

REPORT ON OIL ENGINE MACHINERY

No. 100.873

11 DEC 1934

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Received at London Office

Port of London

Date of writing Report

When handed in at Local Office

Date, First Survey

16th March 1934Last Survey 6th December 1934

No. in Survey held at

Newbury and Greenhithe

Number of Visits

17

Reg. Book.

58106

Single

Triple

Quadruple

Screw vessel

"AQUEITY"

Tons { Gross 301
Net 142.55

Built at

Yarmouth

By whom built

Holloway & Co. Ltd.

Yard No. 336 When built 1934

Engines made at

Newbury

By whom made

Newbury Diesel Co. Ltd.

Engine No. 647 When made 1934

Monkey Boilers made at

By whom made

Boiler No. - When made -

Horse Power

300

Owners

J. T. Everard & Sons Ltd.

Port belonging to

London

Horse Power as per Rule

84

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

yes

Trade for which vessel is intended

L ENGINES, &c.—Type of Engines

Diesel injection, Boosted

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

Maximum pressure in cylinders

600 lb/sq. in.

Diameter of cylinders

320 mm

Length of stroke

400 mm

No. of cylinders

3

No. of cranks

3

Mean Indicated Pressure

100 lb/sq. in.

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge

428 mm

Is there a bearing between each crank

Yes

Revolutions per minute

300

Flywheel dia.

1000 mm

Weight

35 cwt

Means of ignition

Compression

Kind of fuel used

Heavy oil

Crank Shaft, dia. of journals

as per Rule 183.4 mm

Crank pin dia.

190 mm

Crank Webs

Mid. length breadth 252 mm

Mid. length thickness 106 mm

Thickness parallel to axis

Thickness around eye-hole

Flywheel Shaft, diameter

as per Rule 183.4 mm

as fitted 190 mm

Intermediate Shafts, diameter

as per Rule 4.2"

as fitted 5 1/4"

Thrust Shaft, diameter at collars

as per Rule 4.42"

as fitted 130 mm

Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule 4.9"

as fitted 5 1/4"

Is the { tube } shaft fitted with a continuous liner { No liners

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

boss

If the liner is in more than one length are the junctions made by fusion through the whole thickness of 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 so, state type

Newark

If so, state type

Newark

Pitch

3'-2"

No. of blades

3

Material

Bronze

Whether Moveable

Solid

Total Developed Surface

10.5 sq. feet

of reversing Engines

Pne. reversible

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

Yes

Means of lubrication

Yes

Thickness of cylinder liners

32.5 mm

Are the cylinders fitted with safety valves

Yes

Are the exhaust pipes and silencers water cooled or lagged with

both

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

Water Pumps, No.

1-125 mm dia 120 mm stroke

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

Pumps worked from the Main Engines, No.

1

Diameter

125 mm

Stroke

120 mm

Can one be overhauled while the other is at work

connected to the Main Bilge Line

No. and Size

2 SA 125 mm BORE 120 mm STROKE

How driven

MAIN ENGINE DIRECT & AUX. ENGINE GEARED

Is the 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

Pumps, No. and size

1 SA 125 mm dia x 120 mm stroke

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

2 Rotary 10 gal per min

Independent means arranged for circulating water through the Oil Cooler

Yes

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

In Pump Room

Pumps, No. and size

3 2 1/2"

In Machinery Spaces

3 2 1/2"

Holds, &c.

3 2 1/2"

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

One 2 1/2"

Are the Bilge Suctions in the Machinery Spaces

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

Yes

Are they fitted with Valves or Cocks

Values

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

Yes

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

How are they protected

By airtight steel trunks

What pipes pass through the bunkers

For peak & Hold suction

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

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.

1 SA

No. of stages

1

Diameters

110 mm

Stroke

150 mm

Driven by

M. Eng at 300 RPM

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No.

1

No. of stages

2

Diameters

110 mm 45 mm

Stroke

80 mm

Driven by

Auxiliary Engine

Scavenging Air Pumps, No.

