

REPORT ON MACHINERY.

THUR. 24 SEP 1903

Port of Sunderland

Received at London Office

4.

Survey held at Sunderland

Date, first Survey 29th April Last Survey 21 Sept 1903

Book.

(Number of Visits)

on the steel new steamer "Patagonia"

Tons ^{Gross} _{Net}

Built at Amo By whom built Langereld van Riet When built 1903

Engines made at Sunderland By whom made Mccoll + Pollock when made 1903

Boilers made at Sunderland By whom made Mccoll + Pollock when made 1903

Registered Horse Power 50 Owners Braun Blanchard Port belonging to Punta Arenas

Horse Power as per Section 28 49.4 Is Refrigerating Machinery fitted no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Compound No. of Cylinders two No. of Cranks two

No. of Cylinders 13 1/2 - 31 Length of Stroke 21 Revs. per minute 100 Dia. of Screw shaft 6 3/4 Material of screw shaft light steel

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

If the liner does not fit tightly at the part no

on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive no If two

are fitted, is the shaft lapped or protected between the liners no Length of stern bush 2-3 5/8

as per rule 5.94 Dia. of Crank shaft journals 6.34 as per rule 6.34 Dia. of Crank pin 6 3/8 Size of Crank webs 9 1/2 x 4 3/8 Dia. of thrust shaft under

as fitted 6 3/8 Dia. of screw 4-8 Pitch of screw 10-3 No. of blades four State whether moveable no Total surface 23.5

of Feed pumps one Diameter of ditto 2 1/4 Stroke 11 1/2 Can one be overhauled while the other is at work no

of Bilge pumps one Diameter of ditto 2 1/4 Stroke 11 1/2 Can one be overhauled while the other is at work no

of Donkey Engines one Sizes of Pumps 5 1/4 x 3 1/2 x 5 duplex No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room two - 2 In Holds, &c. two 2 - fore peak one - 2

of bilge injections one sizes 2 1/2 Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size yes 2

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 none

all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Valves

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

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

if pipes are carried through the bunkers none How are they protected no

all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes

the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes

when stern tube, propeller, screw shaft, and all connections examined in dry dock 5/9/03 Is the screw shaft tunnel watertight no tunnel

if fitted with a watertight door no worked from no

BOILERS, &c.— (Letter for record (5)) Total Heating Surface of Boilers 888 Is forced draft fitted no

and Description of Boilers One single ended Working Pressure 140 lb Tested by hydraulic pressure to 280 lb

of test 9/9/03 Can each boiler be worked separately no Area of fire grate in each boiler 30 No. and Description of safety valves to

boiler no direct opening Area of each valve 3.97 Pressure to which they are adjusted 145 lb Are they fitted with easing gear yes

smallest distance between boilers on uptakes and bunkers on woodwork 18 Mean dia. of boilers 10-6 Length 9-6 Material of shell plates steel

thickness 3/4 Range of tensile strength 28 1/2 Are they welded or flanged no Descrip. of riveting: cir. seams lap D.R. long. seams D.R.S. D.R.

diameter of rivet holes in long. seams 1 Pitch of rivets 5 5/8 Lap of plates or width of butt straps 10 1/2

percentages of strength of longitudinal joint rivets 83.04 Working pressure of shell by rules 144 lb Size of manhole in shell 14 x 13 some 16 x 12

of compensating ring 11 1/8 x 3 1/4 No. and Description of Furnaces in each boiler Two plain Material steel Outside diameter 3 1/2

length of plain part top 6-3 Thickness of plates bottom 3 1/2 Description of longitudinal joint welded No. of strengthening rings no

working pressure of furnace by the rules 145 lb Combustion chamber plates: Material steel Thickness: Sides 19/32 Back 19/32 Top 19/32 Bottom 13/16

each of stays to ditto: Sides 8 3/4 Back 10 1/2 x 4 1/8 Top 10 If stays are fitted with nuts or riveted heads both Working pressure by rules 141 lb

material of stays steel Diameter at smallest part 1 5/8 x 2 1/4 Area supported by each stay 10 1/2 x 4 1/8 Working pressure by rules 144 lb End plates in steam space:

material steel Thickness 29/32 Pitch of stays 10 1/2 x 16 1/8 How are stays secured D.R. Working pressure by rules 146 lb Material of stays steel

diameter at smallest part 4 1/2 Area supported by each stay 15 1/2 x 16 1/8 Working pressure by rules 159 Material of Front plates at bottom steel

thickness 29/32 Material of Lower back plate steel Thickness 29/32 Greatest pitch of stays 10 1/2 + 8 1/4 Working pressure of plate by rules 146 lb

diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates steel Thickness: Front 29/32 Back 23/32 Mean pitch of stays 9 x 13

each across wide water spaces 14 Working pressures by rules 232 - 150 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 6 1/8 x 1 1/2 Length as per rule 21 7/16 Distance apart 10 Number and pitch of Stays in each one

working pressure by rules 142 lb Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked

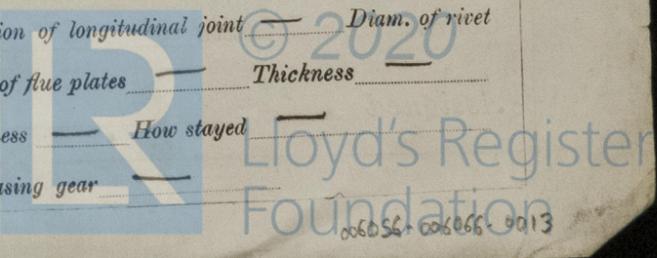
separately no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet

pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no

stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no

working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



DONKEY BOILER— No. *No Donkey Boiler* Description *No Donkey Boiler*

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:—

*One set coupling bolts, Two top end bolts & nuts & Bottom end bolts & nuts
Two main bearing bolts & nuts one set each for feed & bilge pump's valves
Assorted spare iron & bolts spare propeller*

The foregoing is a correct description,
MacCall & Pollack Manufacturer.

Dates During progress of work in shops - - 1903- April 29 July 20 27 Aug. 1 5 10 12 17 19 26 28 Sep. 1 4 5 9 17

of Survey while building } During erection on board vessel - - } 21

Total No. of s = 17

Is the approved plan of main boiler forwarded herewith *Yes*

" " " *donkey* " " " *✓*

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

The Machinery of this vessel has been built under special orderly steam pipe & boiler tested by hydraulic pressure according to Rule, the Material and workmanship sound & good the engine worked satisfactorily & the safety valves adjusted under steam worked well.

It is submitted that this vessel is eligible for THE RECORD. -:- LMC 9.03.

Bale
25.9.03

25.9.03

*This vessel is eligible in our opinion to have the Notation * LMC 9.03 in the Register Book (Machinery aft)*

The amount of Entry Fee. £ 1: : : When applied for, 23.9.1903

Special £ 8: : : When received, 1.10.03

Donkey Boiler Fee £ : : :

Travelling Expenses (if any) £ : : :

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

Committee's Minute **FRI. 25 SEP 1903**

Assigned *+ LMC 9.03*

MACHINERY CERTIFICATE WRITTEN.



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