

## REPORT ON OIL ENGINE MACHINERY.

No. 67278

Received at London Office

1 JUL 1943

Date of writing Report

When handed in at Local Office

28. 6. 1943 Port of Glasgow

No. in Survey held at  
Reg. Book.

Glasgow

Date, First Survey

19th June 1942

Last Survey

15th June 1943

Number of Visits

59

Single  
Twin  
Triple  
Quadruple

Screw vessel

"BRITISH PATIENCE"

Tons Gross 8097  
Net 4757

Built at Glasgow

By whom built

Harland &amp; Wolff, Ltd.

Yard No. 1166

When built 1943

Engines made at Glasgow

By whom made

Harland &amp; Wolff, Ltd.

Engine No. 1166

When made 1943

Donkey Boilers made at Hyde

By whom made

Joseph Adamson &amp; Co. Ltd.

Boilers No. 2587

When made 1942

Brake Horse Power 3200

Owners

British Tankers Ltd.

Port belonging to London

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, &amp;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

740 mm.

Length of stroke

1500 mm.

No. of cylinders

6

No. of cranks

6

Mean Indicated Pressure 128 "

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

115

Flywheel dia. 2489 mm.

Weight

2590 Kp.

Means of ignition

Compression

Kind of fuel used Diesel oil

Crank Shaft,

Solid forged  
Semi built  
All built

dia. of journals

as per Rule 490 mm

Crank pin dia.

505 mm.

Crank Webs

Mid. length breadth 980 mm

Thickness parallel to axis 310 mm

Flywheel Shaft, diameter

as per Rule

as fitted

Intermediate Shafts, diameter

as per Rule

13.15"

Thrust Shaft, diameter at collars

as per Rule

351 mm

Tube Shaft, diameter

as fitted

Screw Shaft, diameter

as per Rule

14.48"

Is the tube

screw

shaft fitted with a continuous liner

yes

Bronze Liners, thickness in way of bushes

as per Rule

3/4"

as fitted

Thickness between bushes

as per Rule

9/16"

as fitted

21/32"

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

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

yes

shaft no If so, state type

11-6"

No. of blades

4

Material Bronze

whether Moveable

no

Total Developed Surface

81 sq. feet

Method of reversing Engines

Direct

Is a governor or other arrangement fitted to prevent racing of the engine when disengaged

yes

Means of lubrication

forced

Thickness of cylinder liners

as per Rule

41 mm.

Are the cylinders fitted with safety valves

yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

yes

Cooling Water Pumps, No. 1 @ 170 tons/hr; 2 @ 120 tons/hr

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. One

Diameter 80 tons per hour

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

1 Bilge &amp; Sanitary, 80 tons/hr

Standby Bilge &amp; Sanitary, 80 tons/hr

Ballast.

120 tons/hr.

How driven

Main Engine

Steam.

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

Ballast Pumps, No. and size One, 120 tons/hr

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 each 100 tons/hr

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

Port 3 1/2"; Starboard 3 1/2"; Aft well 3 1/2"

In Pump Room

In Holds, &amp;c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 3 @ 6";

0.5 transfer pump suction from gutterways, P &amp; S 2" cofferdam, 2 1/2"

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

yes

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 all Sea Connections fitted direct on the skin of the ship

Steel stools

Are they fitted with Valves or Cocks

both

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

yes

Are the Overboard Discharges above or below the deep water line

below

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

How are they protected

yes

What pipes pass through the deep tanks

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

yes

Is the Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

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

yes

Main Air Compressors, No.

yes

No. of stages

yes

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

2

No. of stages

2

Diameters

Stroke

130 mm.

