

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 66106

Received at London Office

23 SEP 1942
2 JAN 1943

Date of writing Report

19 — When handed in at Local Office

21: 9:

15: 2 Port of

Glasgow

Date, First Survey

13: 6: 41

Last Survey

18: 9:

1942

No. in Survey held at

Glasgow

Reg. Book.

Number of Visits

36 37

Single
on the Twin
Triple
Quadruple

Screw vessel

"BRITISH GRATITUDE."

Tons { Gross 8463
Net 4914

Built at

Wulfrun

By whom built Swan, Hunter & Wigham Richardson Ltd.

Yard No. 1673

When built 1942

Engines made at

Glasgow

By whom made Harland & Wolff, Ltd.

Engine No. 8658

When made 1942

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 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 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

Crank pin dia. 505 mm

Crank Webs Mid. length breadth 980 mm

Mid. length thickness 310 mm

Thrust parallel to axis 310 mm

Thrust 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 Appd 454 mm

as fitted 454 mm

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 {

Bronze Liners, thickness in way of bushes as per Rule as fitted

Thickness between bushes as per Rule as fitted

Is the after end of the liner made watertight in the

propeller boss 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

Propeller, dia.

Pitch

No. of blades

Material

whether Moveable

Total Developed Surface

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

Forced

Thickness of cylinder liners 53 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

Engine driven, 100 tons/hour

Ballast Pumps, No. and size

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

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 the Bilge Suctions in the Machinery Spaces

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

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

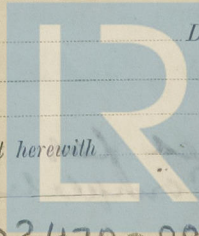
Auxiliary Engines crank shafts, diameter as per Rule as fitted

Position

Have the Auxiliary Engines been constructed under special survey

Is a report sent herewith

002465-002470-0042

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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

(If not, state date of approval)

Shank shaft 23-4-41
Thrust 1-5-41

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,

FOR HARLAND AND WOLFF, LIMITED

Wm. J. Wright

Manufacturer.

Dates of Survey while building

During progress of work in shops--

During erection on board vessel--

Total No. of visits

1941 June 13. 20 July: 9. 21 Sep: 12 Oct: 6. 15 Nov: 13 Dec: 28 (1942)
Jan: 14 Feb: 13. 20. 24 Mar: 9. 16. 27 Apr: 3. 7. 8. 10. 13. 14. 15. 20. 27 May: 11. 20. 28 June: 12. 17.
36 July 6th Aug 4. 13 Sep: 7. 18
37

Dates of Examination of principal parts—Cylinders 8-4-42 Covers 8-4-42 Pistons 16-7-42 Rods 16-7-42 Connecting rods 12-6-42

Crank shaft 14-1-42

Flywheel shaft

Thrust shaft 20-2-42

Intermediate shafts

Tube shaft

Screw shaft

Propeller

Stern tube

Engine seatings

Engines holding down bolts

Completion of filling sea connections

Completion of pumping arrangements

Engines tried under working conditions

Crank shaft, Material

Steel

Identification Mark

8458/1 P. 9

Flywheel shaft, Material

-

Identification Mark

Thrust shaft, Material

Steel

Identification Mark

5.3324 P. 7

Intermediate shafts, Material

Identification Marks

Tube shaft, Material

Identification Mark

Screw shaft, Material

Identification Mark

Identification Marks on Air Receivers

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

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

If so, state name of vessel

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 workmanships are good.

Shop trials have been satisfactorily carried out.

The machinery has been despatched to the Yard of Messrs Swan, Hunter & Wigham Richardson Ltd, to be installed in board their Yard No 1673. It will be eligible in my opinion to be classed in the Register Book with the notation 'I-LMC' c.t. with date, when efficiently installed on board the vessel & tried under working conditions.

The amount of Entry Fee .. £ 5 : - :
Special Specification .. £ 65 : 13 :
Donkey Boiler Fee .. £ 16 : 8 :
Travelling Expenses (if any) £ : : :

When applied for,

22 SEP 1942

When received,

19

Committee's Minute GLASGOW 22 SEP 1942

Assigned referred for Completion

P. Fitzgould.

Engineer Surveyor to Lloyd's Register of Shipping.

This engine has been satisfactorily fitted on board the vessel and tested under working conditions at quay.

19 JAN 1943

KWC

See 28.100938

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