

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 96545

AUG 13 1938

Received at London Office

NEWCASTLE-ON-TYNE

Date of writing Report

19

When handed in at Local Office

10/8/38 Port of

No. in Survey held at
Reg. Book.

Newcastle on Tyne

Date, First Survey

4 Nov 1937 Last Survey

3 Aug 1938

Number of Visits

95

Single
on the ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel"REGENT TIGER."Tons Gross 10177
Net 6184

Built at

Newcastle on Tyne

By whom built

Swan Hunter & Wigham Richardson Ltd. Yard No 1545 When built 1938

Engines made at

ditto

By whom made

do

Engine No 1562 When made 1938

Donkey Boilers made at

ditto

By whom made

do

Boiler No. 1562 When made 1938

Brake Horse Power

4750 normal

Owners

Port belonging to LONDON.

Nom. Horse Power as per Rule

1012

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which vessel is intended

Ocean going. Carrying Petroleum in bulk

MIL ENGINES, &c.—Type of Engines Swan Hunter & Wigham Richardson Ltd. 2 or 4 stroke cycle 2 Single or double acting SingleMaximum pressure in cylinders 568 lb/sq. in. Diameter of cylinders 725 mm Length of stroke 1300 mm No. of cylinders 4 No. of cranks (3 throw)Mean Indicated Pressure 85 lb/sq. in. Span of bearings, adjacent to the Cranks, measured from inner edge to inner edge 1080 mm Is there a bearing between each crank 3 throwRevolutions per minute 110 Flywheel dia. 2450 mm Weight 6.14 Means of ignition compression Kind of fuel used Heavy oil fuelCrank Shaft, dia. of journals as per Rule 496 mm Crank pin dia. as per Rule 540 mm Crank Webs as per Rule 1020 mm Thickness parallel to axis 310 mmFlywheel Shaft, diameter as per Rule 14.65 Intermediate Shafts, diameter as per Rule 21.625 Thrust Shaft, diameter at collars as per Rule 15.4Tube Shaft, diameter as per Rule 16.09 Screw Shaft, diameter as per Rule 21.625 Is the shaft fitted with a continuous liner YesBronze Liners, thickness in way of bushes as per Rule 1 1/2 Thickness between bushes as per Rule 1 1/2 Is the after end of the liner made watertight in thepropeller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner In one pieceIf 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 tight fitIf 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 tubeshaft No If so, state type Yes Length of Bearing in Stern Bush next to and supporting propeller 8' 2"Propeller, dia. 17' 3" Pitch 13' 0" No. of blades 4 Material M. Bragg whether Moveable Solid Total Developed Surface 102 sq. feetMethod of reversing Engines Compressed Air Is a governor or other arrangement fitted to prevent racing of the engine when disconnected Yes Means of lubricationForced. Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged withnon-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 YesCooling Water Pumps, No. ME ME driven S.W. Air Pump, & Ballast P. for Cookers & Galley Is the sea suction provided with an efficient strainer which can be cleared within the vessel YesBilge Pumps worked from the Main Engines, No. none Diameter 7" x 8" x 8" Stroke 8" x 9" x 10" Can one be overhauled while the other is at work YesPumps connected to the Main Bilge Line No How driven all steam drivenIs 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 pumpingarrangements Yes One 8" x 9" x 10" duplex Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size One ME driven 130 mm dia. 500 mm strokeBallast Pumps, No. and size One 8" x 9" x 10" duplex Suctions, connected to both Main Bilge Pumps and Auxiliary BilgeAre two independent means arranged for circulating water through the Oil Cooler Yes In Pump Room 2 g 4"Pumps, No. and size: In Machinery Spaces 3 g 3 1/2" (aft p 15), & 2 g 2 1/2" & p 15 gutterways fwd.In Holds, &c. For hold 2 g 2 1/2" & 1 g 2"Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two g 6" (one aft & one starboard)Are all the Bilge Suction pipes in Hold Yes and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spacesd from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YesAre all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks bothAre 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 bothAre 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 YesWhat pipes pass through the bunkers none How are they protected YesWhat pipes pass through the deep tanks none Have they been tested as per Rule YesAre 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

apartment to another Yes Is the Shaft Tunnel watertight none Is it fitted with a watertight door Yes worked from YesIs a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork YesMain Air Compressors, No. none No. of stages 3 Diameters as per Rule Stroke as per Rule Driven by Steam EnginesAuxiliary Air Compressors, No. Two No. of stages 3 Diameters as per Rule Stroke as per Rule Driven by Steam EnginesSmall Auxiliary Air Compressors, No. one No. of stages 3 Diameters as per Rule Stroke as per Rule Driven by Steam EnginesScavenging Air Pumps, No. One double acting Diameter 1620 mm Stroke 1400 mm Driven by Steam EnginesAuxiliary Engines crank shafts, diameter as per Rule Position all on starboard side in E. Room

Visits 118.

