

REPORT ON MACHINERY.

Port of *Glasgow.*

Continued
MON. FEB 26 1900

Received at London Office 18

No. in Survey held at *Glasgow.* Date, first Survey Last Survey 18
Reg. Book.

1370. on the *Twin Screw Steamer "Custodian."* (Number of Visits)
Master Built at *Glasgow.* By whom built *C. Bonnell & Co.* Tons {Gross Net
When built *1900.*

Engines made at *Glasgow* By whom made *Dunsmuir & Jackson.* when made *1900*

Boilers made at *Glasgow.* By whom made *Dunsmuir & Jackson.* when made *1900.*

Registered Horse Power Owners *Charente S.S. Co. Ltd.* Port belonging to *Liverpool*
(*Prof. Hamilton Managers*)

Nom. Hors. Power as per Section 28 Is Refrigerating Machinery fitted *no.* 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	Lgth. of stern bush
<i>as per rule</i>	<i>as per rule</i>	<i>as per rule</i>	<i>as per rule</i>	<i>as per rule</i>
<i>as fitted</i>	<i>as fitted</i>	<i>as fitted</i>	<i>as fitted</i>	<i>as fitted</i>
Dia. of Tunnel shaft	Dia. of Crank shaft journals	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 *no.* sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room *no.* 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 *no.* Is forced draft fitted *no.*

No. and Description of Boilers *Two Double ended One single ended Cylindrical* Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs*

Particulars of Single Ended Boiler Date of test *25/5/99.* Can each boiler be worked separately *Yes.* Area of fire grate in each boiler *63 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 *185 lbs* Are they fitted with easing gear *Yes.*

Smallest distance between boilers or uptakes and bunkers or woodwork *About 1'6"* Mean dia. of boilers *15'9"* Length *10'6"* Material of shell plates *Steel*

Thickness *1 3/16"* Range of tensile strength *28-32 tons* Are they welded or flanged *no.* Descrip. of riveting: cir. seams *Lap* Long. seams *Double Butt*

Diameter of rivet holes in long. seams *1 1/16"* Pitch of rivets *9 1/2"* Lap of plates or width of butt straps *20 3/4"*

Per centages of strength of longitudinal joint rivets *88.5* plate *84.9* Working pressure of shell by rules *206 lbs* Size of manhole in shell *16" x 12"*

Size of compensating ring *W. Reels Ring* No. and Description of Furnaces in each boiler *3: Mouson's* Material *Steel* Outside diameter *48"*

Length of plain part *top 26'9"* bottom *26'9"* Thickness of plates *5"* crown *8"* bottom Description of longitudinal joint *welded* No. of strengthening rings *no.*

Working pressure of furnace by the rules *210 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *2 1/32"* Back *5"* Top *2 1/32"* Bottom *3 1/32"*

Pitch of stays to ditto: Sides *8 1/2" x 9"* Back *8 1/2" x 8 1/2"* Top *8 1/2" x 9"* 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 sq in* Working pressure by rules *184 lbs* End plates in steam space:

Material *Steel* Thickness *1 5/16"* Pitch of stays *18" x 14"* How are stays secured *Disks* Working pressure by rules *250 lbs* Material of stays *Steel*

Diameter at smallest part *2 5/16"* Area supported by each stay *306 sq in* Working pressure by rules *204 lbs* Material of Front plates at bottom *Steel*

Thickness *7/8"* Material of Lower back plate *Steel* Thickness *7/8"* Greatest pitch of stays *14 1/4"* Working pressure of plate by rules *192 lbs*

Diameter of tubes *3 1/4"* Pitch of tubes *4 1/2" x 4 1/2"* Material of tube plates *Steel* Thickness: Front *1"* Back *7/8"* Mean pitch of stays *11 1/4"*

Pitch of side water spaces *14 1/4"* Working pressures by rules *189 lbs* *216 lbs* Girders to Chamber tops: Material *Steel* Depth and

centre *7 1/2" x 2"* Length as per rule *28 1/2"* Distance apart *9"* Number and pitch of Stays in each *2: 8 1/2"*

rules *214 lbs* Superheater or Steam chest; how connected to boiler *None* Can the superheater be shut off and the boiler worked

meter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivets

Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

Distance between rings Working pressure by rules End plates: Thickness None stayed

Area of safety valves to superheater Are they fitted with easing gear

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