

REPORT ON MACHINERY.

Port of SunderlandReceived at London Office Sat. 4 APL 1903No. in Survey held at Sunderland Date, first Survey 3rd June, 1902 Last Survey 31st March 1903Reg. Book. S. S. "Claverburn" (Number of Visits 42)on the S. S. "Claverburn" Tons { Gross 3870
Net 2518Master J. W. Parker Built at Sunderland By whom built J. Priestman & Co. When built 1903Engines made at Sunderland By whom made Richardsons, Westgarth & Co. when made 1903Milers made at " By whom made " when made 1903Registered Horse Power " Owners E. Haslehurst & Co. Port belonging to LondonNom. Horse Power as per Section 28 322 Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 25 · 41 · 69 Length of Stroke 48 Revs. per minute 65 Dia. of Screw shaft as per rule 14 · 11
 Dia. of Tunnel shaft as per rule 12 · 69 Dia. of Crank shaft journals as per rule 13 · 33 Dia. of Crank pin 13 1/2 Size of Crank webs 19x8 1/8 Dia. of thrust shaft under
 as fitted 12 3/4 as fitted 13 1/2 Dia. of screw 17'-0" Pitch of screw 17'-6" No. of blades 4 State whether moveable No Total surface 85 sq
 No. of Feed pumps 2 Diameter of ditto 3 3/4 Stroke 27 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 11x10 6x4x6 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 3 of 3 1/2" In Holds, &c. Two in each hold of 3 1/2"

No. of bilge injections 1 sizes 5" Connected to condenser, or to circulating pump C. P. 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 ✓
 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
 That pipes are carried through the bunkers None How are they protected ✓
 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
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock New vessel Is the screw shaft tunnel watertight Yes
 Is it fitted with a watertight door Yes worked from top platform

BOILERS, &c.— (Letter for record R) Total Heating Surface of Boilers 4490 sq Is forced draft fitted No
 No. and Description of Boilers Ordinary Marine Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs
 Date of test 27-2-03 Can each boiler be worked separately Yes Area of fire grate in each boiler 71 sq No. and Description of safety valves to
 each boiler 2 Spring Area of each valve 7 · 07 sq Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2 ft. Mean dia. of boilers 13'-6" Length 11'-6 3/4" Material of shell plates S.
 Thickness 1 1/8 Range of tensile strength 28-32 Are they welded or flanged No Descrip. of riveting: cir. seams D. R. L. long. seams J. R. D. B. S.
 Diameter of rivet holes in long. seams 1 9/32 Pitch of rivets 8 Lap of plates or width of butt straps 16 1/2
 Percentages of strength of longitudinal joint rivets 85 Working pressure of shell by rules 180 lbs Size of manhole in shell end 16x12
 plate 83 · 9 No. and Description of Furnaces in each boiler 3 Morrisons Material S Outside diameter 3'-6 1/4"
 Size of compensating ring flanged Thickness of plates crown 1/2 Description of longitudinal joint Weld No. of strengthening rings ✓
 length of plain part top ✓ bottom ✓ Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material S Thickness: Sides 7/8 Back 7/8 Top 7/8 Bottom 3/4
 Pitch of stays to ditto: Sides 8 1/2 Back 8 7/8 Top 8 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 184 lbs
 Material of stays iron Diameter at smallest part 1 5/8 Area supported by each stay 73 Working pressure by rules 183 End plates in steam space:
 Material S Thickness 1 3/32 Pitch of stays 16 1/2 x 19 1/2 How are stays secured nuts Working pressure by rules 183 lbs Material of stays S
 Diameter at smallest part 2 7/8 Area supported by each stay 322 Working pressure by rules 189 Material of Front plates at bottom S
 Thickness 3/4 Material of Lower back plate S Thickness 3/4 Greatest pitch of stays 13 7/8 Working pressure of plate by rules 292
 Diameter of tubes 3 1/4 Pitch of tubes 4 3/8 Material of tube plates S Thickness: Front 25/32 Back 25/32 Mean pitch of stays 8 3/4
 Pitch across wide water spaces 14 Working pressures by rules 187 lbs Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 8 1/2 x 3/4 x 2 Length as per rule 2'-8" Distance apart 8 1/2 Number and pitch of Stays in each 2 stays 8 1/2 pitch
 Working pressure by rules 186 lbs 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
 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 —

DONKEY BOILER—

No.

Description

None fitted

Made at

By whom made

When made

Where fixed

Working pressure

tested by hydraulic pressure to

No. of Certificate

Fire grate area

Description of safety valves

No. of safety valves

Area of each

Pressure to which they are adjusted

If fitted with easing 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

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

Thickness of furnace crown plates

Stayed by

Working pressure of shell by rules

Working pressure of furnace by rules

Diameter of uptake

Thickness of uptake plates

Thickness of water tubes

SPARE GEAR. State the articles supplied:— Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, coupling bolts & nuts, feed & bilge pump valves, assorted iron bolts & nuts &c.

RICHARDSON, WESTGARTH & CO., LTD

The foregoing is a correct description,

Manufactured by

Frederic S. Russell

CHIEF

DRAUGHTSMAN

Dates of Survey while building
During progress of work in shops— 1902— June 2, 6, July 28, 31, Aug. 13, 15, 19, 27, 29, Oct. 28, Nov. 4, 6, 17, 19, 21, 26, Dec. 3, 6, 12, 16, 18.
During erection on board vessel— 1903— Jan. 15, 20, 24, 27, 30, Feb. 3, 19, 23, 24, 25, 26, 27, 28, Mar. 3, 5, 10, 11, 24, 25, 28, 31.
Total No. of visits 42.

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

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

Material of screw shaft Wrought Iron Is the screw shaft fitted with a continuous liner the whole length of the stern tube YesIs the after end of the liner made water tight in the propeller boss No. 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 ✓

The machinery of this vessel has been constructed under special survey, the material and workmanship being good and efficient, and the engines when tried under steam worked satisfactorily.

The pumps, watertight doors and steam steering gear are in efficient working order, and the main steam pipes have been tested by hydraulic pressure to 400 lbs per square inch.

In my opinion this vessel is eligible for the notification in the Register Book of LMC 3-03

It is submitted that this vessel is eligible for THE RECORD. LMC 3.03

Bal

4.4.03

4.4.03

The amount of Entry Fee.. £ 37 : 16 :

Special .. £ 2 : 2 :

Donkey Boiler Fee .. £ :

Travelling Expenses (if any) £ :

When applied for,

3.4.03

When received,

23.4.03

P. R. Salmon

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 7 APR 1903

Assigned

+ LMC 3.03

MACHINERY CERTIFICATE
WRITTEN.

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Foundation