

REPORT ON OIL ENGINE MACHINERY.

No. 60320

Received at London Office

OCT 26 1938

Date of writing Report

19

When handed in at Local Office

24. 10. 1938

Port of

Glasgow.

No. in Survey held at
Reg. Book.

Glasgow.

Date, First Survey 2: 11: 37

Last Survey 26. 10. 1938

Number of Visits 58

Single
on the Twin
Triple
Quadruple

Screw vessel

"BRITISH FIDELITY"

Tons { Gross 8465.32
Net 4905.66.

Built at Glasgow.

By whom built Harland & Wolff Ltd.

Yard No. 1010 G When built 1938

Engines made at Glasgow.

By whom made Harland & Wolff Ltd.

Engine No. 1010 G When made 1938.

Donkey Boilers made at Belfast

By whom made Harland & Wolff Ltd.

Boiler No. 1010 G When made 1938

Brake Horse Power 2850 @ 105 RPM.

Owners British Tanker Co. 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

Oil Tanker

OIL ENGINES, &c.—Type of Engines

Solid injection

2 or 4 stroke cycle 4 Single or double acting SA.

Maximum pressure in cylinders 700 lb.

Mean Indicated Pressure 128 "

Diameter of cylinders 740 mm

Length of stroke 1500 mm

No. of cylinders 6

No. of cranks 6

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 105

Flywheel dia. 2489 mm.

Weight 2540 Kgs.

Means of ignition Compression

Kind of fuel used Diesel oil.

Crank Shaft, { Solid forged
Semi built
All builtdia. of journals as per Rule 483 mm
as fitted 505 mm.

Crank pin dia. 505 mm

Crank Webs Mid. length breadth 840 mm.

Mid. length thickness 310 "

Thickness parallel to axis 310 mm.
Thickness around eyehole 222.5 "Flywheel Shaft, diameter as per Rule 483 mm
as fittedIntermediate Shafts, diameter as per Rule 13.6 "
as fitted 17 "Thrust Shaft, diameter at collars as per Rule 14.3 "
as fitted 454 mm. (17.87 ")Tube Shaft, diameter as per Rule
as fittedScrew Shaft, diameter as per Rule 15 "
as fitted 17 "

Is the { screw } shaft fitted with a continuous liner { yes

Is the { screw } shaft fitted with a continuous liner { yes

Is the { screw } shaft fitted with a continuous liner { yes

Bronze Liners, thickness in way of bushes as per Rule .758 "
as fitted 2 "Thickness between bushes as per Rule .57 "
as fitted 11/16 "

Is the after end of the liner made watertight in the

Is the after end of the liner made watertight in the

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

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

Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

Propeller, dia. 17'-0" Pitch 11'-6" No. of blades 4 Material Ag. Bronze whether Moveable No Total Developed Surface 89 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 535.32 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

Cooling Water Pumps, No. Three. 2 @ 100 " 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. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and Size 1 Ballast pump 150 tons/hour. 2 Bilge & sanitary pumps each 100 tons/hour.
How driven Stem. 9' x 10' x 10". Stem. 7' x 8' x 8".

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 9' x 10' x 10". Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 70 tons per hour.

Are two independent means arranged for circulating water through the Oil Cooler yes

Pumps, No. and size:—In Machinery Spaces Port drain hut 3 1/2": Starb. drain hut 3 1/2": Aft. well 3 1/2" In Pump Room aft. pump room with 2 @ 4".

In Holds, &c. Freehold. One 3" Port & one 3" Starb.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 6"; 1 @ 4 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 yes

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 above

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

What pipes pass through the deep tanks

Have they been tested as per Rule

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

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. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 120 cft. in Stroke at 450 RPM Driven by Steam engine.

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

What provision is made for first Charging the Air Receivers Above steam driven compressors.

Venting Air Pumps, No. Under side of piston Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule All aux. machinery steam driven except 30 K.W generator driven

as fitted by Diesel Engine. For lighting only. Position Engine room. Starb. side aft.

