

REPORT ON MACHINERY.

No. 33776

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Date of writing Report 20-3-1914 When handed in at Local Office 23-3-1914 Port of Glasgow
No. in Survey held at Glasgow Date, First Survey 9.7.13 Last Survey 20-3-1914
Reg. Book. 114 on the Steel Screw 3 Mast Steamer "STREATHAM" (Number of Visits 33)
Master J. H. Leau Built at Dublin By whom built Dublin Dockyard Co. Ltd. When built 1914
Engines made at Glasgow By whom made Ross & Duncan when made 1914.
Boilers made at Glasgow By whom made Ross & Duncan when made 1914.
Registered Horse Power Owners John Harrism Ltd Port belonging to Dublin
Nom. Horse Power as per Section 28 138 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders $14 \times 24\frac{1}{2} \times 45$ Length of Stroke 33 Revs. per minute 92 Dia. of Screw shaft as per rule 9.6" Material of screw shaft Iron
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 Yes If two
liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 3-4 $\frac{1}{2}$ "
Dia. of Tunnel shaft as per rule 9.0" Dia. of Crank shaft journals as per rule 9.02" Dia. of Crank pin 9.5" Size of Crank webs 14 $\frac{1}{2} \times 6\frac{1}{2}$ " Dia. of thrust shaft under
collars 9.5" Dia. of screw 11-9" Pitch of Screw 12-9" No. of Blades 4 State whether moveable No Total surface 49 sq ft
No. of Feed pumps 2 Diameter of ditto 3" Stroke 16 $\frac{1}{2}$ " Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 3" Stroke 16 $\frac{1}{2}$ " Can one be overhauled while the other is at work Yes
No. of Donkey Engines 3 Sizes of Pumps 1 Dup. 6x4x6 1 Ballast 6x5x5 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 2-2 $\frac{1}{2}$ " + 1-2 $\frac{1}{2}$ " special 1 D. B. 4 $\frac{1}{2} \times 3 \times 6$ In Holds, &c. Forward 2-2 $\frac{1}{2}$ " Aft 2-2 $\frac{1}{2}$ "

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump C. P. Is a separate Donkey Suction fitted in Engine room & size Yes
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 Hold & Tank suction How are they protected Wood casings
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
Dates of examination of completion of fitting of Sea Connections + of Stern Tube + Screw shaft and Propeller Dublin Rpt.
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel D. Colville & Sons & The Lanarkshire Steel Co. Ltd.
Total Heating Surface of Boilers 2298 sq ft Is Forced Draft fitted No No. and Description of Boilers One single ended marine
Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 13-2-14 No. of Certificate 12553
Can each boiler be worked separately Area of fire grate in each boiler 69 sq ft No. and Description of Safety Valves to
each boiler 1 pair spring loaded Area of each valve 4.06 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 3-3" Inside dia. of boilers 16-0" Length 11-0" Material of shell plates steel
Thickness 1 $\frac{5}{16}$ " Range of tensile strength 28/26/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D. R.
long. seams T. R. D. B. S. Diameter of rivet holes in long. seams 1 $\frac{5}{16}$ " Pitch of rivets 8 $\frac{3}{4}$ " width of butt straps 1-4 $\frac{1}{4}$ "
Per centages of strength of longitudinal joint rivets 85% Working pressure of shell by rules 185 Size of manhole in shell 12 \times 16"
Size of compensating ring 4 $\frac{1}{4}$ " x 1 $\frac{5}{16}$ " No. and Description of Furnaces in each boiler 3 Deighlin Material steel Outside diameter 4-4 $\frac{1}{4}$ "
Length of FURNACE top 36-10 $\frac{1}{2}$ " Thickness of plates crown 2 $\frac{1}{32}$ " Description of longitudinal joint welded No. of strengthening rings
bottom 36-10 $\frac{1}{2}$ " Working pressure of furnace by the rules 205 Combustion chamber plates: Material steel Thickness: Sides 11 $\frac{1}{16}$ " Back 5 $\frac{5}{8}$ " Top 11 $\frac{1}{16}$ " Bottom 13 $\frac{1}{16}$ "
Pitch of stays to ditto: Sides 8 \times 8" Back 4 $\frac{3}{4}$ " x 8 $\frac{1}{4}$ " Top 8 \times 8" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 211
Material of stays L. M. Iron Area at smallest part 2.040 Area supported by each stay 640 Working pressure by rules 242 End plates in steam space:
Material steel Thickness 1 $\frac{1}{8}$ " Pitch of stays 19 \times 14" How are stays secured D. N. & W. Working pressure by rules 185 Material of stays steel
Area at smallest part 6.10 Area supported by each stay 323 Working pressure by rules 196 Material of Front plates at bottom steel
Thickness 13 $\frac{1}{16}$ " Material of Lower back plate steel Thickness 13 $\frac{1}{16}$ " Greatest pitch of stays 13 $\frac{1}{2}$ " x 4 $\frac{3}{4}$ " Working pressure of plate by rules 190
Diameter of tubes 3 $\frac{1}{2}$ " Pitch of tubes 4 $\frac{7}{8}$ " x 4 $\frac{7}{8}$ " Material of tube plates steel Thickness: Front 1 $\frac{1}{8}$ " Back 7 $\frac{1}{8}$ " Mean pitch of stays 10 $\frac{3}{8}$ "
Pitch across wide water spaces 14" Working pressures by rules 208 Girders to Chamber tops: Material Iron Depth and
thickness of girder at centre 8 \times 2 $\frac{1}{4}$ " Length as per rule 2-8 $\frac{1}{2}$ " Distance apart 8" Number and pitch of stays in each 3 @ 8"
Working pressure by rules 194 Superheater or Steam chest: how connected to boiler None Can the superheater be shut off and the boiler worked
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with casing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____
 Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____
 Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 2 Connecting Rod wps end bolts & nuts, 2 Connecting rod bottom bolts & nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed, large & air pump valves, 1 set of piston springs, a quantity of assorted bolts & nuts. Iron of various sizes.

