

Rpt. 4b.
RECEIVED

REPORT ON OIL ENGINE MACHINERY.

No 34597

19 DEC 1946

2 DEC 1946
Date of writing Report

When handed in at Local Office 17 Dec 1946 Port of Sunderland

IND Survey held at
Reg. Book.

Date, First Survey 1946-22 Last Survey 2 Dec 1946
Number of Visits 59

on the Single
Twin
Triple
Quadruple
Screw vessel

BRITISH HOLLY

Tons Gross 8582
Net 4919

Built at Sunderland

By whom built Sir J. Lamont & Sons Ltd.

Yard No. 440 When built 1946

Engines made at Sunderland

By whom made Wm. Beardmore & Sons Ltd.

Engine No. 256 When made 1946

Donkey Boilers made at Stockton

By whom made Stockton Chen. Engrs & Riley Ltd.

Boiler No. 6935/6 When made 1946

Brake Horse Power 3100 ✓

Owners British Tanker Co. Ltd.

Port belonging to London.

Nom. Horse Power as per Rule 684 ✓

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted Yes.

Trade for which vessel is intended Tanker.

915/6

OIL ENGINES, &c. Type of Engines Opened piston airless injection 2 or 4 stroke cycle 2 Single or double acting Single ✓

Maximum pressure in cylinders 640 lbs. ✓ Diameter of cylinders 235/8 in. Length of stroke up to 980 in. ✓ 4 (3 throw) ✓

Mean Indicated Pressure 85 lbs. ✓ Length of stroke 600 in. ✓ 4 Number of cylinders Between each 3 throw. ✓

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1690 in. ✓ F. 1.33 Zens Is there a bearing between each crank

Revolutions per minute 105 Flywheel dia. 431 in. Weight A. 3.26 Zens Means of ignition compression Kind of fuel used -

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

Semi built dia. of journals 431 in. ✓ Crank pin dia. 450 in. ✓ Mid. length thickness 255 in. ✓ Thickness around eye hole 201 in. ✓

All built dia. of journals 431 in. ✓ Crank pin dia. 450 in. ✓ Thrust Shaft, diameter at collars as per Rule 431 in. ✓

Flywheel Shaft, diameter as per Rule 431 in. ✓ Intermediate Shafts, diameter as per Rule 450 in. ✓ as fitted 450 in. ✓ as per Rule 450 in. ✓ as fitted 450 in. ✓

Tube Shaft, diameter as per Rule 450 in. ✓ Screw Shaft, diameter as per Rule 450 in. ✓ As the tube shaft fitted with a continuous liner Yes. ✓

Bronze Liners, thickness in way of bushes as per Rule 22 in. ✓ Thickness between bushes as per Rule 12 in. ✓ Is the after end of the liner made watertight in the propeller boss 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 -

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. 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 As a governor or other arrangement fitted to prevent racing of the engine when de-clutched. Yes. Means of lubrication

and freed Thickness of cylinder liners 25 in. 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 siphoned back to the engine -

Cooling Water Pumps, No. one steam driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel (f.w. Cooling)

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" (Leopold) & 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 one steam driven 8" x 4" x 18"

Are two independent means arranged for circulating water through the Oil Cooler No. ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size: - In Machinery Spaces 2 @ 3 1/2" x 6" E.R. 1-6" well suction. In Pump Room 4" x 18" ballast pump.

In Holds, &c. (Tanker) -

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 10 8" (Ballast) 1-6" (G.S.) v 1-4" main eng. Casting water pump.

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

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform planks -

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel No. ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate -

Do pipes pass through the bunkers -

How are they protected -

Do 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 No. ✓

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 No. ✓ Is it fitted with a watertight door -

If a wood vessel, what means are provided to prevent leakage of either fuel oil or lubricating oil from saturating the woodwork -

Main Air Compressors, No. Two No. of stages Three Diameters 12 3/4" - 12 3/4" - 10 1/4" 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 -

Scavenging Air Pumps, No. Two Diameter 15 1/2" Stroke 5 1/2" Position - Driven by -

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

Have the Auxiliary Engines been constructed under special survey -

Is a report sent herewith -

004538-004350-0007

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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

Seamless, lap welded or riveted longitudinal joint

Material

State No. of Report or Certificate

Its. Cr. 1^o

58042

Complete

Fitted with fusible plugs. Relief valves fitted on deck from

Yeo.

