

REPORT ON OIL ENGINE MACHINERY

No. 100,399

7 AUG 1934

Received at London Office

Writing Report 3rd Aug 1934 When handed in at Local Office 7 AUG 1934 Port of London
Survey held at Newbury Date, First Survey 15 December 1933 Last Survey 2 August 1934
Number of Visits 14

on the Greenock ^{Single} ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel "GRIT" Tons ^{Gross} ~~Net~~

made at Newbury By whom built George Brown & Co Yard No. 188 When built 1934
By whom made Newbury Diesel Co. Ltd. Engine No. 655 When made 1934
Boilers made at - By whom made - Boiler No. - When made -
Power 500 Owners J. J. Everard & Sons Ltd Port belonging to London
Power as per Rule 140 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
which vessel is intended coasting

GINES, &c. Type of Engines Heavy oil, solid injection, boosted 2 or 4 stroke cycle 2 Single or double acting Single
Pressure in cylinders 600 lb/sq. in. Diameter of cylinders 320 mm Length of stroke 400 mm No. of cylinders 5 No. of cranks 5
Rated Pressure 100 lb/sq. in.

Rings, adjacent to the Crank, measured from inner edge to inner edge 428 mm Is there a bearing between each crank yes
Revolutions per minute 300 Flywheel dia. 920 mm Weight 25 cwt Means of ignition Comprimur Kind of fuel used Heavy oil

Shaft, diameter as per Rule 189.5 mm Crank pin dia. 190 mm Crank Webs Mid. length breadth 252 mm Thickness parallel to axis shrunk
as fitted 190 mm Mid. length thickness 106 mm Thickness around eye-hole ✓

Intermediate Shafts, diameter as per Rule 4.86" Thrust Shaft, diameter at collars as per Rule 5.1"
as fitted 5 5/8" as fitted 130 mm

Screw Shaft, diameter as per Rule 5.62" Is the tube shaft fitted with a continuous liner No liner
as fitted 5 5/8" as fitted

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 stern ✓
If the liner is in more than one length are the junctions made by fusion through the whole thickness of 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 ✓

Propeller, diameter as per Rule 29" 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"
Pitch 3-7/2" No. of blades 3 Material Brass whether Moveable Solid Total Developed Surface 12.5 sq. feet

reversing Engines Engine reversible Is a governor or other arrangement fitted to prevent racing of the engine when declutched ✓ Means of lubrication On reduced gear
Thickness of cylinder liners 32.5 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with Both material Both If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ✓

Water Pumps, No. 1 S.A. 140 mm dia 120 mm stroke Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓
Pumps worked from the Main Engines, No. 2 S.A. Diameter 140 mm Stroke 120 mm Can one be overhauled while the other is at work yes
No. and Size 140 mm How driven 80 mm

connected to the Main Bilge Line ✓ If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping ✓
g 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 ✓

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 Rotary (Mothart & Pett) 12 gal. per min.
Independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge ✓
and size:—In Machinery Spaces ✓ In Pump Room ✓

Direct Suctions to the Engine Room Bilges, No. and size ✓
Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ✓ Are the Bilge Suctions in the Machinery Spaces ✓
readily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges ✓

Connections fitted direct on the skin of the ship ✓ Are they fitted with Valves or Cocks ✓
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 ✓
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 ✓

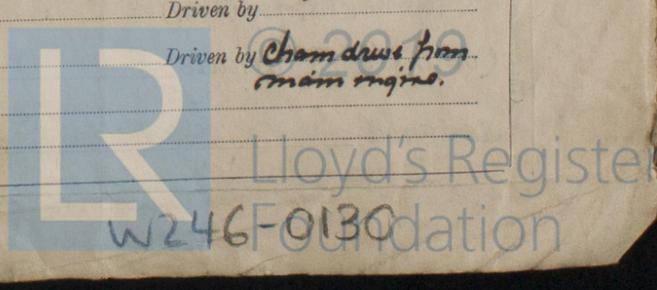
How are they protected ✓
Have they been tested as per Rule ✓
Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times ✓

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 ✓

On a cargo vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓
Air Compressors, No. 1 S.A. No. of stages 1 Diameters 110 mm Stroke 150 mm Driven by Main Eng. @ 300 R.P.M.
Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 110 mm - 45 mm Stroke 80 mm Driven by Reduced Newbury Aux Eng @ 1000 R.P.M.

Auxiliary Air Compressors, No. 5 Rotary Boosters Diameter ✓ Stroke ✓ Driven by Cham drive from main engine.

Auxiliary Engines crank shafts, diameter as per Rule ✓ as fitted ✓



AIR RECEIVERS:—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. _____ Is a drain fitted at the lowest part of each receiver _____
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 _____
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? No 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 2.11.33 and 2.2.34 Receivers _____ Separate Tanks _____
 Donkey Boilers _____ General Pumping Arrangements _____ Oil Fuel Burning Arrangements _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied Y/0
 State the principal additional spare gear supplied List attached hereto.

The foregoing is a correct description,
 For & on behalf of

THE NEWBURY DIESEL Co. LTD. Manufacturer.

Dates of Survey while building
 During progress of work in shops-- 1933 Dec. 15. 1934 Jan. 3, 23, Feb. 21, March 16, 26, Ap. 5, 19, May 29, June 20, 27, July 16, 23
 During erection on board vessel--
 Total No. of visits _____

Dates of Examination of principal parts—Cylinders 5.4.34 Covers 21.2.34 Pistons 16.3.34 Rods _____ Connecting rods 29
 Crank shaft 21.2.34 Flywheel shaft _____ Thrust shaft 21.2.34 Intermediate shafts 27.6.34 Tube shaft _____
 Screw shaft 27.6.34 Propeller _____ Stern tube 27.6.34 Engine seatings _____ Engines holding down bolts _____

Completion of fitting sea connections _____ Completion of pumping arrangements _____ Engines tried under working conditions _____
 Crank shaft, Material Q.D. Steel Identification Mark LLOYDS 9184 PK 24-1-34 Flywheel shaft, Material _____ Identification Mark _____
 Thrust shaft, Material Q.D. Steel Identification Mark LLOYDS 1036 GAL 21.2.34 Intermediate shafts, Material Q.D. Steel Identification Marks _____
 Tube shaft, Material _____ Identification Mark _____ Screw shaft, Material Q.D. Steel Identification Mark _____

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 Y/0 If so, state name of vessel Geo. Brown, N° 187, Newbury, Dundee

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

These main engines have been specially surveyed during construction and are in accordance with the approved plans and the Rules. The material used has been made at works approved by the Committee and tried by the Surveyors to this Society. Shop trials were witnessed & found satisfactory. They have now been dispatched to Greenock for fitting on board and will be eligible in my opinion for the notation of + LMC of suitable date in the Register Book, when installed and tried as required by the Rules.

Attached hereto being Certificate 4 in N, List of Spare Gear.

140 N.P.C. 5% = £35.0.0
 The amount of Entry Fee .. £ 3 : 0 : _____ When applied for, _____
 Special 4/5 of £35. £ 28 : 0 : _____ - 7 AUG 1934
 Donkey Boiler Fee ... £ _____ ✓ _____ When received, _____
 Travelling Expenses (if any) £ 2 : 0 : _____ 20.3.19 35-7/8W

Committee's Minute **GLASGOW 18 SEP 1934**

Assigned See Genk. Rm. No. 19817

Geo. A. Lang
 Engineer Surveyor to Lloyd's Register of Ships



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