

# REPORT ON MACHINERY.

Port of Glasgow

SAT. 16 APL 1898

Received at London Office

No. in Survey held at Glasgow & Dumbarton, first Survey 22. January, Last Survey 5. April 1898  
 Reg. Book. S.S. "Valletta" "Montclair" (Number of Visits 46)  
 on the Glasgow & Dumbarton TONS } Gross 3806.36  
 Net 2458.13  
 Master W. Owen Built at Dumbarton By whom built McNellan & Son When built 1898  
 Engines made at Glasgow By whom made D. Kawan & Son when made 1898  
 Boilers made at Glasgow By whom made D. Kawan & Son when made 1898  
 Registered Horse Power \_\_\_\_\_ Owners Elder Dempster Co. Port belonging to Liverpool  
 Nom. Horse Power as per Section 28 339 Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three  
 Diameter of Cylinders 25"-42"-68" Length of Stroke 45" Revolutions per minute 60 Diameter of Screw shaft 13 1/2"  
 Diameter of Tunnel shaft 11 1/2" Diameter of Crank shaft journals 13 Diameter of Crank pin 13 1/2" Size of Crank webs 25 x 8 1/2"  
 Diameter of screw 14'-0" Pitch of screw 18'-6" No. of blades Four State whether moveable Yes Total surface 87 sq. ft.  
 No. of Feed pumps Two Diameter of ditto 3 3/4" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps Two Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines Two Sizes of Pumps 8 x 5 x 8 and 8 x 10 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Four - 3 1/2" In Holds, &c. Eight - 3 1/2"  
 No. of bilge injections On sizes 5" Connected to condenser, or to circulating pump Pumps a separate donkey suction fitted in Engine room & size Yes - 3 1/2"  
 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  
 What pipes are carried through the bunkers Fore Hold sections How are they protected Wood casings  
 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  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launching the screw shaft tunnel watertight Stated to be  
 Is it fitted with a watertight door Yes worked from Main Deck

BOILERS, &c.— (Letter for record I) Total Heating Surface of Boilers 4208 sq. ft. Is forced draft fitted Yes  
 No. and Description of Boilers Two - Split - Single Ended Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs.  
 Date of test 10-9-97 Can each boiler be worked separately Yes Area of fire grate in each boiler 50 sq. ft. No. and Description of safety valves to  
 each boiler Two - Relief Spring Area of each valve 9.62 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 14" Mean diameter of boilers 14'-3"  
 Length 11'-6" Material of shell plates Steel Thickness 1 1/2" Description of riveting: circum. seams Lap Double long. seams Butt Single  
 Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 19 1/2"  
 Per centages of strength of longitudinal joint rivets 88-4 Working pressure of shell by rules 184 lbs. Size of manhole in shell 16" x 12"  
 Size of compensating ring 6 x 1 1/2" No. and Description of Furnaces in each boiler Three - Morrison's Material Steel Outside diameter 4 1/2"  
 Length of plain part top Thickness of plates bottom 9" Description of longitudinal joint Weld No. of strengthening rings 2  
 Working pressure of furnace by the rules 192 lbs. Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 3/2" Top 5/8" Bottom 3/4"  
 Pitch of stays to ditto: Sides 8 1/2" x 7 1/2" Back 8" x 8" Top 8" x 7" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 198 lbs.  
 Material of stays Steel Diameter at smallest part 1 1/2" x 1 1/4" Area supported by each stay 64 sq. in. Working pressure by rules 183 lbs. End plates in steam space:  
 Material Steel Thickness 3/4" Pitch of stays 16" x 15" How are stays secured Nuts & Rivets Working pressure by rules 196 lbs. Material of stays Steel  
 Diameter at smallest part 2 1/8" Area supported by each stay 240 sq. in. Working pressure by rules 197 lbs. Material of Front plates at bottom Steel  
 Thickness 4/6" Material of Lower back plate Steel Thickness 5/8" Greatest pitch of stays 12 3/4" Working pressure of plate by rules 194 lbs.  
 Diameter of tubes 2 1/2" Pitch of tubes 8 1/2" x 3 1/2" Material of tube plates Steel Thickness: Front 4/6" Back 3/4" Mean pitch of stays 9 1/2"  
 Pitch across wide water spaces 13 1/2" Working pressures by rules 209 lbs. Girders to Chamber tops: Material Iron Depth and  
 thickness of girder at centre 9" x (17 x 2) Length as per rule 36" Distance apart 7 1/2" Number and pitch of Stays in each Three 8 1/2"  
 Working pressure by rules 201 lbs. Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked  
 separately \_\_\_\_\_ Diameter \_\_\_\_\_ Length \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet  
 holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 If 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 \_\_\_\_\_

