

REPORT ON OIL ENGINE MACHINERY.

No. 34524

29 AUG 1946

Received at London Office

Date of writing Report

When handed in at Local Office 19 Aug 1946 Port of

No. in Survey held at
Reg. Book.Date, First Survey 23 Sep 45 Last Survey 15 Aug 1946
Number of Visits 71on the Single
Triple Screw vesselBRITISH PRINCESSTons Gross 8582
Net 4918Built at Sunderland

By whom built

Sir J. Lang & Sons Ld.Yard No. 468When built 1946Engines made at Sunderland

By whom made

Wm. Leyford & Sons Ld.Engine No. 252When made 1946Donkey Boilers made at Stockton

By whom made

Stockton Chem. Engs. & Ship. Bldg. Co. Ld.Boiler No. 6926When made 1946Brake Horse Power 3100

Owners

British Tanker Co. Ld.Port belonging to LondonNom. 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.

OIL ENGINES, &c. Type of Engines

Opposed piston airless injection 2 or 4 stroke cycle 2Single or double acting Single.

Maximum pressure in cylinders

640 lbf.

Mean Indicated Pressure

85 lbf.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

886 in.

Revolutions per minute

105Crank Shaft, Solid forgedDiameter of crank pin 4 1/2 in.

Flywheel Shaft, diameter

4 1/2 in.

Tube Shaft, diameter

4 1/2 in.

Screw Shaft, diameter

4 1/2 in.

Bronze Liners, thickness in way of bushes

22 in.

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.Propeller, dia. 16' 3"Pitch 11' 9"No. of blades 4Material Bronze

Is an approved Oil Gland or other appliance fitted at the after end of the tube

no.

Length of Bearing in Stern Bush next to and supporting propeller

5' 8"

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 detached

Yes.

Means of lubrication

Forced.

Thickens 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 syphoned back to the engine

one engine drivenCooling 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. noneDiameter 2 @ 4" x 8" x 8" (duplex)

Pumps connected to the Main Bilge Line

Steam.

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

one engine driven 110 in x 510 in

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

Yes.

Pumps, No. and size

2 @ 3 1/2" in E.R. & 1 - 6" hull suction

In Holds, &c.

(Tanker)

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

1 @ 8" (Ballast) 1 - 6" (C.S.) 1 - 4" main engine

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strain-bones

Yes.

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 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.

What pipes pass through the bunkers

none

What pipes pass through the deep tanks

none

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

Yes. (Tanker)

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

noneMain Air Compressors, No. TwoNo. of stages 3.Auxiliary Air Compressors, No. TwoNo. of stages 3.Small Auxiliary Air Compressors, No. TwoNo. of stages 3.

What provision is made for first Charging the Air Receivers

(Steam driven Compressors)Scavenging Air Pumps, No. TwoDiameter 1510 in

Auxiliary Engines crank shafts, diameter

as per Rule

Have the Auxiliary Engines been constructed under special survey

Yes.

Is a report sent herewith

Yes.

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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 - Internal diameter - thickness -

Seamless, lap welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure by Rules Actual

Starting Air Receivers, No. Two Total cubic capacity 280 Cuft. Internal diameter 4'-6" thickness 1 1/4"

Seamless, lap welded or riveted longitudinal joint Riveted Material M/Sted 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) 4/5/45 Lic. 1803 23/1/45. 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 Cylinder liner Complete with packer, 1 upper & 1 lower piston skirt, 4 Scrap rings, 1 main piston head, 40 main piston rings, 4 fuel valves complete, 8 spray pumps, 1 Centre Conn rod, 1 main Spherical bearing, 2 Side Conn. rod ball end Sph. bearings, 1 main Sph. bearing & 2 Side Sph. bearings, 4 Centre & Side (each) top & ball end bearings ball & nuts, 2 Side rod ball & nuts, 1 Set Coupling ball & nuts, 2 NR air starting valves, 2 Cph. relief valves, 1 fuel pump Suct. Chamber, 2 fuel pump bodies complete with valves &c., 1 Scavenger pump del. valve & 1 duct for Suct. 1 Set pads for thrust, 8 rubber hoses for cooling service, 1 roller chain for Camshaft drive, 1 C.I. Prop. 1 Cast Shaft 3 pads for int. shaft bearing & 2 ducts for Cast Shaft bearing

The foregoing is a correct description.
WILLIAM DOXTORD & SONS, Limited.

Wm. Doxtord & Sons, Limited

Manufacturer.

Dates of Survey while building During progress of work in shops - 1945 Jan 23, Nov 5, 27, 28, 10. Dec 4, 6, 7, 11, 18, 28. 1946 Jan 3, 11, 15, 17, 22, 23, 28, 29. Feb 1, 4, 12, 13, 15, 18, 19. During erection on board vessel - 1945 Jan 1, 4, 5, 7, 11, 13, 15, 18, 19, 20, 22, 25, 27, 28, 29. Apr 1, 2, 4, 5, 9, 10, 11, 12, 15, 16, 17, 18, 23, 24, 25, 26, 29, 30. May 17, 24. June 1, 4, 10, 11. Aug 12, 15. Total No. of visits 71

Dates of Examination of principal parts - Cylinder 28/1/46, 1/2/46 Covers - Pistons 13/3/46 Rods 13/3/46 Connecting rods 20/3/46

Crank shaft 11/4/46 Flywheel shaft as crank Thrust shaft as crank Intermediate shafts 29/1/46 Tube shaft -

Screw shaft 24/3/46 Propeller LON. 1/2/46 Stern tube 12/4/46, 14/4/46 Engine seatings (Bank top) Engines holding down bolts 4/4/46.

Completion of fitting sea connections 14/4/46 Completion of pumping arrangements 12/8/46 Engines tried under working conditions 15/8/46.

Crank shaft, Material Ingot Steel Identification Mark 11/4/46 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°14968-110 H.P. 29/1/46

Tube shaft, Material - Identification Mark - Screw shaft, Material Ingot Steel Identification Mark N°14968-110 H.P. 24/3/46

Identification Marks on Air Receivers K 1856 / Y L.R. 22122 L.C.D. 15/2/46.

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

Description of fire extinguishing apparatus fitted 12 in. perforated pipe laid around E.P. & B.H. Rn. 2 1/2" pipe for standing B.H. Rn. & spraying on furnace for 10-29 gals. & 1-10 gals (with hose) contained in tank.

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 Yes. If so, state name of vessel BRITISH MAJOR (Sea Rpt 34436).

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been built under Special Survey in accordance with the approved plan & the rules of the Society. The materials & workmanship are good. It has been securely fitted on board the vessel & tried under working conditions alongside Quay & also at Sea 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 to 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 100 L.M.C. 8.46 (oil Eng), T.S. (C) 2 DB 150 lbs.

The amount of Entry Fee .. £ 6 : When applied for, Special ... £ 109 : 4 : 20 AUG 1946 Donkey Boiler Fee ... £ 12 : 12 : When received, Travelling Expenses (if any) £

Committee's Minute

Assigned + L.M.C. 8.46 Oil Eng. C.L. 2 DB 150 lbs.

H. J. Brown.

Engineer Surveyor to Lloyd's Register of Shipping.

