 TONS/HK ONE BILGE SANITARY 28 TONS/HK
How driven STEAM STEAM MAIN ENGINE
Is the cooling water led to the bilges NO If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements YES
Last Pumps, No. and size YES Power Driven Lubricating Oil Pumps, including spare pump, No. and size ONE MAIN ENGINE 125 TONS/HK ONE INDEPENDANT 125 TONS/HK STEAM DRIVEN
Are two independent means arranged for circulating water through the Oil Cooler YES Suctions, connected to both main bilge pumps and auxiliary
Oil pumps, No. and size:—In machinery spaces 1-3" PORT FOR 1-3" STAR FOR 1-2 1/2" COFFERDAM 1-3" BILGE WELL In pump room FOR 1-2 1/2" 12" 1-4" P 1-4" S
Holds, &c. FOR STORE 1-2" PORT 1-2" STAR 2" FORE HOLD 1-2 1/2" PORT 1-2 1/2" STAR 2" FOR COFFERDAM 1-4" AFT COFFERDAM 1-4"
Dependent Power Pump Direct Suctions to the engine room bilges, No. and size ONE 5" PORT 1" ONE 4" STAR 2"
Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes YES Are the bilge suction pipes in the machinery spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES
Are all Sea Connections fitted direct on the skin of the Ship NO Are they fitted with valves or cocks BOTH Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates YES Are the overboard discharges above or below the deep water line ABOVE
Are they each fitted with a discharge valve always accessible on the plating of the vessel YES Are the blow off cocks fitted with a spigot and brass covering plate YES
Do all pipes pass through the bunkers 1-4" AFT COFFERDAM SUCTION How are they protected HEAVY GAUGE SD STEEL PIPE
Do all pipes pass through the deep tanks NONE Have they been tested as per Rule YES
Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times YES
Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another YES Is the shaft tunnel watertight YES Is it fitted with a watertight door YES worked from YES
If the vessel is a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork YES
Main Air Compressors, No. NONE No. of stages 2 diameters 90 CUBIC FEET FREE AIR PER MINUTE driven by DIESEL ENGINE
Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 120 CUBIC FEET FREE AIR PER MINUTE driven by STEAM ENGINE
Small Auxiliary Air Compressors, No. 5, 10, 20 No. of stages 1 diameters 120 CUBIC FEET FREE AIR PER MINUTE driven by STEAM ENGINE
What provision is made for first charging the air receivers AUXILIARY STEAM & STEAM DRIVEN COMPRESSOR.
Savenging Air Pumps, No. NONE diameter 12 in. stroke 12 in. driven by DIESEL ENGINE
Auxiliary Engines crank shafts, diameter as per Rule 4 3/16 in. PINS 3 3/4 in. No. ONE 4 GLINDER 4500A 300W DIESEL GENERATOR ONE SINGLE GLINDER ENCLOSED STEAM ENGINE 300W Position ENGINE ROOM STARBOARD SIDE
Have the auxiliary engines been constructed under special survey YES (DIESEL ENGINE) Is a report sent herewith YES (NOTTINGHAM RPT N 482)

003581-003590-0092

AIR RECEIVERS:—Have they been made under survey *E. M.V. CLAM* ✓ State No. of report or certificate. ✓
Is each receiver, which can be isolated, fitted with a safety valve as per Rule. *YES* ✓
Can the internal surfaces of the receivers be examined and cleaned. *YES* ✓ Is a drain fitted at the lowest part of each receiver. *YES* ✓
Injection Air Receivers, No. *✓* Cubic capacity of each. *✓* Internal diameter. *✓* thickness. *✓*
Seamless, lap welded or riveted longitudinal joint. *✓* Material. *✓* Range of tensile strength. *✓* Working pressure. *✓*
Starting Air Receivers, No. *ONE* Total cubic capacity. *462 cu ft* Internal diameter. *PLEASE SEE M.V. CLAM FIRST ENTRY REPORT*
Seamless, lap welded or riveted longitudinal joint. *✓* Material. *✓* Range of tensile strength. *✓* Working pressure. *✓*

IS A DONKEY BOILER FITTED *YES* ✓ If so, is a report now forwarded. *YES* ✓

Is the donkey boiler intended to be used for domestic purposes only. *No*

PLANS. Are approved plans forwarded herewith for shafting. *YES* ✓ Receivers. *✓* Separate fuel tanks. *✓*
(If not, state date of approval)

Donkey boilers. *✓* General pumping arrangements. *YES* ✓ Pumping arrangements in machinery space. *YES* ✓

Oil fuel burning arrangements. *YES* ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied. *YES* ✓

State the principal additional spare gear supplied. *AS PER ATTACHED LIST.*

TORSIONAL VIBRATION CHARACTERISTICS APPROVED 17.8.48.