Wh62-0040

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. *None* 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. *Two* Total cubic capacity. *400 cub. ft.* Internal diameter. *5'-0"* thickness. *15/16"*
Seamless, lap welded or riveted longitudinal joint. *T.R. Steel* Material. *Steel* Range of tensile strength. *29-33 tons* Working pressure by Rules. *601 lbs.* Actual. *600 lbs.*

IS A DONKEY BOILER FITTED? *Yes* *For S.E. Boilers* If so, is a report now forwarded? *Yes*
Is the donkey boiler intended to be used for domestic purposes only. *No. For essential services at sea.*
PLANS. Are approved plans forwarded herewith for Shafting. *4/2/37 + 24/6/37* Receivers. *19/8/37* Separate Fuel Tanks. *10/12/37*
Donkey Boilers. *14/6/37 + 21/2/38* General Pumping Arrangements. *1/6/37* Pumping Arrangements in Machinery Space. *24/9/37*
Oil Fuel Burning Arrangements. *30/11/37.* Bedplate, Columns & Intabature (E.V. Construction). *20/12/37*
SPARE GEAR.

Has the spare gear required by the Rules been supplied. *Yes*
State the principal additional spare gear supplied. *2 Piston heads, 2 piston rods (1 upper & 1 lower), 2 piston skirts, 2 fuel pump bodies. etc.*

The foregoing is a correct description,
SWAM, HUNTER, & WIGHAM RICHARDSON, LTD. Manufacturer.

Dates of Survey while building
During progress of work in shops: 1937: Nov. 4, 5, 10, 19, 23, 30. Dec. 2, 3, 10, 14, 24, 28. 1938: Jan. 4, 12, 17, 18, 19, 24. Feb. 1, 10, 11, 14, 21. Mar. 3, 4, 9, 10, 12, 14, 15, 16, 17, 21, 22, 23. Apr. 1, 4, 5, 6, 7, 8, 11, 12, 13, 14, 19, 20, 21, 22, 23, 25, 26, 27, 28. May 2, 3, 5, 6, 9, 10, 11, 12, 16, 17, 18, 23, 24. June 1, 3, 8, 9, 10, 13, 14, 30. July 1, 5, 11, 15, 19, 21, 22, 26, 27, 29. Aug. 3.
During erection on board vessel: 25, 26, 27. June 1, 3, 8, 9, 10, 13, 14, 30. July 1, 5, 11, 15, 19, 21, 22, 26, 27, 29. Aug. 3.
Total No. of visits. *95.*
Dates of Examination of principal parts—Cylinders. *1/4/38* Covers. *✓* Pistons. *24/5/38* Rods. *2nd & 24th 5/38* Connecting rods. *16/5/38*
Crank shaft. *9/5/38* Flywheel shaft. *9/5/38* Thrust shaft. *9/5/38* Intermediate shafts. *9/5/38* Tube shaft. *✓*
Screw shaft. *28/12/38* Propeller. *10/3/38* Stern tube. *3/3/38* Engine seatings. *5/7/38* Engines holding down bolts. *5/7/38*
Completion of fitting sea connections. *16/2/38* Completion of pumping arrangements. *21/7/38* Engines tried under working conditions. *22/7/38 + 3/8/38*
Crank shaft, Material. *F.M. Steel* Identification Mark. *2-2-38 G.O.C.* Flywheel shaft, Material. *as Crank shaft* Identification Mark. *as Crank shaft*
Thrust shaft, Material. *F.M. Steel* Identification Mark. *7526 HAI. 811* Intermediate shafts, Material. *F.M. Steel* Identification Marks. *7526 HAI. 815 & 816.*
Tube shaft, Material. *✓* Identification Mark. *✓* Screw shaft, Material. *F.M. Steel* WORKING SHAFT Identification Mark. *7526 HAI. 814*
SPARE SHAFT 7526 HAI. 813.

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*
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 has been constructed under special survey in accordance with the Society's Rules & approved plan, and the materials and workmanship are good. The Engines have been satisfactorily tested in shop under full load, and the Electric Welded Construction Bedplate, frames, & Intabature were examined after the test bench trials and found satisfactory. The machinery has been efficiently installed on board the vessel and tested under full working conditions.*
The vessel is eligible in my opinion for records + L.M.C. 8.38,
T.S. CL., 2 DB 180 lbs. OIL ENG.

The amount of Entry Fee .. £ 6: - : When applied for, *10 AUG 1938*
Special £ 125: 6 :
Elec. Welded Constr. £ 12: 12 :
Donkey Boiler Fee ... £ 26: 18 :
2 Air Receivers £ 4: 4 :
Travelling Expenses (if any) £ 25: 19: 0 :
When received, *31/8/38*
pmk/19.

Committee's Minute
Assigned *+ L.M.C. 8.38*
2 DB 180 lbs. C.L.

A. Watt.
Engineer Surveyor to Lloyd's Register of Shipping.
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