

REPORT ON OIL ENGINE MACHINERY.

No 35044

Received at London Office
 Date of writing Report 19 25th January 1949 Port of Sunderland.
 When handed in at Local Office Sunderland. Date, First Survey 22nd August 1947 Last Survey 25th January 1949
 No. in Survey held at Reg. Book. Single on the Triple Screw vessel "BRITISH FORTUNE" Tons: Gross 6108 Net 3334
 Built at Sunderland. By whom built Wm. Beaford & Sons L^d Yard No. 463 When built 1949
 Engines made at Sunderland. By whom made Wm. Beaford & Sons L^d Engine No. 463 When made 1949
 Donkey Boilers made at Stockton By whom made Stockton Chem. Eng. & Ry. Bldg. L^d Boiler No. 4049/50 When made 1949
 Brake Horse Power 2250 Owners British Tanker Co L^d Port belonging to London
 Nom. Horse Power as per Rule m.n. 516 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted yes.
 Trade for which vessel is intended 9156"

IL ENGINES, &c. Type of Engines Opposed piston airless injection 2 or 4 stroke cycle 2 Single or double acting Single.
 Maximum pressure in cylinders 640 lbs/sq. in. Diameter of cylinders 600 in. Length of Stroke 980 in. No. of cylinders 3 No. of cranks 3
 Mean Indicated Pressure 85 lbs/sq. in. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 940 in. Is there a bearing between each crank Between each triple thrust.
 Revolutions per minute 100 Flywheel dia. 2200 in. Weight 2263 lbs. Means of ignition Compression Kind of fuel used —
 Crank Shaft, { Solid forged dia. of journals 418 in. Crank pin dia. 450 in. Crank Webs 308 in. Mid. length breadth 650 in. Thickness parallel to axis 245 in.
 { Semi built as fitted 450 in. Mid. length thickness 253 in. Thickness around each hole 200 in.
 { All built as fitted 450 in. Thrust Shaft, diameter at collars 450 in.
 Flywheel Shaft, diameter 418 in. Intermediate Shafts, diameter 450 in. as fitted 450 in. Is the shaft fitted with a continuous liner yes.
 Tube Shaft, diameter 18 in. as per Rule 18 in. as fitted 16 in. 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 — Length of Bearing in Stern Bush next to and supporting propeller 4'-0"
 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 disengaged yes. Means of lubrication —
 Land & forced Land & forced 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 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 (In. Cooling)
 Bilge Pumps worked from the Main Engines, No. none Diameter 20 in. Stroke 4 in. Can one be overhauled while the other is at work —
 Pumps connected to the Main Bilge Line { No. and Size 2 @ 4 in. x 8 in. duplex. 3 + Sanitary 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 in. x 12 in. x 10 in. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one engine driven 8 in. x 6 in. x 7 in.
 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 in. + 1 - 6 in. x 8 in. In Pump Room 1 - 2 in.
 In Holds, &c. (Tanker) Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - 8 in. (Ballast pump), 1 - 6 in.
 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 yes. Are they fitted with Valves or Cocks Bath
 Are all Sea Connections fitted direct on the skin of the ship yes. Are the Overboard Discharges above or below the deep water line Below.
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes. Are the Blow Off Cocks fitted with a spigot and brass covering plate yes.
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes. How are they protected —
 What pipes pass through the bunkers none Have they been tested as per Rule yes.
 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 (Tanker) Is the Shaft Tunnel watertight no. 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 1 Diameters 12 in. x 12 in. Stroke 7 in. 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 Compressor.
 Scavenging Air Pumps, No. one Diameter 14 in. Stroke 6 in. Driven by Steam engine
 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 —

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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

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?

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 Shafing

(If not, state date of approval)

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

1 Cast iron Propeller, 1 Propeller Shaft, 1 Cylinder Liner & Gasket Complete
1 Upper & Lower Piston Skirts, 4 Scrapers rings, 2 main Piston heads, 40 rings, 8 fuel valve spray pipes,
1 Cent. & 1 Side Cam. rod belt end Spherical bearing, 1 main Sph. bearing, 4 Centre & Side top & belt end
bearing both ends, 2 main bearing Sph. & nuts, 1 Set Coupling belt & nuts for intermediate shaft, 2 N.R.
Starting valves, 2 relief valves Complete, 1 Fuel Pump Suct. Chamber Complete, 2 fuel pump heads Complete
4 fuel valves Complete, 1 Scav. Pump Suct. & del Valve Complete, 1 Set ahead pads for thrust, 1 roller chain for
Camshaft drive, 3 pads for inter & belt shaft bearings
J.C. & S.

The foregoing is of correct description.
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

1947 Aug 12, 17, 19, Sep 25, 15, 18, Oct 2, Dec 19, 24, 30 / 1948 Jan 6, 13, 15, Mar 9, 11, 12, Apr 20, 27, 29, 30, May 3, 5, 10, 11, 19, 20, Jun 3
Jul 8, Aug 19, 23, 24, 25, 26, Sep 1, 2, 3, 6, 7, 8, 10, 13, 14, 15, 16, 17, 21, 23, 27, 28, 29, 30, Oct 1, 5, 13, 25, 26, 27, 28, Dec 1, 13, 23, 24, 29
1949 Jan 6, 10, 12, 14, 24, 25

Crank shaft

8/4/48

Flywheel shaft

as crank

Thrust shaft

as crank

Intermediate shafts

26/10/48

Tube shaft

15/9/48

Screw shaft

28/10/48

Propeller

21/5/48

Stern tube

30/4/48

20/5/48

Engine sealings

(Lank top)

Engines holding down bolts

10/1/49.

Completion of fitting sea connections

20/5/48

Completion of pumping arrangements

25/1/49

Engines tried under working conditions

25/1/49.

Crank shaft, Material

Ingot Steel

Identification Mark

8/7/48

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° 16026-F.4884
WHF. 26/10/48.

Tube shaft, Material

-

Identification Mark

-

Screw shaft, Material

Ingot Steel

Identification Mark

N° 16026-F.4785
WHF. 28/10/48.

Identification Marks on Air Receivers

K. 2142/3

L.R. 22681.

A.R.R. 23/5/48.

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 1/2" perforated pipe for steam

led around E.R. & B. Rm.

"Phonene" & 2 1/2" light

drainage pipe for

furnace & boiler.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

Danker.

If so, have the requirements of the Rules been complied with

not decided.

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

"BRITISH ENTERPRISE".

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

Special Survey is 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. about 150°F) & safety valves adjusted under steam to working pressure. Section 20 of the rules has been complied with.

The machinery is now eligible in my opinion to have notation
L.M.C. 1. 49. (oil Eng.) T. S. (C) 2 DB 150 lb/s.

The amount of Entry Fee

£

When applied for,

Special

£

When received,

Donkey Boiler

£

Travelling Expenses (if any)

£

Committee's Minute

Assigned

+ L.M.C. 1. 49 oil Eng

2 DB 150 lb. CL

Engineer & Surveyor to Lloyd's Register of Shipping.



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