Is a drain fitted at the lowest part of each receiver

Yeo.

thickness

—

internal diameter

—

thickness

—

Working pressure

by Rules

Actual

—

Starting Air Receivers, No.

Total cubic capacity

280 cu ft.

Internal diameter

4' - 6"

thickness

—

1 1/4"

Seamless, lap welded or riveted longitudinal joint Riveted

Material

1/8 in.

Range of tensile strength

28/32

Working pressure

by Rules

Actual

—

600 lbs.

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)

1/5/45

Line. 1803

Recivers

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

State the principal additional spare gear supplied 1 main piston & jacket Complete, 1 upper piston piston skirt, 4 scraper rings, 1 main piston head & 40 rings, 4 fuel valves complete, 8 spray plugs, 1 Centre Cam. rod belt end Sph. bearing, 2 Side Cam. rod belt end Sph. bearings, 1 main Sph. bearing, 2 main bearing bolts & nuts, 4 Centre & side (race) top & belt end bearing bolts & nuts, 2 Side rod bolts & nuts, 1 set Coupling bolts, 2 NR air Starting Valves, 2 Cyl. relief valves, 1 fuel pump Sect. Chambers Complete, 2 fuel pump heads complete with valves, 1 Cav. pump Sect. & del. Valve, 1 Set feed for tanks, 8 rubber hoses for piston cooling, 1 C. Propeller, 1 tail shaft, 1 roller Chain for Camshaft Drive, 3 pads for wt. & tail shaft bearings & 6

WILLIAM DOXFORD & SONS, LIMITED.

28th February

Manufacturer.

Dates of Survey while building	During progress of work in shops	Director	1946. Mar. 22-29. April. 2-3. May. 15. 16. 17. 22-24. May. 29. 1. 2. 3. 6. 9. 13. 14. 16. 17. 21. 22. 23. 24. June. 6. 7. 8. 17. 18. 19. 20. 21.
	During erection on board vessel		25-27. 28. July. 1. 2. 3. 4. 5. 7. 8. 9. 10. Aug. 19. 20. 21. 22. Sep. 3. 4. 19. Oct. 22. 23. Nov. 14. Dec. 3. 4. 12.
	Total No. of visits	59	22/3/46, 29/3/46
			31/5/46 3/5/46
Dates of Examination of principal parts — Cylinders	3/4/46, 9/4/46	Covers	Pistons 7/6/46 Rods 7/6/46 Connecting rods 19/6/46
Crank shaft	20/6/46	Flywheel shaft as crank	Thrust shaft as crank Intermediate shafts 1/5/46 Tube shaft
Screw shaft	3/9/46	Propeller 3/9/46 Stern tube 20/8/46	Engine seatings (Punk lip) Engines holding down bolts 7/11/46
Completion of fitting sea connections	21/8/46	Completion of pumping arrangements N° 256 N.H.P.	4/12/46 Engines tried under working conditions 4/12/46
Crank shaft, Material	Cast Steel	Identification Mark 20/6/46	Flywheel shaft, Material as crank Identification Mark as crank.
Thrust shaft, Material	as crank	Identification Mark as crank	Intermediate shafts, Material Cast Steel Identification Marks 1/5/46.
Tube shaft, Material	—	Identification Mark —	Screw shaft, Material Cast Steel Identification Mark N° 9630-95340k 3/9/46.
Identification Marks on Air Receivers	K. 1862/3. L.R. 22166 A.R.R. 2/5/46.		

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 1/2" x 1. perforated pipe for skin. led around F. & B. L. R. — Spraying for furnaces

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 —

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with Not desired.

Is this machinery duplicate of a previous case If so, state name of vessel "BRITISH MAJOR."

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 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) & Safety valves adjusted under steam & working pressure in accordance with rule requirements. Section 20 of the rules has been complied with.

The machinery is eligible in my opinion to have notation

8/1 LMC. 12. 46 (oil Eng.) T.S. (C.L) 2 D.B. 150 kips.

Insufficient words were affixed for Sister ship British Major 18.4.46.

The amount of Entry Fee £ 6 :

Special £ 100 : 4 : 1
Donkey Boiler Fee £ 12 : 12 :

Travelling Expenses (if any) £ : : :

When applied for,

7 DEC 1946

When received,

19

Committee's Minute

FRI. 10 JAN 1947

Assigned + LMC 12.46 Oil Eng.
C.L. 2 D.B. 150 kips.

D. J. Fraser.

Engineer Surveyor to Lloyd's Register of Shipping.

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