

# REPORT ON MACHINERY.

JUL 9 1901

Port of *Greenock*

Received at London Office

No. in Survey held at *Greenock & Port Glasgow* Date, first Survey *9<sup>th</sup> June 1900* Last Survey *27<sup>th</sup> June 1901*

Reg. Book. *sup<sup>t</sup>*

(Number of Visits *8<sup>th</sup>*)

*4* on the *Screw Steamer "Arciduca Stefano"*

Tons { Gross *3586.80*  
Net *2337.21*

Master *A. D. Scopinich* Built at *Port Glasgow* By whom built *Russell & Co.*

When built *1901.*

Engines made at *Greenock* By whom made *J. G. Kincaid & Co.*

when made *1901.*

Boilers made at *Glasgow* By whom made *Anderson & Lyall*

when made *1901.*

Registered Horse Power *297* Owners *Credit Co. Genoa* Port belonging to *Lussinpiccolo.*

Norm. Horse Power as per Section 28 *297* Is Refrigerating Machinery fitted *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *Inverted Direct Acting Triple Expansion* No. of Cylinders *Three* No. of Cranks *Three*  
Dia. of Cylinders *24.40 & 6.5* Length of Stroke *45* Revs. per minute *80* Dia. of Screw shaft *as per rule 13.53* Lgth. of stern bush *55*  
Dia. of Tunnel shaft *as per rule 12.15* Dia. of Crank shaft journals *as per rule 12.34* Dia. of Crank pins *12.34* Size of Crank webs *14x8 1/4* Dia. of thrust shaft under  
collars *12 3/4* Dia. of screw *16.6* Pitch of screw *17.6* No. of blades *Four* State whether moveable *no* Total surface *86.5 sq. ft.*  
No. of Feed pumps *Two* Diameter of ditto *4* Stroke *24* Can one be overhauled while the other is at work *yes*  
No. of Bilge pumps *Two* Diameter of ditto *4* Stroke *24* Can one be overhauled while the other is at work *yes*  
No. of Donkey Engines *Two* Sizes of Pumps *12x10 & duplex 4x6* No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room *Four 3 1/2* In Holds, &c. *eight 3 1/2 & one 2 1/2 in tunnel well.*

No. of bilge injections *one* sizes *6" & 5 1/2" pipe* Connected to condenser, or to circulating pump *no* Is a separate donkey suction fitted in Engine room & size *yes 3 1/2*

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 *Bilge pipes.* How are they protected *Wood casing.*

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 *on ship before.* Is the screw shaft tunnel watertight *yes*

Is it fitted with a watertight door *yes* worked from *top platform.*

OILERS, &c.—(Letter for record) Total Heating Surface of Boilers Is forced draft fitted

No. and Description of Boilers *see Glasgow report No. 18,852* Working Pressure Tested by hydraulic pressure to

Date of test Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to

each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are they welded or flanged Descrip. of riveting: cir. seams long. seams

Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets. Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of Stays in each

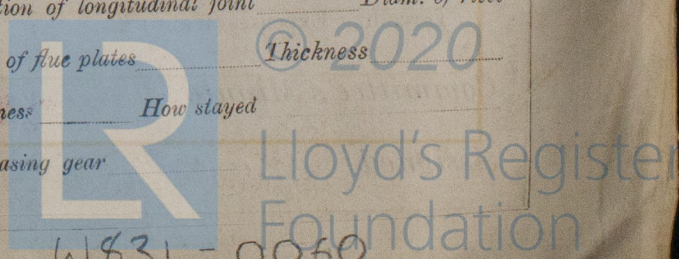
Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

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. Description X  
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  
enter the donkey boiler Dia. of donkey boiler Length Material of shell plates Thickness Range of temperature  
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 Bottom Length of furnace Thickness of furnace plates Description  
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: 2 bottom end bolts, 2 top end do., 2 inn. bearing bolts & 12 Coupling bolts all with nuts, 12 Condenser tubes, 12 ferrules (brass), 1 spare propeller, 1 spare screw shaft, 3 cpl. escape valves & spring, 6 holding down bolts, 6 junk ring bolts, 6 cyl. cover bolts & nuts, 6 valve chest cover bolts & nuts, 2 feed & 2 bilge pump valves, 1 feed escape valve spring, 2 sets firing tools, 6 doz. assorted bolts & nuts, 1 set of safety valve springs, 12 boiler and assorted iron

The foregoing is a correct description,

John H. McCaid & Co. Manufacturer.  
P. Hall.

Dates of Survey while building  
During progress of work in shops - 1900. June 9. 13. 14. 16. 19. 25. 28. 29. July 26. 30. Aug 1. 6. 17. 20. 23. 27. 29. 30. Sep 19. 25. 28. Oct 24. 27. 30. Nov 9. 13. 16. 18. 24. 28. 1901. Jan 10. 12. 16. 21. 23. 25. 29. Feb 1. 5. 9. 11. 14. 16. 19. 21. March 1. 5. 8. 11. 14. 19. 21. 22. 25. 27. April 2. 6. 10. 30. May 6. 9. 20. 22. 23. 24. 28. 30. June 3. 5. 11. 12. 13. 14. 20. 21. 22. 23. 26. 27.  
Total No. of visits 84.  
Is the approved plan of main boiler forwarded herewith Yes  
" " " donkey " " " No.

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

Material of screw shaft 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 Yes  
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 non-corrosive If two liners are fitted, is the shaft lapped or protected between the liners

These Engines were specially surveyed during construction, workmanship good. The Engines and Boilers are satisfactorily fitted in vessel. Main steam pipes tested to 400 lbs tests satisfactory. Engines & boilers were tested full steam, they are now in good order & safe working condition and are in our opinion eligible to be noted in Register Book LMC 6.01. [The steam pipes were tested under 400 lbs. hydraulic pressure and found tight.]

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 6.01

The amount of Entry Fee. £ 2 : : :  
Special £ 23 : 4 : 8  
Donkey Boiler Fee £ 11 : 12 : 4  
Travelling Expenses (if any) £ : : :  
When applied for, 3.7.1901  
When received, 5.7.1901

Committee's Minute Glasgow, 8-JUL 1901

Assigned

C. A. C. Heron & R. Elliott.  
Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.  
Greenock District.

MACHINERY CERTIFICATE  
WRITTEN 10.7.01

Lloyd's Register  
Foundation