

REPORT ON MACHINERY.

Port of Glasgow.

Received at London Office **TUES. FEB 6 1900.**

No. in Survey held at Glasgow. Date, first Survey 4 July 1899 Last Survey 29 January 1900.
 Reg. Book. " Sal de Travers" (Number of Visits 31.)
 on the Screw Steamer
 Master Wm. Inley. Built at Ayr By whom built S. McKnight & Co. Ltd. When built 1900
 Engines made at Glasgow By whom made Ross & Duncanson. when made 1900
 Boilers made at Glasgow. By whom made Ross & Duncanson. when made 1900
 Registered Horse Power _____ Owner John Harrison Port belonging to Glasgow.
 Nom. Hors. Power as per Section 28 116 Is Refrigerating Machinery fitted No. Is Electric Light fitted No.

Tons { Gross 767.95
 Net 275.62

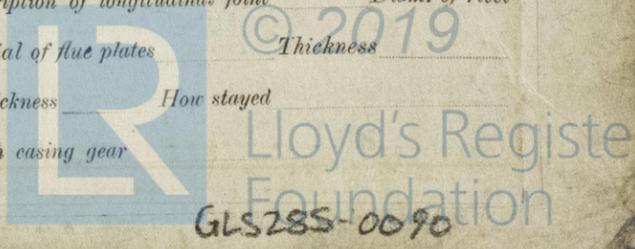
ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 17 2/2 - 44" Length of Stroke 33" Revs. per minute 90 Dia. of Screw shaft 8.6" Lgth. of stern bush 36"
 Dia. of Tunnel shaft 8 1/2" Dia. of Crank shaft journals 9" Dia. of Crank pin 9 1/2" Size of Crank webs 16 1/2 x 5 1/2" Dia. of thrust shaft under rollers 8 1/2" Dia. of screw 11.6" Pitch of screw 12.9" No. of blades 4 State whether moveable No Total surface 44 Sq. ft.
 No. of Feed pumps 2 Diameter of ditto 5" Stroke 16 1/2" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 16 1/2" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Two. Sizes of Pumps 3 1/2 x 5" Ballast No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two: 2 1/4" dia. In Holds, &c. Two: 2" dia.
 No. of bilge injections 1 sizes 4 1/2" Connected to condenser, or to circulating pump e.p. Is a separate donkey suction fitted in Engine room & size Yes: 2 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 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.
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock New Vessel 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 1830 Sq. ft. Is forced draft fitted No.

No. and Description of Boilers One: Cylindrical: Single ended. Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs.
 Date of test 22/12/99 Can each boiler be worked separately ✓ Area of fire grate in each boiler 60 Sq. ft. No. and Description of safety valves to each boiler 2: Direct Spring Area of each valve 6.49" Pressure to which they are adjusted 165 lbs Are they fitted with easing gear Yes.
 Smallest distance between boilers or uptakes and bunkers or woodwork About 9" Mean dia. of boilers 15.0" Length 10.6" Material of shell plates Steel
 Thickness 1 3/16" Range of tensile strength 27-32 tons Are they welded or flanged No. Descrip. of riveting: cir. seams Lap Double long. seams Butt Straps
 Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8" 4" Lap of plates or width of butt straps 14 1/2"
 Per centages of strength of longitudinal joint rivets 88 Working pressure of shell by rules 169 lbs. Size of manhole in shell 16" x 12"
 Size of compensating ring 4 1/2 x 1 3/16" No. and Description of Furnaces in each boiler 3: Deighton's Material Steel Outside diameter 48"
 Length of plain part 6.6" Thickness of plates 1 1/4" Description of longitudinal joint Welded. No. of strengthening rings ✓
 Working pressure of furnace by the rules 141 lbs. Combustion chamber plates: Material Steel Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 5/8"
 Pitch of stays to ditto: Sides 8 1/2 x 8 1/2" Back 8 1/2 x 7 1/2" Top 8 1/2 x 8" If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 169 lbs.
 Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 42 1/4" Working pressure by rules 164 lbs End plates in steam space:
 Material Steel Thickness 15/16" Pitch of stays 16 x 16" How are stays secured By nuts & washers. Working pressure by rules 163 lbs. Material of stays Steel
 Diameter at smallest part 2 5/16" Area supported by each stay 256" Working pressure by rules 164 lbs Material of Front plates at bottom Steel
 Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 12 1/2" Working pressure of plate by rules 362 lbs.
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/2 x 4 1/8" Material of tube plates Steel Thickness: Front 15/16" Back 3/4" Mean pitch of stays 10.28"
 Pitch across wide water spaces 14" Working pressures by rules 161 lbs 181 lbs. Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 7" x 2" Length as per rule 29 1/2" Distance apart 8" Number and pitch of Stays in each 2: 8 1/2"
 Working pressure by rules 144 lbs Superheater or Steam chest; how connected to boiler None. 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 casing gear _____

