

REPORT ON MACHINERY.

8165

No. 8165
 No. in Survey held at Port Glasgow Date, first Survey 7th Nov. 1881 Last Survey 22nd April 1882
 Reg. Book. "S.S. Luirain" on the "S.S. Luirain" Tons 1165.52
 Master Port Glasgow Built at Port Glasgow When built 1881
 Engines made at Port Glasgow By whom made Blackwood & Gordon when made 1881 & 2
 Boilers made at " By whom made " when made "
 Registered Horse Power 200 Owners Austrian S. N. Co. Port belonging to Sydney N. S. W.

ENGINES, &c.—

Description of Engines Compound Inverted Direct Acting
 Diameter of Cylinders 30 & 60 Length of Stroke 48" No. of Rev. per minute 60 Point of Cut off, High Pressure 30" Low Pressure 30"
 Diameter of Screw shaft 1 1/2 Diameter of Tunnel shaft 10 3/4 Diameter of Crank shaft journals 1 1/2 Diameter of Crank pin 1 1/2 size of Crank webs 21 x 9
 Diameter of screw 1 1/2 Pitch of screw 19 to 22 feet No. of blades 4 state whether moveable yes total surface 54.5 feet
 No. of Feed pumps 2 diameter of ditto 3 3/4 Stroke 2 1/4 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 diameter of ditto 3 3/4 Stroke 2 1/4 Can one be overhauled while the other is at work yes
 Where do they pump from Engine Room & Holds. one pumps also from Sea & discharges on deck
 No. of Donkey Engines 2 Size of Pumps 5 x 10 & 4 x 8 Where do they pump from Large from Sea. Hot well
Bilges & Ballast tanks. Small from Sea only.
 Are all the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes
 No. of bilge injections one and sizes 3 1/2 Are they connected to condenser, or to circulating pump to Circ. pump (Geynnes)
 How are the pumps worked by Levers
 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 a little below
 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 & Ballast Tank pipes How are they protected wood Casement
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock on Slip before vessel was launched. Screw shaft
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from E. Room top platform.

BOILERS, &c.—

Number of Boilers 2 Description Hot sided Multitubular
 Working Pressure 85 lbs Tested by hydraulic pressure to 170 lbs per sq in Date of test 4th March 1882
 Description of superheating apparatus or steam chest None fitted
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately —
 No. of square feet of fire grate surface in each boiler 62.5 Description of safety valves Direct spring
 No. to each boiler Two area of each valve 17.72 sq in Are they fitted with easing gear yes
 No. of safety valves to superheater — area of each valve — are they fitted with easing gear —
 Smallest distance between boilers and bunkers or woodwork 7" from Deck
 Diameter of boilers 12' 0" Length of boilers 11' 3" description of riveting of shell long. seams Double butt Strap circum. seams Double
 Thickness of shell plates 3/8" diameter of rivet holes 1 1/8" whether punched or drilled punched pitch of rivets 4 3/4"
 No. of plating 19" Straps per centage of strength of longitudinal joint 76 working pressure of shell by rules 97 lbs
 No. of manholes in shell 15 1/2 x 12 1/2 size of compensating rings 3 1/2 x 3 x 1/2
 No. of Furnaces in each boiler 3 outside diameter 40" length, top 7' 6" bottom 10' 8"
 Thickness of plates 1/6" description of joint Welded if rings are fitted No greatest length between rings —
 Working pressure of furnace by the rules 109 lbs
 Combustion chamber plating, thickness, sides 1/2" Steel back 1/2" Steel top 1/2" Steel
 No. of stays to ditto sides 8 x 8" back 8 x 8" top 8 x 9"
 Are stays fitted with nuts or riveted heads Nuts inside & out working pressure of plating by rules 120 lbs for sides & back & 94 lbs for top
 Diameter of stays at smallest part 1 1/4" & 1 3/8" at wide space working pressure of ditto by rules 111 lbs at wide space & 115 lbs for small space
 No. of plates in steam space, thickness 1/6" pitch of stays to ditto 14 x 14 how stays are secured double nuts &
 Working pressure by rules 138 lbs diameter of stays at smallest part 2 1/4" working pressure by rules 122 lbs
 Bottom plates at bottom, thickness 5/8" Steel Back plates, thickness 1/6" greatest pitch of stays 12" working pressure by rules 100 lbs

GRK 298-0003

DONKEY BOILER— Description *Round Upright*
Made at *Greenock* By whom made *W. Watson* when made *1882*
Where fixed *in Stakehole* working pressure *85 lbs* Tested by hydraulic pressure to *170 lbs* No. of Certificate *97*
Fire grate area *19.5 sq ft* Description of safety valves *Direct spring* No. of safety valves *Two* area of each *7.06 sq*
If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *yes if stop cock is open*
Diameter of donkey boiler *6.6* " length *11.0* " description of riveting *Lap triple in vertical seam*
thickness of shell plates *9/16* " diameter of rivet holes *13/16* " whether punched or drilled *punched*
pitch of rivets *3* " lap of plating *5 1/2* " & *4* " per centage of strength of joint *72*
thickness of crown plates *1 1/16* " stayed by *no stays* Crown *hemispherical*
Diameter of furnace, top *5.3* " bottom *5.9* " ^{height} length of furnace *6.0* "
thickness of plates *1/2* " description of joint *lap single*
thickness of furnace crown plates *1/2* " stayed by *no stays* Crown *hemispherical*
Working pressure of shell by rules *85 lbs* working pressure of furnace by rules *Stays 27 x 16 pitch. 1 1/2 diam =*
diameter of uptake *14* " thickness of plates *7/16* " thickness of water tubes *7/16* " *two tubes 10" diam =*

The foregoing is a correct description,
 Port Blackwood & Gordon Manufacturer.
 A. W. Gresham Manager

General Remarks (State quality of workmanship, opinions as to class, &c. *The Engines & Boilers have been specially surveyed during construction. Quality of workmanship good. The Machinery & Boilers are now in good order and safe working condition and are in my opinion, eligible to be noted in the Register Book. ✠ LLOYD'S M.C. 4.82.*)

It is submitted that this vessel is
eligible to have the notification
bottoms recorded M 25/4/82

The amount of Entry Fee .. £ 3 : — : — received by me,

Special .. £ 30 : — : — £ 33. —

Certificate (if required) .. £ *Gratis* : *24th Apr 1882*
To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute

Tuesday, 25th April, 1882.

Andrew C. Heron
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Clyde District

Lloyd's Register
Foundation