

REPORT ON MACHINERY.

No. 18201
THU. 24 APR. 1924

Received at London Office
GREENOCK

Date of writing Report 19 When handed in at Local Office 15/4/1924 Port of GREENOCK

No. in Survey held at Greenock Date, First Survey 26th Jan'y, 1923 Last Survey 12th April, 1924
Reg. Book. S/S Birchton (Number of Visits 49)

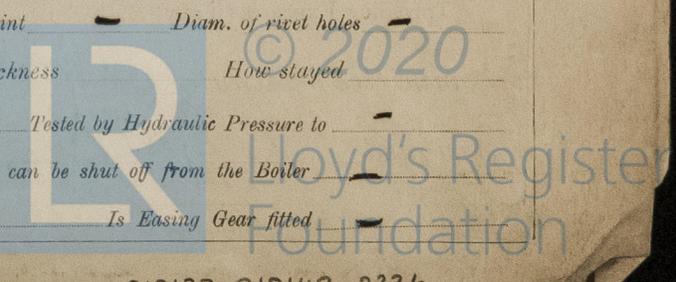
Master Built at Dumbarton By whom built A. G. Millar & Co. Ltd. (459) Tons Gross 1732 Net 1006
Engines made at Greenock By whom made John & Kucalid. (599) when made 1923
Boilers made at alls By whom made alls (599) when made 1923
Registered Horse Power Owners The Mathews. S. C. Co. Port belonging to Glasgow
Nom. Horse Power as per Section 28 165 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 15-26-42 Length of Stroke 30 Revs. per minute 90 Dia. of Screw shaft as per rule 8.43 as fitted 8.76 Material of screw shaft S
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight in the propeller boss Yes If the liner is in more than one length are the joints burned — If 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 — If two liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 3-3 1/2
Dia. of Tunnel shaft as per rule 8.09 as fitted None Dia. of Crank shaft journals as per rule 8.49 as fitted 8.34 Dia. of Crank pin 8 3/4 Size of Crank webs 13 1/2 x 7 1/2 Dia. of thrust shaft under collars 8 3/4 Dia. of screw 12.0 Pitch of Screw 11-6 No. of Blades 4 State whether moceable Yes Total surface 55 A
No. of Feed pumps 2 Diameter of ditto 3 Stroke 15 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 3 Stroke 15 Can one be overhauled while the other is at work Yes
No. of Donkey Engines 2 Sizes of Pumps 2 6 1/4 x 6 1/2 Ball 9 x 1 1/2 x 1 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2 3" Eng Room Drill 1.3 In Holds, &c. 2 4" in each
No. of Bilge Injections all sizes 6 Connected to circulating pump Is a separate Donkey Suction fitted in Engine room & size Yes 4"
Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks both
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line above
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
What pipes are carried through the bunkers Steam, Fuel, &c. How are they protected Steel casing
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record (S) Manufacturers of Steel Colville, Spencers, Lancashire
Total Heating Surface of Boilers 2598 # Reliance System of Amsted Is Forced Draft fitted Diaphragm No. and Description of Boilers 2 Single Ended
Working Pressure 200 Tested by hydraulic pressure to 350 Date of test 3-5-23 No. of Certificate 1630
Can each boiler be worked separately Yes Area of fire grate in each boiler 39 H16 # No. and Description of Safety Valves to each boiler Double Spring Area of each valve 3.98 Pressure to which they are adjusted 205 Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 12 Mean dia. of boilers 2-13/32 Length 10-6 Material of shell plates S
Thickness 3/32 Range of tensile strength 28.32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams DR long. seams TR. OBS Diameter of rivet holes in long. seams 1 5/32 Pitch of rivets 8 1/8 Length of plates or width of butt straps 14 1/4
Per centages of strength of longitudinal joint rivets 85.76 Working pressure of shell by rules 201 Size of manhole in shell 16 x 12
Size of compensating ring 2-17/8 x 2-57/8 x 13/32 and Description of Furnaces in each boiler 2 Corrugated Material S Outside diameter 3-11/4
Length of plain part top Yes Thickness of plates crown 7 5/8 Description of longitudinal joint weld No. of strengthening rings 25/32 bottom Yes
Working pressure of furnace by the rules 201 Combustion chamber plates: Material S Thickness: Sides 5/8 Back 2/32 Top 5/8 Bottom 25/32
Pitch of stays to ditto: Sides 4 1/2 x 8 1/4 Back 8 1/4 x 8 1/2 Top 4 5/8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 201
Material of stays S Area at smallest part 236.173 Area supported by each stay 44.37 Working pressure by rules 204 End plates in steam space: Material S Thickness 1 1/8 Pitch of stays 1 1/4 x 1 3/4 How are stays secured DN Working pressure by rules 203 Material of stays S
Area at smallest part 556 Area supported by each stay 288 Working pressure by rules 210 Material of Front plates at bottom S
Thickness 3/32 Material of Lower back plate S Thickness 13/16 Greatest pitch of stays 137/8 x 8 1/2 Working pressure of plate by rules 201
Diameter of tubes 3 Pitch of tubes 4 1/4 x 4 1/8 Material of tube plates S Thickness: Front 3/32 Back 3/4 Mean pitch of stays 9.71
Pitch across wide water spaces 14 Working pressures by rules 202 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 3/4 x 11/16 (2) Length as per rule 2.49/32 Distance apart 8 Number and pitch of stays in each 3 at 7 1/2
Working pressure by rules 205 Steam dome: description of joint to shell — % of strength of joint —
Diameter — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet holes —
Pitch of rivets — Working pressure of shell by rules — Crown plates — Thickness — How stayed —