Is a Report also sent on the Hull of the Ship? When, one mile or more, If not, state whether.



DONKEY BOILER— No. *1* Description *Vertical with cross tubes*
 Made at *Stockton* By whom made *Riley Bros.* When made *16/12/99* Where fixed *In Stockton*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *2118* Fire grate area *19.6* Description of safety valves *Direct Spring*
 No. of safety valves *1* Area of each *9.62* Pressure to which they are adjusted *82 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*
 Dia. of donkey boiler *6' 0"* Length *10' 6"* Material of shell plates *Steel* Thickness *1/32"* Range of tensile strength *27-32 tons*
 Descrip. of riveting long. seams *D. Riv. Lap* Dia. of rivet holes *3/16"* Whether punched or drilled *P* Pitch of rivets *2 1/4"*
 Lap of plating *4 1/4"* Per centage of strength of joint Rivets *48* Thickness of shell crown plates *1/32"* Radius of do. *5 1/4"* No. of Stays to do. *6*
 Dia. of stays. *1 1/2"* Diameter of furnace Top *4' 10"* Bottom *5' 5 1/8"* Length of furnace *59"* Thickness of furnace plates *1/32"* Description of joint *Lap*
 Thickness of furnace crown plates *1/32"* Stayed by *As above.* Working pressure of shell by rules *82*
 Working pressure of furnace by rules *91 lbs* Diameter of uptake *15"* Thickness of uptake plates *1/16"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *2 main Bearing Bolts, 2 Crank pin Bolts, 2 Crosshead Bolts, 1 set Coupling Bolts, 1 set Feed & Bilge pump, 1 main Chest valve, 1 Donkey check valve, 3 Boiler tubes*

The foregoing is a correct description,
Hos & Dunsand Manufacturer.

Dates of Survey while building
 During progress of work in shops— 1899:— July. 4. Aug. 1. 3. 14. 22. 28. Sep. 22. 28. Oct. 6. 13. 26. Nov. 3. 7. 10. 14. 21. 27. 30. Dec. 1. 7. 8. 21. 22. 28.
 During erection on board vessel— 1900:— Jan. 8. 11. 17. 22. 23. 27. 29.
 Total No. of visits *31.* Is the approved plan of main boiler forwarded herewith *Yes.*
 " " " donkey " " " *No.*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The Engines and Boilers of this vessel have been built under special survey and the materials and workmanship are good. When completed they were examined under steam and worked satisfactorily.
The machinery is now in good and safe working condition and eligible in my opinion to have the record of ~~L.M.C.~~ 1, 1900. marked in the Society's Register Book.

THE RECORD + L.M.C. 1.00.
 J.S. IMPROD.
 6.2.00 6.2.00.

Glasgow.

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

The amount of Entry Fee.. £ 2 : :
 Special .. £ 17 : 8 :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ 9 : 18 : 10

When applied for, 5/2/1900.
 When received, 7.2.00
 J.S. IMPROD.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned + L.M.C. 1.00

FRI. 9 FEB 1900

MACHINERY CERTIFICATE WRITTEN.

