

RECEIVED

Rpt. 4b. 22 JUL 1949

REPORT ON OIL ENGINE MACHINERY.

No. 106343

I.N.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} ~~Triple~~ Screw vessel 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

Trade for which vessel is intended OPEN SERVICE

ENGINES, &c. — Type of Engines HAWTHORN-WELK'SPOOK-SUPERCHARGED 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 700 LBS/P Diameter of cylinders 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 2260 in Weight 6000 Kg Means of ignition COMPRESSION Kind of fuel used DIESEL OIL

Crankshaft dia. of journals as per Rule 442 in as fitted 460 in Crank pin dia 460 in Crank webs Mid. length breadth 870 in Mid. length thickness 267 in Thickness parallel to axis 340 in Thickness around eyeholes 328 in

Propeller Shaft, diameter as per Rule 340 in as fitted 340 in Intermediate Shafts, diameter as per Rule 312 in as fitted 350 in Thrust Shaft, diameter at collars as fitted 340 in as per Rule 328 in

Propeller Shaft, diameter as per Rule 342 in as fitted 370 in Is the tube screw shaft fitted with a continuous liner YES

Bronze Liners, thickness in way of bushes as per Rule 18.5 in as fitted 19.5 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

Propeller, dia 14'-0" Pitch 11'-9" No. of blades 4 Material MANRIE BRONZE 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 55 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 back 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/HOUR ONE BILGE 6" x 6" x 6" 33 TONS/HOUR ONE BILGE SANITARY 28 TONS/HOUR

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

Power Driven Lubricating Oil Pumps, including spare pump, No. and size ONE MAIN ENGINE 125 TONS/HOUR ONE INDEPENDANT 125 TONS/HOUR 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" COFFEE DAM 1-3" BILGE WELL In pump room FOR 1-2 1/2" 12" 1-4" 1-4 1/2" 1-4 1/2" 1-4 1/2" 1-4 1/2"

Independent Power Pump Direct Suctions to the engine room bilges, No. and size ONE 5" PORT & ONE 4" STAR

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 COFFEE DAM 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

Are all wooden vessels, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork YES

ENGINE Air Compressors, No. NONE No. of stages 1 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 DIESEL ENGINE

What provision is made for first charging the air receivers AUXILIARY STEAM & STEAM DRIVEN COMPRESSOR

Refrigerating Air Pumps, No. NONE diameter 1 stroke 1 driven by DIESEL GENERATOR

Auxiliary Engines crank shafts, diameter as per Rule 4 3/16 in Pins 3/4 in No. ONE SINGLE CYLINDER ENCLOSED STEAM ENGINE 30 KW 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)

End 8/8/49

003581-003590-0092

List of
273
129
120
5, 10, 20
10.31
99

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 ✓
 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. ²⁶ H 120 2/2

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, 30, 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. 8, 14, 19, 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 -	
	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 H.R. 27.10.48 Flywheel shaft, material OH / INGOT STEEL Identification mark LLOYDS N° 17447 F.H. 13.8.48 T.R.O.
 Thrust shaft, material OH / INGOT STEEL Identification mark F11438 LLOYDS N° 17447 H.R. 17.8.48 Intermediate shafts, material OH / INGOT STEEL Identification marks 13164 LLOYDS N° 17447 H.R. 27.5.48 T.R.O.
 Tube shaft, material ✓ Identification mark 7. A.O. 23.11.48 Screw shaft, material OH / INGOT STEEL Identification mark 13163 LLOYDS N° 17447 H.R. 13.5.48 T.R.O. 6.
 Identification marks on air receivers LLOYDS TEST. 650 LBS WP 450 LBS DWB 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 tests & 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

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.

The amount of Entry Fee ... £
 Special MENT. ... £ 188 : 4 When applied for 19 JUL 1949
 Air Receiver ✓
 Donkey Boilers Fee... £ 2 : 2 When received 19
 Elec. Welding Const. (34700) £ 9 : 15
 Travelling Expenses (if any) £

J.A. Orde & Co. Surveyors
 Engineer Surveyors to Lloyd's Register of Shipping.



Lloyd's Register Foundation

Committee's Minute FRI. 12 AUG 1949
 Assigned + LMC 6.49 Oil Eng C.L. DB 180 LB.