

Gl No. 17706
JRK 12621

REPORT ON MACHINERY.

Port of *Glasgow*

Received at London Office **FRI. MAR 16 1900**

No. in Survey held at *Glasgow*. Date, first Survey *10 April 1899* Last Survey *10 February 1900*
 Reg. Book. *Supt* (Number of Visits *28*)
 100. on the *Screw Steamer "Sirius"* Gross *3335.85*
 Master *Henri Raoul* Built at *Glasgow* By whom built *Russell & Co* Tons Net *2173.35*
 Engines made at *Greenock* By whom made *J. G. Kinnaird & Co* when made *1900*
 Boilers made at *Glasgow* By whom made *Anderson & Co* when made *1900*
 Registered Horse Power Owners *Compagnie des vapeurs de charge francais* Port belonging to *Marseille*
 Nom. Horse Power as per Section 28 *291* Is Refrigerating Machinery fitted *no* Is Electric Light fitted *yes*

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 as fitted
Dia. of Tunnel shaft as per rule as fitted	Dia. of Crank shaft journals as per rule as fitted	Dia. of Crank pin	Lgth. of stern bush
Collars	Dia. of screw	Pitch of screw	No. of blades
No. of Feed pumps	Diameter of ditto	Stroke	State whether moveable
No. of Bilge pumps	Diameter of ditto	Stroke	Total surface
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 the discharge pipes above or below the deep water line	
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates	Are the blow off cocks fitted with a spigot and brass covering plate	How are they protected	
Are they each fitted with a discharge valve always accessible on the plating of the vessel	How are they protected		
What pipes are carried through the bunkers			
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 it fitted with a watertight door	worked from		

BOILERS, &c.— (Letter for record *S.*) Total Heating Surface of Boilers *4406 sq. ft.* Is forced draft fitted *no*

No. and Description of Boilers *Two: Cylindrical, built: Single End* Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs*

Date of test *9/10/2/1900* Can each boiler be worked separately *yes* Area of fire grate in each boiler *64 sq. ft.* No. and Description of safety valves to each boiler *Two direct spring* Area of each valve *7.06 sq. in.* Pressure to which they are adjusted *183 lbs* Are they fitted with easing gear *yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *11 1/2"* Mean dia. of boilers *15' 1 3/4"* Length *10' 6"* Material of shell plates *Steel*

Thickness *1 1/4"* Range of tensile strength *28-32 tons* Are they welded or flanged *no* Descrip. of riveting: cir. seams *Lap double* long. seams *Double Butt Shapes*

Diameter of rivet holes in long. seams *1 5/8"* Pitch of rivets *9"* 4 1/2" Lap of plates or width of butt straps *19 3/8"*

Percentage of strength of longitudinal joint rivets *89* Working pressure of shell by rules *184 lbs* Size of manhole in shell *16" x 12"*

Size of compensating ring *26" x 30" x 1 1/4"* No. and Description of Furnaces in each boiler *3: Corrugated* Material *Steel* Outside diameter *49"*

Length of plain part top *3' 6" 10 1/2"* Thickness of plates crown *5"* Description of longitudinal joint *Keel* No. of strengthening rings *partial on c.e. bottom*

Working pressure of furnace by the rules *206 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *5"* Back *5"* Top *3 1/2"* Bottom *5"*

Pitch of stays to ditto: Sides *8 1/2" x 8 1/2"* Back *8 1/2" x 8 1/2"* Top *9" x 8 1/2"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *184 lbs*

Material of stays *Steel* Diameter at smallest part *1 1/2"* Area supported by each stay *36 1/2"* Working pressure by rules *182 lbs* End plates in steam space:

Material *Steel* Thickness *1 3/8"* Pitch of stays *18" x 20"* How are stays secured *Double nuts* Working pressure by rules *185 lbs* Material of stays *Steel*

Diameter at smallest part *3 1/2"* Area supported by each stay *360"* Working pressure by rules *192 lbs* Material of Front plates at bottom *Steel*

Thickness *3/4"* Material of Lower back plate *Steel* Thickness *3/4"* Greatest pitch of stays *12 1/2"* Working pressure of plate by rules *235 lbs*

Diameter of tubes *3 1/4"* Pitch of tubes *4 1/2" x 4 1/2"* Material of tube plates *Steel* Thickness: Front *13/16"* Back *7/16"* Mean pitch of stays *9"*

Pitch across wide water spaces *14 1/4"* Working pressures by rules *215 lbs* 262 lbs Girders to Chamber tops: Material *Steel* Depth and

Thickness of girder at centre *8 1/2" x 1 1/2"* Length as per rule *24 1/2"* Distance apart *9"* Number and pitch of Stays in each *2: 8 1/2"*

Working pressure by rules *228 lbs* Superheater or Steam chest; how connected to boiler *none* Can the superheater be shut off and the boiler worked

Shippin separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

es Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

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
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 ripeting 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 :-

The foregoing is a correct description,
Manufacturer. *Anderson & Ryall*

Dates During progress of work in shops - 1899: Apr. 10. 14. 17. 28. May. 1. 4. July. 4. 24. Aug. 1. 14. 22. 28. Sep. 1. 28. 28. Oct. 6. 11.
of Survey During erection on board vessel - 20. Nov. 3. 7. 14. 24. 30. Dec. 7. 8. 13. 27. Jan. 11. 19. Feb. 9. 10.
while building Total No. of visits 32.
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 been built under special survey and the materials and workmanship are good. When completed they were tested by Hydraulic pressure to 360 lbs per sq. inch and found tight and sound.

Certificate (if required) to be sent to

The amount of Entry Fee. £ 10 4
Special £ 10 4
Donkey Boiler Fee £
Travelling Expenses (if any) £
When applied for, 14-3-1900
When received, 16/3/00
Wm. Austin
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute
Assigned see minute on Grk. Rpt. No. 12621