

REPORT ON OIL ENGINE MACHINERY.

No. 35541

MAR 27 1951

Received at London Office

6 APR 1951

Date of writing Report

When handed in at Local Office

Port of

Sunderland

No. in Survey held at Reg. Book.

Sunderland

Date, First Survey 4 October 1949

Last Survey 21 March 1951

Number of Visits 66

Single Triple Screw vessel

"BRITISH BUILDER"

Gross 8699
Net 5078

Built at Sunderland

By whom built Wm. Hoafford & Sons L^{td}

Yard No. 482 When built 1951

Engines made at Sunderland

By whom made Wm. Hoafford & Sons L^{td}

Engine No. 482 When made 1951

Donkey Boilers made at Stockton

By whom made Stockton Chem. Eng^g & Riley Bros L^{td}

Boiler No. 719478 When made 1950

Brake Horse Power 3100

Owners British Tanker Co L^{td}

Port belonging to London

Nom. Horse Power as per Rule MN. 684

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted Yes.

Trade for which vessel is intended Tanker

OIL ENGINES, &c. Type of Engines Opposed piston action injection 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 640 lbs/sq. in. Diameter of cylinders 600 mm Length of stroke upper 980 mm lower 1340 mm No. of cylinders 4 No. of cranks 4 Triple threads

Mean Indicated Pressure 85 lbs/sq. in. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 886 mm Is there a bearing between each crank Between each triple thread.

Revolutions per minute 105 Flywheel dia. 1690 mm Weight 1.32 tons Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, dia. of journals as per Rule 431 mm as fitted 450 mm Crank pin dia. 450 mm Crank Webs Mid. length breadth 650 mm Mid. length thickness 255 mm Thickness parallel to axis 255 mm Thickness around eye-hole 201 mm

Flywheel Shaft, diameter as per Rule 431 mm as fitted 450 mm Intermediate Shafts, diameter as per Rule 450 mm as fitted 450 mm Thrust Shaft, diameter at collars as per Rule 431 mm as fitted 450 mm

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 450 mm Is the tube shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule as fitted 22 mm Thickness between bushes as per Rule as fitted 14 mm 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 one length.

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 No.

Propeller, dia. 16'-3" Pitch 11'-9" No. of blades 4 Material Bronze whether Moveable No. Total Developed Surface 93 sq. feet

Method of reversing Engines Hand lever Is a governor or other arrangement fitted to prevent racing of the engine when disconnected 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 Yes.

Cooling Water Pumps, No. 1 Engine driven 1 Steam driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel (P.W. Corling)

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 2 @ 4" x 8" x 8" duplex. 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 @ 10" x 12" x 10" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 @ 8" x 5 1/2" x 5 1/2" 1 @ 8" x 4" x 18"

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 @ 3 1/2" 1 @ 6" (aft. well) In Pump Room

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 8" (Ballast pump) + 1 @ 6"

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

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 (Tanker) Is the Shaft Tunnel watertight none

Is it fitted with a watertight door - worked from -

On 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. Two No. of stages Three Diameters 11 1/2" - 9 1/2" - 23 1/2" Driven by Steam Engine 13 1/2" x 4"

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

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

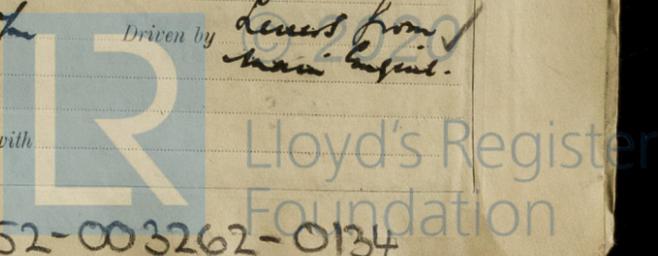
What provision is made for first Charging the Air Receivers (Steam driven Compressor)

Refrigerating Air Pumps, No. Two Diameter 15 1/2" Stroke 5 1/2" Driven by Levers from main engine.

Auxiliary Engines crank shafts, diameter as per Rule as fitted No. Position

Have the Auxiliary Engines been constructed under special survey - Is a report sent herewith -

EWK
17/4/51



003252-003262-0134

AIR RECEIVERS: - Have they been made under survey

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

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.

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

Actual

IS A DONKEY BOILER FITTED?

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)

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Retained

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

1 Cylinder liner & pack. Complete, 1 upper & lower piston skirts, 4 scraper rings, 2 main piston heads & 110 rings, 4 first valves complete, 16 spray flaps, 1 crank & side crank, red sp. bearings, 1 main bearing, with 2 studs & nuts, 4 center pins (each) top & bottom end bolts & nuts, 1 set complete belt & nuts, 1 cyl. relief valves, 1 fuel pump & 2 fuel pump bearings complete, 1 set. & set. valve for storage pump, 1 set. pads for a/b. side of thrust, 3 pads for int. steel shaft bearings, 8 rollers for piston coating, 1 roller chain for camshaft drive, 1 R.I. propeller, 1 screw shaft - etc. etc.

The foregoing is a correct description.

WILLIAM DOXFORD & SONS, LIMITED.

Manufacturer.

Table with columns for Dates of Survey while building, Dates of Examination of principal parts, and Identification Marks on Air Receivers. Includes handwritten entries for dates and marks.

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

Description of fire extinguishing apparatus fitted

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

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

This machinery has been built under special survey in accordance with the approved plans & the rules of the Society. The materials & workmanship are good. It has been securely fitted on board the vessel & tried under full working conditions with satisfactory results. The two donkey boilers have also been securely fixed on board the vessel, fitted to burn oil fuel (f.p. above 150° F.) & safety valves adjusted under steam to working pressure. Section 20 of the rules has been complied with.

The machinery is now eligible, in my opinion, to have notation LMC 3.51 (oil eng) T.S. (cl) 2 DB 150 H.P.

Table for Entry Fee details including Special, Doubled Bill, and Travelling Expenses.

Committee's Minute FRI. 20 APR 1951. Assigned + LMC 3.51 Oil Eng. P.L. 2 DB 150 H.P.

Signature of Engineer Surveyor to Lloyd's Register of Shipping.



SUNDERLAND. Certificate (if required) to be sent to the Surveyors...