

# REPORT ON MACHINERY.

No. 32144

of writing Report 20.12.12 When handed in at Local Office 20.12.12 Port of Glasgow  
 in Survey held at Glasgow Date, First Survey 23.1.12 Last Survey 19.12.1912.  
 Book. on the S.S. SIR ROGER BACON (Number of Visits 53)  
 Master C.P. Cogley Built at Paisley By whom built John Fullerton & Co (N<sup>o</sup> 225) Tons Gross 808. Net 568.  
 Engines made at Glasgow By whom made Ross & Duncan (N<sup>o</sup> 911) when made 1912  
 Meters made at Glasgow By whom made Ross & Duncan (N<sup>o</sup> 1390-1) when made 1912.  
 Registered Horse Power Owners J. Bacon Ltd. Port belonging to Liverpool  
 Horse Power as per Section 28 147. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

**GINES, &c.**—Description of Engines Triple expansion surface condensing No. of Cylinders 3. No. of Cranks 3.  
 No. of Cylinders 14. 2 1/2. 44 Length of Stroke 33 Revs. per minute 86. Dia. of Screw shaft as per rule 9.44 Material of screw shaft Iron  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight  
 Is the propeller boss Yes If the liner is in more than one length are the joints burned No If the liner does not fit tightly at the part  
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two  
 shafts are fitted, is the shaft lapped or protected between the liners Length of stern bush 3'-2"  
 Dia. of Tunnel shaft as per rule 8.44 Dia. of Crank shaft journals as per rule 8.88 Dia. of Crank pin 9" Size of Crank webs 1/4 x 5/8 Dia. of thrust shaft under  
 bars 9" Dia. of screw 11'-6" Pitch of Screw 14'-3" No. of Blades 4 State whether moveable No Total surface 49.5  
 No. of Feed pumps 2. Diameter of ditto 3" Stroke 16 1/2 Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2. Diameter of ditto 3 1/4 Stroke 16 1/2 Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 2. Sizes of Pumps 6 x 4 1/2 x 6 Duplex feed Ballast No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room 1-2 1/2, 1-2 1/4, 1-2 1/2 special In Holds, &c. 2-2"  
 No. of Bilge Injections 1. sizes 4" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes - 2 1/4"  
 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 Tank & hold suction 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  
 Dates of examination of completion of fitting of Sea Connections 13.11.12. of Stern Tube 28.10.12. Screw shaft and Propeller 22.10.12.  
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

**BOILERS, &c.**—(Letter for record (S)) Manufacturers of Steel David Colville & Sons & The Lanarkshire Steel Co.  
 Total Heating Surface of Boilers 2696 Is Forced Draft fitted No No. and Description of Boilers 2 - Single ended marine  
 Working Pressure 140 lbs. Tested by hydraulic pressure to 340 lbs. Date of test 18.6.12. No. of Certificate 11655.  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 39 # No. and Description of Safety Valves to  
 each boiler Two spring loaded Area of each valve 3.94 # Pressure to which they are adjusted 145 lbs. Are they fitted with easing gear Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 6'-0" Mean dia. of boilers 12'-0" Length 16'-0" Material of shell plates Steel  
 Thickness 3/32 Range of tensile strength 28/32 Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams D.R.  
 Long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 6 7/8" Lap of plates or width of butt straps 1'-5 1/2"  
 Percentages of strength of longitudinal joint rivets 88.5 Working pressure of shell by rules 142 lbs. Size of manhole in shell 16" x 12"  
 plate 83.6  
 Size of compensating ring 7 x 3 1/2" No. and Description of Furnaces in each boiler 2 - Plain Material Steel Outside diameter 3'-8"  
 Length of plain part top 6'-2" Thickness of plates crown 3/4" Description of longitudinal joint weld No. of strengthening rings one  
 bottom 5'-10" bottom 5/4"  
 Working pressure of furnace by the rules 141 lbs. Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 19/32" Top 5/8" Bottom 5/8"  
 Pitch of stays to ditto: Sides 9 x 8 1/2" Back 8 1/2 x 8 1/2" Top 9 x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 141 lbs.  
 Material of stays Steel Diameter at smallest part 1.46" Area supported by each stay 48 3/4" Working pressure by rules 149 lbs. End plates in steam space:  
 Material Steel Thickness 1" Pitch of stays 14" x 16" How are stays secured D.N.S.W. Working pressure by rules 144 lbs. Material of stays Steel  
 Diameter at smallest part 4.64" Area supported by each stay 242" Working pressure by rules 148 lbs. Material of Front plates at bottom Steel  
 Thickness 13/16" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 14 x 8 3/8" Working pressure of plate by rules 141 lbs  
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2 x 4 3/8" Material of tube plates Steel Thickness: Front 13/16" Back 3/4" Mean pitch of stays 8 7/8"  
 Pitch across wide water spaces 1'-2" Working pressures by rules 182 lbs. Girders to Chamber tops: Material Iron Depth and  
 thickness of girder at centre 7 x 2 1/4" Length as per rule 2'-4 21/32" Distance apart 9" Number and pitch of stays in each 2 - 8 3/4"  
 Working pressure by rules 193 lbs. Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked  
 separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet  
 holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes  
 If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes  
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

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