

REPORT ON OIL ENGINE MACHINERY.

No. 96545

AUG 13 1938

Received at London Office
NEWCASTLE-ON-TYNE

Date of writing Report 10/8/38 When handed in at Local Office 10/8/38 Port of Newcastle on Tyne

No. in Survey held at Newcastle on Tyne Date, First Survey 4 Nov 1937 Last Survey 3 Aug 1938
Reg. Book. Number of Visits 95.

Single
Triple
Quadruple
on the Triple 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

ALL ENGINES, &c.—Type of Engines Swan Hunter Doxford opposed piston type 2 or 4 stroke cycle 2 Single or double acting Single

Maximum 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 throw

Revolutions per minute 110 Flywheel dia. 2450 mm Weight 6.14 Means of ignition compression Kind of fuel used Heavy oil fuel

Crank Shaft, dia. of journals as per Rule 496 mm as fitted 540 mm Crank pin dia. 540 mm Crank Webs 1020 mm Thickness parallel to axis 310 mm

Flywheel Shaft, diameter as per Rule 14.65 as fitted 21.625 Thrust Shaft, diameter at collars as per Rule 15.4 as fitted 21.625

Tube Shaft, diameter as per Rule 16.09 as fitted 21.625 Is the screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 31/32 as fitted 1 1/32 Thickness between bushes as per rule 23/32 as fitted 1 Is the after end of the liner made watertight in the

propeller 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 piece

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 tight fit

If 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

shaft 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. Bronze whether Moveable Solid Total Developed Surface 102 sq. feet

Method of reversing Engines compressed air Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of lubrication Forced

Thickness of cylinder liners 25 mm 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

Cooling Water Pumps, No. ME driven S.W. Circ Pump, & Ballast P. for Cookers & Guides 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. none Diameter 7" x 8" x 8" Stroke 8" x 9" x 10" Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size Two 7" x 8" x 8" Duplex Bilge & one 8" x 9" x 10" Duplex Ballast. How driven all steam driven

Is 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 one ME driven 130 mm dia 500 mm stroke two Stand-by Rotary 50 ton for

Ballast Pumps, No. and size One 8" x 9" x 10" duplex Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Stand-by Rotary 50 ton for

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 3 of 3 1/2" (aft p 15), & 2 of 2 1/2" to p 15 gutterways fwd. In Pump Room 2 of 4"

In Holds, &c. For hold 2 of 2 1/2" & 1 of 2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two of 6" (one aft & one starboard)

Are all the Bilge Suction pipes in Hold and Pump Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces

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

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

Are 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 both

Are 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

What pipes pass through the bunkers none How are they protected Yes

What pipes pass through the deep tanks none Have they been tested as per Rule Yes

Are 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 Yes

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

Main Air Compressors, No. none No. of stages 3 Diameters Peter Brotherhood Type 4 U. See London Cert No D 189 Stroke 2 1/2" Driven by Steam Engines

Auxiliary Air Compressors, No. Two No. of stages 3 Diameters Reavallo Type HCSA4 Stroke 2 1/2" Driven by 2 Cyls Peter 20 BHP oil engine

Small Auxiliary Air Compressors, No. one No. of stages 3 Diameters 2 1/2" Stroke 2 1/2" Driven by levers from M. Eng

Scavenging Air Pumps, No. One double acting Diameter 1620 mm Stroke 1400 mm Driven by 2-25 KW Steam & 1-20 BHP 2 Cyls Peter oil eng.

Auxiliary Engines crank shafts, diameter as per Rule 1620 mm as fitted 1620 mm Position all on starboard side in E. Room

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
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 Material Steel Range of tensile strength 29-33 tons Working pressure
 by Rules 601 lbs
 Actual 600 lbs.

IS A DONKEY BOILER FITTED? Yes ✓ 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? Yes ✓
PLANS. Are approved plans forwarded herewith for Shafting 4/2/37 + 24/6/37 Receivers 19/8/37 Separate Fuel Tanks 10/12/37
 (If not, state date of approval)
 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.W. 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,
 FOR
SWAN, HUNTER, & WIGHAM RICHARDSON, LTD. Manufacturer.

Dates of Survey while building	1937		1938	
	During progress of work in shops--	During erection on board vessel--	During progress of work in shops--	During erection on board vessel--
	Nov. 4, 5, 10, 19, 23, 30	Dec. 2, 3, 10, 14, 24, 28	Jan. 4, 12, 17, 18, 19, 24	Feb. 1, 10, 11, 14, 21
	24, 25, 28, 29, 30, 31	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	Aug 3.
	25, 26, 27	June 1, 3, 8, 9, 10, 13, 14, 30	July 1, 5, 11, 15, 19, 21, 22, 26, 27, 29	
Total No. of visits	<u>95.</u>			

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
 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,	<u>10 AUG 1938</u>
Special	£ 125: 6	When received,	<u>31/8/38</u>
Elec. Welded Constr	£ 12: 12		<u>21/8/38</u>
Donkey Boiler Fee	£ 2: 18		<u>21/8/38</u>
2 Air Receivers	£ 4: 4		<u>21/8/38</u>
Travelling Expenses (if any)	£ 25: 19: 0		<u>21/8/38</u>

Committee's Minute JUL 23 / 1938
 Assigned + dunc. 8.38
2 DB. 180 lbs. C.L.

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



Newcastle-on-Tyne

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