

Rpt. 4b.

4 NOV 1943

REPORT ON OIL ENGINE MACHINERY.

No 67905.

Received at London Office

4 NOV 1943

Date of writing Report

When handed in at Local Office

30. 10. 1943 Port of Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey 6th Dec 1941 Last Survey 28th Oct. 1943

Number of Visits 72

Single
on the Twin Screw vessel

"EMPIRE TRAVELLER"

Tons Gross 8201.35
Net 4773.06

Built at Belfast

By whom built Harland & Wolff, Ltd.

Yard No. 1189 When built 1943

Engines made at Glasgow

By whom made Harland & Wolff, Ltd.

Engine No. 8446/2 When made 1943

Donkey Boilers made at Belfast

By whom made Harland & Wolff, Ltd.

Boiler No. 8445/9 When made 1943

Brake Horse Power 3300

Owners Ministry of War Transport.
(Ingr. Eagle Oil Co. Ltd.)

Port belonging to Belfast.

Nom. Horse Power as per Rule 490

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 Heavy oil. Airless injection 2 or 4 stroke cycle 4 Single or double acting S.A.

Maximum pressure in cylinders 700 lb Diameter of cylinders 29 1/2 in 740 mm Length of stroke 1500 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 128 lb Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 972 mm Is there a bearing between each crank Yes

Revolutions per minute 110 Flywheel dia. 2489 mm Weight 2590 Kgs Means of ignition Compression Kind of fuel used Diesel oil.

Crank Shaft, { Solid forged
Semi built
All built } dia. of journals as per Rule Appd. 505 mm. as fitted 505 mm. Crank pin dia. 505 mm. BORED 230 mm. Crank Webs Mid. length breadth 980 mm Mid. length thickness 310 mm Thickness parallel to axis 310 mm Thickness around eye-hole 292.5 mm

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as approved 17 in Thrust Shaft, diameter at collars as per Rule as approved 454 mm.

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as approved 16 in Is the shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule as approved 15 1/16 in Thickness between bushes as per Rule as approved 3/32 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 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 Yes

If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No

Propeller, dia. 15'-6" Pitch 12'-0" No. of blades 4 Material Bronze whether Moveable fixed Total Developed Surface 75 sq. feet

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when decelerated Yes Means of lubrication forced.

Thickness of cylinder liners 53/64 in Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material lagged

Cooling Water Pumps, No. 1 AT 180 TONS PER HOUR. ENGINE DRIVEN. 2 AT 220 " " " STEAM Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Bilge Pumps worked from the Main Engines, No. 1 Bilges Sanitary Pump. 2 Ballast Pump. 3 S.W. Circulating Pump. Pumps connected to the Main Bilge Line { No. and Size 80 tons per hour How driven Steam Stroke 220 tons per hour. 180 tons per hour. Main Engine

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 One 220 tons per hour Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 " 100 " " " STM. " Are two independent means arranged for circulating water through the Oil Cooler Yes

Pumps, No. and size:—In Machinery Spaces 3 at 3 1/2 in. (P.S. and aft) Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge In Pump Room

In Holds, &c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 3 at 6 in; O.F. Transfer pump suction from guttering, 2 @ 2 1/2 in Are the Bilge Suctions in the Machinery Spaces

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are they fitted with Valves or Cocks both

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 Have they been tested as per Rule Yes

What pipes pass through the deep tanks 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 Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door worked from

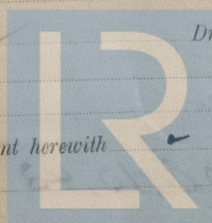
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Main Air Compressors, No. 2 No. of stages 2 Diameters 280 & 245 mm Stroke 130 mm Driven by Steam engine

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 280 & 245 mm Stroke 130 mm Driven by Small Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 280 & 245 mm Stroke 130 mm Driven by

What provision is made for first Charging the Air Receivers Steam driven compressors. Scavenging Air Pumps, No. 2 Diameter 280 mm Stroke 130 mm Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted all auxiliaries steam driven. Position Is a report sent herewith

Have the Auxiliary Engines been constructed under special survey. Yes



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Lloyd's Register
Foundation

006601-006613-0295

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

Starting Air Receivers, No.

2

Total cubic capacity, 900 cu. ft.

