

REPORT ON MACHINERY.

Port of Glasgow

No. in Survey held at Greenock & Glasgow Date, first Survey 12 July '99 Last Survey 10 April 1900
Reg. Book. S. S. Pandrosia (Number of Visits 23)

Master Thomas Brady Built at Greenock By whom built Russell & Co (No. 103) When built 1900
Engines made at Greenock By whom made J. G. Niccaid & Co when made 1900
Boilers made at Glasgow By whom made Harvey Curle & Co Ltd when made 1900
Registered Horse Power 290 Owners The Steamship Pandrosia Co (Limd) Port belonging to Liverpool
Nom. Hors. Power as per Section 28 288 Is Refrigerating Machinery fitted no Is Electric Light fitted no

Gross 3326.20
Net 2165.20
Tons

ENGINES, &c.—Description of Engines

Description of Engines			No. of Cylinders	No. of Cranks
Dia. of Cylinders	Length of Stroke	Revs. per minute	Dia. of Screw shaft as per rule	Lgth. of stern bush
Dia. of Tunnel shaft as per rule	Dia. of Crank shaft journals as per rule	Dia. of Crank pin	Size of Crank webs	Dia. of thrust shaft under collars
Dia. of screw	Pitch of screw	No. of blades	State whether moveable	Total surface
No. of Feed pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
No. of Bilge pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
No. of Donkey Engines	Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps		
In Engine Room		In Holds, &c.		
No. of bilge injections	sizes	Connected to condenser, or to circulating pump	Is a separate donkey suction fitted in Engine room & size	
Are all the bilge suction pipes fitted with roses		Are the roses in Engine room always accessible	Are the sluices on Engine room bulkheads always accessible	
Are all connections with the sea direct on the skin of the ship		Are they Valves or Cocks		
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates		Are the discharge pipes above or below the deep water line		
Are they each fitted with a discharge valve always accessible on the plating of the vessel		Are the blow off cocks fitted with a spigot and brass covering plate		
What pipes are carried through the bunkers		How are they protected		
Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times				
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges				
When were stern tube, propeller, screw shaft, and all connections examined in dry dock		Is the screw shaft tunnel watertight		
Is it fitted with a watertight door		worked from		

BOILERS, &c.—

(Letter for record S) Total Heating Surface of Boilers 4311 sq ft Is forced draft fitted no

