

REPORT ON MACHINERY.

TUES. 6 NOV 1900

Port of *Greenock*

Received at London Office

18

No. in Survey held at *Greenock* Date, first Survey *6th Oct. 1899* Last Survey *27th Oct. 1900*
 Reg. Book. *Supt.* (Number of Visits *122*)
36 on the *Screw Steamer, "Marianne"* Tons *Gross 3598.61*
Net 2343.68
 Master *A. Goulich* Built at *Port Glasgow* By whom built *Russell & Co.* When built *1900*
 Engines made at *Greenock* By whom made *Rankin & Blackmore* when made *1900*
 Boilers made at *do* By whom made *do do* when made *1900*
 Registered Horse Power Owners *Fratelli Goulich* Port belonging to *Trieste*
 Nom. Horse Power as per Section 28 *300* Is Refrigerating Machinery fitted *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *Inverted direct acting triple & 3/4"* No. of Cylinders *Three* No. of Cranks *Three*
 Dia. of Cylinders *24.39 & 65* Length of Stroke *45* Revs. per minute *70* Dia. of Screw shaft *as per rule 12.6* Lgth. of stern bush *52*
 Dia. of Tunnel shaft *as per rule 11.4* Dia. of Crank shaft journals *as per rule 12* Dia. of Crank pin *12 1/4* Size of Crank webs *16x8 1/2* Dia. of thrust shaft under
 collars *12 1/4* Dia. of screw *17 1/2* Pitch of screw *16 1/4* No. of blades *four* State whether moveable *no* Total surface *88 1/2*
 No. of Feed pumps *Two* Diameter of ditto *3 1/2* Stroke *24* Can one be overhauled while the other is at work *yes*
 No. of Bilge pumps *Two* Diameter of ditto *4 1/2* Stroke *24* Can one be overhauled while the other is at work *yes*
 No. of Donkey Engines *Two* Sizes of Pumps *12x10 & duplex 4 1/2 x 6* 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 in holds & one 2 1/2 in tunnel wall*

No. of bilge injections *one* sizes *6* Connected to condenser, or to circulating pump *is 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 *—*
 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 *Bilge pipes* How are they protected *wood casing*
 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 *on slip before launching* Is the screw shaft tunnel watertight *yes*
 Is it fitted with a watertight door *yes* worked from *top platform*

BOILERS, &c.— (Letter for record *5*) Total Heating Surface of Boilers *4,550 sq* Is forced draft fitted *no*
 No. and Description of Boilers *Two & 6 Cylindrical multitubular* Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs*
 Date of test *25.9.00* Can each boiler be worked separately *yes* Area of fire grate in each boiler *66 sq* No. and Description of safety valves to
 each boiler *Two direct spring* Area of each valve *8.3 sq* Pressure to which they are adjusted *184 lbs* Are they fitted with easing gear *yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *9 1/2* Mean dia. of boilers *16.6* Length *10.6* Material of shell plates *Steel*
 Thickness *1 1/32* Range of tensile strength *29 to 32 tons* Are they welded or flanged *no* Descrip. of riveting: cir. seams *Lap double* long. seams *DBS. trouble*
 Diameter of rivet holes in long. seams *1 5/16* Pitch of rivets *9 & 4 1/2* Lap of plates or width of butt straps *19 1/2 straps*
 Per centages of strength of longitudinal joint *91* Working pressure of shell by rules *181 lbs* Size of manhole in shell *16 x 12*
 Size of compensating ring *30 x 26 1/2 x 1 1/32* No. and Description of Furnaces in each boiler *Three Dighton* Material *Steel* Outside diameter *50"*
 Length of plain part *top 1 1/2 bottom 1 1/2* Thickness of plates *top 3 1/2 bottom 3 1/2* Description of longitudinal joint *welded* No. of strengthening rings *—*
 Working pressure of furnace by the rules *188 1/4* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16* Back *9/16* Top *1 1/32* Bottom *3/4*
 Pitch of stays to ditto: Sides *7 3/4 x 7 3/4* Back *7 1/2 x 7 1/2* Top *8 x 8* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *182 to 194 lbs*
 Material of stays *Steel* Diameter at smallest part *1 3/8 & 1 1/2* Area supported by each stay *606* Working pressure by rules *180 to 185* End plates in steam space:
 Material *Steel* Thickness *1 1/32* Pitch of stays *16 1/4 x 16* How are stays secured *double nuts* Working pressure by rules *183 lbs* Material of stays *Steel*
 Diameter at smallest part *2 3/8* Area supported by each stay *260 sq* Working pressure by rules *180 lbs* Material of Front plates at bottom *Steel*
 Thickness *1 1/8* Material of Lower back plate *Steel* Thickness *1 1/8* Greatest pitch of stays *13* Working pressure of plate by rules *199 lbs*
 Diameter of tubes *3 1/2* Pitch of tubes *4 5/8 x 4 5/8* Material of tube plates *Steel* Thickness: Front *27/32 & 7/16* Back *27/32* Mean pitch of stays *9 1/2 & 11 1/2*
 Pitch across wide water spaces *14 1/4* Working pressures by rules *231 lbs* Girders to Chamber tops: Material *Steel* Depth and
 thickness of girder at centre *9 3/8 x 3 1/4 double* Length as per rule *32 1/2* Distance apart *8"* Number and pitch of Stays in each *Three 8"*
 Working pressure by rules *207 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 *—*

