

YACHT. REPORT ON OIL ENGINE MACHINERY.

14376
No. ~~85486~~

4b.

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

Survey held at Spurwich
on the Single Screw vessel M.Y. "SONA"
Built at Southampton By whom built Campier & Nicholson Yard No. 307 When built
By whom made Messrs Vickers-Petters Ltd Engine Nos 251 When made 1922
Boilers made at Spurwich By whom made _____ Boiler No. _____ When made _____
Horse Power 500 each engine Owners Earl of Dunraven K.P. Port belonging to Southampton
Horse Power as per Rule 286 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted yes

ENGINES, &c.—Type of Engines Single-Diesel 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 350 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 appd. 7 1/2"
Crank pins 7 1/2" Breadth of crank webs as appd. 11" Thickness of ditto as appd. 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 ✓
If without liners, is the shaft arranged to run in oil ✓

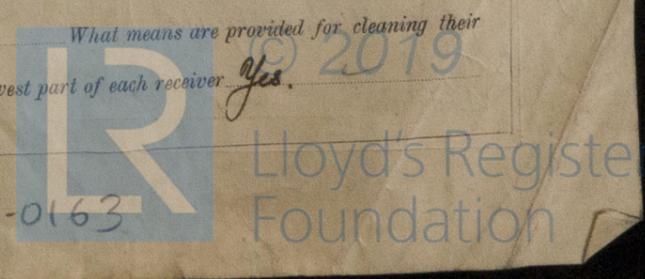
Length of stern bush _____ Diameter of propeller _____
No. of blades _____ state whether moveable ✓ Total surface _____ square feet
Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners 1 3/8" Top. 1/8" Blm.
Means of lubrication main bearings syphoned. Top & Hot ends forced. Are the exhaust pipes and silencers water cooled or lagged with _____

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 suction 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 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 _____

RECEIVERS:—No of high pressure air receivers 2 Internal diameter 24" Cubic capacity of each 24 feet
Material Steel Seamless, lap welded or riveted longitudinal joint Riveted. (Butt strip) Range of tensile strength 28/32 tons
Working pressure as appd. 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 receiver be examined Yes What means are provided for cleaning their _____
Is there a drain arrangement fitted at the lowest part of each receiver Yes



W319-0163

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	1-11-20	280lb	560lb	Abt.	
COVERS	15-9-21	280"	"	"	
JACKETS	5-11-20	5 to 10lb	50lb	"	
Air "Sumner" Master valve	14-12-21		400lb	"	
MAIN COMPRESSORS—1st Stage	27-10-21	200lb	400lb	"	
Air bottles for whistle	16-12-20		1200lb	"	
2nd " "					
Fuel by-pass valve	14-12-21	200lb	400lb	"	
3rd " "	17-1-21				
AIR RECEIVERS—STARTING	14-12-21	"	400lb	"	
" " " " INJECTION valve	14-12-21	"	400lb	"	
AIR PIPES	20-12-21	600"	1200lb	"	
FUEL PIPES	16-11-20	600"	1200lb	"	
FUEL PUMPS	8-12-20		20lb	"	
SILENCERS	8-12-20		20lb	"	
WATER JACKET	11-1-22		25lb	"	
Lubricating oil tanks	4-3-21		4-22	"	
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting *Yes* Receivers *Yes* Separate Tanks *Yes*

SPARE GEAR *See separate sheets, duly signed.*

The foregoing is a correct description,

W. J. ... Manufacturer.

Dates of Survey while building	Dates of Examination of principal parts	Completion of fitting sea connections	Material of crank shaft	Material of tunnel shafts	Is the flash point of the oil to be used over 150° F.	Is this machinery duplicate of a previous case
During progress of work in shops - - During erection on board vessel - - - Total No. of visits	Cylinders 24-10-20 Heads 1-11-20 Pistons 19-11-20 Rods 16-11-20 Connecting rods 15-11-20 Engine seatings 28-11-21	Engines holding down bolts ✓ Completion of pumping arrangements ✓ Engines tried under working conditions ✓	Steel Identification Mark on Do. 444 J.R. 446 D.M.C. 459 A.L. 460 A.L.	Steel 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. The cylinders, water jackets, covers, air starting receivers, pipes, fuel pumps, pipes etc have been hydro tested and stamped as above. On completion of erection, the engine was run on a full power to 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, *5 MAY 1922*
 Special *14-7-21* £ *67-18-0*
 Donkey Boiler Fee *14-7-21* £
 Travelling Expenses (if any) £
 When received *15-9-22*
 For Balance see Sou. rpt 11316

A. G. Farminer
 Engineer Surveyor to Lloyd's Register of Ship

Committee's Minute

Assigned

FRI. 18 AUG. 1922



Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)