

REPORT ON OIL ENGINE MACHINERY.

No 67774

Received at London Office

25 NOV 1943

Date of writing Report

When handed in at Local Office

22. 11. 19

Port of

Glasgow

No. in Survey held at Reg. Book.

Glasgow

Date, First Survey

30th Dec 1941

Last Survey

12th Nov 1943

Number of Visits

44

on the <sup>Single</sup> ~~Triple~~ ~~Quadruple~~ Screw vessel

"TREUANIION"

Tons Gross 7376.27 Net 6133.64

Built at

Port Glasgow

By whom built

Lithgorn Ltd.

Yard No. 985

When built 1943

Engines made at

Glasgow

By whom made

Harland & Wolff, Ltd.

Engine No. 8462/2

When made 1943

Donkey Boilers made at

By whom made

Boiler No.

When made

Brake Horse Power

3300

Owners

Ministry of War Transport

Port belonging to

Nom. Horse Power as per Rule

490

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

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 lbs

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

110

Flywheel dia. 2489 mm.

Weight 2590 Kgs.

Means of ignition Compression

Kind of fuel used Diesel oil

Crank Shaft,

Solid forged

dia. of journals

as per Rule Appl. 505 mm.

Crank pin dia. 505 mm.

Crank Webs

Mid. length breadth 980 mm.

Thickness parallel to axis 310 mm.

as fitted

505 mm.

as fitted

BORED 115 mm.

Mid. length thickness 310 mm.

Thickness around eye-hole 292.5 mm.

Flywheel Shaft, diameter

as per Rule

as fitted

Intermediate Shafts, diameter

as per Rule

as fitted

Thrust Shaft, diameter at collars

as per Rule

as fitted

Tube Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the

tube

screw shaft fitted with a continuous liner

yes

Bronze Liners, thickness in way of bushes

as per Rule

as fitted

3/4

Thickness between bushes

as per Rule

as fitted

9/16

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

shaft

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller 4'-11 1/2"

Propeller, dia.

16'-0"

Pitch

12'-0"

No. of blades

4

Material Bronze

whether Moveable

no

Total Developed Surface

94 sq. feet

Method of reversing Engines Direct

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

yes

Means of lubrication

freed

Thickness of cylinder liners

53 to 61 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.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. 2

Diameter

Stroke

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

How driven

Is the cooling water led to the bilges

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

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

1 engine driven 100 tons/hour

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

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

In Pump Room

In Holds, &c.

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

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

Are all Sea Connections fitted direct on the skin of the ship

Are they fitted with Valves or Cocks

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

Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

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

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

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.

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

Scavenging Air Pumps, No.

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

No.

Position

Have the Auxiliary Engines been constructed under special survey

Is a report sent herewith

014887-014898-0332



AIR RECEIVERS: — Have they been made under survey

State No. of Report or Certificate

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

Is a drain fitted at the lowest part of each receiver

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.

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

Actual

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 Shafting *crank & thrust shafts* 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

The foregoing is a correct description.

*Wm. L. Wright*

Manufacturer.

Dates of Survey while building  
During progress of work in shops -- *1941 Aug 30 1942 Jan 11, Apr 23 May 4, 7, 11, June 17 Aug 14 Sep 7, 18 Oct 16, 21, Dec 21 1943 Feb 1 Mar 5, 12, 18 Apr 20, 22, 23, 28 May 5, 6, 12, 19 Jun 7, 20 July 13, 14, 16, 19, 23, 29 Aug 12, 27 Sep 7, 15 Oct 16, 21, 22, 25, 26, Nov 3, 7, 12*  
During erection on board vessel --  
Total No. of visits *44*

Dates of Examination of principal parts—Cylinders *16-7-43* Covers *16-7-43* Pistons *6-5-43* Rods *6-5-43* Connecting rods *29-7-43*

Crank shaft *16-10-43* Flywheel shaft *✓* Thrust shaft *1-2-43* Intermediate shafts *22-10-43* Tube shaft *✓*

Screw shaft *22-10-43* Propeller *15-9-43* Stern tube *15-9-43* Engine seatings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions

Crank shaft, Material *Steel* Identification Mark *Lloyd's 8462/2 P.9* Flywheel shaft, Material Identification Mark

Thrust shaft, Material *Steel* Identification Mark *Lloyd's 53957 P.9* Intermediate shafts, Material *Steel* Identification Marks *See below*

Tube shaft, Material Identification Mark Screw shaft, Material *Steel* Identification Mark *Lloyd's 53777 P.9*

Identification Marks on Air Receivers

Intermediate Shafts:— *Nº1. Lloyd's 53956; Nº2. 53306; Nº3. 53923; Nº4. 53237; Nº5. 53237; Nº6. 53875; Nº7. 53618; Nº8. 54164. P.9.*

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

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 *Engines duplicate of A/88 MSM. Glasgow Report No. 65986.*

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

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

*The materials and workmanship are good.*

*The machinery has been despatched to Greenock to be installed on board the vessel yard No 985, building by Messrs. Lithgow's Ltd.*

*On completion it will be eligible in my opinion to be classed in the Register Book with record of + LMC C.L. with date.*

*This engine has been efficiently installed in this vessel, for recommendations see Greenock reports Nº 22560.*

*Charles J. Hunter*

The amount of Entry Fee .. £ *5* : - :  
Special *3/4 of 98-10-0* £ *65* : *13* :  
Donkey Boiler Fee ... £ *16* : *8* :  
Travelling Expenses (if any) £ : :  
When applied for, *23 NOV 1943*  
When received, *19*

Committee's Minute

Assigned *Deferred for completion*

*P. Fitzgerald*

Engineer Surveyor to Lloyd's Register of Shipping.



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