DONKEY BOILER— No. Description *see Glasgow report No 18369. attached.*

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 can enter the donkey boiler No. Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile 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. Plates

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:— 1 propeller. 1 screw shaft. 12 shaft coupling bolts & nuts. 2 Connecting rod do. 2 piston rod do. 2 main bearing do. 6 holding down do. 6 studs for Cylinder Covers. 6 do for Valve Cover. 2 feed & 2 bilge pump valves. 12 Condenser tubes. 3 Cylinder escape valves & springs. 1 set air & Circ pump valves. 12 boiler tubes. 1 feed escape valve & spring. 1 set safety valve springs. 1 set fire bars. a quantity of bolts nuts & washers.

The foregoing is a correct description,

James MacIntyre Manufacturer.

1899. Oct 6. 11. 13. 21. Nov 8. 18. 29. Dec 8. 15. 19. 21. 25. 29. -1900. Jan 9. 11. 15. 19. 22. 25. 30. Feb 1. 3. 6. 9. 10. 12. 15. 20. 22. 24. 26. March 2. 6. 8. 13. 16. 17. 23. 26. 30. April 4. 6. 11. 14. 18. 24. 25. 26. 30. May 2. 4. 8. 10. 14. 17. 21. 23. 26. 29. 31. June 2. 5. 7. 9. 11. 13. 15. 18. 20. 21. 22. 26. 29. July 2. 16. 19. 20. 23. 25. 26. 28. 31. Aug. 2. 6. 8. 13. 16. 18. 22. 24. 27. 29. 30. Sep. 4. 6. 8. 10. 12. 14. 17. 18. 19. 21. 24. 25. Oct 1. 4. 5. 8. 11. 12. 13. 15. 16. 19. 20. 22. 23. 25. 26. 27. -122			
Dates of Survey while building	During progress of work in shops - -		
	During erection on board vessel - -		
	Total No. of visits	- 122	- Is the approved plan of main boiler forwarded herewith <i>yes.</i>
		donkey	<i>yes.</i>

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

James MacIntyre These Engines and Boilers were specially surveyed during construction. workmanship good. thrust. intermediate & screw shafts. examined when being turned & found apparently sound. Main Steam pipes tested by hydraulic pressure to 400 lbs per sq in & test satisfactory. The Engines & Boilers are satisfactorily fitted in vessel, and have been tested under full steam. they are now in good order and safe working condition, and are in our opinion eligible to be noted in Register Book. **L.M.C. 10.00.**

It is submitted that this vessel is eligible for THE RECORD. **L.M.C. 10.00.**

Greenock.

RS 6.11.00.
6.11.00

The amount of Entry Fee..	£ 3 : " : "	When applied for,
Special	£ 35 : " : "	29.10.1900
Donkey Boiler Fee	£ " : " : "	When received,
Travelling Expenses (if any) £	" : " : "	29.10.1900

Committee's Minute **Glasgow.** 5- NOV. 1900

Assigned **L.M.C. 10.00.**

MACHINERY CERTIFICATE
WRITTEN 7/11/00

C. B. Heron & R. Elliott
Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.

