

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 141445

Received at London Office 13 DEC 1930

Date of writing Report 10:17:30 When handed in at Local Office 10 Dec. 1930 Port of **HULL**
No. in Survey held at **Knottingley** Date, First Survey 17 Sept Last Survey 1 Dec 1930
Reg. Book. Number of Visits 8

89943 on the **Single** **CONSTANCE** **H** **Screw vessel** Tons { Gross 155.31 Net 57.04
Built at **Knottingley** By whom built **Messrs John Harker Ltd** Yard No. 28 When built 1930
Engines made at **Keighley** By whom made **Messrs H. Widdop & Co. Ltd** Engine No. 2954 When made 1930
Donkey Boilers made at **✓** By whom made **✓** Boiler No. **✓** When made **✓**
Brake Horse Power 150 Owners **John Harker Ltd** Port belonging to **Steel**
Nom. Horse Power as per Rule 43 Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**
Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines

2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank
Revolutions per minute Flywheel dia. Weight Means of ignition Kind of fuel used
Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth 3 Mid. length thickness 14 3 Thickness parallel to axis shrunk Thickness around eyehole
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 {
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 **see attached** 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 **see attached** Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication
Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with
non-conducting material 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. **one** Diameter **3 1/2"** Stroke **3"** Can one be overhauled while the other is at work
Pumps connected to the Main Bilge Line { No. and Size **one 3 1/2" x 3"** & auxiliary centrifugal pump.
How driven **off main engine & off auxiliary engine**

Ballast Pumps, No. and size

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 **2 @ 2 1/2"**
In Holds, &c. **2" dia fore peak & stern** **2" to each cofferdam**

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 **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
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 **all 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. No. of stages Diameters Stroke 3 Driven by
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke 4 Driven by
Scavenging Air Pumps, No. Diameter Stroke Driven by
Auxiliary Engines crank shafts, diameter as per Rule as fitted

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

Can the internal surfaces of the receivers be examined **see attached** What means are provided for cleaning their inner surfaces
Is there a drain arrangement fitted at the lowest part of each receiver **see attached**
High Pressure 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. Total cubic capacity Internal diameter thickness
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

009170-009181-0102

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

— Please see attached manchester Report 7143 —

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building

During progress of work in shops --

During erection on board vessel --

Total No. of visits

1930. Sept 17. Oct 1. 13. 29. Nov 5. 21. 26. Dec 1.

8.

Dates of Examination of principal parts—Cylinders	✓	Covers	✓	Pistons	✓	Rods	✓	Connecting rods	✓
Crank shaft	✓	Flywheel shaft	✓	Thrust shaft	✓	Intermediate shafts	✓	Tube shaft	✓
Screw shaft	✓	Propeller	✓	Stern tube	✓	Engine seatings	29. 10. 30	Engines holding down bolts	29. 10. 30
Completion of fitting sea connections	17. 9. 30	Completion of pumping arrangements	26. 11. 30	Engines tried under working conditions	26. 11. 30				
Crank shaft, Material	✓	Identification Mark	✓	Flywheel shaft, Material	✓	Identification Mark	✓		
Thrust shaft, Material	✓	Identification Mark	✓	Intermediate shafts, Material	✓	Identification Marks	✓		
Tube shaft, Material	✓	Identification Mark	✓	Screw shaft, Material	✓	Identification Mark	✓		

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

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

Is this machinery duplicate of a previous case

If so, state name of vessel

J. Harker No. 34

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

— please see manchester Report No 7143 —

This engine has been satisfactorily fitted on board, tried under full working conditions and found in good order. It is eligible in my opinion to have record of + L.M.C. 12. 30.

The amount of Entry Fee ... £

Special 1/5. £ 3

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

11 Dec 1930

When received,

24 1. 31

Committee's Minute

FRI. 19 DEC 1930

Assigned

+ Lmb. 12. 30

CERTIFICATE WRITTEN

W. H. Waggott

Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation