

# REPORT ON MACHINERY.

Port of Sunderland

Received at London 29 JUL 1897

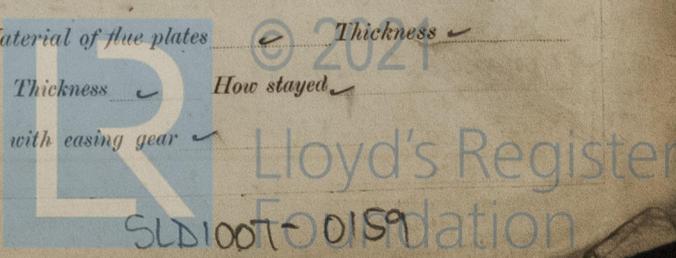
No. in Survey held at Sunderland  
Reg. Book.

Date, first Survey 19 August Last Survey 19 July 1894  
(Number of Visits 58)

on the Screw Steamer "Ile de la Reunion" Tons { Gross 3409  
Net 2398  
Master P. Charles Built at Sunderland By whom built Sir James Laing When built 1897  
Engines made at Sunderland By whom made George Clark Sim when made 1897  
Boilers made at Sunderland By whom made George Clark Sim when made 1897  
Registered Horse Power 300 Owners Comp. Havrais Peninsulaire Port belonging to Havre  
Nom. Horse Power as per Section 28 323 Navigation a depart Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Tri compound inverted direct acting No. of Cylinders 3 No. of Cranks 3  
Diameter of Cylinders 24 1/2" 41" 67" Length of Stroke 45" Revolutions per minute 60 Diameter of Screw shaft as per rule 12.35"  
Diameter of Tunnel shaft as fitted 12 7/8" Diameter of Crank shaft journals 12 3/4" Diameter of Crank pin 12 3/4" Size of Crank webs 1' 6 1/2" x 8 1/2"  
Diameter of screw 17' 0" Pitch of screw 17' 3" No. of blades 4 State whether moveable no Total surface 80 sq ft  
No. of Feed pumps 2 Diameter of ditto 3 1/4" 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 Ballast Sizes of Pumps 6" Duplex 6" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 3 of 3 1/2" In Holds, &c. No. 1 - 2 of 3 1/2", No. 2 - 2 of 3 1/2", No. 3  
2 of 3 1/2", after well 1 of 3 1/2".  
No. of bilge injections 1 sizes 5 1/2" Connected to condenser, or to circulating pump 6.0 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 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 R) Total Heating Surface of Boilers 4959 sq ft Is forced draft fitted no  
No. and Description of Boilers 3 Multitubular Working Pressure 180 Tested by hydraulic pressure to 360  
Date of test 18.5.97 Can each boiler be worked separately yes Area of fire grate in each boiler 50 sq ft No. and Description of safety valves to  
each boiler 2 valves 3 3/4" dia sprung loaded Area of each valve 11.04 sq ft Pressure to which they are adjusted 180 Are they fitted  
with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 3' 0" Mean diameter of boilers 13' 6"  
Length 10' 9" Material of shell plates S Thickness 1 5/16" Description of riveting: circum. seams double riveted long. seams J.R.D.B.S.  
Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 1' 8 1/8"  
Per centages of strength of longitudinal joint rivets 87.6 Working pressure of shell by rules 199 Size of manhole in shell 16" x 13"  
Size of compensating ring 9 1/8" x 1 3/8" No. and Description of Furnaces in each boiler 3 Ribbed Material S Outside diameter 3' 5 1/8"  
Length of plain part top 9" Thickness of plates crown 1 1/16" Description of longitudinal joint welded No. of strengthening rings ✓  
bottom 32 Working pressure of furnace by the rules 183 Combustion chamber plates: Material S Thickness: Sides 1 1/16" Back 5/8" Top 1 1/16" Bottom 3/32"  
Pitch of stays to ditto: Sides 9 1/2" x 8 5/8" Back 8 1/2" x 8 1/2" Top 9 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 187  
Material of stays Iron Diameter at smallest part back 1.6" 41.85" Area supported by each stay sides 81.90 Working pressure by rules 211 End plates in steam space:  
Material S Thickness 1 5/16" Pitch of stays 18 1/2" x 18 1/4" How are stays secured double nuts Working pressure by rules 238 Material of stays S  
Diameter at smallest part 3.037 Area supported by each stay 333.06 sq ft Working pressure by rules 193 Material of Front plates at bottom S  
Thickness 3/4" Material of Lower back plate S Thickness 1" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 185  
Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates S Thickness: Front 29/32 + 1/64" Back 27/32" Mean pitch of stays 9" x 9"  
Pitch across wide water spaces 14 1/4" Working pressures by rules 282 Girders to Chamber tops: Material S Depth and  
thickness of girder at centre 9" x 1 3/8" Length as per rule 30 1/16" Distance apart 9" Number and pitch of Stays in each 2 of 9 1/2"  
Working pressure by rules 189 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**— Description *Mult. 2 Plain furnaces*  
 Made at *Stockton* By whom made *Sudron & Co. Lim* When made *12.6.97* Where fixed *main deck*  
 Working pressure *100* tested by hydraulic pressure to *200* No. of Certificate *1513* Fire grate area *21 sq* Description of safety valves *spring*  
 No. of safety valves *2*. Area of each *59 sq* Pressure to which they are adjusted *100* If fitted with easing gear *yes* If steam from main boilers enter the donkey boiler *no* Diameter of donkey boiler *8' 0"* Length *9' 0"* Material of shell plates *S* Thickness *9/16*  
 Description of riveting long seams *t. r. lap* Diameter of rivet holes *7/8"* Whether punched or drilled *drilled* Pitch of rivets *3*  
 Lap of plating *6 3/8"* Per centage of strength of joint Rivets *78* end *7/8"* Thickness of shell crown plates *3/4"* washers Radius of do. Pitch No. of Stays to do. *16"*  
 Dia. of stays. *1 3/4"* eff. Diameter of furnace Top *27 1/2"* Bottom — Length of furnace *6' 2"* Thickness of furnace plates *1/16"* Description of joint *welded* Thickness of furnace crown plates *3/32"* Stays by *8" to 8 1/2" p 1 3/8" dia.* Working pressure of shell by rules *101*  
 Working pressure of furnace by rules *105* Diameter of uptake tubes *3"* Thickness of uptake plates *11/16"* Thickness of water tubes *5/16"*

