

REPORT ON MACHINERY.

Port of *Glasgow & Greenock*

TUES. 8 MAR 1893

Received at London Office

No. in Survey held at *Glasgow*
g. Book.

Date, first Survey *16 June 1892* Last Survey *25 July* 18 *98*

(Number of Visits *70*)

on the *S.S. Craigrowan*

Gross
Tons
Net

When built *1898*

Master Built at *Port Glasgow* By whom built *A. Rodgers & Co*

Engines made at *Glasgow* By whom made *Hall Brown & Co* when made *1898*

Milers made at *"* By whom made *A. & S. Inglis* when made *1898*

Registered Horse Power Owners *Thapsill & Co* Port belonging to *Leith*

Net Horse Power as per Section 28 *228* *250* Is Electric Light fitted *no*

INES, &c.—Description of Engines *Triple* No. of Cylinders *3* No. of Cranks *3*
Diameter of Cylinders *22½ 34 61* Length of Stroke *42* Revolutions per minute *60* Diameter of Screw shaft as per rule *11.4*
Diameter of Tunnel shaft as fitted *10.9* Diameter of Crank shaft journals *11½* Diameter of Crank pin *11½* Size of Crank webs *4½ x 21¾*
Diameter of screw *15.9* Pitch of screw *10.6* No. of blades *4* State whether moveable *yes* Total surface *40 sq ft*
No. of Feed pumps *2* Diameter of ditto *3½* Stroke *21* Can one be overhauled while the other is at work *yes*
No. of Bilge pumps *2* Diameter of ditto *3½* Stroke *20* Can one be overhauled while the other is at work *yes*
No. of Donkey Engines *2* Sizes of Pumps *6" x 4" x 6"* No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room *5 - 3½ - 3 - 2½* In Holds, &c. *2 in each + 1 aft 3"*
No. of bilge injections *1* sizes *6"* Connected to *main* to circulating pump *—* Is a separate donkey suction fitted in Engine room & size *yes 3½"*
Are all the bilge suction pipes fitted with roses *yes* Are the roses in Engine room always accessible *yes* Are the sluices on Engine room bulkheads always accessible *none*
Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *both*
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *yes* Are the discharge pipes above or below the deep water line *above*
Are they each fitted with a discharge valve always accessible on the plating of the vessel *yes* Are the blow off cocks fitted with a spigot and brass covering plate *yes*
Are the pipes carried through the bunkers *none* How are they protected *—*
Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times *yes*
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *yes*
Were stern tube, propeller, screw shaft, and all connections examined in dry dock *on slip before launch* Is the screw shaft tunnel watertight *Apparently*
Is it fitted with a watertight door *yes* worked from *upper platform* *3888* See *item 9.2.98*

ERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *3196 ft²* Is forced draft fitted *no*
and Description of Boilers *2 Multitubular single ended* Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs*
Date of test *5/11/94* Can each boiler be worked separately *yes* Area of fire grate in each boiler *53 ft²* No. and Description of safety valves to boiler *2 Direct Spring* Area of each valve *5.9 sq in* Pressure to which they are adjusted *164 lbs* Are they fitted with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *10"* Mean diameter of boilers *14.09 ft*
Material of shell plates *Steel* Thickness *13/16* Description of riveting: circum. seams *Double lap* long. seams *Single butt straps*
Diameter of rivet holes in long. seams *13/16* Pitch of rivets *4¾* Lap of plates or width of butt straps *19¾*
Percentages of strength of longitudinal joint *84.6* Working pressure of shell by rules *162 lbs* Size of manhole in shell *16" x 12"*
No. of compensating rings *4* No. and Description of Furnaces in each boiler *3 plain* Material *Steel* Outside diameter *3.5"*
Thickness of plain part *6.2* Thickness of plates *4.9* Description of longitudinal joint *Welded* No. of strengthening rings *none*
Working pressure of furnace by the rules *194 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16* Back *9/16* Top *9/16* Bottom *16*
No. of stays to ditto: Sides *4¾* Back *4x8* Top *4x12* stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *171 lbs*
Material of stays *Steel* Diameter at smallest part *1½ x 1¼* Area supported by each stay *58"* Working pressure by rules *196 lbs* End plates in steam space: Material *Steel* Thickness *14/16* Pitch of stay *16½ x 15½* How are stays secured *Double nut & washers* Working pressure by rules *160 lbs* Material of stays *Steel*
Diameter at smallest part *1¼* Area supported by each stay *220"* Working pressure by rules *164 lbs* Material of Front plates at bottom *Steel*
Thickness *13/16* Material of Lower back plate *Steel* Thickness *13/16* Greatest pitch of stay *12¾ x 9¾* Working pressure of plate by rules *160 lbs*
Diameter of tubes *3½* Pitch of tubes *4¾ x 4¾* Material of tube plates *Steel* Thickness: Front *13/16* Back *13/16* Mean pitch of stays *12"*
Distance across wide water spaces *14½* Working pressures by rules *267 lbs* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *4½ x 1"* Length as per rule *2.9* Distance apart *4¾* Number and pitch of Stays in each *3 - 9½"*
Working pressure by rules *171 lbs* Superheater or Steam chest; how connected to boiler *—* Can the superheater be shut off and the boiler worked independently *—*
Diameter *—* Length *—* Thickness of shell plates *—* Material *—* Description of longitudinal joint *—* Diam. of rivet *—*
Pitch of rivets *—* Working pressure of shell by rules *—* Diameter of flue *—* Material of flue plates *—* Thickness *—*
Are they 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 *—*