Driven by

Steam engine

Small Auxiliary Air Compressors, No.

yes

No. of stages

yes

Diameters

Stroke

Driven by

What provision is made for first Charging the Air Receivers

Steam driven compressors

Scavenging Air Pumps, No.

yes

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter

as per Rule

all auxiliaries steam driven

as fitted

Position

Have the Auxiliary Engines been constructed under special survey

Is a report sent herewith

002550-002558-0106

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Foundation



# AIR RECEIVERS:—Have they been made under survey

State No. of Report or Certificate

2-836

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

yes

Can the internal surfaces of the receivers be examined and cleaned

yes

Is a drain fitted at the lowest part of each receiver

yes

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.

2

Total cubic capacity 900 cu. ft.

Internal diameter 6'-0 5/16"

thickness

Shell 1 1/2" + 1 9/32"

Seamless, lap welded or riveted longitudinal joint

Riveted

Material Steel

Range of tensile strength

Shell, 28/32 lbs

Working pressure

by Rules

356 lb

Actual

356 "

## IS A DONKEY BOILER FITTED?

yes

If so, is a report now forwarded?

Yes. Manchester Rpt 11318/9

Is the donkey boiler intended to be used for domestic purposes only

no

PLANS. Are approved plans forwarded herewith for Shafing

(If not, state date of approval)

Receivers

yes

Separate Fuel Tanks 7-8-42

Donkey Boilers Manchester Rpt.

General Pumping Arrangements

yes

Pumping Arrangements in Machinery Space

3-6-43

Oil Fuel Burning Arrangements

3-6-43

## SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes.

as per attached list. (Under separate cover)

State the principal additional spare gear supplied

The foregoing is a correct description,

Wm. J. Wright.

Manufacturer.

Dates of Survey while building  
During progress of work in shops-- 1942 Jun 19 Sep 8-20 Oct 3, 28-30 Nov 21 Dec 22 1943 Jan 12, 15, 18, 22, 24, 27 Feb 1, 2, 5, 9, 11, 15, 16, 22, 23, 24, 25, 26 Mar 1  
During erection on board vessel-- 2, 4, 9, 12, 16, 17, 18, 19, 23, 25, 29, 30, 31 Apr 29, 30 May 5, 7, 10, 11, 12, 13, 14, 17, 20, 24, 27, 31 Jun 2, 3, 4, 14, 15  
Total No. of visits 59.

Dates of Examination of principal parts—Cylinders 22-2-43 Covers 22-2-43 Pistons 25-2-43 Rods 25-2-43 Connecting rods 18-3-43

Crank shaft 2-2-43 Flywheel shaft Thrust shaft 11-2-43 Intermediate shafts 11-2-43 Tube shaft

Screw shaft 4-3-43 Propeller 4-3-43 Stern tube 4-3-43 Engine seatings 17-3-43 Engines holding down bolts 17-5-43

Completion of fitting sea connections 17-3-43 Completion of pumping arrangements 14-6-43 Engines tried under working conditions 15-6-43

Crank shaft, Material Steel Identification Mark 1166 P.9. Flywheel shaft, Material Identification Mark

Thrust shaft, Material Steel Identification Mark S-4553 P.9. Intermediate shafts, Material Steel Identification Marks S-5073 P.9.

Tube shaft, Material Identification Mark Screw shaft, Material Steel Identification Mark S-5175 P.9.

Identification Marks on Air Receivers Lloyd's Rpt 556 H. WP 356 H. 1-7-42 R.S.; Lloyd's Rpt 556 H. WP 356 H. 3-7-42 R.S.

Steam pipes Assesmer 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

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

yes

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

yes

If so, state name of vessel "British Vigilance" Glasgow Rpt No. 65550.

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

The machinery of this vessel has been built under Special Survey and in accordance with the approved plans and the Rules of this Society.

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.

The machinery is eligible in my opinion to be classed in the Register Book with notation of + LMC 6.43; C.L; 2 DB, WP 150 H.

The amount of Entry Fee .. £ 5 : - :  
Special ... £ 98 : 10 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 20 JUN 1943  
When received, 19

Committee's Minute

GLASGOW 29 JUN 1943

Assigned - LMC 6.43 oil eng  
2 DB 150 H.

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



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