SUPERHEATER. Type — Date of Approval of Plan — Tested by Hydraulic Pressure to —
Date of Test: — Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler —
Diameter of Safety Valve — Pressure to which each is adjusted — Is Easing Gear fitted —

If not, state whether, and when, one will be sent? No Is a Report also sent on the Hull of the Ship?



IS A DONKEY BOILER FITTED?

No ✓

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:—

2 Connecting Rods top end both ends, ditto for bottom end, 2 Main Bearing bolts, 1 Set of Coupling bolts, 1 Set of Feed Pulge Pump Bolts, a quantity of assorted bolts nuts, Iron of various sizes

The foregoing is a correct description, FOR JOHN G. KINCAID & COY., LIMITED.

Robert Green Boarders.

Manufacturer.

Dates of Survey while building: During progress of work in shops - - 1923 Jan 26-30 Feb 14-20 27 Mar 2-6 19-21 27 29 Apr 3-5 10-12 16-20 24 30 May 3 8-10 18 21 30 June 5-11-15-18 July 17-19-23-24 Aug 7-15 Oct 3-5 Nov 26 (1924) Jan 14-16 Feb 8-22 27-28 Mar 5-11-14-24 Apr 12. Total No. of visits 49

Is the approved plan of main boiler forwarded herewith? Yes for use with 1st Certificate Refd 4th 1819

Dates of Examination of principal parts—Cylinders 28. 5. 23 Slides 5-6. 23 Covers 28. 5. 23 Pistons 30-5. 23 Rods 23-7. 23 Connecting rods 23-7. 23 Crank shaft 23-7. 23 Thrust shaft 23-7. 23 Tunnel shafts ✓ Screw shaft 16-1. 24 Propeller 16-1. 24 Stern tube 16-1. 24 Steam pipes tested 6-2. 24 Engine and boiler seatings on 4th Ref. Engines holding down bolts 28-2. 24 Completion of pumping arrangements 28 3-24 Boilers fixed 27-2. 24 Engines tried under steam 12-4-24 Completion of fitting sea connections on 4th Ref. Stern tube on 4th Ref. Screw shaft and propeller on 4th Ref. Main boiler safety valves adjusted 24-3-24 Thickness of adjusting washers PV 7/16 SV 3/8 PV 15/32 SV 7/16 Material of Crank shaft S Identification Mark on Do. LLOYD'S 599 W.G.M Material of Thrust shaft S Identification Mark on Do. LLOYD'S 64266 Material of Tunnel shafts ✓ Identification Marks on Do. Material of Screw shafts S Identification Marks on Do. 6419 W.G.M Material of Steam Pipes Copper SD Test pressure 100 lbs

Is an installation fitted for burning oil fuel? ✓ Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with? ✓

Is this machinery duplicate of a previous case? Yes If so, state name of vessel S/S "Oakton" 18104

General Remarks (State quality of workmanship, opinions as to class, &c.) These Engines & Boilers have been built under special survey in accordance with the approved plans & the workmanship & material are of good quality, they have been securely fitted on board, and under steam & found satisfactory.

The machinery is eligible in my opinion for the record of L M C 4-24

It is submitted that this vessel is eligible for THE RECORD. + L M C 4. 24. F D. C L.

W. Gordon-Mitchell 25/4/24

W. Gordon-Mitchell Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : - : / When applied for, 16/4/1924 Special ... £ 41 : 5 : / Donkey Boiler Fee ... £ : : / When received, 24 Travelling Expenses (if any) £ : : /

Committee's Minute GLASGOW 23 APR 1924

Assigned + L M C 4. 24

GREENOOK

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

DIPLICATE WRITTEN 24/4/24

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