

YACHT. REPORT ON OIL ENGINE MACHINERY.

No. **86804**

4b.

MARKS.

Received at London Office **7 JUL 1923**

Writing Report **19** When handed in at Local Office **7 JUL 1923** Port of **London (Greenwich)**

Survey held at **Greenwich** Date, First Survey **10 JAN 1923** Last Survey **15 JUNE 1923**

on the **Single** } Screw **Yacht "Karen"** Tons { Gross
Twin }
Triple } Net

Built at **Greenwich** By whom built **Lampson Nicholson** Yard No. **550** When built **1923**

Made at **Greenwich** By whom made **Wickens-Petters Ltd.** Engine No. **551** When made **1923**

Boilers made at **Greenwich** By whom made **Greenwich** Boiler No. **551** When made **1923**

Horse Power **240** **Back Engine Owners** Port belonging to **Greenwich**

Horse Power as per Rule **137** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **No**

ENGINES, &c. Type of Engines **Semi-Diesel** 2 or 4 stroke cycle **2** Single or double acting **Single**

Pressure in cylinders **300 lb.** No. of cylinders **8** No. of cranks **4** Diameter of cylinders **14"**

Stroke **16"** Revolutions per minute **275** Means of ignition **Hot Spark** Kind of fuel used **Grade oil**

Bearing between each crank **Yes** Span of bearings (Page 92, Section 2, par. 7 of Rules) **2-3 3/4**

Between centres of main bearings **2-3 3/4"** Is a flywheel fitted **Yes** Diameter of crank shaft journals **6"**

Diameter of crank pins **6"** Breadth of crank webs **9 1/4"** Thickness of ditto **3 3/4"**

Diameter of tunnel shaft **6"** Diameter of thrust shaft **6"**

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

Is the liner in more than one length are the joints burned **Yes**

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 **Yes**

Are the exhaust pipes and silencers water cooled or lagged with **Yes**

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

No. of cooling water pumps **one** Is the sea suction provided with an efficient strainer which can be cleared **Yes**

No. of bilge pumps fitted to the main engines **Two** Diameter of ditto **4 1/2"** Stroke **6"**

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

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

No. of ballast pumps **Two** How driven **Hand** Sizes of pumps **6"**

Is a separate auxiliary pump suction fitted in **Yes**

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

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

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

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

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

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

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

No. of stages **Two** Diameters **2'-0"** Stroke **24"** Driven by **Hand**

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

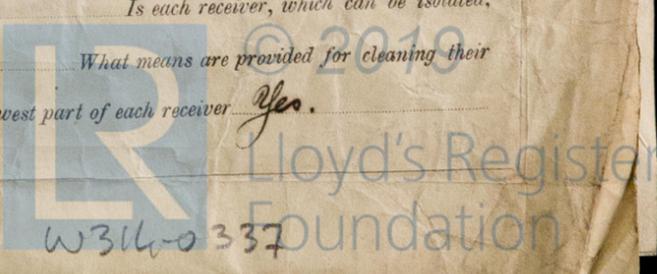
RECEIVERS:—No of high pressure air receivers **Two** Internal diameter **2'-0"** Cubic capacity of each **24** **feet**

Material **Steel** Seamless, lap welded or riveted longitudinal joint **Seamless, lap welded or riveted longitudinal joint**

Working pressure by rules **See Glasgow Report No 42712** Range of tensile strength **See Glasgow Report No 42712**

Can the internal surfaces of the receivers be examined **Yes** What means are provided for cleaning their **See Glasgow Report No 42712**

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



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 <i>Iron</i>	550 8-3-23	280 lbs per sq"	560 lbs per sq"	ASST.	
" " <i>Heads</i>	8-3-23	280 lbs "	560 lbs "	ASST.	
" " <i>JACKETS</i>	15-3-23	5 to 10 lbs "	50 "	ASST.	
" " <i>PISTON WATER PASSAGES</i>					
MAIN COMPRESSORS—1st STAGE					
" 2nd "					
" 3rd "					
AIR RECEIVERS <i>Control Valve</i>	24-3-23	200 lbs "	400 lbs "	ASST.	
" <i>Securing fittings</i>	24-3-23	200 lbs "	400 lbs "	ASST.	
" <i>Injection</i>	7-5-23	200 lbs "	400 lbs "	ASST.	
" <i>4) Air starting & reversing valves</i>	29-3-23	200 lbs "	400 lbs "	ASST.	
AIR PIPES	29-3-23	200 lbs "	400 lbs "	ASST.	
FUEL PIPES	6-4-23	600 lbs "	1200 lbs "	ASST.	
FUEL PUMPS	17-3-23	600 lbs "	1200 lbs "	ASST.	
" <i>one oil container</i>	24-3-23	200 lbs "	400 lbs "	ASST.	
SILENCER <i>Water cooled</i>	2-6-23	5 to 10 lbs "	50 to 25 "	ASST.	
" <i>Exhaust pipe leads water cooled</i>	22-5-23		25 "	ASST.	
" <i>WATER JACKET</i>					
SEPARATE FUEL TANKS	32-5-23		7 1/2 lbs "	ASST.	

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

SPARE GEAR 2 *Exhaustors*, 16 *Exhaust joints*, 5 *Main bearing brass bottom half*, 1 *Conn. rod, gudgeon bar*, 1 *Pan top end brass with bolts & nuts*, 4 *Fuel pump suction valves*, 2 *" delivery valves*, 2 *" Springs complete*

8. *Safety valve diaphragm for fuel pump.*
 24. *Suction & delivery valves for h.c. & bilge pumps.*
 16. *Cylinder head joints.*
 10. *Piston rings.*
 2. *Air reversing valves.*
 1. *Fuel pump complete.*
 1. *Piston ring guide.*
 1. *Complete set thrust pads.*

1. *Cylinder head complete*
 1. *Flange pinion for cu.*
 1. *Exhaust fan*
 10%. *of all sizes bolts*
 2. *Complete sets of springs*
 4. *Spring washers for cu.*

The foregoing is a correct description,



J. McElraith Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1923: JAN 10-27 FEB 24-28 MAR 9-8-15-17-20-24-29 APR 6-21-27 MAY 1-7-9-12-24-31 JUN 1-7-9-12-24-31

Total No. of visits: *24*

Dates of Examination of principal parts: Cylinders *10-1-23*, Heads *27-1-23*, Crank shafts *15-1-23*, Extension *8-3-23*, Clowns *8-3-23*, Thrust shaft *15-3-23*, Pistons *24-2-23*, Rods ✓, Connecting rods ✓, 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 shafts: *Steel*, Identification Marks on Do. *Nº 626 A1*, Material of thrust shafts: *Steel*, Identification Mark on Do. *Nº*, Material of *extension* shafts: *Steel*, Identification Marks on Do. *Nº*, 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, are sound. On completion of erection, the engines were run at full power for 6 hours & found satisfactory, both in work afterwards dismantled & working parts examined, found satisfactory. Have now been dispatched to Messrs Sampson & Meehoburn. Expect to be installed in the yacht "KAREN", & will be eligible in my opinion to have the record of + L.M.C. with date, after a satisfactory trial when installed in the vessel.*

The amount of Entry Fee £ *44* : : :
 Special Donkey Boiler Fee £ *30.16.0* : : :
 Travelling Expenses (if any) £ : : :
 When applied for, *1917/18*
 When received, *230.16.0 paid 1-5-23 J.B.W.*

A.B. Larmer
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute
 Assigned
 3 AUG. 1923
 See Sou Rpt 11574

