

REPORT ON OIL ENGINE MACHINERY.

No. 90,085.

20 OCT 1926

tpt. 4b

Port of London
Date, First Survey Nov. 6th 1925 Last Survey May 3rd 1926
When handed in at Local Office Bedford
No. in Survey held at Bedford
eg. Book.

Single
on the Twin
Triple
Quadruple
Screw vessel SHROPSHIRE
Tons { Gross
Net

built at Glasgow By whom built Fairfield Shipbuilding Co. Yard No. 619 When built 1926
Glasgow By whom made Fairfield Shipbuilding Co. Engine No. When made

Engines made at Bedford By whom made W. H. Allen Sons & Co. Ltd. Boiler No. 27904 When made 1926
Donkey Boilers made at Bedford Owners Bibby S.S. Co. Ltd. Port belonging to Liverpool

Brake Horse Power 400 each set Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
Nom. Horse Power as per Rule 100 each set

Trade for which vessel is intended The oil engine replaced by an Allen by order of the owner 10-37

L ENGINES, & Type of Engines THREE SETS Burmeister & Wain 2 or 4 stroke cycle Yes Single or double acting Yes
Maximum pressure in cylinders 500 lbs/sq. in. Diameter of cylinders 4 1/2 in. Length of stroke 600 in. No. of cylinders 4 No. of cranks 4

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 476 in. Is there a bearing between each crank Yes
Revolutions per minute 240 Flywheel dia. 2180 in. Weight 7 Tons. Means of ignition Compression Kind of fuel used Heavy Oil

Crank Shaft, dia. of journals 226 in. as per Rule 235 in. as fitted Crank pin dia. 240 in. Crank Webs Mid. length breadth 380 in. shrunk Thickness parallel to axis ✓
Mid. length thickness 127 in. Thickness around eye-hole ✓

Flywheel Shaft, diameter 235 in. as per Rule 235 in. as fitted Intermediate Shafts, diameter ✓ as per Rule ✓ as fitted Thrust Shaft, diameter at collars ✓ as per Rule ✓ as fitted

Tube Shaft, diameter ✓ as per Rule ✓ as fitted Screw Shaft, diameter ✓ as per Rule ✓ as fitted Is the { tube { screw } shaft fitted with a continuous liner { ✓

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 shaft ✓ Length of Bearing in Stern Bush next to and supporting propeller ✓

Propeller, dia. ✓ Pitch ✓ No. of blades ✓ Material ✓ whether Moveable ✓ Total Developed Surface ✓ sq. feet under varying load Yes Means of lubrication ✓

Method of reversing Engines ✓ Is a governor or other arrangement fitted to prevent racing of the engine ✓ Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material ✓ Thickness of cylinder liners 3 1/2 in. Are the cylinders fitted with safety valves Yes 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. ✓ Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓
Bilge Pumps worked from the Main Engines, No. ✓ Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓

Pumps connected to the Main Bilge Line { No. and Size ✓ How driven ✓ Lubricating Oil Pumps, including Spare Pump, No. and size Number of Engine driven

Ballast Pumps, No. and size ✓ Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces ✓ In Holds, &c. ✓

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ✓ Are the Bilge Suctions in the Machinery Spaces

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ✓ Are they fitted with Valves or Cocks ✓

Are all Sea Connections fitted direct on the skin of the ship ✓ Are the Overboard Discharges above or below the deep water line ✓

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate ✓

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel ✓ How are they protected ✓

What pipes pass through the bunkers ✓ Have they been tested as per Rule ✓

What pipes pass through the deep tanks ✓ 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. One per Engine No. of stages Three Diameters 62 x 285 x 325 in. Stroke 250 in. Driven by Crank direct

Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Small Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

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

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule ✓ What means are provided for cleaning their inner surfaces ✓

Can the internal surfaces of the receivers be examined Yes Is there a drain arrangement fitted at the lowest part of each receiver Yes High Pressure Air Receivers, No. One per Engine Cubic capacity of each 90 lines Internal diameter 9 3/4 in. thickness 3/8 in.

Seamless, lap welded or riveted longitudinal joint Yes Material Steel Range of tensile strength 29/32 in. Working pressure by Rules 821 lbs/sq. in.

Starting Air Receivers, No. ✓ Total cubic capacity ✓ Internal diameter ✓ thickness ✓ Range of tensile strength ✓ Working pressure by Rules ✓

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

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shifting
(If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

As per attached List

The foregoing is a correct description.

Manufacturer.

W.H. ALLEN, SONS & CO., LTD.

Dates of Survey while building
During progress of work in shops - - -
During erection on board vessel - - -
Total No. of visits

Dates of Examination of principal parts—Cylinders 8-3-26 Covers 8-3-26 Pistons 20-2-26 Rods 15-2-26, 25-2-26
Crank shafts 1-2-26 Flywheel shaft Thrust shaft Intermediate shafts Tube shaft

Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts

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

Crank shafts Material Steel Identification Mark No 1085 SHF Flywheel shaft, Material Identification Mark No 1048 SHF

Thrust shaft, Material Identification Mark 16-12-25 Intermediate shafts, Material Identification Marks 24-11-25

Tube shaft, Material Identification Mark 15-1-25 Screw shaft, Material Identification Mark

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

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.)

These three Electric Generating Sets consist of multipole compound wound D.C. type Dynamo with interpoles, of a capacity of 265 k.W. each at 240 R.P.M. the voltage being 220 and amperage 1205.

They are driven by Diesel Engines of 400 B.H.P. and each set has been constructed under special survey and in accordance with approved plans and the requirements of the Rules.

The workmanship & material, so far as can be seen, are good and satisfactory full load and 15% overload bench trials of a duration of 6 and 2 hrs. respectively have been witnessed.

The sets, which are numbered 27904, 1, 2 & 3 have been shipped to Glasgow to be installed in Messrs. Fairfield's S.E.C. No 619 and, in opinion, are eligible for inclusion in the classification and record of T.L.M.C. of the vessel.

The amount of Entry Fee ... £ 30

Special ... £

Donkey Boiler Fee ... £

Travelling Expenses (if any) £ 8-14-3

Committee's Minute GLASGOW 19 OCT 1926

Assigned T.L.M.C. 10.26 on Glasgow Report No 46030.

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation