

REPORT ON OIL ENGINE MACHINERY.

No. 19303.

Received at London Office

Date of writing Report 1. 1. 1930 When handed in at Local Office 6th MARCH 1931. Port of Greenock

No. in Survey held at Greenock Date, First Survey 18th APRIL 1930 Last Survey 5th MARCH 1931

Reg. Book, Greenock Number of Visits 91.

on the Single 5/5 "British Resource" Screw vessel Tons { Gross 4201.51
Net 1194.10

Built at Greenock By whom built Greenock Dockyard & Co. Ltd. Yard No. 421 When built 1931

Engines made at Greenock By whom made John & Thucall & Co. Ltd. Engine No. 1763 When made 1931

Donkey Boilers made at ditto By whom made ditto Boiler No. 1763 When made 1931

Brake Horse Power 2700 Owners British Tankers Ltd. Port belonging to London

Nom. Horse Power as per Rule 653 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Foreign 1948 5-9 1/2

OIL ENGINES, &c. Type of Engines Burner & Organ 2 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 500 Diameter of cylinders 7 1/2 Length of stroke 15 1/2 No. of cylinders 8 No. of cranks 8

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 100 1/2 Is there a bearing between each crank Yes

Revolutions per minute 98 Crank pin dia. 2 1/2 Weight 24 1/4 Kgs. Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, dia. of journals as per Rule 4 1/2 Crank pin dia. 4 1/2 Crank Webs Mid. length breadth 3 1/2 Thickness parallel to axis 3 1/2

as fitted 4 1/2 Mid. length thickness 3 1/2 Thickness around eye hole 2 1/2

Intermediate Shafts, diameter as per Rule 12 1/2 Thrust Shaft, diameter at collars as per Rule 13 1/2

as fitted 12 1/2 as fitted 13 1/2

Tube Shaft, diameter as per Rule 14 1/2 Is the tube shaft fitted with a continuous liner Yes

as fitted 14 1/2 as fitted 14 1/2

Screw Shaft, diameter as per Rule 14 1/2 Is the screw shaft fitted with a continuous liner Yes

as fitted 14 1/2 as fitted 14 1/2

Bronze Liners, thickness in way of bushes as per Rule 7/8 Thickness between bushes as per rule 7/8 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 Yes

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 Yes

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 6-0 1/4

Propeller, dia. 16 9 Pitch 12 6 No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 88 sq. feet

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

Thickness of cylinder liners 32/52 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. Two 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 — Stroke — Can one be overhauled while the other is at work —

Pumps connected to the Main Bilge Line { No. and Size Two (one 5" centrifugal) (one 9" 10" 10")
How driven Steam Motor

Ballast Pumps, No. and size one 9" 10" 10" Lubricating Oil Pumps, including Spare Pump, No. and size Two 4 1/2" 2 1/2" 10" 10"

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 2. 2" 3-3" Four Pump Room 1. 2 1/2" In Pump Room 2. 4" each

In Hold, &c. 2. 2 1/2" Main Tanks 2. 4" each

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two 5"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces led 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 No

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 above

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 —

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 compartment to another Yes Is the Shaft Tunnel watertight None 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 No. of stages 3 Diameters 7 1/2-6 1/2-1 1/2 Stroke 6 1/2 Driven by Main Engine

Auxiliary Air Compressors, No. Two No. of stages 3 Diameters 2 1/2-2 1/2-6 1/2 Stroke 2 1/4 Driven by Diesel Engine

Small Auxiliary Air Compressors, No. one No. of stages 50 CF per minute Diameters — Stroke — Driven by Steam

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

Auxiliary Engines crank shafts, diameter as per Rule — as fitted — see London Reg. 90 95913 attached

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. 2 Cubic capacity of each 200 litres Internal diameter 14 thickness 1 1/2

Seamless, lap welded or riveted longitudinal joint Seamless Material S Range of tensile strength 29-33 Working pressure by Rules 1000 Actual 1000

Starting Air Receivers, No. 2 Total cubic capacity 1400 Internal diameter 6-8 1/8 thickness 1 1/2 + 1 3/32

Seamless, lap welded or riveted longitudinal joint TRIPLES Material S Range of tensile strength 28-32 Working pressure by Rules 350 Actual 350

W1140-0109

IS ^{aux} ~~A~~ ~~DONKEY~~ BOILERS FITTED? *yes* ~~no~~

If so, is a report now forwarded? *yes*

Is the donkey boiler intended to be used for domestic purposes only

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

aux Boilers

General Pumping Arrangements

Receivers

Separate Tanks

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

Propeller, Propeller shaft, Cylinder liner, Cylinder head

The foregoing is a correct description
for JOHN G. KINCAID & CO. LIMITED.

McCann Director.

Manufacturer.

Dates of Survey while building { During progress of work in shops - (1930) Apr. 18, 26, May 4, 11, 26, June 20, 24, 25, 30, July 16, 29, Aug. 4, 4, 8, 11, 13, 19, Sept. 1, 9, 10, 11, 16, 17, 18, 19, 29, 30, Oct. 6, 9, 10, 13, 15, 21, 22, 23, 24, 28, 30, 31, Nov. 3, 4, 10, 11, 12, 14, 19, 20.
During erection on board vessel - 21, 24, 25, 24, 28, Dec. 1, 2, 3, 4, 5, 8, 9, 10, 13, 19, 22, 23, 24, 29, 30, (1931) Jan. 8, 12, 13, 15, 19, 21, 23, 24, 28, 29, 30, Feb. 4, 6, 9, 12, 14, 20, 25, Mar. 2, 3, 4, 5.
Total No. of visits 91.

Dates of Examination of principal parts { *LINER*
Cylinders 3 11. 30 Covers 11- 8. 30 Pistons 19, 11. 30 Rods 19, 11. 30 Connecting rods 3- 12. 30
Crank shaft 30. 9. 30 Flywheel shaft ✓ Thrust shaft 23- 12. 30 Intermediate shafts ✓ Tube shaft ✓

Screw shaft 3- 12. 30 Propeller 28- 11. 30 Stern tube 28- 11. 30 Engine seatings 22. 12. 30 Engines holding down bolts 6- 2- 31
Completion of fitting sea connections 22. 12. 30 Completion of pumping arrangements 2. 3 21. Engines tried under working conditions 5. 3. 21.

Crank shaft, Material *S* Identification Mark *LR 1163 WGM* Flywheel shaft, Material ✓ Identification Mark -
Thrust shaft, Material *S* Identification Mark *LR 14193 WGM* Intermediate shafts, Material ✓ Identification Marks -
Tube shaft, Material - Identification Mark - Screw shaft, Material *S* Identification Mark *LR 1840 WGM*

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 *yes*

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 *yes*

If so, state name of vessel

"British Pride" Cal. Repl. 7° 19296.

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

These engines & boiler have been built under special license in accordance with the approved plans & the workmanship & material are of good quality. They are now securely fitted on board. Tried under working conditions & found satisfactory. The machinery is eligible in my opinion for the record of.

⊕ L M C 3 31. (Notation of Donkey boilers 150th)

Damage caused by heating of the main engine compressor short when on the official trial oil 3rd March 1931.

Main compressor short ground up in Lake Chamber house & new Gudgeon Pins fitted. Machinery tried under working condition on completion & found satisfactory (for further particulars see copy of Damage Repl. attached)

The amount of Entry Fee ... £ 6 : -

Special ... £ 104 : 13

Donkey Boiler Fee ... £ 30 : 6

air *Revisions* (if any) £ 8 : 8

Damage 3 : 3

Committee's Minute GLASGOW 10 MAR 1931

Assigned *7 L M C 3 31*

CERTIFICATE WRITTEN

W. Gordon-Mitchell
Engineer Surveyor to Lloyd's Register of Shipping.



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