

REPORT ON OIL ENGINE MACHINERY.

No. 99607

Received at London Office 12 JAN 1934

Date of writing Report 11 January 1934 When handed in at Local Office 12 JAN 1934 Port of London
 No. in Survey held at Newbury Date, First Survey 9 June 1933 Last Survey 3 January 1934
 Reg. Book. Single on the Tonnage Triple Quadruple Screw vessel M/S "Acuity" Number of Visits 11

Built at Greenock By whom built George Brown & Co. Ltd. Yard No. 185 When built
 Engines made at Newbury By whom made Newbury Diesel Co. Ltd. Engine No. 643 When made 1934
 Donkey Boilers made at By whom made Boiler No. — When made —
 Brake Horse Power 400 Owners Frederick T. Everard & Son, Ltd. Port belonging to
 Nom. Horse Power as per Rule 112 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 Trade for which vessel is intended 17 5/8" 15 3/4"

CL ENGINES, &c. Type of Engines Diesel Solid injection Boosted 2 or 4 stroke cycle 2 Single or double acting Single
 Maximum pressure in cylinders 600 lb. sq. in. Diameter of cylinders 32.07" Length of stroke 4.007" No. of cylinders 4 No. of cranks 4
 Mean Indicated Pressure 100 lb. sq. in. Is there a bearing between each crank Yes
 Revolutions per minute 300 Flywheel dia. 92.07" Weight 25 cwt Means of ignition Compression Kind of fuel used Heavy oil
 Crank Shaft, dia. of journals as per Rule 186.57" as fitted 190.7" Crank pin dia. 190.7" Crank Webs Mid. length breadth 252.7" Mid. length thickness 106.7" Thickness parallel to axis shrunk Thickness around eye-hole
 Flywheel Shaft, diameter as per Rule as fitted Hank shaft Intermediate Shafts, diameter as per Rule 4.63" as fitted 5 5/8" Thrust Shaft, diameter at collars as per Rule 4.86" as fitted 130.7"
 Main Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 5.32" as fitted 5 5/8" Is the tube screw shaft fitted with a continuous liner No
 Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per rule as fitted Is the after end of the liner made watertight in the
 Propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
 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
 If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube
 If so, state type Newark Length of Bearing in Stern Bush next to and supporting propeller 29"

Propeller, dia. 5' 9" Pitch 3' 9" No. of blades 3 Material bronze whether Moveable Solid Total Developed Surface 11.25 sq. feet
 Method of reversing Engines Air Pumping Gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication
 Forced Thickness of cylinder liners 32.7" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with
 non-conducting material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No. 1. S.A. 130 bore x 120 stroke 147 R.P.M. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 Bilge Pumps worked from the Main Engines, No. 2. Diameter 130.7" Stroke 120.7" Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size How driven
 the cooling water led to the bilges If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
 arrangements

Ballast Pumps, No. and size 1. S.A. 125 x 120 152 R.P.M. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2. Rotary
 Are 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 In Pump Room
 in Holds, &c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are the Bilge Suctions 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
 Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate
 What pipes pass through the bunkers How are they protected
 What pipes pass through the deep tanks Have they been tested as per Rule

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
 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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
 Main Air Compressors, No. 1. S.A. No. of stages 1 Diameters 110.7" Stroke 150.7" Driven by Main Eng. 300 R.P.M.
 Auxiliary Air Compressors, No. 1. No. of stages 2 Diameters 110.7" 45.7" Stroke 80.7" Driven by Aux. Eng. (Rumel Newton)
 Small Auxiliary Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —
 Scavenging Air Pumps, No. 4 Rotary Boosters Diameter Stroke Driven by Main Eng. chain drive

Auxiliary Engines crank shafts, diameter as per Rule as fitted See Manchester Report No. 7933 of November 1933 attached hereto

AIR RECEIVERS:—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

High Pressure Air Receivers, No. — Cubic capacity of each — Internal diameter — thickness —

Seamless, lap welded or riveted longitudinal joint — Material — Range of tensile strength — Working pressure —
by Rules —
Actual —

Starting Air Receivers, No. 3 Total cubic capacity 29 cu ft Internal diameter 19" thickness 1/2"
(By Bradley Boiler Co.)

Seamless, lap welded or riveted longitudinal joint DR Pap Material Steel Range of tensile strength — Working pressure —
by Rules —
Actual —

IS A DONKEY BOILER FITTED? — If so, is a report now forwarded? —

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

PLANS. Are approved plans forwarded herewith for Shafting 12.4.33 and 16.9.33 Receivers — Separate Tanks —
(If not, state date of approval)

Donkey Boilers — General Pumping Arrangements — Oil Fuel Burning Arrangements —

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied List of Spare gear to be supplied attached hereto.

For & on behalf of
The foregoing is a correct description
THE NEWBURY DIESEL CO. LTD.
W. Collins Manufacturer.
SECRETARY

Dates of Survey while building
During progress of work in shops-- 1933 June 9. July 7. 17. Aug. 28 Sept 21. Oct 17 Nov. 9. 28. Dec. 14. 1934 Jan. 3.
During erection on board vessel--
Total No. of visits —

Dates of Examination of principal parts—Cylinders 26.8.33/17.10.33 Covers 21.9.33/17.10.33 Pistons 17.10.33 Rods — Connecting rods 28.8.33

Crank shaft 7.7.33 Flywheel shaft — Thrust shaft 21.9.33 Intermediate shafts 17.10.33 Tube shaft —

Screw shaft 17.10.33 Propeller — Stern tube 21.9.33 Engine seatings — Engines holding down bolts —

Completion of fitting sea connections — Completion of pumping arrangements — Engines tried under working conditions —

Crank shaft, Material 4.2. Steel Identification Mark LLOYDS 3023 9A. 26.5.33 Flywheel shaft, Material — Identification Mark —

Thrust shaft, Material 4.2. Steel Identification Mark LLOYDS 815 MAB 28.8.33 9AS 21.9.33 Intermediate shafts, Material 4.2. Steel Identification Marks LLOYDS 9341-1 JP 28.9.33 9AL

Tube shaft, Material — Identification Mark — Screw shaft, Material 4.2. Steel Identification Mark LLOYDS 9341-4 JP 28.9.33 9AL

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

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

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 — If so, state name of vessel —

General Remarks (State quality of workmanship, opinions as to class, &c. Workmanship good

These main engines have been specially surveyed during construction and they are in accordance with the approved plans and the Rules. The materials used have been made at works approved by the Committee and tried by the Surveyors to this Society.

They have now been dispatched to Greenock for fitting onboard and will be eligible in my opinion for the notation of +LMC of suitable date, in the Register Book, when fitted onboard and tried as required by the Rules

Attached hereto: Longing Certificate 5 m N: Machinery Report N° 7933 on auxiliary engine.
List of Spare gear to be supplied. Approved plan of Propeller shaft.

The amount of Entry Fee £ 3 : 0 : When applied for, 12 JAN 1934
Special 1/2 1.28... £ 22 : 8
Donkey Boiler Fee £ — : When received, 23/14 1934
Travelling Expenses (if any) £ 3 : 14

Committee's Minute GLASGOW 13 FEB 1934

Assigned + L.M.C. 2.34
on Grt. Rpt. 19703.

Geo. A. Farquhar
Engineer Surveyor to Lloyd's Register of Shipping