

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. Mohr* 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. Hors. Power as per Section 28 *1355* Is Refrigerating Machinery fitted *yes for this use* 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 <small>as per rule as fitted</small>
Dia. of Tunnel shaft <small>as per rule as fitted</small>	Dia. of Crank shaft journals <small>as per rule as fitted</small>	Dia. of Crank pin	Size of Crank webs
collars	Dia. of screw	Pitch of screw	No. of blades
No. of Feed pumps	Diameter of ditto	Stroke	State whether moceable
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			
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 <i>Donkey Boiler</i>	

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 3/4* Length *10 in 6* Material of shell plates *Steel*

Thickness *1 1/32* Range of tensile strength *27 to 32 tons* Are they welded or flanged *no* Descrip. of riveting: cir. seams *Lap and butt* g. seams *D/S S Treble*

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

Per centages of strength of longitudinal joint rievts *92.2*
plate *84.5* Working pressure of shell by rules *191 lbs* Size of manhole in shell *16 x 12*

Size of compensating ring *28 x 1 1/8* No. and Description of Furnaces in each boiler *Three Suspension* Material *Steel* Outside diameter *14 3/8*

Length of plain part top *12*
bottom *32* Thickness of plates crowns *1 1/32*
bottom *3/32* 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* Back *9/8* Top *3/2* Bottom *1 1/8*

Pitch of stays to ditto: Sides *8 x 7 3/8* Back *8 x 6* Top *9 x 8 1/2* 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 1/8 x 1 1/2* Area supported by each stay *52 x 67 1/2* 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 x 16 1/2* How are stays secured *double nuts* Working pressure by rules *177 lbs* Material of stays *Steel*

Diameter at smallest part *2 1/8* 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* Material of Lower back plate *Steel* Thickness *1 3/16* Greatest pitch of stays *11 1/2* Working pressure of plate by rules *209 lbs*

Diameter of tubes *3 1/2* Pitch of tubes *4 3/4 x 4 3/4* Material of tube plates *Steel* Thickness: Front *3/4 x 3/4* Back *3/8* Mean pitch of stays *9 1/2 x 11.8*

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 x 3/4 double* Length as per rule *31 in* Distance apart *8 1/2 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*

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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 test 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 of Survey while building

During progress of work in shops - - -

During erection on board vessel - - -

Total No. of visits

SECRETARY

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

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

Certificate (if required) to be sent to the Registrar and to arrive on or before the date for Committee's Minutes.

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

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

Committee's Minute **Glasgow. 29 OCT. 1900**

Assigned

See Mr Entry report attached.

Done