

REPORT ON MACHINERY.

Port of *Glasgow*

WED. FEB 7 1900

Received at London Office

No. in Survey held at *Glasgow* Date, first Survey *20 Decr 1898* Last Survey *26 Jan 1900*
 Reg. Book. *71 Sup.* on the *S. S. "Argyle"* (Number of Visits *63*)
 Master *Do* Built at *Glasgow* By whom built *A & J Inglis* Tons Gross *425* Net *300*
 Engines made at *Glasgow* By whom made *A & J Inglis* When built *1900*
 Boilers made at *do* By whom made *do* when made *1900*
 Registered Horse Power *99* Owners *R & Reid* Port belonging to *St John's NFL.*
 Nom. Horse Power as per Section 28 *99* Is Refrigerating Machinery fitted *No* Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *15-24-40* Length of Stroke *30* Revs. per minute *100* Dia. of Screw shaft *7 3/4* as per rule *7 3/4* as fitted *9* Lgth. of stern bush *3-0*
 Dia. of Tunnel shaft *7 1/2* as per rule *7* as fitted *7 1/2* Dia. of Crank shaft journals *7-3/8* as per rule *7-3/8* as fitted *8* Dia. of Crank pin *8* Size of Crank webs *15 x 5 1/2* Dia. of thrust shaft under collars *8* Dia. of screw *9-0* Pitch of screw *11-0* No. of blades *4* State whether moceable *Yes* Total surface *20*
 No. of Feed pumps *2* Wires Diameter of ditto *7 x 6* Stroke *12* Can one be overhauled while the other is at work *Yes*
 No. of Bilge pumps *2* Diameter of ditto *2 5/8* Stroke *15* Can one be overhauled while the other is at work *Yes*
 No. of Donkey Engines *1 Duplex* Sizes of Pumps *2-4 1/2 x 8* Stroke *8* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *2-2 in E. R. 1-2 in Tunnel* Holds, &c. *Fore Hold 2-2*
After Hold 1-2
 No. of bilge injections *1* sizes *4* Connected to condenser, or to circulating pump *Yes* Is a separate donkey suction fitted in Engine room & size *Yes-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 *Yes*
 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 *For Bilge pipes* How are they protected *Wood covering*
 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 *6.12.99* Is the screw shaft tunnel watertight *Yes*
 Is it fitted with a watertight door *Yes* worked from *Main Deck*

BOILERS, &c.— (Letter for record *(S)*) Total Heating Surface of Boilers *1325* Is forced draft fitted *Howden's*
 No. and Description of Boilers *One S. E. Multitubular* Working Pressure *160* Tested by hydraulic pressure to *320*
 Date of test *5.12.99* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *57* No. and Description of safety valves to each boiler *2 Cockburn's* Area of each valve *7* Pressure to which they are adjusted *162 lbs* Are they fitted with easing gear *Yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *5 1/2* Mean dia. of boilers *12-9 3/4* Length *10-1 1/2* Material of shell plates *Steel*
 Thickness *1 1/8* Range of tensile strength *27/32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *273 lap long. seams D. Butt*
 Diameter of rivet holes in long. seams *1 1/4* Pitch of rivets *7 3/8* Lap of plates or width of butt straps *1-8*
 Per centages of strength of longitudinal joint rivets *88* Working pressure of shell by rules *182 lbs* Size of manhole in shell *16 x 10* plate *83*
 Size of compensating ring *Inc nuts* No. and Description of Furnaces in each boiler *3 Overrus* Material *Steel* Outside diameter *39*
 Length of plain part top *15* Thickness of plates crown *15* Description of longitudinal joint *welded* No. of strengthening rings *8 ribs* bottom *32*
 Working pressure of furnace by the rules *163* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16* Back *9/16* Top *9/16* Bottom *1*
 Pitch of stays to ditto: Sides *8 x 7 1/4* Back *8 x 8 1/4* Top *8 x 7 1/2* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *165 lbs*
 Material of stays *Steel* Diameter at smallest part *1.34* Area supported by each stay *66* Working pressure by rules *171* End plates in steam space: Material *Steel* Thickness *27/32* Pitch of stays *15 1/2 x 15* How are stays secured *2 nuts & washers* Working pressure by rules *172* Material of stays *Steel*
 Diameter at smallest part *2.31* Area supported by each stay *232* Working pressure by rules *181* Material of Front plates at bottom *Steel*
 Thickness *13/16* Material of Lower back plate *Steel* Thickness *13/16* Greatest pitch of stays *12 1/2* Working pressure of plate by rules *206*
 Diameter of tubes *3 1/2* Pitch of tubes *4 1/16 x 4 3/8* Material of tube plates *Steel* Thickness: Front *13/16* Back *13/16* Mean pitch of stays *9 1/16*
 Pitch across wide water spaces *13 1/2* Working pressures by rules *288* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *(8 x 3/4) 2* Length as per rule *2-4 1/2* Distance apart *7 1/2* Number and pitch of Stays in each *2-8*
 Working pressure by rules *216* Superheater or Steam chest; how connected to boiler *None* Can the superheater be shut off and the boiler worked separately *Yes*
 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 *None*

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

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 Plates 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:— *As required by the Rules, also: 2 propeller blades, 12 studs & nuts for ditto, 1 set each air & circulating pump valves, 1 In B safety valve spring & 3 cylinder escape valves & springs.*

The foregoing is a correct description,

A. & J. Inglis Manufacturer *S*

Dates of Survey while building

During progress of work in shops: 1898: Dec. 20. 1899: Mar. 6. 20. 24. Apr. 4. 13. 15. 17. 20. 21. 24. 26. May. 3. 14. 25. 27. 31. Jun. 2. 9. 19. 23. Jul. 3. 11. 28. Aug. 1. 17. 24. 29.

During erection on board vessel: Sep. 7. 9. 15. 16. 18. 21. Oct. 3. 4. 6. 7. 12. 13. 16. 17. 20. 23. 27. 30. Nov. 2. 9. 10. 20. 24. Dec. 4. 5. 6. 8. 14. 19. 26. 1900: Jan. 8. 11. 15. 23. 26.

Total No. of visits *68*

Is the approved plan of main boiler forwarded herewith *Yes*

" " " donkey " " " *None*

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

The engines & boiler of this vessel have been constructed under Special Survey, the materials & workmanship are good & they have been satisfactorily tried under steam.

*This vessel is in my opinion eligible for notation **L.M.C.** in the Register Book.*

It is requested that the plan of the boiler may be returned for use with the sister vessels now under construction.

The foregoing report is forwarded herewith.

It is submitted that this vessel is eligible for THE RECORD. **L.M.C. 1.00** ED *Dec. light.*

H. J. Sadler Smith C.M. 7.2.00

The amount of Entry Fee... £ 1 : : When applied for, 5/21 1900

Special £ 14 : 17 : : When received, 6/21 1900

Donkey Boiler Fee £ : : :

Travelling Expenses (if any) £ : : :

H. J. Sadler Smith
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI 9 FEB 1900* MACHINERY CERTIFICATE

Assigned *+ L.M.C. 1.00*



Lloyd's Register Foundation

Glasgow.

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