

YACHT.

17525

REPORT ON OIL ENGINE MACHINERY.

No. 6812

24 JUL 1929

pt. 4b.

Received at London Office

MANCHESTER

19-7-1929 When handed in at Local Office 23-7-1929 Port of

Date, First Survey 14-5-29 Last Survey 16-7-1929

Survey held at

MANCHESTER

Number of Visits 7

on the Single Screw vessel

"MAID MARION"

Tons Gross Net

built at

Manchester

By whom made L. Gardner & Sons Ltd.

Yard No. When built Engine No. 28170 When made 1929

Donkey Boilers made at

By whom made Boiler No. When made

Indicated Horse Power 54

Owners Port belonging to

Net Horse Power as per Rule 15

Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended Yachting

ENGINES, &c. Type of Engines Vertical, SOLID INJECTION, Reversing, Air Starting 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 580 lbs/sq. in. Diameter of cylinders 8" Length of stroke 9 3/4" No. of cylinders 3 No. of cranks 3

Number of bearings, adjacent to the Crank, measured from inner edge to inner edge 14" Is there a bearing between each crank Yes

Revolutions per minute 400 Flywheel dia. 31 1/2" Weight 1159 lbs Means of ignition Heat of compression of fuel used Heavy Oil

Crank Shaft, dia. of journals 4 3/4" as per Rule Specially considered Crank pin dia. 4 3/4" Crank Webs Mid. length breadth 6 1/2" Thickness parallel to axis Solid

Flywheel Shaft, diameter 4 3/4" as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule Specially considered

Tube Shaft, diameter 4 3/4" as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule 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

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

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

propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet Means of lubrication

Method of reversing Engines Camshaft driven Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes

Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

cooling Water Pumps, No. One on engine 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 1 3/4" Stroke 2 1/2" Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size How driven Lubricating Oil Pumps, including Spare Pump, No. and size One 1 3/8" dia. & 7" effective stroke

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 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

ed 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. One on engine No. of stages 2 Diameters 1 3/8" & 4 1/2" Stroke 2 1/2" Driven by crank shft extension

Auxiliary Air Compressors, No. 1 Gardner No. of stages one Diameters 1 1/2" Stroke 3 3/8" Driven by ovc type Gardner Engine

Small Auxiliary Air Compressors, No. brankhead compression No. of stages Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted 1 3/8" 1-0" running test only

IR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Safety valves fitted on compressor

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Plug in ends (3' gal)

Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. Not fitted Cubic capacity of each Internal diameter thickness Working pressure by Rules

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

Starting Air Receivers, No. 2 183617 183618 Total cubic capacity 8 CUB. FT. Internal diameter 10" thickness 4" sides, 1" centre of base

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength 28/32 tons Working pressure by Rules 460 lbs/sq. in.

SEAMLESS CHESTERFIELD TYPE Mild Steel

W315-0085(112)

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *Yes*
(If not, state date of approval)

Receivers *Yes*

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

The foregoing is a correct description,

L GARDNER & SONS LIMITED.

William Gardner. Manufacturer.

Dates of Survey while building: During progress of work in shops - 1929. May 5th, June 7th, 19th, 26th, 28th, July 2nd, 16th.
During erection on board vessel -
Total No. of visits

Dates of Examination of principal parts - Cylinders 26-6-29 Covers 26-6-29 Pistons 19-6-29 Rods 30-1-29
Connecting rods 16-7-29
Crank shaft 14-5-29 Flywheel shaft 7-6-29 Thrust shaft 12-6-29 Intermediate shafts 2-7-29 Tube shaft
Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions in shop 16-7-29
Crank shaft, Material *Mild Steel* Identification Mark *79* Flywheel shaft, Material Identification Mark
Thrust shaft, Material *Mild Steel* Identification Mark *82* 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 *Yes*

If so, state name of vessel *Mass. Thompsons No. 1087. Mch. Report 6699.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The above main engines of Gardner's Type 3J5 and one Gardner petrol O.V.C Type single cylinder vertical engine No. 28125 at 770 R.P.M with its single stage air compressor have been built under special survey, and the materials tested in accordance with the rules of this Society. The materials so far as can be seen are sound and the workmanship is good. The engines proved satisfactory under shop tests on full load. The above engines are in my opinion eligible for the notation of L.M.C. with date when fitted on board the vessel in accordance with the rule requirements.*

Amount charged to Messrs L. Gardner & Sons $\frac{4}{5}$ (£9-0-0) = £7-4-0

The amount of Entry Fee ... £ :
Special (See note above) ... £ 7 : 0 : 0
Donkey Boiler Fee ... £ : 4 :
Travelling Expenses (if any) ... £ :
When applied for, 23-7-1929
When received, 30-8-29

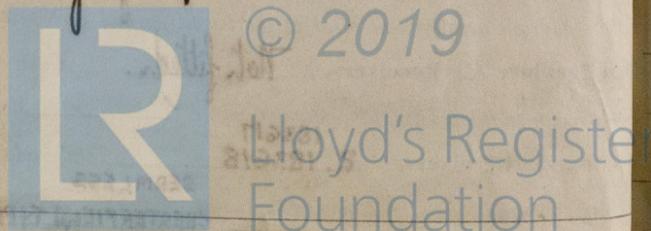
J. J. Campbell
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 30 AUG 1929

Assigned see Minute on

San Rpt 13658



L. Gardner & Sons, Ltd.

Yacht "MAID MARION".

Plans herewith:-

3J5 Engine.

- General Arrgt.
- Flywheel.
- Crankshaft.
- Thrust Shaft.
- Connecting Rod.
- Air Compressing Cylinder.
- Clutch.
- Arrgt. of Water & Bilge Pumps.
- Air Bottles.
- Propeller Shaft.
- Air Compressor Connecting Rod.

OVC Engine.

- General Arrgt.
- Thrust Shaft.
- Crankshaft.
- Cylinder.
- Connecting Rod.
- Air Compressing Cylinder.

1-29
7-29

6-7-29

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Compress
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Lloyd's Register

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