Internal diameter 6'-0 5/8"

thickness 1"

Seamless, lap welded or riveted longitudinal joint

Riveted

Material

Steel

Range of tensile strength 28/32 ton

Working pressure

Actual 356 lb

IS A DONKEY BOILER FITTED? (2)

yes

If so, is a report now forwarded? Belfast Rpt No. 13354

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)

CRANK SHAFT 23-4-41

THRUST 1-5-41

INTER-SCREW SHAFTS 25-1-43

Receivers

yes

Separate Fuel Tanks

Donkey Boilers

yes

General Pumping Arrangements

yes

Pumping Arrangements in Machinery Space

yes

Oil Fuel Burning Arrangements

yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes

State the principal additional spare gear supplied

As per attached list. (Under separate cover)

The foregoing is a correct description.

Wm. J. Wright.

Manufacturer.

Dates of Survey while building

During progress of work in shops--

During erection on board vessel--

Total No. of visits

72

1941 Oct 6, Dec 30, 1942 Jan 10, Apr 22, May 7, Jul 10, Aug 14, Sep 17, Dec 24, 25, 1943 Jan 14, 22, 29, Mar 2, 5, 12, 15, 18, 24, Apr 14, 16, 20, 21, 28, 29, May 4, 12, 19, 21, Jun 4, 8, 10, 16, 22, 25, 30, Jul 19, 20, 24, 28, Aug 18, 25, Sep 2, 8, 9, 10, 13, 14, 15, 16, 20, 21, 25, 30, Oct 1, 5, 6, 8, 11, 12, 13, 14, 15, 18, 19, 20, 24, 27, 28.

Dates of Examination of principal parts—Cylinders 14-4-43 4-5-43 Covers 14-4-43 4-5-43 Pistons 12-3-43 16-4-43 Rods 16-4-43 Connecting rods 4-6-43

Crank shaft 24-12-42 Flywheel shaft 24-12-42 Thrust shaft 24-12-42 Intermediate shafts 10-6-43 Tube shaft 22-6-43 Propeller 25-6-43 Stern tube 16-6-43 Engine seatings 18-8-43 Engines holding down bolts 28-9-43

Completion of fitting sea connections 16-6-43 Completion of pumping arrangements 28-10-43 Engines tried under working conditions 28-10-43

Crank shaft, Material Steel Identification Mark Lloyd's 8260 P.7 Flywheel shaft, Material Steel Identification Mark Lloyd's 8260 P.7

Thrust shaft, Material Steel Identification Mark Lloyd's 8260 P.7 Intermediate shafts, Material Steel Identification Mark Lloyd's 8260 P.7

Tube shaft, Material Steel Identification Mark Lloyd's 8260 P.7 Screw shaft, Material Steel Identification Mark Lloyd's 8260 P.7

Identification Marks on Air Receivers No. 236. Lloyd's test 556 lb D; WP 356 lb, 13-10-42 R.S.; No. 237 Lloyd's test 556 lb, WP 356 lb 15-10-42 R.S.

Steam pipes Bessemer Steel. Flanges stamped accordingly.

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

yes

Description of fire extinguishing apparatus fitted Perforated steam pipes under boilers. Portable extinguishers as per B.O.T. and Merchant Shipping regulations

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

yes

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

yes

Is this machinery duplicate of a previous case

yes

If so, state name of vessel Generally similar to "Empire Benefit", Glasgow Rpt No. 66990

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

This machinery has been built under Special Survey and in accordance with the Rules of this Society, the approved plans, and the Ministry of War Transport Specification.

The materials and workmanship are good.

The machinery has been efficiently secured in position on board the vessel, and afterwards tried under full working conditions with satisfactory results.

It is eligible in my opinion to be classed in the Register Book with the notation of + LMC 10.43 C.L. 2 DB. WP 150 lb.

See also Belfast Report No 13560 enclosed herewith.

The amount of Entry Fee .. £ 5 : - :
Special Specification .. £ 98 : 10 :
Donkey Boiler Fee .. £ 24 : 12-6 :
Travelling Expenses (if any) £ : : :

When applied for, 2 NOV 1943
When received, 19

P. Fitzgibbon & G. E. Murdoch
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 2 NOV 1943

Assigned + LMC 10.43 Oil tank, 2 DB. 150 lb.