For *R. & W. HAWTHORN, LESLIE & CO. LIMITED*

The foregoing is a correct description, AND THE PARTICULARS OF THE INSTALLATION AS FITTED ARE AS APPROVED FOR
J.B. Johnson Manufacturer. *TORSIONAL VIBRATION CHARACTERISTICS.*

Dates of Survey while building
During progress of work in shops - *[1947] OCT. 31, [1948] APR. 9, 19, 27, MAY. 6, 14, 25, JUNE. 17, 18, SEPT. 20, 23, 29, OCT. 5, 6, 7, 10, 27, NOV. 2, 4, 8, 10, 12, 16, 17, 18, 22, 24, 26, DEC. 2, 6, 13, 15, 17, 20, 22, 23, 28, 31, [1949] JAN. 5, 7, 11, 13, 14, 17, 19, 20, 21, 25, 31, FEB. 2, 8, 9, 10, 14, 18, 23, 25, MAR. 4, 7, 10, 14, 16, 18, 22, 25, 30, 31, APR. 1, 5, 7, 11, 13, 14, 20, 21, 28, 29, MAY. 3, 4, 10, 12, 13, 17, 18, 25, 26, JUNE. 1, 3, 7, 8, 10, 14, 15, 16, 17, 22, 23, 24, 27, 28.*
During erection on board vessel - *25, 26, JUNE. 1, 3, 7, 8, 10, 14, 15, 16, 17, 22, 23, 24, 27, 28.*
Total No. of visits. *103*

Dates of examination of principal parts—Cylinders. *12.11.48* Covers. *12.11.48* Pistons. *6.12.48* Rods. *30.12.48* Connecting rods. *9.12.48*

Crank shaft. *17.1.49* Flywheel shaft. *18.2.49* Thrust shaft. *22.11.48* Intermediate shafts. *13.1.49* Tube shaft. *✓*

Screw shaft. *6.12.48* Propeller. *6.12.48* Stern tube. *7.1.49* Engine scatings. *✓* Engine holding down bolts. *20.4.49*

Completion of fitting sea connections. *10.2.49* Completion of pumping arrangements. *27.6.49* Engines tried under working conditions. *28.6.49*

Crank shaft, material. *OH/INGOT STEEL* Identification mark. *LLOYDS N 18048* Flywheel shaft, material. *OH/INGOT STEEL* Identification mark. *LLOYDS N 17447*

Thrust shaft, material. *OH/INGOT STEEL* Identification mark. *F11438* Intermediate shafts, material. *OH/INGOT STEEL* Identification marks. *LLOYDS N 17447*

Tube shaft, material. *✓* Identification mark. *LLOYDS N 17447* Screw shaft, material. *OH/INGOT STEEL* Identification mark. *LLOYDS N 17447*

Identification marks on air receivers. *LLOYDS TEST. 650 LBS. WP 450 LBS. DWA 11.2.26* RETESTED. *LLOYDS TEST. 350 LBS. WP 350 LBS. T.A.O. 23.12.48.*

Is the flash point of the oil to be used over 150°F. *YES* ✓

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with. *YES* ✓

Description of fire extinguishing apparatus fitted. *SEE ATTACHED LIST.* ✓

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo. *✓* If so, have the requirements of the Rules been complied with. *✓*

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with. *✓*

Is this machinery duplicate of a previous case. *No* ✓ If so, state name of vessel. *✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been constructed & installed on board under special survey, in accordance with the Rules & the approved plans.*

The materials & workmanship are good

Satisfactory basin & sea trials were witnessed & the machinery is eligible in my opinion for the record of LMC 6.49, & notation TSCL - Oil Eng MACH Act -

ONE DB 180 LB

The amount of Entry Fee ... £ ...

Special *MCMT.* ... £ *188. 4* When applied for. *19*

Air Receiver *✓* Donkey Boiler Fee. ... £ *2. 2* When received. *19*

Elec. Welding Const. *(347/2)* ... £ *9. 15.*

Committee's Minute *FRI. 12 AUG 1949*

Assigned *+ LMC 6.49 Oil Eng C.L. DB 180 LB*

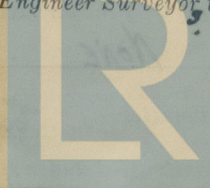
NEWCASTLE-ON-TYNE.

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

19 JUL 1949

J.A. Orde & C. Busler
Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation