

REPORT ON MACHINERY.

JUL 9 1901

Port of Greenock

Received at London Office

No. in Survey held at Greenock & Port Glasgow Date, first Survey 9th June 1900 Last Survey 27th June 1901
Reg. Book. sup^t (Number of Visits 2)

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 & Coy. When built 1901.

Engines made at Greenock By whom made J. G. Kincaid & Coy. when made 1901.

Boilers made at Glasgow By whom made Anderson & Lyall when made 1901.

Registered Horse Power 297 Owners Credito C. Cav. Scopinich & Coy Port belonging to Lussinpiccolo.

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" 65" 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 12.3/4 Dia. of Crank pins 12.3/4 Size of Crank webs 14" x 8.1/4" 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 12" x 10" & duplex 4" x 6" 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 is pump 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 launching 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 see Glasgow report No. 18,852 Is forced draft fitted no

No. and Description of Boilers see Glasgow report No. 18,852 Working Pressure 150 lbs Tested by hydraulic pressure to 225 lbs

Date of test 1901 Can each boiler be worked separately yes Area of fire grate in each boiler 100 sq. ft. No. and Description of safety valves to each boiler one safety valve Are they fitted with easing gear yes

Area of each valve 100 sq. ft. Pressure to which they are adjusted 150 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 40" Length 120" Material of shell plates steel

Thickness 3/8" Range of tensile strength 45,000 lbs Are they welded or flanged no Descrip. of riveting: cir. seams no long. seams yes

Diameter of rivet holes in long. seams 1/8" Pitch of rivets 2" Lap of plates or width of butt straps 1"

Per centages of strength of longitudinal joint 85% Working pressure of shell by rules 150 lbs Size of manhole in shell 18"

Size of compensating ring 18" No. and Description of Furnaces in each boiler one Material steel Outside diameter 40"

Length of plain part 120" Thickness of plates 3/8" Description of longitudinal joint butt No. of strengthening rings no

Working pressure of furnace by the rules 150 lbs Combustion chamber plates: Material steel Thickness: Sides 3/8" Back 3/8" Top 3/8" Bottom 3/8"

Pitch of stays to ditto: Sides 12" Back 12" Top 12" If stays are fitted with nuts or riveted heads no Working pressure by rules 150 lbs

Material of stays steel Diameter at smallest part 1 1/2" Area supported by each stay 100 sq. ft. Working pressure by rules 150 lbs End plates in steam space: no

Material steel Thickness 3/8" Pitch of stays 12" How are stays secured by nuts Working pressure by rules 150 lbs Material of stays steel

Diameter at smallest part 1 1/2" Area supported by each stay 100 sq. ft. Working pressure by rules 150 lbs Material of Front plates at bottom steel

Thickness 3/8" Material of Lower back plate steel Thickness 3/8" Greatest pitch of stays 12" Working pressure of plate, by rules 150 lbs

Diameter of tubes 12" Pitch of tubes 12" Material of tube plates steel Thickness: Front 3/8" Back 3/8" Mean pitch of stays 12"

Pitch across wide water spaces 12" Working pressures by rules 150 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 12" Length as per rule 120" Distance apart 12" Number and pitch of Stays in each no

Working pressure by rules 150 lbs Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked separately no

Diameter 12" Length 120" Thickness of shell plates 3/8" Material steel Description of longitudinal joint butt Diam. of rivet holes 1/8" Pitch of rivets 2" Working pressure of shell by rules 150 lbs Diameter of flue 12" Material of flue plates steel Thickness 3/8"

If stiffened with rings no Distance between rings 12" Working pressure by rules 150 lbs End plates: Thickness 3/8" How stayed by nuts

Working pressure of end plates 150 lbs Area of safety valves to superheater no Are they fitted with easing gear yes



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 te _____

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 _____ Descriptio _____

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 firing tools, 12 boiler safety valve springs, 12 boiler and assorted nuts*

The foregoing is a correct description,

John G. McCaid & Co Manufacturer.
p. Hall.

Dates of Survey while building	During progress of work in shops -	1900. June 9. 13. 14. 16. 19. 25. 29. 29. July 26. 30. Aug 1. 6. 17. 20. 23. 27. 29. 30. Sep 19. 25. 28. Oct 1. 4. 5. 8. 11. 14. 16. 19. 22. 24. 27. 30.	
		During erection on board vessel -	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 *Yes* If two liners are fitted, is the shaft lapped or protected between the liners *Yes*

*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**

J.S. *C.M.*
10.7.01 9.7.01

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

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

Committee's Minute **Glasgow, 8-JUL 1901**
Assigned **+ LMC. 6.01.**



Greenock

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

DONKEY BOILER. No. and Date of prior On Cylindrical Mult.

Lloyd's Register of British