

YACHT.

REPORT ON OIL ENGINE MACHINERY.

No. 68

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Date of writing Report 10th Mar. 1926 When handed in at Local Office 10th Mar. 1926 Port of Winterthur
 No. in Survey held at Winterthur Date, First Survey 25th Jan. 1924 Last Survey 26th Feb. 1926
 Reg. Book. on the ^{Single} ~~Twin~~ ^{Triple} Screw ~~Engines~~ MOTOR YACHT. "MINGARY"
 Built at Glasgow By whom built Alex. Stephen & Co., Ltd. Yard No. 511 When built 1926
 Engines made at Winterthur By whom made Messrs. Sulzer Bros. Engine No. 14082 When made 1926
 Donkey Boilers made at — By whom made — Boiler No. — When made —
 Brake Horse Power 450 (Two Eng.) Owners Kenneth W. Clark Port belonging to —
 Nom. Horse Power as per Rule 128.56 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

OIL ENGINES, &c.—Type of Engines Airless Eng. Internal Combustion Eng. 2 or 4 stroke cycle 2 Single or double acting single
 Maximum pressure in cylinders 35 Kg. cm^2 No. of cylinders 4 Each Eng. Diameter of cylinders 210 mm No. of cranks 4 Each Eng. Length of stroke 420 mm
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 360 mm Is there a bearing between each crank Yes.
 Revolutions per minute 300 Flywheel dia. 1000 mm Weight 1000 Kg. Means of ignition ^{Superheated steam} ~~to compression~~ Kind of fuel used Heavy fuel oil.
 Crank Shaft, dia. of journals as per Rule 160.5 mm as fitted 175 mm Crank pin dia. 175 mm Crank Webs Mid. length breadth 240 mm Mid. length thickness 98 mm Thickness parallel to axis shrunk Thickness around eye-hole
 Flywheel Shafts, diameter as per Rule 160.5 mm as fitted 175 mm Intermediate Shafts, diameter as per Rule 105.13 mm as fitted Thrust Shaft, diameter at collars as per Rule 110.4 mm as fitted 140 mm

Is the { tube { shaft fitted with a continuous liner {
 as fitted

Is the after end of the liner made watertight in the
 as fitted

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

of the tube shaft 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 Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes. Means of lubrication

needed. Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

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

Boiling Water Pumps, No. 2. One each Eng. S.A. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Large Pumps fitted to the Main Engines, No. 2 Each Eng. Diameter 125 mm Stroke 50 mm Can one be overhauled while the other is at work Yes

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

Fast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size 2 - One each Eng. 2 - " " " Hand pumps

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 Engine and Boiler Room

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 Space

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

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

partment to another. Is the Shaft Tunnel watertight. Is it fitted with a watertight door worked from

Is the wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Auxiliary Air Compressors, No. Two - 1 each Eng. No. of stages 1 Diameters 150 mm Stroke 80 mm Driven by Crank shaft.

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

All Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Exhausting Air Pumps, No. 1 each Eng. D.A. Diameter 500 mm Stroke 420 mm Driven by Crank shaft.

Auxiliary Engines crank shafts, diameter as per Rule as fitted

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

Are the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Holes 200 mm ϕ at each end.

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

High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Working Air Receivers, No. 5 Total cubic capacity 5 x 380 = 1900 litres Internal diameter 410 mm thickness 17.5 mm

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Working pressure by Rules 95 Kg. per cm^2 @ 49.5 Kg. mm^2

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	27-8-24, 29-8-24.	35 kg. Cm ²	45 kg. Cm ²	R.	Test satisfactory
" " COVERS	21-8-24.	" "	" "	R	" "
" " JACKETS	21-8-24, 27-8-24, 29-8-24.	1	6	R	" "
" PISTON WATER PASSAGES	4-9-24.	1	6	R	" "
MAIN COMPRESSORS—1st STAGE					
" 2nd "					
" 3rd "					
AIR RECEIVERS—STARTING	6-7-23.	30	140	R	" "
" INJECTION					
AIR PIPES	16-1-25, 30-1-25.	30	60	R	" "
FUEL PIPES	" "	100	200	R	" "
FUEL PUMPS & VALVES	7-8-24, 11-8-24, 1-9-24.	100	200	R	" "
SILENCER					
" WATER JACKET					
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for Shafting

(If not, state date of approval)

9-5-24.

Receivers

11-3-26.

Separate Tanks

11-3-26.

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

The foregoing is a correct description,

M. Bachmann

Manufacturer.

Dates of Survey while building	During progress of work in shops --	25-1-24, 7-3-24, 9-4-24, 12-5-24, 19-5-24, 5-6-24, 17-7-24, 18-7-24, 7-8-24, 8-8-24, 11-8-24, 13-8-24, 21-8-24, 27-8-24, 29-8-24, 1-9-24, 2-9-24, 4-9-24, 22-10-24, 15-12-24, 16-12-24, 16-1-25, 18-1-25, 30-1-25, 23-2-25, 27-2-25, 27-1-26, 11-2-26, 26-2-26,
	During erection on board vessel --	
	Total No. of visits	

Dates of Examination of principal parts—Cylinders 30-1-25, 27-2-25 Covers 30-1-25, 27-2-25 Pistons 30-1-25, 27-2-25 Rods 30-1-25, 27-2-25

Crank shaft 30-1-25, 27-2-25 Flywheel shaft 30-1-25, 27-2-25 Thrust shaft 30-1-25, 27-2-25 Intermediate shafts 30-1-25, 27-2-25 Tube shaft 30-1-25, 27-2-25

Screw shaft 30-1-25, 27-2-25 Propeller 30-1-25, 27-2-25 Stern tube 30-1-25, 27-2-25 Engine seatings 30-1-25, 27-2-25 Engines holding down bolts 30-1-25, 27-2-25

Completion of fitting sea connections 30-1-25, 27-2-25 Completion of pumping arrangements 30-1-25, 27-2-25 Engines tried under working conditions 30-1-25, 27-2-25

FLYWHEEL Crank shaft, Material Ann. S. Inc. Eng. S. Ltd. Identification Mark Lloyd's H. 136 R. 5-6-24 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. Yes.

Is this machinery duplicate of a previous case No. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been constructed under special survey in accordance with the requirements of the Rules, the Secretary's letters, and the approved plans. Materials and workmanship good. Full power trial of Engines in shop satisfactory.

The amount of Entry Fee ... £	:	:	When applied for,
Special £	:	:	19.
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19.

Committee's Minute

GLASGOW 29 JUN 1926

Assigned

See G. R. No. 45771

W. G. Gallis

Engineer Surveyor to Lloyd's Register of Shipping.



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