

## REPORT ON OIL ENGINE MACHINERY.

No. 35440

OCT 11 1950

Received at London Office

Date of writing Report

When handed in at Local Office

Port of

Sunderland.

No. in Survey held at  
Reg. Book.

Sunderland.

Date, First Survey 1 September 1949 Last Survey 10 October 1950

Number of Visits 62

Single  
on the ~~Twin~~ Screw vessel  
Triple  
Quadruple

"BRITISH DIPLOMAT"

Tons Gross 6155  
Net 3346

Built at Sunderland

By whom built

Wm. Leayford &amp; Sons Ltd

Yard No. 481

When built 1950

Engines made at Sunderland

By whom made

Wm. Leayford &amp; Sons Ltd

Engine No. 481

When made 1950

Donkey Boilers made at Stockton

By whom made

Stockton Chem. Engg &amp; Refry Bldg Co Ltd

Boiler No. 4193/4

When made 1950

Brake Horse Power 2250

Owners

British Tanker Co Ltd

Port belonging to

London

Nom. Horse Power as per Rule

516

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes

Trade for which vessel is intended

Tanker.

OIL ENGINES, &amp;c. Type of Engines Opposed piston 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 980 mm No. of cranks 3 Triple throw

Mean Indicated Pressure 85 lbs/sq in Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 940 mm Is there a bearing between each crank Between each triple throw.

Revolutions per minute 100 Flywheel dia. F. 2300 mm Weight F. 2.263 tons Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, { Solid forged dia. of journals as per Rule 418 mm as fitted 450 mm Crank pin dia. 450 mm Crank Webs Mid. length breadth 650 mm Thickness parallel to axis 255 mm

Flywheel Shaft, diameter as per Rule 418 mm as fitted 450 mm Intermediate Shafts, diameter as per Rule 308 mm as fitted 430 mm Thrust Shaft, diameter at collars as per Rule 418 mm as fitted 450 mm

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 341 mm as fitted 430 mm Is the tube shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 18 mm as fitted 21 mm Thickness between bushes as per Rule 13.5 mm as fitted 16.5 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

If so, state type

Propeller, dia. 15'-9" Pitch 11'-6" No. of blades 4 Material Bronze whether Moveable No. Total Developed Surface 85 sq. feet

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

Land &amp; Freed 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. one Engine driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel (P.W. Castling)

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. &amp; Ballast Pump. 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

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" x 1 - 6" in E.R. In Pump Room 1 - 2"

In Holds, &amp;c. (Tanker) Main room amidships 2 @ 4" in each.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - 8" (Ballast Pump) &amp; 1 - 6"

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

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 Ball

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plate Yes Are the Overboard Discharges above or below the deep water line Below

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

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. Two No. of stages 3 Diameters 11 1/2" - 9 1/2" - 2 1/2" Stroke 4 Driven by Steam Engine

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 Compressors

Scavenging Air Pumps, No. One Diameter 1400 mm Stroke 610 mm Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted Position

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

Lloyd's Register  
Foundation

002550-002558-0043



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

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

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

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

1 C.I. Propeller, 1 Screw Shaft, 1 Cyph. liner & Jacket Complete, 1 upper & 1 lower piston skirt, 4 scraper rings, 2 main piston heads, 40 rings, 8 fuel valve & spray pumps, 1 Centre & S. Cam. rod both end Sph. bearing, 1 main Sph. bearing, 4 Centre & side top & bottom bearing bolts & nuts, 2 main bearing studs & nuts, 1 Set Coupling bolts & nuts, 2 NR an Starting valves, 2 relief valves Complete, 1 Fuel pump Suct. Chamber Complete, 2 fuel pump heads Complete, 4 fuel valves Complete, 1 Sear. Pump Suct. & Del. Valve Complete, 1 Set Pads for abd. Side of crank, 3 pads for int. & Screw Shaft bearings, 1 roller Chain for Camshaft drive, 6 rubber hoses for piston cooling &c &c.

The foregoing is a correct description of the machinery of the vessel.

WILLIAM DOXFORD & SONS, LIMITED.

Manufacturer.

Dates of Survey while building

During progress of work in shops - -  
During erection on board vessel - -  
Total No. of visits

1949 Sep 1, 2, 9, 12, 19, 22, 23. Nov 16, 18, 22, 23, 25, 30. Dec 5, 13, 15, 20, 21, 30. 1950 Jan 3, 5, 9, 13. Mar 1, 7, 22, 24, 31. Apr 3, 5, 11, 12, 17.  
18, 19, 20, 21, 26, 27. May 1, 2, 3, 4, 5, 8, 9, 10, 11, 15, 16. Jun 2, 24, 25. Aug 9, 14, 17, 23, 31. Sep 4, 11, 14. Oct 10.

Dates of Examination of principal parts - Cylinders 22/3/50 Covers - Pistons 21/4/50 Rods 21/4/50 Connecting rods 1/5/50.

Crank shaft 23/11/49. Flywheel shaft as crank. Thrust shaft as crank. Intermediate shafts 1/5/50. Tube shaft -

Screw shaft 8/5/50. Propeller 14/4/50. Stern tube 5/4/50. Engine seatings (Sankt) Engines holding down bolts 14/8/50.

Completion of fitting sea connections 5/4/50. Completion of pumping arrangements 10/10/50. Engines tried under working conditions 10/10/50.

Crank shaft, Material Ingot Steel Identification Mark 23/11/49. Flywheel shaft, Material as crank Identification Mark as crank.

Thrust shaft, Material as crank Identification Mark as crank. Intermediate shafts, Material Ingot Steel Identification Marks No 20024, 634 N.W.F. 1/5/50.

Tube shaft, Material - Identification Mark - Screw shaft, Material Ingot Steel Identification Mark No 20024-634 N.W.F. 8/5/50.

Identification Marks on Air Receivers K. 2325/6 LR 23061 J. McL. 17/1/50.

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.

Description of fire extinguishing apparatus fitted 12 perforated pipe for steam led around E.R. B.H. Rm. 10-2 Gall + 1-10 Gall Cont. am for Phenol. Spraying & spray. Pipe in B.H. Rm. for quenching furnace mouths.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo (Tanker) If so, have the requirements of the Rules been complied with not required.

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 Defender" (Std Rpt 35399).

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, fitted to burn oil fuel (F.P. above 150° F.) & the safety valves adjusted under steam & working pressure. Section 2 of the rules has been complied with.

The machinery is now eligible in my opinion to have notation \* LMC. 10. 50 (oil Eng.) T. S. (CL) 2 DB 150 lb/sq.

Note: The Survey B.H.P. may be considered 2250.

The amount of Entry Fee £ 148 4 Special Donkey Boiler Fee £ 14 Travelling Expenses (if any) £ 19 When applied for, OCT 16 1950 When received, 19

Committee's Minute Assigned + LMC 10,50 Oil Eng. C.L. 2 DB 150 lb.