3 Rotary Boosters

Diameter

Stroke

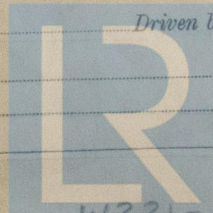
Driven by

Main Engine

Auxiliary Engines crank shafts, diameter

as per Rule 2.3"

as fitted 2 3/8"



Lloyd's Register Foundation

AIR RECEIVERS:—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

High Pressure Air Receivers, No. 1 Cubic capacity of each 1 Internal diameter 18" thickness 1/8"

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual Actual

Starting Air Receivers, No. 3 Total cubic capacity 36 cubic ft. Internal diameter 18" thickness 9/16"

Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength Working pressure by Rules Actual Actual

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? yes

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

PLANS. Are approved plans forwarded herewith for Shafting 16.3.34 Receivers certificate herewith Separate Tanks yes

Donkey Boilers yes General Pumping Arrangements copy herewith 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 List of Spare gear attached hereto.

For & on behalf of
The foregoing is a correct description, Co. LTD.

C. P. Lewis Manufacturer.
SECRETARY.

Dates of Survey while building
During progress of work in shops-- 1934. Mar. 16. Apr. 19. May. 29. June 20. 27. July 18. 25. Aug. 30. Sept. 17. Oct. 1. 17
During erection on board vessel-- 1934 Oct. 31. Nov. 12. 16. 27. Dec. 6.
Total No. of visits 15 17.

Dates of Examination of principal parts—Cylinders 27/6/34-25/7/34 Covers 30.8.34 Pistons 30.8.34 Rods — Connecting rods 18.7.34
Crank shaft 19.4.34 Flywheel shaft Bank shaft Thrust shaft 25.7.34 Intermediate shafts 30.8.34 Tube shaft —
Screw shaft 30.8.34 Propeller 16.11.34 Stern tube 29.5.34 Engine seatings 31.10.34 Engines holding down bolts 27.11.34
Completion of fitting sea connections 16.11.34 Completion of pumping arrangements 27.11.34 Engines tried under working conditions 1.12.34
Crank shaft, Material 4.2. Steel Identification Mark LLOYDS 9197 Flywheel shaft, Material Bank shaft Identification Mark —
Thrust shaft, Material 4.2. Steel Identification Mark LLOYDS 1172 Intermediate shafts, Material 4.2. Steel Identification Marks LLOYDS 1461
Tube shaft, Material — Identification Mark SAL. 30.8.34 Screw shaft, Material 4.2. Steel Identification Mark LLOYDS 1461
SAL. 30.8.34

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 no 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 yes

Is this machinery duplicate of a previous case no If so, state name of vessel yes

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

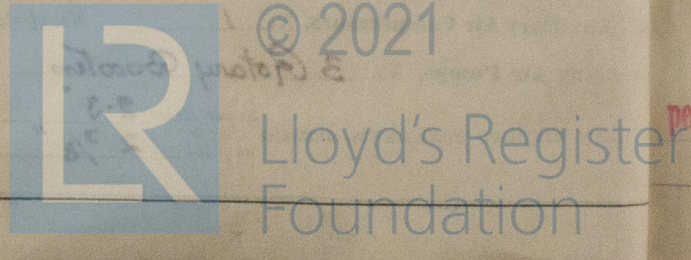
These main engines have been specially surveyed during construction and are in accordance with the approved plans and the Rules. The materials used have been made at works approved by the Committee and tested by the Surveyors to this Society. They were found satisfactory during bench trials at Newbury and shipped to Greenhithe where main and auxiliary engines were fitted on board in accordance with approved plans and the Rules of the Society tried under working conditions and found satisfactory. Eligible in our opinion to be classed in Register book and to have notation of +LHC12.34 and T.S. O.G.

Attached hereto:—Engng Certificate 4 in 11. List of Spare gear for Main & Auxiliary Engines. Air Receiver certificate.

12 mth 2.0.0
NH. 84.0.0 21.0.0
23.0.0
The amount of Entry Fee .. £ 2 : 0 : 0
4/5 of 21.0.0 Construction .. £ 16 : 16 : 0
Special .. £ 4 : 4 : 0
1/5 of 21.0.0 Fitting out .. £ 2 : 5 : 0
Donkey Boiler Fee .. £ 2 : 5 : 0
Travelling Expenses (if any) £ 18 : 0 : 0

Committee's Minute 21 DEC 1934
Assigned + Lmb. 12.34
oil oil

Geo. A. Long and Alex. Ewing
Engineer Surveyor to Lloyd's Register of Shipping.



CERTIFICATE WRITTEN.