Have the Auxiliary Engines been constructed under special survey

Is a report sent herewith

AIR RECEIVERS:—Have they been made under survey *yes* State No. of Report or Certificate *2 262 (15th Nov)*
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 Actual
Starting Air Receivers, No. *Two* Total cubic capacity *900 Cu ft.* Internal diameter *6-0 7/16* thickness *Shell 28/32 tan* by Rules *356 lb* Actual *356 lb*
Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *26/30* Working pressure by Rules *356 lb* Actual *356 lb*
IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *yes. Subject Report No. 12209.*
Is the donkey boiler intended to be used for domestic purposes only *no.*
PLANS. Are approved plans forwarded herewith for Shafting *yes* Receivers *✓* Separate Fuel Tanks *30-9-36 3-10-36 **
Donkey Boilers *✓* General Pumping Arrangements *yes* Pumping Arrangements in Machinery Space *yes*
Oil Fuel Burning Arrangements *6-10-36 ** ** approved for duplicate vessels in 968 etc.*
SPARE GEAR.
Has the spare gear required by the Rules been supplied *yes.*
State the principal additional spare gear supplied *as per attached list.*

The foregoing is a correct description.
For HARCAND AND WOLFF, LIMITED,

Wm. J. Wright

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *Finnlestone Secretary 1937 Nov.: 2.12 Dec.: 2.9.13 (1938) Jan.: 11.21.27 Feb.: 9 Mar.: 21.22.23*
{ During erection on board vessel --- } *25 Apr.: 5.11.13.20.25.28 May: 10.12.13.18.23.24.25 June: 1.2.3.7.21.23.27.28.29 July: 1.5 Aug: 5.8.10.11.15.18.22.25.29.31 Sep: 2.28.29.30 Oct: 4.6.10.11.18.19.26*
Total No. of visits *58* *23-6-38 23-6-38 27-6-38 27-6-38*
Dates of Examination of principal parts—Cylinders *28-6-38* Covers *28-6-38* Pistons *1-7-38* Rods *7-7-38* Connecting rods *10-8-38*
Crank shaft *25-5-38* Flywheel shaft *✓* Thrust shaft *7-6-38* Intermediate shafts *15-8-38* Tube shaft *✓*
Screw shaft *15-8-38* Propeller *15-8-38* Stern tube *15-8-38* Engine seatings *11-8-38* Engines holding down bolts *30-9-38*
Completion of fitting sea connections *11-8-38* Completion of pumping arrangements *26-10-38* Engines tried under working conditions *26-10-38*
Crank shaft, Material *Steel* Identification Mark *1010 P.7 + test* Flywheel shaft, Material *✓* Identification Mark *✓*
Thrust shaft, Material *Steel* Identification Mark *7401 P.7* Intermediate shafts, Material *Steel* Identification Marks *7297 P.7*
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *7255 P.7*
Identification Marks on Air Receivers *No 181 R.L.A.* Spare shaft *7256 P.7*

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 *✓* 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 *yes* If so, state name of vessel *"BRITISH SECURITY" 56 Report No. 5914*

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 workmanships are good.

The machinery has been efficiently secured in position on board the vessel.

Trials under working conditions have been arranged to take place on the 26th Oct. 1938.

The machinery is eligible in my opinion to be classed in the Register Book with notation of -1-LMC 10.38 C.L. 2 DB. WP 150 lb. Subject to satisfactory trials as above.

The amount of Entry Fee .. £ 5 : -
Special ... £ 98 : 10
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When applied for, *25 OCT 1938*
When received, *8/11 1938*

Committee's Minute *GLASGOW 25 OCT 1938*

Assigned *+ LMC 10.38*

2 DB 150 lb.

P. Fitzgerald & S. E. Murdoch
Engineer Surveyors to Lloyd's Register of Shipping.



Lloyd's Register
Foundation