The foregoing is a correct description,

Ross & Duncan Wmouison Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1913 July 9-15 Aug 5-20 Sept 4-9 15-18 24 Oct 6-15 28 Nov 4-13 19-24 Dec 1-8 17-27
 { During erection on board vessel -- 1914 Jan 7-13 14-21 27 Feb 5-10 15-27 Mar 3-10 16-20
 Total No. of visits 33

Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 24-9-13 Slides 4-11-13 Covers 4-11-13 Pistons 4-11-13 Rods 17-12-13
 Connecting rods 14-12-13 Crank shaft 19-11-13 Thrust shaft 21-1-14 Tunnel shafts — Screw shaft 13-1-14 Propeller 13-1-14
 Stern tube 13-1-14 Steam pipes tested 3-3-14 Engine and boiler seatings 16-3-14 Engines holding down bolts 16-3-14
 Completion of pumping arrangements 16-3-14 Boilers fixed 16-3-14 Engines tried under steam 20-3-14
 Main boiler safety valves adjusted 16-3-14 Thickness of adjusting washers Port 5/16" Starboard 5/16"
 Material of Crank shaft Steel Identification Mark on Do. 6481 Material of Thrust shaft Steel Identification Mark on Do. 6481
 Material of Tunnel shafts Iron Identification Marks on Do. — Material of Screw shafts Iron Identification Marks on Do. 6481
 Material of Steam Pipes Copper Test pressure 360 lbs \square

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Machinery has been built under special survey in accordance with the approved plans, securely fitted on board & tried under steam with satisfactory results and is eligible, in my opinion, to have record of T.L.M.C 3-14.

It is submitted that this vessel is eligible for THE RECORD. + LMC 3 14.

The amount of Entry Fee .. £ 2 : 0 : 0 When applied for.
 Special £ 20 : 14 : 0 24.3.14
 Donkey Boiler Fee £ : : : When received.
 Travelling Expenses (if any) £ : : : 26/3/14

Committee's Minute

GLASGOW 24 MAR 1914

Assigned + L.M.C. 3,14 subject to classification of hull.

FRI. MAR. 27 1914

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Lloyd's Register of Shipping
 MACHINERY CERTIFICATE
 WRITTEN