

REPORT ON OIL ENGINE MACHINERY.

No. 104060

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Date of writing Report 19 When handed in at Local Office 6. 11. 46 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle on Tyne Date, First Survey (1945) Oct. 30th Last Survey Oct. 26th 1946

88764 on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel M.V. REGENT TIGER Tons Gross 9960.24 Net 5930.59

Built at Wallsend on Tyne By whom built Swan Hunter, Wigham & Bart No. 1743 When built 1946

Engines made at Neptune Works, Walker By whom made " Engine No. 1834 When made 1946

Donkey Boilers made at " By whom made " Boiler No. 1834 When made 1946

Brake Horse Power 4750 Owners Oil Tank Steamship Co Ltd Port belonging to London

Nom. Horse Power as per Rule 1011 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended MN. 1012 Carrying petroleum in bulk 88%

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

Maximum pressure in cylinders 640 lb/in² Diameter of cylinders 28 1/2" Length of stroke 22 5/8" No. of cylinders 4 No. of cranks 4-3 throw

Mean Indicated Pressure 85 lb/in² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1080 mm 1410 mm Is there a bearing between each crank EACH-3 throw

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

Crank Shaft, { Solid forged dia. of journals 498 mm Crank pin dia. 540 mm Crank Webs Mid. length breadth 170 mm Thickness parallel to axis 310 mm

Flywheel Shaft, diameter as per Rule 540 mm Intermediate Shafts, diameter as per Rule 14.65" Thrust Shaft, diameter at collars as per Rule 15.11"

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

Bronze Liners, thickness in way of bushes as per Rule 1.97" Thickness between bushes as per Rule 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

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 If so, state type Length of Bearing in Stern Bush next to and supporting propeller 8-2"

Propeller, dia. 17-2" Pitch 13-0" No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 102 sq. feet

Method of reversing Engines Compound air Is a governor or other arrangement fitted to prevent racing of the engine when declutched 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

Cooling Water Pumps, No. 2-2 DISTILLED WATER ON M.E. 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. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and Size (1) BALLAST 8x9x10-130T/HR. (2) BILGE 7x8x8-100T/HR. How driven Steam

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 Ballast Pumps, No. and size (1) 8x9x10-130T/HR Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size (2) 9x8x18-50T/HR

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 3-3 1/2" dia. 1-3" dia Dry Tank. 1-2" dia E. R. Cofferdam In Pump Room 2-4" dia

in Holds, &c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size (1) 6" dia BALLAST. (1) 6" dia BILGE.

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes 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

Are all Sea Connections fitted direct on the skin of the ship 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 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 Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

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 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

compartment to another Yes 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. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters 12 3/4"-10 1/4" Stroke 7" Driven by Steam engine

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

What provision is made for first Charging the Air Receivers Auxiliary compressors

Scavenging Air Pumps, No. One double acting Diameter 1680 mm Stroke 1400 mm Driven by Crank shaft

Auxiliary Engines crank shafts, diameter as per Rule 3 1/4" Position Aft engine room

Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Yes-Manchester R/P 12609

AIR RECEIVERS:—Have they been made under survey *Yes* ✓ State No. of Report or Certificate ✓
 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* ✓
Injection 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. 2 Total cubic capacity 400 cub ft Internal diameter 5'-0" thickness 1 5/16"
 Seamless, lap welded or riveted longitudinal joint Riveted ✓ Material Steel Range of tensile strength 29-33 Jan 2 Working pressure by Rules 602 lbs sq. in. Actual 600 lbs sq. in.

