

REPORT ON OIL ENGINE MACHINERY.

No 35594

Date of writing Report 19 1951 When handed in at Local Office JUN 11 1951 Port of Sunderland
No. in Survey held at Sunderland Date, First Survey 24 January 1950 Last Survey 11 June 1951
Reg. Book. Single on the Twin Screw vessel BRITISH CRAFTSMAN Tons Gross 8694
Triple Quadruple Net 5008
Built at Sunderland By whom built Wm. Kayford & Son Ltd. Yard No. 483 When built 1951
Engines made at Sunderland By whom made Wm. Kayford & Son Ltd. Engine No. 483 When made 1951
Donkey Boilers made at Stockton By whom made Stockton Chem. Eng. & Riley Bros Ltd. Boiler No. 4199, 4200 When made 1951
Brake Horse Power 3100 Owners British Tanker Co Ltd. Port belonging to London
Nom. Horse Power as per Rule 1684 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 Diesel Injection 2 or 4 stroke cycle 2 Single or double acting Single
Maximum pressure in cylinders 64.4 lbs/sq. in. Diameter of cylinders 600 mm Length of stroke 980 mm No. of cylinders 4 No. of cranks 4
Mean Indicated Pressure 8.5 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 throw.
Revolutions per minute 105 Flywheel dia. 1690 mm Weight 1.325 tons Means of ignition Compression Kind of fuel used Heavy oil.
Crank Shaft, Solid forged dia. of journals 431 mm as fitted 450 mm Crank pin dia. 459 mm Crank Webs 650 mm Mid. length breadth 255 mm Thickness parallel to axis 255 mm
Semi built as per Rule 431 mm as fitted 450 mm Intermediate Shafts, diameter 450 mm as per Rule 450 mm as fitted 450 mm Thrust Shaft, diameter at collars 431 mm as per Rule 431 mm as fitted 450 mm
Flywheel Shaft, diameter 450 mm as per Rule 450 mm as fitted 450 mm
Tube Shaft, diameter 450 mm as per Rule 450 mm as fitted 450 mm Is the tube shaft fitted with a continuous liner yes.
Screw Shaft, diameter 450 mm as per Rule 450 mm as fitted 450 mm
Bronze Liners, thickness in way of bushes 22 mm as per Rule 22 mm as fitted 22 mm Thickness between bushes 14 mm as per Rule 14 mm 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 no.
If two liners are fitted, is the shaft lapped or protected between the liners no. Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft no.
If so, state type Hand lever Length of Bearing in Stern Bush next to and supporting propeller 5' 8"
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 disengaged 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 Steam driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel (no. casting)
Bilge Pumps worked from the Main Engines, No. none Diameter 2 @ 4" x 8" x 8" (duplex.) Stroke 8" Can one be overhauled while the other is at work yes.
Pumps connected to the Main Bilge Line no. 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 no.
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 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" x 3" x 3" In Pump Room 1 @ 2"
In Holds, &c. (Tanker) 1 @ 6" x 6" x 6" 1 @ 8" (Ballast Pump), 1 @ 6"
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 the Bilge Suctions in the Machinery Spaces yes.
Are they fitted with Valves or Cocks Ball
Are all Sea Connections fitted direct on the skin of the ship yes. Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plate 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 yes.
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 (Tanker) Is the Shaft Tunnel watertight yes. Is it fitted with a watertight door no. worked from no.
If a wood vessel, what means are provided to prevent leakage of either fuel oil or lubricating oil from saturating the woodwork yes.
Main Air Compressors, No. 1 No. of stages 3 Diameters 15.0" x 4.2" x 2.7" Stroke 4" Driven by Steam Engine 13.2" x 4"
Auxiliary Air Compressors, No. 1 No. of stages 1 Diameters 15.0" Stroke 5.10" Driven by no.
Small Auxiliary Air Compressors, No. 1 No. of stages 1 Diameters 15.0" Stroke 5.10" Driven by no.
What provision is made for first Charging the Air Receivers yes.
Scavenging Air Pumps, No. 1 Diameter 15.0" Stroke 5.10" Driven by Steam Engine 13.2" x 4"
Auxiliary Engines crank shafts, diameter 431 mm as per Rule 431 mm as fitted 450 mm Position no.
Have the Auxiliary Engines been constructed under special survey yes. Is a report sent herewith yes.

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 Shifting

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

State the principal additional spare gear supplied

Cylinder liner & packet: Complete, 1 upper & 1 lower piston skirt, 4 scraper rings
2 main piston heads, 40 piston rings, 4 fuel valves complete, 16 spray plugs, 1 Cent. Conn rod spl. ball end
bearing & 2 Side Conn rod ditto, 1 main bearing (Cpl.) 2 studs & nuts for same, 4 Cent. & Side top ball end bear
ings & nuts, 1 Set. Coupling bolts & nuts, 2 NR Starting air valves, 2 Cyl. relief valves, 1 Fuel pump Suct. Chamber, 2
fuel pump bodies complete with valves, 1 Scav. pump Suct. & del. Valve disc, 1 Set. pads for thrust, 1 Set. of 3 pads for in
termediate shaft bearings, 3 rubber hoses for piston cooling service, blinks of roller chain for Camshaft drive, 1 C.I. Propeller
Shaft, 1 Screw Shaft & etc.

The foregoing is a description of the machinery of the vessel

T.V.C. appd 18/4/46 for "British Major"

Dates of Examination of principal parts — Cylinders 21/9/50 26/9/50 Pistons 9/10/50 Rods 9/10/50 Connecting rods 20/10/50
Crank shaft 5/5/50 Flywheel shaft as crank Thrust shaft as crank Intermediate shafts 3/11/50 Tube shaft —
Screw shaft 3/11/50 Propeller 11/10/50 Stern tube 22/8/50 24/8/50 Engine seatings (Dank top) Engines holding down bolts 9/4/51.
Completion of fitting sea connections 24/8/50 Completion of pumping arrangements 11/6/51 Engines tried under working conditions 11/6/51
Crank shaft, Material Ingot Steel Identification Mark 5/5/50 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 N 20444-909
Tube shaft, Material — Identification Mark — Screw shaft, Material Ingot Steel Identification Mark N 20444-911
Identification Marks on Air Receivers K. 2335, 2336
L.R. 23140
J. McL. 1/6/50.

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

If so, state name of vessel

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
fitted on board the vessel, fitted to burn oil fuel (F.P. above 150° F.)
Safety valves adjusted under steam to working pressure. Section 2
of the rule has been complied with.
The machinery is now eligible in my opinion to have
notation LMC 6.51 (oil Eng.) T.S. C. 2 DB 150 lb.

The amount of Entry Fee .. £ : : When applied for,
Special £ 212 : 8 : JUN 14 1951
Donkey Boiler Fee .. £ 16 : - : When received,
Travelling Expenses (if any) £ : : 19

Committee's Minute

TUES. 3 JUL 1951

Assigned

+ LMC 6.51 Oil Eng.
C.L. 2 DB 150 lb.



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