

Rpt. 4b
NOV 1944

REPORT ON OIL ENGINE MACHINERY.

No 22820.

Received at London Office

176 NOV 1944

Date of writing Report 4th Nov. 1944 When handed in at Local Office 10th Nov. 1944 Port of GREENOCK

No. in Survey held at GREENOCK Date, First Survey 30th APRIL 1943 Last Survey 3 Nov 1944 Number of Visits 69

on the Single Twin Triple Quadruple Screw vessel **"EMPIRE RAWLINSON"** Tons Gross 9912.16 Net 7002.75

Built at PORT GLASGOW By whom built LITHGOWS LTD Yard No. 994 When built 1944

Engines made at GREENOCK By whom made JOHN G. KINCAID & CO LTD Engine No. K155 When made 1944

Donkey Boilers made at ANNAN By whom made CCHRAN & CO LTD Boiler No. 1567 When made

rate Horse Power 6800 Owners M. O. W. T. Port belonging to

om. Horse Power as per Rule 1231 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

rade for which vessel is intended 1236 GREEN SEA SERVICE

ENGINES, &c. Type of Engines Diesel wireless injection 2 or 4 stroke cycle 2 Single or double acting double

imum pressure in cylinders 700 lbs/sq. in. 24 7/16 55 1/8

ean Indicated Pressure 6.56 kg/cm² Diameter of cylinders 6207 Length of stroke 14007 No. of cylinders 6 No. of cranks 6

an of bearings, adjacent to the Crank, measured from inner edge to inner edge 11647 Is there a bearing between each crank Yes

olutions per minute 116 Flywheel dia. 2482.87 Weight 2500 kg Means of ignition Compression Kind of fuel used Heavy oil

ank Shaft, Solid forged dia. of journals as per Rule Crank pin dia. 4857 Crank Webs Mid. length breadth 10407 Thickness parallel to axis 250
Semi built dia. of journals as fitted 4857 Crank Webs Mid. length thickness 2507 Thickness around eyehole 272.5
All built dia. of journals as fitted 115 Can hole

whell Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
as fitted 15.79 as fitted 16 as fitted 16.58

ube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the shaft fitted with a continuous liner Yes
as fitted 17.29 as fitted 17.75 as fitted 16.58

ronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the
as fitted .829 as fitted .622 as fitted .75

opeller 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

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

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 the tube Yes

aft No If so, state type Yes Length of Bearing in Stern Bush next to and supporting propeller 5'-10"

ropeller, dia. 18'-0" Pitch 13'-11 3/4" No. of blades 4 Material MB Whether Moveable No Total Developed Surface 121 sq. feet

ethod of reversing Engines Air ram Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced

Thickness of cylinder liners 42 7/8 Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or 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

ooling Water Pumps, No. Four 2 Main 1 F.W. 1 S.W. the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

ilge Pumps worked from the Main Engines, No. None Diameter Yes Stroke Yes Can one be overhauled while the other is at work Yes

umps connected to the Main Bilge Line { No. and Size One 250 ton/hr. Two 135 ton/hr ca.
How driven Electric motors

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

allast Pumps, No. and size One 250 ton/hr Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Two @ 350 ton/hr

ere two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 4 @ 3 1/2" 4 @ 2 1/2" 1 @ 5" tunnel 1.2 1/2" tunnel well In Pump Room Yes

u Holds, &c. 4 @ 3" 4 @ 3 1/2" (No 1 - 2 at 3 No 3 - 2 at 3 1/2 No 6 2 at 3 No 2 2 at 3 No 5 2 at 3) Two @ 5 1/2" One @ 8"

ndependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two @ 5 1/2" One @ 8"

ere all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces Yes

d from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

ere all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both

ere 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 Below

ere 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

That pipes pass through the bunkers None How are they protected Yes

That pipes pass through the deep tanks None Have they been tested as per Rule Yes

ere 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 No worked from Accum from J.O.K.

