

REPORT ON MACHINERY.

Port of Sunderland

MUN. 2 FEB 1903

Received at London Office 10

No. in Survey held at Sunderland Date, first Survey 10th Sept, 02 Last Survey 28th January 1903
Reg. Book. (Number of Visits 33)

on the S.S. "Margarita" Tons } Gross 2787
Net 1759

Master H. Kennedy Built at Sunderland By whom built J. Blumer & Co. When built 1903

Engines made at Sunderland By whom made Jes. Clark Ltd. when made 1903

Boilers made at " By whom made " when made 1903

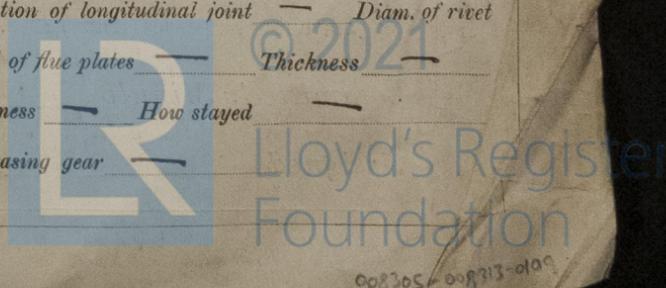
Registered Horse Power 279 Owners Buenos Ayres Great Southern Railway Port belonging to London

Nom. Horse Power as per Section 28 279 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 23 1/2" - 39" - 64" Length of Stroke 42 Revs. per minute 70 Dia. of Screw shaft as per rule 12 3/8" as fitted 12 3/8" Lgth. of stern bush 4'-4"
 Dia. of Tunnel shaft as per rule 11 1/4" as fitted 11 1/4" Dia. of Crank shaft journals as per rule 11 7/8" as fitted 11 7/8" Dia. of Crank pin 11 7/8" Size of Crank webs 17 1/2" x 9 1/2" Dia. of thrust shaft under collars 12 3/8" Dia. of screw 16'-0" Pitch of screw 17'-3" No. of blades 4 State whether moveable No Total surface 75 sq ft
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/4" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 7 3/4" x 9" x 10" & 6" x 4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4 of 3" diam. In Holds, &c. Two in each 3" diam.

No. of bilge injections 1 size 5" Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size 4" diam.
 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 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 S) Total Heating Surface of Boilers 4392 Is forced draft fitted No
 No. and Description of Boilers Two single ended Working Pressure 160 Tested by hydraulic pressure to 320
 Date of test 4-12-02 Can each boiler be worked separately Yes Area of fire grate in each boiler 55 sq ft No. and Description of safety valves to each boiler Two Spring Loaded Area of each valve 7.66 sq in Pressure to which they are adjusted 160 Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2 ft. Mean dia. of boilers 15-3 Length 10-6 Material of shell plates S
 Thickness 1 3/4" Range of tensile strength 28 1/2-32 Are they welded or flanged One flanged Descrip. of riveting: cir. seams D.R.L long. seams J.R.D.B.S.
 Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/2" ~~Top of plates or width of butt straps~~ 1'-5 1/2"
 Percentages of strength of longitudinal joint rivets 89 plate 85 Working pressure of shell by rules 162 lbs. Size of manhole in shell 16 x 13
 Size of compensating ring 9 3/4" x 1 1/8" No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 44 1/2"
 Length of plain part top 6.5" bottom 6.5" Thickness of plates crown 4 1/4" bottom 4 1/4" Description of longitudinal joint Welded No. of strengthening rings none
 Working pressure of furnace by the rules 160 Combustion chamber plates: Material S Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1/8"
 Pitch of stays to ditto: Sides 10 3/4" Back 10 3/4" x 9 1/4" Top 8 3/4" x 10 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 162
 Material of stays S Diameter at smallest part 1 3/4" Area supported by each stay 98 1/2 Working pressure by rules 180 End plates in steam space:
 Material S Thickness 1 1/32" Pitch of stays 18 5/8" How are stays secured Nuts Working pressure by rules 162 Material of stays S
 Diameter at smallest part 2 5/8" Area supported by each stay 409 Working pressure by rules 160 Material of Front plates at bottom S
 Thickness 13/16" Material of Lower back plate S Thickness 5 5/8" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 163
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates S Thickness: Front 5/64" Back 3/4" Mean pitch of stays 9
 Pitch across wide water spaces 14 1/4" Working pressures by rules 160 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 3/4" x 13/16" x 2 Length as per rule 2-10 1/2" Distance apart 8 3/4" Number and pitch of Stays in each 2 stays 10 3/4"
 Working pressure by rules 167 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 —



DONKEY BOILER— No. 1 Description *Byl. Multi- 2 plain furnaces*
 Made at *Stockton* By whom made *Riley Bros* When made *1902* Where fixed *On deck*
 Working pressure *80lbs* tested by hydraulic pressure to *160lbs* No. of Certificate *2885* Fire grate area *20sq* Description of safety valves *Direct Spring*
 No. of safety valves *2* Area of each *7.07* Pressure to which they are adjusted *80lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *9'-0"* Length *8'-6"* Material of shell plates *S* Thickness *1/2* Range of tensile strength *37/32* Descrip. of riveting long. seams *J. R. Lap* Dia. of rivet holes *15/16* Whether punched or drilled *Drilled* Pitch of rivets *4 1/8*
 Lap of plating *6 1/2* Per centage of strength of joint Rivets *77.3* Thickness of shell *end riv. washers* Plates *3/4* Dia. of do. *17 x 16 1/2* No. of Stays to do. *—*
 Dia. of stays *2 1/8* Diameter of furnace Top *31"* Bottom *L* Length of furnace *5'-4"* Thickness of furnace plates *1/16* Description of joint *Weld* Thickness of furnace or stay plates *15/32* Stayed by *1 1/8* off *3" pitch riv.* Working pressure of shell by rules *83.7 lbs*
 Working pressure of furnace by rules *80 lbs* Diameter of uptake *3 1/2* Thickness of uptake plates *7 3/4 x 8 1/16* Thickness of water tubes *5/16*

SPARE GEAR. State the articles supplied:— *Top and bottom end connecting rod, bolts and nuts, two main bearing bolts and nuts, one set of coupling bolts, feed and bilge pump valves, bolts, nuts, and iron assorted, propeller &c.*

The foregoing is a correct description,
G. G. Clark Limited Manufacturer.

Dates of Survey while building
 During progress of work in shops— 1902. — Sept. 10, 15, Oct. 7, 15, 17, 28. Nov. 5, 8, 12, 17, 18, 20, 22, 25, 26. Dec. 1, 2, 4, 5, 9, 10, 12, 13, 15, 16, 20, 22.
 During erection on board vessel — 23, 24, 30, 1902. — Jan. 5, 14, 28.
 Total No. of visits *33*

Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " *Retained*

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

Material of screw shaft *Scrap 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 *✓*

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 *L.M.C 1-03*.

It is submitted that this vessel is eligible for THE RECORD — L.M.C 1.03

The amount of Entry Fee. £ *33 : 19* :
 Special £ .. :
 Donkey Boiler Fee £ .. :
 Travelling Expenses (if any) £ .. :
 When applied for, *17.1.03*
 When received, *19.1.03*

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

Committee's Minute TUES. 3 FEB 1903

TUES. 17 FEB 1903

Assigned *L.M.C 1.03*

TUES. 2 JUN 1903