

YACHT.  
REPORT ON OIL ENGINE MACHINERY.

14376  
No. 85486

4b.

Received at London Office  
5 MAY 1922 Port of London (Spurwich)  
Date, First Survey 22<sup>nd</sup> SEPT 1920 Last Survey 3<sup>rd</sup> May 1922  
Number of Visits 49

Writing Report 5 MAY 1922 When handed in at Local Office

Survey held at Spurwich

on the ~~Twin~~ <sup>Single</sup> Screw vessels M.Y. "SONA"

Built at Southampton By whom built Campin & Nicholson Yard No. 307 When built

Boilers made at Spurwich By whom made Messrs Vickers-Petters Ltd Engine Nos 251 When made 1922

By whom made Boiler No. When made

Port belonging to Southampton

Horse Power 500 each engine. Owners Earl of Dunraven K.P.

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

Horse Power as per Rule 286

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

Pressure in cylinders 280 lbs. No. of cylinders 6 No. of cranks 6 Diameter of cylinders 16"

Stroke 18" Revolutions per minute 250 Means of ignition Electric + Hot surface Kind of fuel used Grade oil.

Bearing between each crank Yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 35 1/2" 21 1/2"

Between centres of main bearings 35 1/2" Is a flywheel fitted Yes Diameter of crank shaft journals as fitted 7 1/2"

Crank pins 7 1/2" Breadth of crank webs as fitted 11" Thickness of ditto as fitted 4 1/4"

Diameter of tunnel shaft as per Rule 3 1/2" Diameter of thrust shaft as fitted 8"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

If the liner is in more than one length are the joints burned

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

Are the shafts fitted, is the shaft lapped or protected between the liners If without liners, is the shaft arranged to run in oil

Length of stern bush Diameter of propeller

No. of blades state whether moveable Total surface square feet 13 1/2 Top.

Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners 1/8 Blm.

Means of lubrication Main bearings syphoned. Top & Hot ends forced. Are the exhaust pipes and silencers water cooled or lagged with

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

No. of cooling water pumps 3 each the sea suction provided with an efficient strainer which can be cleared

No. of bilge pumps fitted to the main engines 1 on each engine Diameter of ditto 4 1/2" Stroke 6"

No. of auxiliary pumps connected to the main bilge lines How driven

No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room

No. of ballast pumps How driven Sizes of pumps

Is a separate auxiliary pump suction fitted in

Are all the bilge suction pipes fitted with roses Are the roses in Engine Room always accessible

Are all connections with the sea direct on the skin of the ship

Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates

Are they each fitted with a discharge valve always accessible on the plating of the vessel

Are the bilge suction pipes, cocks and valves arranged so as to prevent any

Is the screw shaft tunnel watertight Is it fitted with a watertight door

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

No. of stages Diameters Stroke Driven by

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Are the air compressors and their coolers made so as to be easy of access

No of high pressure air receivers 2 Internal diameter 24" Cubic capacity of each 24 feet.

Steel. Seamless, lap welded or riveted longitudinal joint Riveted. (Butt strip) Range of tensile strength 25/32 tons.

working pressure 200 lbs. No. of starting air receivers Internal diameter

Material Seamless, lap welded or riveted longitudinal joint

Working pressure by rules Is each receiver, which can be isolated.

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their

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

Man hole door at end.



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	1-11-20	280 lb " "	560 lb " "	A.B.F.	
COVERS	15-9-21	280 " "	" "	"	
JACKETS	5-11-20	5 to 10 lb " "	50 lb " "	"	
Air "Surge" Master valve	14-12-21		400 lb	"	
MAIN COMPRESSORS—1st Stage	24-10-21	200 lb " "	400 lb	"	
Air bottles for whistle	16-12-20		1200 lb	"	
2nd " "	24-10-21			"	
Fuel by-pass valve	14-12-21	200 lb " "	400 lb	"	
3rd " "	17-1-21	"	400 lb	"	
AIR RECEIVERS—STARTING	14-12-21	"	400 lb	"	
" Pumping INJECTION valve	14-12-20	"	400 lb	"	
AIR PIPES	14-12-21	"	400 lb	"	
FUEL PIPES	20-12-21	600 " "	1200 lb	"	
FUEL PUMPS	16-11-20	600 " "	1200 lb	"	
SILENCERS	8-12-20	"	20 lb	"	
WATER JACKET	8-12-20	"	20 lb	"	
Lubricating oil tanks	11-1-22	"	25 lb	"	
SEPARATE FUEL TANKS	4-3-21	"	4-2 lb	"	

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

Yes

Receivers

Yes

Separate Tanks

Yes

SPARE GEAR

See separate sheets, duly signed.

The foregoing is a correct description,

W. Lumsden

Manufacturer.

Dates of Survey while building

Dates of Examination of principal parts—Cylinders 24-10-20 1-11-20 2-11-20 19-11-20 Heads 14-11-20 19-11-20 22-11-20 30-9-21 Pistons 5-11-20 16-11-20 19-11-20 28-11-21 Rods Connecting rods 2-11-20 15-11-20 26-11-20 Crank shaft 9-8-20 24-10-20 15-9-21 Thrust shaft 2-12-20 15-12-20 Tunnel shafts Screw shaft Propeller Stern tube Engine seatings

Engines holding down bolts

Completion of pumping arrangements

Engines tried under working conditions

Completion of fitting sea connections

Stern tube

Screw shaft and propeller

Material of crank shaft Steel

Identification Mark on Do.

444 J.R. 446 D.M.C. 459 A.L. 460 A.L.

Material of thrust shaft Steel

Identification Mark on Do.

Material of tunnel shafts

Identification Marks on Do.

Material of screw shafts

Identification Marks on Do.

Is the flash point of the oil to be used over 150° F.

Is this machinery duplicate of a previous case

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) These engines have been constructed under Survey in accordance with the approved plans Society's Rules. The materials and workmanship of the cylinders, water jackets, covers, air starting receivers, pipes, fuel pumps, pipes etc have been tested and stamped as above. On completion of erection, the engine was run on a full power test works; manoeuvring + governor trials, also starting up from cold with electric starters, of which proved satisfactory. Engines afterwards dismantled, working parts examined found satisfactory.

The engines in my opinion will be eligible to be classed + L.M.C. with date after being installed in the vessel, + a satisfactory trial run.

The amount of Entry Fee £ 4-0-0

When applied for,

Special Survey £ 67-18-0

5 MAY 1922

Donkey Boiler Fee

When received

Travelling Expenses (if any) £

15-9-22 11316

A.B. Farmanier

Engineer Surveyor to Lloyd's Register of Ship

Committee's Minute

Assigned



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