IS A DONKEY BOILER FITTED? *Yes - Two* ✓ If so, is a report now forwarded? *Yes* ✓
 Is the donkey boiler intended to be used for domestic purposes only *No* ✓
PLANS. Are approved plans forwarded herewith for Shafting *Yes* Receivers *Yes* Separate Fuel Tanks *Yes*
 Donkey Boilers *Yes* General Pumping Arrangements *Yes* Pumping Arrangements in Machinery Space *Yes*
 Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes* ✓
 State the principal additional spare gear supplied 1 Spare screw shaft. 1 Upper piston rod, piston & skirt. 1 Lower piston rod, piston & skirt. 1 Lower piston skirt (heavy) 7 Piston rings. 1 Flywheel liner. 1 Main bearing complete. 2 Side rod bolts. 2 Fuel valve bodies & spindles. 2 Fuel pump bodies & quadrant for upper P.W.S. 4 Rubber hoses for upper P.W.S. 1 Swinging link & complete cylinder lubricator. 1 Gross assorted washers. Assorted springs.

(For SWAN, HUNTER & WIGHAM RICHARDSON LTD.)

The foregoing is a correct description,
P.L. Long Manufacturer.

Dates of Survey while building { During progress of work in shops - (1945) Oct. 30, 31 Nov. 19, 26, 30, Dec. 11, 12, 18, 21, (1946) Jan. 3, 7, 14, 16, 21, 25, 28, Feb. 1, 5, 7, 8, 11, 12, 20, 22, 25 Mar. 4, 8, 11, 13, 15, 19, 22, 26 Apr. 2, 9, 10, 12, 15, 18, 23, 24, 29, 30 May 1, 2, 3, 6, 7, 8, 9, 10, 14, 17, 20, 27, 29, 30, 31 June 6, 12, 14, 15, 17, 19, 21, 24, 26, 27 July 1, 3, 5, 10, 16, 18, 19, 22, 26 Aug. 14, 15, 20, 21, 28, 30 Sept. 2, 3, 5, 6, 13, 17, 19, 23, 25, 27, Oct. 10, 11, 14, 15, 17, 21, 26.
 Total No. of visits 104

Dates of Examination of principal parts—Cylinders 14-5-46 Covers ✓ Pistons 14-5-46 Rods 25-2-46 Connecting rods 8-3-46
 Crank shaft 25-1-46 Flywheel shaft 25-1-46 Thrust shaft 25-1-46 Intermediate shafts 21-6-46 Tube shaft ✓
 Screw shaft 14-6-46 Propeller 21-6-46 Stern tube 15-6-46 Engine seatings 10-10-46 Engines holding down bolts 10-10-46 11-10-46 17-10-46 18-10-46
 Completion of fitting sea connections 1-7-46 Completion of pumping arrangements 11-10-46 Engines tried under working conditions
 Crank shaft, Material O.H. Steel Identification Mark 14625 G.H.M. Flywheel shaft, Material O.H. Steel Identification Mark its crank shaft F 7477
 Thrust shaft, Material O.H. Steel Identification Mark its crank shaft Intermediate shafts, Material O.H. Steel Identification Marks 14737 F 7478
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material O.H. Steel Identification Mark 14737 F 7475
 Identification Marks on Air Receivers LLOYDS TEST T.P. 800 lbs sq. in. W.P. 600 lbs sq. in. 10-5-46 J.H.M.

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 *Yes* ✓ If so, have the requirements of the Rules been complied with *Yes* ✓
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *None 96545* ✓
 Is this machinery duplicate of a previous case *Yes* ✓ If so, state name of vessel *REGENT TIGER.*

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery of this vessel has been constructed under special survey in accordance with rule requirements & approved plans. Materials & workmanship are good. The machinery was satisfactorily tested on mooring & sea trials & in my opinion is eligible for classification with records of +L.M.C. 10, 46. 2.D.B. 180 lbs. T.S.C.L.
 Resolutions approved 17.1.45 and 14.10.46
R.M.

The amount of Entry Fee .. £ 6 : 0 : 0 When applied for NOV 1945
 Special £ 125 : 5 : 6
 Donkey Boiler Fee £ 27 : 0 : 0 When received,
 AIR RECEIVERS
 Travelling Expenses (if any) £ 4 : 4 : 0

J. H. Matthews
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 13 DEC 1946*

Assigned *+L.M.C. 10, 46 Oil Eng.*
C.L.

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