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yes

ain Air Compressors, No. Two No. of stages Two Diameters 140 cu ft/min Stroke each Driven by Q Motor

uxiliary Air Compressors, No. None No. of stages None Diameters None Stroke 8-10 cu ft/min Driven by None

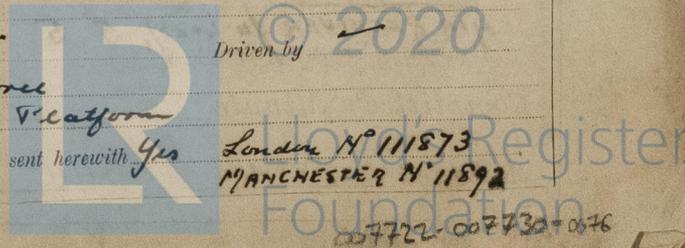
EMERGENCY Small Auxiliary Air Compressors, No. One No. of stages None Diameters None Stroke None Driven by Q Motor

What provision is made for first Charging the Air Receivers Emergency compressor

evenging Air Pumps, No. None Diameter None Stroke None Driven by None

uxiliary Engines crank shafts, diameter as per Rule No. Three
as fitted Position ER Platform

Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Yes London N° 11573
MANCHESTER N° 11592



AIR RECEIVERS: - Have they been made under survey

State No. of Report or Certificate S 11952

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

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.

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

IS A DONKEY BOILER FITTED?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting

Receivers 5-10-43

Separate Fuel Tanks 4-12-43

Donkey Boilers 9 1/2 hp N 68280

General Pumping Arrangements 2-4-47

Pumping Arrangements in Machinery Space 23-6-43

Oil Fuel Burning Arrangements 29-11-43

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

See separate list

It was found necessary to dry dock this vessel after the first loaded trials, owing to the stern gear overheating at the conclusion of the trial. The shaft liner was found slack on the shaft & cracked in several places in way of the gland. A new shaft has now been fitted (BC). Subsequent loaded trials were entirely satisfactory.

The foregoing is a correct description, For JOHN G. KINCAID & CO. LIMITED.

Director. Manufacturer.

Dates of Survey while building: During progress of work in shops - (1943) APRIL 30, JUNE 11, JULY 16, OCT. 29, NOV. 1, 17, 24, 26, 29, DEC. 1, 16 (1944) JAN 5, 14, 18, 21, 25, FEB. 1, 21, 23, MAR. 6, 23, 31, APR 23, 24, 29, 30. During erection on board vessel - JUNE 5, 6, 8, 9, 12, 13, 14, 16, 19, 20, 22, 26, 30, JULY 10, 12, 13, 19, 22, 26, 28, AUG. 1, 8, 9, 17, 21, 22, 24, 28, 29, SEPT 8, 14, 15, 22, 29, OCT. 2, 4, 6, 8, 9, 10, 18, 24, 25, NOV. 3.

Dates of Examination of principal parts - Cylinders 25/1/44, Covers 25/1/44, Pistons 25-1-44, Rods 24-5-44, Connecting rods 24-5-44, Crank shaft 24-5-44, Flywheel shaft, Thrust shaft 5/6/44, Intermediate shafts 5/6/44, Tube shaft, Screw shaft 24/10/44, Propeller 29/5/44, Stern tube 21/2/44, Engine sealings 26/6/44, Engines holding down bolts 15/9/44, Completion of fitting sea connections 20/6/44, Completion of pumping arrangements 4/10/44, Engines tried under working conditions 4/10/44, Crank shaft, Material SMS, Identification Mark 2912228 CMH, Flywheel shaft, Material, Identification Mark, Thrust shaft, Material SMS, Identification Mark 29 12062 CMH, Intermediate shafts, Material SMS, Identification Marks 2912228 CMH, Tube shaft, Material, Identification Mark, Screw shaft, Material SMS, Identification Mark BC F9411 M 10/10

Identification Marks on Air Receivers: N 2381, L10405 TEST, 5854, W.P. 3554, CMH 19-6-44

Is the flash point of the oil to be used over 150° F. 44

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with 44

Description of fire extinguishing apparatus fitted 2-30 gal & 6-2 gal portable "Phonem" Two 50 lb CO2 bottles connect scavenge

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 built under special survey in accordance with the Rules & approved plans. The M.O.W.T. Specifications & plans have been supervised. The materials & workmanship are sound & good.

The machinery has been efficiently installed in the vessel & tested out under full working conditions with satisfactory results and is eligible in my opinion to be classed in the Society's Register Book with record

L.M.C. 11-44 and Notation Screw shaft C.L. 10B.105 lb

Forging certificates commensurate to this vessel & 156 to follow will be forwarded on completion of the latter.

The amount of Entry Fee £ 6 : 0 : When applied for, Special £ 130 : 15 : 6 10th Nov. 1944, Specification £ 32 : 14 : 0, Donkey Boiler Fee £, Air RECEIVER (4-4-25) £ 5 : 5 : When received, Travelling Expenses (if any) £

Committee's Minute

Assigned - L.M.C. 11.44

10B 105 lb.

Charles J. Hunter Engineer Surveyor to Lloyd's Register of Shipping.



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