

YACHT.

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REPORT ON OIL ENGINE MACHINERY.

No. 7049.

of writing Report 7-5-1930 When handed in at Local Office 10-5-1930 Port of

Received at London Office 12 MAY 1930

in Survey held at

Date, First Survey 6-11-29 Last Survey 6-5-1930

on the ~~Single~~ ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel

Tons { Gross
Net

at Southampton
Lines made at Manchester

By whom built Messrs J. J. Thornycroft & Co. Ltd.

Yard No. 1099 When built

By whom made Messrs L. Gardner & Sons Ltd.

Engine No. 28503 When made 1930

By whom made

Boiler No. When made

Owners

Port belonging to

Net Horse Power 500 Total

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Use 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 12 1/2" Length of stroke 15" No. of cylinders 5 each engine No. of cranks 5

No. of bearings, adjacent to the Crank, measured from inner edge to inner edge 20 3/4" Is there a bearing between each crank Yes

Revolutions per minute 290 Flywheel dia. 49" Weight 3387 lbs. Means of ignition Heat of compression of fuel used Heavy Oil

Crank Shaft, dia. of journals as per Rule 7 3/4" Crank pin dia. 7 3/4" Crank Webs Mid. length breadth 9 1/2" Mid. length thickness 3 1/8" Thickness parallel to axis Solid Thickness around eye-hole Solid

Wheel 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 5" Approved

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

Tube Speller 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

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 Camshaft act. & Air Is a governor or other arrangement fitted to prevent racing of the engine when decoupled Yes Means of lubrication

TO MAIN BEARINGS. Thickness of cylinder liners SOLID WITH CYL. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and cylinders water cooled or lagged with

TO REMAINDER. WATER COOLED. The exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

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

Pumps connected to the Main Bilge Line No. and Size How driven

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size One 2" bore x 1 1/2" effective stroke ONE ON EACH ENGINE

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

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

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

How are they protected

Have they been tested as per Rule

That pipes pass through the bunkers

That pipes pass through the deep tanks

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

of 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 each engine No. of stages 2 Diameters 2 1/2" & 7" Stroke 3 1/2" Driven by crank shaft extension

Auxiliary Air Compressors, No. No. of stages 2 Diameters 1 1/2" & 4 1/2" Stroke 2 3/4" Driven by

Small Auxiliary Air Compressors, No. One Gardner No. of stages 2 Diameters 1 1/2" & 4 1/2" Stroke 2 3/4" Driven by Gardner 3 1/2" type engine

Scavenging Air Pumps, No. Crankcase compression Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted 2 1/2" dia. journals 2 5/8"

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

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

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

Starting Air Receivers, No. 4 (211291, 211292, 211293, 211294) Total cubic capacity 36008. FT. Internal diameter 14 1/2" thickness 4" sides 1" centre of base

Seamless, lap welded or riveted longitudinal joint SEAMLESS CHESTERFIELD TYPE Material Mild Steel Range of tensile strength 28-32 tons Working pressure by Rules 400 lbs/sq. in.

W307-0164

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *Yes*

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 - 6/11/29, 12/11/29, 26/11/29, 11/12/29, 13/1/30, 24/3/30, 9/4/30, 11/4/30, 16/4/30, 28/4/30, 2/5/30, 6/5/30
During erection on board vessel - - -
Total No. of visits

Dates of Examination of principal parts—Cylinders 9-4-30 Covers 9-4-30 Pistons 11-4-30 Rods 6-11-29 Connecting rods 11-12-29 11-1
Crank shaft 9-4-30 Flywheel shaft Thrust shaft 13-1-30 Intermediate shafts 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 28-4-30 3-5-30 6-5-30

Crank shaft, Material Mild Steel Identification Mark 11-30612-3186 R.W.F. Flywheel shaft, Material Identification Mark
Thrust shaft, Material Mild Steel Identification Mark 2 off 11-389 C.F. 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 *Camper & Nicholson N° 364. Mch. Rpt. N° 6790*

General Remarks (State quality of workmanship, opinions as to class, &c. The above main engines of Gardner's Type 539, and one Gardner 312 Type three cylinder vertical engine N° 28516 direct coupled to a Newton's dynamo N° 31785 of 110/170 volts at 1000 R.P.M., the armature shaft extended & clutch coupled to a two stage Gardner air compressor N° 566, also one Gardner auxiliary 212 Type two cylinder vertical engine N° 28501 direct coupled to a Newton's dynamo N° 65950 of 110/170 volts, 50/78 amps, 8.5 K.W. at 800 R.P.M., 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 loads, the main engines manoeuvred well.

These 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.

The amount of Entry Fee ... £ : *✓* : When applied for, 10-5-1930
Special ... £ 28 : 12 :
Donkey Boiler Fee ... £ : *✓* : When received, 4-6-1930
Travelling Expenses (if any) £ : *✓* :

Committee's Minute

WED. 11 JUN 1930

Assigned

See Sou rpt. No 13966

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

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Foundation