

REPORT ON MACHINERY.

Port of Sunderland

MUN. 2 FEB 1903

No. in Survey held at SunderlandDate, 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 1759When built 1903Master A. Kennedy Built at Sunderland By whom built J. Blumer & Co.Engines made at Sunderland By whom made Geo. Black, Ltd. when made 1903Boilers made at " By whom made " when made 1903Registered Horse Power 279 Owners Buenos Ayres Great Southern Railway Port belonging to LondonNom. 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 23½"-39"-64" Length of Stroke 42 Revs. per minute 70 Dia. of Screw shaft as per rule 12½" as fitted 12½" Lgth. of stern bush 4'-4"
 Dia. of Tunnel shaft as per rule 11½" as fitted 11½" Dia. of Crank shaft journals as per rule 11.75" as fitted 11½" Dia. of Crank pin 11½" Size of Crank webs 17½"x2½" Dia. of thrust shaft under collars 12½" Dia. of screw 16'-0" Pitch of screw 17'-3" No. of blades 4 State whether moveable No Total surface 75 sq
 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 4½" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 7¾"x9"x10"x6"x4"x6" 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 YesAre all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks BothAre 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 aboveAre 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 YesWhat 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 YesAre the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges YesWhen were stern tube, propeller, screw shaft, and all connections examined in dry dock New Vessel Is the screw shaft tunnel watertight YesIs it fitted with a watertight door Yes worked from Top PlatformBOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 4392 Is forced draft fitted NoNo. and Description of Boilers Two single ended Working Pressure 160 Tested by hydraulic pressure to 320Date of test 4-12-02 Can each boiler be worked separately Yes Area of fire grate in each boiler 55 sq No. and Description of safety valves to each boiler Two Spring Loaded Area of each valve 7.66 sq Pressure to which they are adjusted 160 Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 2 ft. Mean dia. of boilers 15-3 Length 10-6 Material of shell plates SThickness 1¾" Range of tensile strength 28½-32 Are they welded or flanged End flanged Descrip. of riveting: cir. seams D.R.L. long. seams J.R.D.B.S.Diameter of rivet holes in long. seams 1½" Pitch of rivets 7½" ~~Top of plates or~~ width of butt straps 1'-5½"Per centages of strength of longitudinal joint rivets 89 plate 85 Working pressure of shell by rules 162 lbs. Size of manhole in shell 16 x 13Size of compensating ring 2¾ x 1½ No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 44½Length of plain part top 6.5" bottom 6.5" Thickness of plates crown 4½" bottom 4½" Description of longitudinal joint Welded No. of strengthening rings noneWorking pressure of furnace by the rules 160 Combustion chamber plates: Material S Thickness: Sides ¾" Back ¾" Top ¾" Bottom ¾"Pitch of stays to ditto: Sides 10¾" Back 10¾"x9¾" Top 8¾"x10¾" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 162Material of stays S Diameter at smallest part 1¾" Area supported by each stay 98½ Working pressure by rules 180 End plates in steam space:Material S Thickness 1¾" Pitch of stays 18½" How are stays secured Nuts Working pressure by rules 162 Material of stays SDiameter at smallest part 2¾" Area supported by each stay 409 Working pressure by rules 160 Material of Front plates at bottom SThickness 13/16" Material of Lower back plate S Thickness 5/16" Greatest pitch of stays 14½" Working pressure of plate by rules 163Diameter of tubes 3¾" Pitch of tubes 4½" Material of tube plates S Thickness: Front 5/16" Back ¾" Mean pitch of stays 9Pitch across wide water spaces 14½" Working pressures by rules 160 Girders to Chamber tops: Material S Depth andthickness of girder at centre 2¾"x13/16"x2 Length as per rule 2-10½ Distance apart 8¾" Number and pitch of Stays in each 2 stays 10¾"Working pressure by rules 167 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler workedseparately — Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivetholes — 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 80 lbs tested by hydraulic pressure to 160 lbs No. of Certificate 2885 Fire grate area 20 sq Description of safety valves Direct Spring
 No. of safety valves 2 Area of each 7.07 Pressure to which they are adjusted 80 lbs 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 1/2
 Lap of plating 6 1/2 Per centage of strength of joint 77.3 Thickness of shell end plates 3/4 riv. washers 17 x 16 1/2 No. of Stays to do. —
 Dia. of stays 2 1/8 off Diameter of furnace Top 31" Bottom L Length of furnace 5'-4" Thickness of furnace plates 1/16 Description of joint Weld Thickness of Comb. Shanks 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 tubes 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. J. Clark 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 its tight 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

Assigned

MACHINERY CERTIFICATE WRITTEN.

TUES. 17 FEB 1903

TUES. 2 JUN 1903

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