**SPARE GEAR.** State the articles supplied: *Top & bottom end connecting rod bolts & nuts, one set of coupling bolts & nuts, two main bearing bolts & nuts, feed & bilge pump valves, propeller, prop shaft, 1/2 crank shaft, bolts nuts & iron assorted.*

The foregoing is a correct description,  
**FOR GEORGE CLARK LIMITED,** Manufacturer.  
*George Clark*

Dates of Survey while building	During progress of work in shops	1896 Aug 19 24 Sept 6 Oct 19 20 21 26 27 28 30 Nov 4 6 9 10 12 16 17 18 19 24 24 30 Dec 23 31
	During erection on board vessel	Jan 4 8 9 13 15 20 25 28 Feb 1 11 18 19 March 5 9 April 7 May 15 18 19 28 29 31 June 1 3 14 15
	Total No. of visits	30 July 12 6 8 12 13 19

**General Remarks** (State quality of workmanship, opinions as to class, &c. *Machinery & boilers constructed under special survey: materials and workmanship good & efficient. Engines and boilers examined under steam & found satisfactory.*  
*In my opinion this vessel is eligible for the record of L.M.C. 7.97.*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 7.97

*JS*  
 29.7.97  
*HS*  
 29/7/97

Certificate (if required) to be sent to

The amount of Entry Fee	£ 3 : -	When applied for	31.7.97
Special	£ 36 : 3	When received	31.7.97
Donkey Boiler Fee	£ - : -		
Travelling Expenses (if any)	£ - : -		

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

Committee's Minute **TUES. 3 AUG 1897**

Assigned *+ 2 m.c. 7.97*