If not, state whether, and when, one will be sent? Yes Is a Report also sent on the Hull of the Ship? Yes

010179-010188-0265



15974 Gls.

**DONKEY BOILER**— Description *Cylinder Single Ended.*  
 Made at *Glasgow* By whom made *R. Rowan & Son* When made *1898* Where fixed *Stobelloch*  
 Working pressure *100 lbs* Tested by hydraulic pressure to *100 lbs* No. of Certificate *4565* Fire grate area *302 sq ft* Description of safety valves *Rivet Spring*  
 No. of safety valves *Two* Area of each *6.9 sq ft* Pressure to which they are adjusted *100 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*  
 Diameter of donkey boiler *9'-6"* Length *9'-0"* Material of shell plates *Steel* Thickness *3/8"*  
 Description of riveting long. seams *Lap Saddle* Diameter of rivet holes *1"* Whether punched or drilled *Drilled* Pitch of rivets *3 1/2"*  
 Lap of plating *7"* Per centage of strength of joint *78.8* Rivets *7/8"* Thickness of shell plates *3/8"* Radius of do. *Rebbed* Stays to do. *14" x 14"*  
 Dia. of stays. *2"* Diameter of furnace Top *34 1/2"* Bottom *34 1/2"* Length of furnace *5'-6"* Thickness of furnace plates *1/2"* Description of joint *Welded* Thickness of furnace crown plates *1/2"* Stayed by *Rebbed Stay 1 1/2" x 1 1/2"* Working pressure of shell by rules *102 lbs*  
 Working pressure of furnace by rules *119 lbs* Diameter of uptake *4"* Thickness of uptake plates *1/2"* Thickness of water tubes *3/4" 9 nos.*

**SPARE GEAR.** State the articles supplied:— *Two connecting rod bolts & nuts top end; two bottom end bolts & nuts; set main bearing bolts; set coupling bolts; set feed & bilge pump valves; iron, bolts, nuts, etc.*

The foregoing is a correct description,  
*David Rowan & Son* Manufacturer.

Dates of Survey while building  
 During progress of work in shops— } 1897:— Jan'y 22 Feb'y 15 19 27 23 25 Mar 3 8 12 15 19 23 29 Apr 8 16 22 28 May 12 31 June 7 14 Aug 5 19 24  
 During erection on board vessel— } Sept 10 Oct 5 15 Nov 20 21 23 Decr 29 1898:— Jan'y 14 26 Feb 2 8 16 24 25 Mar 4 11 16 18 23 25 31 Apr 5  
 Total No. of visits *Forty-six*

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been constructed under Special Survey, and is of good material and workmanship. It has been securely fitted on board, and in my opinion it is eligible to have record + L.M.C. 4-98 in the Register Book. The boiler is fitted with Rowan's Forced Draft. Two boiler photo prints are appended.*)

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 4.98 F.D.

*R.S.*  
 18.4.98.

The amount of Entry Fee... £ 3 : : When applied for, 11.4.98.  
 Special ... £ 36 : 19 : : When received, 13.4.98.  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 Committee's Minute  
 Assigned

*R.J.P. Rowan & Son*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

TUES. 19 APR 1898  
 + L.M.C. 4.98



GLASGOW.

Certificate (if required) to be sent to  
 The Surveyors are requested not to write on or below the space for Committee's Minute.