No. and Description of Boilers	<u>2 Multitubular</u>	Working Pressure	<u>180 lbs</u>	Tested by hydraulic pressure to	<u>360 lbs</u>
Date of test	<u>31/1/1900</u>	Can each boiler be worked separately	<u>yes</u>	Area of fire grate in each boiler	<u>67.5</u>
each boiler	<u>five direct firing</u>	Area of each valve	<u>7.06 sq</u>	Pressure to which they are adjusted	<u>183 lbs</u>
Smallest distance between boilers or uptakes and bunkers or woodwork	<u>12"</u>	Mean dia. of boilers	<u>15'-3"</u>	Length	<u>10'-6"</u>
Material of shell plates	<u>Steel</u>	Thickness	<u>1 1/4"</u>	Range of tensile strength	<u>28 to 32</u>
Are they welded or flanged	<u>Neither</u>	Descrip. of riveting: cir. seams	<u>Double</u>	long. seams	<u>Double</u>
Diameter of rivet holes in long. seams	<u>1 5/16"</u>	Pitch of rivets	<u>4 1/8"</u>	Lap of plates or width of butt straps	<u>1 1/4" x 1 1/2" + 1 1/16"</u>
Per centages of strength of longitudinal joint	<u>88%</u>	Working pressure of shell by rules	<u>182 lbs</u>	Size of manhole in shell	<u>12" x 16"</u>
Size of compensating ring	<u>Flanged piece 2'-10" x 2'-6"</u>	No. and Description of Furnaces in each boiler	<u>3 Dighton</u>	Material	<u>Steel</u>
Outside diameter	<u>4'-1 1/4"</u>	Length of plain part	<u>6'-8"</u>	Thickness of plates	<u>19"</u>
Description of longitudinal joint	<u>weld</u>	No. of strengthening rings	<u>—</u>	Working pressure of furnace by the rules	<u>192 lbs</u>
combustion chamber plates: Material	<u>Steel</u>	Thickness: Sides	<u>19"</u>	Back	<u>19"</u>
Top	<u>32"</u>	Bottom	<u>4"</u>	Pitch of stays to ditto: Sides	<u>4" x 9/8"</u>
Back	<u>8" x 8"</u>	Top	<u>4 1/2" x 8 3/4"</u>	Working pressure by rules	<u>190 lbs</u>
Material of stays	<u>Steel</u>	Diameter at smallest part	<u>1 1/2"</u>	Area supported by each stay	<u>64"</u>
Working pressure by rules	<u>200 lbs</u>	End plates in steam space: Material	<u>Steel</u>	Thickness	<u>1 1/4"</u>
Pitch of stays	<u>18 3/4" x 20 1/2"</u>	How are stays secured	<u>double nuts</u>	Working pressure by rules	<u>182 lbs</u>
Material of stays	<u>Steel</u>	Diameter at smallest part	<u>3 1/2"</u>	Area supported by each stay	<u>384"</u>
Working pressure by rules	<u>220 lbs</u>	Material of Front plates at bottom	<u>Steel</u>	Thickness	<u>2 1/2"</u>
Material of Lower back plate	<u>Steel</u>	Thickness	<u>1/2"</u>	Greatest pitch of stays	<u>13 3/4" x 8"</u>
Working pressure of plate by rules	<u>—</u>	Diameter of tubes	<u>3 1/4"</u>	Pitch of tubes	<u>4 1/2" x 4 1/2"</u>
Material of tube plates	<u>Steel</u>	Thickness: Front	<u>3 3/32"</u>	Back	<u>1/2"</u>
Mean pitch of stays	<u>11 1/4"</u>	Pitch across wide water spaces	<u>14 1/2"</u>	Working pressures by rules	<u>187 lbs</u>
Girders to Chamber tops: Material	<u>Steel</u>	Depth and thickness of girder at centre	<u>9" x 3 1/2"</u>	Length as per rule	<u>2'-4 1/2"</u>
Distance apart	<u>8 3/4"</u>	Number and pitch of Stays in each	<u>3-4 1/2"</u>	Working pressure by rules	<u>200 lbs</u>
Superheater or Steam chest; how connected to boiler	<u>none</u>	Can the superheater be shut off and the boiler worked separately	<u>—</u>	Diameter	<u>—</u>
Length	<u>—</u>	Thickness of shell plates	<u>—</u>	Material	<u>—</u>
Description of longitudinal joint	<u>—</u>	Diam. of rivet holes	<u>—</u>	Pitch of rivets	<u>—</u>
Working pressure of shell by rules	<u>—</u>	Diameter of flue	<u>—</u>	Material of flue plates	<u>—</u>
Thickness	<u>—</u>	If stiffened with rings	<u>—</u>	Distance between rings	<u>—</u>
Working pressure by rules	<u>—</u>	End plates: Thickness	<u>—</u>	How stayed	<u>—</u>
Working pressure of end plates	<u>—</u>	Area of safety valves to superheater	<u>—</u>	Are they fitted with easing gear	<u>—</u>

DONKEY BOILER— No. Description

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 no. Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams Dia. of water holes Whether punched or drilled Pitch of rivets

Lap of plating Percentage of strength of joint Rivets Plates 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:—

The foregoing is a correct description,

Pro. Barclay Curle & Co. Manufacturer. John G. Kincaid & Co

Dates of Survey while building

During progress of work in shops - - During erection on board vessel - - Total No. of visits	1899: - July. 12. 27. Aug. 3. 9. 30. Sep. 2. 7. 11. 16. Oct. 10. 13. 24. 31. Nov. 3. 9. Dec. 18. 22.	
		1900: - Jan. 11. 16. 22. 31. Feb. 6. Apr. 10.
		23.

Is the approved plan of main boiler forwarded herewith Yes

“ “ “ donkey “ “ “

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

The main Boilers of this vessel have now on completion been forwarded to Greenock to be fitted on board by the Engineers Messrs J. Kincaid & Co

James Moffison
Glasgow 26/4/1900

Certificate (if required) to be sent to

The amount of Entry Fee . . . £ : : When applied for.

3 Special . . . £ 11 : 9 : 4 2.5. 00.

Donkey Boiler Fee . . . £ : : When received.

Travelling Expenses (if any) £ : : 14/5/00 5/5/00

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

Committee's Minute

MAY 4 1900

Assigned



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