

REPORT ON MACHINERY.

TUES. 30 OCT 1900

Port of *Greenock*

Received at London Office

18

No. in Survey held at *Greenock* Date, first Survey *24th March 1899* Last Survey *19th Oct 1900*
 Reg. Book. (Number of Visits *181*)
 308 on the *Screw Steamer "Persia"* Tons { Gross *7950.96*
 Net *4198.07*
 Master *W. A. Miller* Built at *Greenock* By whom built *Caird & Co. (Lim^d)* When built *1900*
 Engines made at *Greenock* By whom made *Caird & Co. (Lim^d)* when made *1900*
 Boilers made at *do* By whom made *do do* when made *1900*
 Registered Horse Power *2500* Owners *Peninsular & Oriental S.N. Coy.* Port belonging to *Greenock*
 Nom. Horse Power as per Section 28 *1355* Is Refrigerating Machinery fitted *yes for this use* Is Electric Light fitted *yes*

ENGINES, &c.—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 Lgth. of stern bush
 Dia. of Tunnel shaft as per rule as fitted Dia. of Crank shaft journals as per rule as fitted 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 *2 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 *Donkey Boiler*

BOILERS, &c.—

(Letter for record *B*) Total Heating Surface of Boilers *1668 sq. ft.* Is forced draft fitted *no*

No. and Description of Boilers *One Cylindrical Multitubular* Working Pressure *170 lbs* Tested by hydraulic pressure to *340 lbs*
 Date of test *28.6.00* Can each boiler be worked separately *no* Area of fire grate in each boiler *53 sq. ft.* No. and Description of safety valves to each boiler *Two direct spring* Area of each valve *5.94 sq. in.* Pressure to which they are adjusted *172 lbs* Are they fitted with easing gear *yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *24 in.* Mean dia. of boilers *14 in.* Length *10 ft 6 in.* Material of shell plates *Steel*
 Thickness *1 1/2 in.* Range of tensile strength *27 to 32 tons* Are they welded or flanged *no* Descrip. of riveting: cir. seams *Lap riveted* Lang. seams *D/B S Treble*
 Diameter of rivet holes in long. seams *1 1/2 in.* Pitch of rivets *8 1/2 in.* Lap of plates or width of butt straps *19 in. straps*
 Per centages of strength of longitudinal joint rivets *92.2* plate *84.5* Working pressure of shell by rules *191 lbs* Size of manhole in shell *16 in. x 12 in.*
 Size of compensating ring *28 in. x 1 1/2 in.* No. and Description of Furnaces in each boiler *Three Suspension* Material *Steel* Outside diameter *43 1/2 in.*
 Length of plain part top *15 in.* bottom *15 in.* Thickness of plates crown *1 1/2 in.* bottom *3/2 in.* Description of longitudinal joint *Welded* No. of strengthening rings *in bottom*
 Working pressure of furnace by the rules *189 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *7/8 in.* Back *9/16 in.* Top *3/2 in.* Bottom *1 1/2 in.*
 Pitch of stays to ditto: Sides *8 in. x 7 1/2 in.* Back *8 in. x 6 in.* Top *9 in. x 8 1/2 in.* If stays are fitted with nuts or riveted heads *not riveted* Working pressure by rules *170 to 194 lbs*
 Material of stays *Steel* Diameter at smallest part *1 1/2 in.* Area supported by each stay *52 x 67 in.* Working pressure by rules *191 to 223 lbs* End plates in steam space: *bottom row iron*
 Material *Steel* Thickness *7/16 in.* Pitch of stays *17 in.* How are stays secured *double nuts* Working pressure by rules *177 lbs* Material of stays *Steel*
 Diameter at smallest part *2 1/2 in.* Area supported by each stay *280 sq. in.* Working pressure by rules *178 lbs* Material of Front plates at bottom *Steel*
 Thickness *1 3/16 in.* Material of Lower back plate *Steel* Thickness *1 3/16 in.* Greatest pitch of stays *11 in.* Working pressure of plate by rules *209 lbs*
 Diameter of tubes *3 1/2 in.* Pitch of tubes *4 3/4 in. x 4 3/4 in.* Material of tube plates *Steel* Thickness: Front *3/4 in.* Back *3/8 in.* Mean pitch of stays *9 1/2 in. x 11 in.*
 Pitch across wide water spaces *15 in.* Working pressures by rules *201 lbs* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *8 1/2 in. x 3/4 in. double* Length as per rule *31 in.* Distance apart *8 1/2 in. x 9 in.* Number and pitch of Stays in each *Two 9 in.*
 Working pressure by rules *174 lbs* Superheater or Steam chest; how connected to boiler *no* Can the superheater be shut off and the boiler worked separately *no*
 Diameter *no* Length *no* Thickness of shell plates *no* Material *no* Description of longitudinal joint *no* Diam. of rivet holes *no*
 Pitch of rivets *no* Working pressure of shell by rules *no* Diameter of flue *no* Material of flue plates *no* Thickness *no*
 If stiffened with rings *no* Distance between rings *no* Working pressure by rules *no* End plates: Thickness *no* How stayed *no*
 Working pressure of end plates *no* Area of safety valves to superheater *no* Are they fitted with easing gear *no*

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
 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 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,
 FOR CAIRD AND COMPANY, LIMITED, Manufacturer.

William McIntosh

Dates During progress of work in shops - - - SECRETARY
 of Survey while building During erection on board vessel - - -
 Total No. of visits

Is the approved plan of main boiler forwarded herewith
 " " " donkey " " "

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

The amount of Entry Fee. . . £ : : When applied for.
 Special £ : : 15
 Donkey Boiler Fee £ : : When received.
 Travelling Expenses (if any) £ : : 15

Committee's Minute Glasgow. 29 OCT. 1900

Assigned

See Mr Entry report attached.

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