

# REPORT ON MACHINERY.

UES. 21 OCT 1902

Port of Glasgow

Received at London Office

No. in Survey held at Glasgow Date, first Survey 16 Oct 1901 Last Survey 10 October 1902  
 Reg. Book 1148 on the T.S.S. "Commonwealth" (Number of Visits 2)  
 Master J. E. Elbery Built at Glasgow By whom built Barclay Curle & Co. Ltd When built 1902  
 Engines made at Glasgow By whom made Barclay Curle & Co. Ltd when made 1902  
 Boilers made at do By whom made do when made 1902  
 Registered Horse Power \_\_\_\_\_ Owners W Lund Port belonging to London  
 Nom. Horse Power as per Section 28 843 Is Refrigerating Machinery fitted Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin screw triple expansion No. of Cylinders 6 No. of Cranks 6  
 Dia. of Cylinders 24-40-64 Length of Stroke 48 Revs. per minute 90 Dia. of Screw shaft 13 1/2 Lgth. of stern bush 4-8  
 Dia. of Tunnel shaft 12 3/4 Dia. of Crank shaft journals 12-9 1/4 Dia. of Crank pin 13 1/2 Size of Crank webs 8 1/2 Dia. of thrust shaft under collars 13 1/2 Dia. of screw 16-3 Pitch of screw 18.0 s. 18.4 P No. of blades 3 State whether moveable Yes Total surface 74 sq ft each  
 No. of Feed pumps Wain Diameter of ditto 2-9 Stroke 26 Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 4 7/8 Stroke 24 Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 4 Sizes of Pumps (12x8x26) 2, (10x7x10) 2 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Eng. Room 2-3 1/2 In Holds, &c. Hold 2-3 1/2, 1-4, 2-1-4, 2-3-1-4, 2-4-2-3 1/2, 2-5-1-3 1/2 Tunnel 1-3  
 No. of bilge injections 2 sizes 7 1/2 Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size 1-3 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 For bilge & ballast 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 Before launch Is the screw shaft tunnel watertight Yes  
 Is it fitted with a watertight door Yes worked from Upper deck

BOILERS, &c.— (Letter for record (S)) Total Heating Surface of Boilers 12913 Is forced draft fitted Handblows  
 No. and Description of Boilers 2 D.E. & 2 S.E. Mull's Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs  
 Date of test 4-7-02 Can each boiler be worked separately Yes Area of fire grate in each boiler 56-876 No. and Description of safety valves to each boiler Spring 2-6E Area of each valve S.E. 6-24 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 width of stokehold Mean dia. of boilers 14-3 Length SE 11-0 Material of shell plates Steel  
 Thickness 1 7/16 Range of tensile strength 28/32 Are they welded or flanged no Descrip. of riveting: cir. seams DOT lap long. seams DBS. 5 rivs  
 Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 9 Lap of plates or width of butt straps 1-7 3/4  
 Per centages of strength of longitudinal joint 93 Working pressure of shell by rules 204 lbs Size of manhole in shell 16x12  
 Size of compensating ring Flanged No. and Description of Furnaces in each boiler DE. 6. SE. 3 Material Steel Outside diameter 3-8 1/2  
 Length of plain part top Thickness of plates bottom 9/16 Description of longitudinal joint welded No. of strengthening rings —  
 Working pressure of furnace by the rules 199 Combustion chamber plates: Material Steel Thickness: Sides 19/32 Back 9/16 (SE) Top SE 19/32 Bottom 27/32  
 Pitch of stays to ditto: Sides 9x7 Back 8x7 1/2 Top SE 9x8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules DE 187 SE 160  
 Material of stays Steel Diameter at smallest part 1-4 5/8 Area supported by each stay 64 Working pressure by rules 180 End plates in steam space: Material Steel Thickness 1 7/32 Pitch of stays 15 1/4 x 16 How are stays secured Double nuts Working pressure by rules 254 Material of stays Steel  
 Diameter at smallest part 5-5 1/2 Area supported by each stay 256 Working pressure by rules 216 Material of Front plates at bottom Steel  
 Thickness 13/16 Material of Lower back plate Steel (S.E) Thickness 1 1/16 Greatest pitch of stays 13 1/2 Working pressure of plate by rules 200 (SE)  
 Diameter of tubes 2 1/2 Pitch of tubes 3 3/4 Material of tube plates Steel Thickness: Front 13/16 Back SE 25/32 Mean pitch of stays 11 1/2  
 Pitch across wide water spaces 13 1/2 Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre SE (11 3/4 x 11) 2 DE. 49 1/2 DE. 8 3/16 DE. 4-9  
 Length as per rule SE 30 1/2 Distance apart SE 8 Number and pitch of Stays in each SE 3-8  
 Working pressure by rules SE 157 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 easing gear \_\_\_\_\_



