

## REPORT ON OIL ENGINE MACHINERY.

No. 34611

Received at London Office

15 JAN 1947

JAN 1947

Date of writing Report

When handed in at Local Office JAN 14 1947

Port of

Sunderland.

No. in Survey held at  
Reg. Book.Date, First Survey 12 July '46 Last Survey 10 Jan 1947.  
Number of Visits 45Single  
on the Twin } Screw vessel  
Triple  
Quadruple

"BRITISH ENSIGN"

Tons Gross 8738  
Net 4984

Built at Haverhill Hill

By whom built

James I.B. Co. Ld.

Yard No. 393 When built

Engines made at

Sunderland

By whom made

Wm. Leppard &amp; Sons Ld.

Engine No. 251 When made 1944.

Donkey Boilers made at

By whom made

Boiler No. When made

Brake Horse Power 3100

Owners British Tanker Co. Ld.

Port belonging to LONDON

Nom. Horse Power as per Rule

687

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

23 5/8

91 5/16

OIL ENGINES, &amp;c.—Type of Engines Approved piston and injection 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 640 lb/sq. in. Diameter of cylinders 600 mm Length of stroke 980 mm No. of cylinders 4 No. of cranks 4 (3 throws)

Mean Indicated Pressure 85 lb/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 3 throws.

Revolutions per minute 2450 F. 1.33 Dims. Means of ignition Compression Kind of fuel used —

Crank Shaft, { Solid forged dia. of journals 431 mm Crank pin dia. 450 mm Crank Webs Mid. length breadth 650 mm Thickness parallel to axis 255 mm

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

Tube Shaft, diameter 450 mm as per Rule 450 mm Screw Shaft, diameter 450 mm as per Rule 450 mm

Bronze Liners, thickness in way of bushes 25 mm as per Rule 25 mm Thickness between bushes 25 mm as per Rule 25 mm

propeller boss 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

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface 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

Hand lever 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 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. one Engine driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel —

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 — How driven —

Is the cooling water led to the bilges If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements one Engine driven 110 mm x 510 mm

Ballast Pumps, No. and size — Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces In Pump Room

In Holds, &amp;c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

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

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

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

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

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

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 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. 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

Scavenging Air Pumps, No. two Diameter 1510 mm Stroke 510 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



**AIR RECEIVERS:** — Have they been made under survey

State No. of Report or Certificate

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

Is a drain fitted at the lowest part of each receiver

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?**

If so, is a report now forwarded?

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)

4/5/46

Dec. 1803 22/1/46

Receivers

Separate Fuel Tanks

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

Ys. (Engine only)

State the principal additional spare gear supplied

1 Cylinder lens & gasket complete, 1 upper & lower piston skirt, 4 scraper rings, 1 main piston head, 40 main piston rings, 4 fuel valves complete, 8 spray plugs, 1 Centre Cam. rod belt end Spherical bearing, 2 Side Cam. rod belt end Sph. bearings, 1 main (Sph.) bearing, 2 main bearing Stud. nuts, 4 Centre & side (Sack) top & belt end bearing bolts & nuts, 2 Side rod belt ends, 1 Set Coupling bolt & nuts, 2 N.R. Starling valves, 2 C.G. relief valves, 1 fuel pump Suct. Chamber, 2 fuel pump bellies complete with valves, 1 Sear. pump del. valve & ditto for Suct., 1 Set pads for Mitchell thrust, 8 rubber hoses for piston cooling, 1 roller chain for camshaft drive

The foregoing is a correct description

WILLIAM DOXFORD & SONS, LIMITED.

20th Dec. 1946

Manufacturer.

Dates of Survey while building  
During progress of work in shops - 19.4.46, July 12, Aug. 6, 8, 13, 24, 28, 30, Sep. 3, 11, 12, 27, Oct. 2, 3, 4, 10, 11, 14, 18, 21, 22, 25, 30, Nov. 1, 18, 27, Dec. 5, 49.  
During erection on board vessel - 12.4, 12.7, 18, 19, 20, 23, 24, 27, 30, 31, 47, Jan. 2, 6, 7, 9, 10.  
Total No. of visits 45

Dates of Examination of principal parts - Cylinders 4/10/46, 11/10/46, Covers 6/12/46, 18/12/46, Pistons 6/12/46, 18/12/46, Rods 6/12/46, 18/12/46, Connecting rods 20/12/46  
Crank shaft 27/12/46, Flywheel shaft as crank, Thrust shaft as crank, Intermediate shafts - Tube shaft -  
Screw shaft - Propeller - Stern tube - Engine sealings - Engines holding down bolts -  
Completion of fitting sea connections - Completion of pumping arrangements - Engines tried under working conditions 9/1/47, 10/1/47  
Crank shaft, Material Eng. Steel Identification Mark N° 258 H.H.F. 27/12/46 Flywheel shaft, Material as crank Identification Mark as crank  
Thrust shaft, Material as crank Identification Mark as crank Intermediate shafts, Material - Identification Marks -  
Tube shaft, Material - Identification Mark - Screw shaft, Material - Identification Mark -  
Identification Marks on Air Receivers -

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 Ys.

If so, state name of vessel

BRITISH ADMIRAL (Sloop 33413)

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

Special Survey in accordance with the approved plans & the rules of the Society.

The materials & workmanship are good.

On completion it has been tried under full load conditions on test bed with satisfactory results.

It has now been despatched to Harston Hill for installation on board the vessel & upon this being completed satisfactorily the machinery will be eligible, in my opinion, to have notation 150 L MC (with date) (oil Eng.)

The amount of Entry Fee .. £ 6 : : When applied for,  
2/3 Special ... £ 42 : 18 : JAN 14 1947  
Donkey Boiler Fee ... £ 12 : 12 :  
Travelling Expenses (if any) £ : : When received, 19.

Committee's Minute FEB. 13 JUN 1947

Assigned See F.E. Mch. opt.

J. H. K. K. K.

Engineer Surveyor to Lloyd's Register of Shipping.



© 2020

Lloyd's Register Foundation

SUNDERLAND.

ML- (The Surveyors are requested not to write on or below the space for Committee's Minute.)