

REPORT ON MACHINERY.

No. 69271.
SAT. APR. 26. 1913

24 APR 1913

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Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of

No. in Survey held at Birkenhead Date, First Survey 7 Sept 1912 Last Survey 17 April 1913
Reg. Book. on the Gwin S.S. "Doon" (Number of Visits 8)

Master Eccleston Built at Birkenhead By whom built Cammell Laird & Co. When built 1913-4
Engines made at Birkenhead By whom made Cammell Laird & Co. when made 1913-4
Boilers made at do By whom made do when made 1913-4

Registered Horse Power 181 Owners Royal Mail Steam Packet Co. Port belonging to Buenos Ayres
Nom. Horse Power as per Section 28 181 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

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 in 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 liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 4" 1"

ENGINES, &c.—Description of Engines Gwin S.S. Inverted Compound S. Eng. No. of Cylinders Two each No. of Cranks 2, each
Dia. of Cylinders N.P. 15" L.P. 32" Length of Stroke 19" Revs. per minute 170 Dia. of Screw shaft as per rule 6.51" as fitted 6.34" Material of screw shafts Steel

Dia. of Tunnel shaft as per rule 6.01" as fitted 6.39" Dia. of Crank shaft journals as per rule 6.98" as fitted 6.98" Dia. of Crank pin 6.58" Size of Crank webs 13x4 3/8" Dia. of thrust shaft under collars 6.58" Dia. of screw 6" 6" Pitch of Screw 8" 6" No. of Blades 4 State whether moveable yes Total surface 21.5 sq ft.

No. of Feed pumps 2. Action Diameter of ditto 6" 8" Stroke 18" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2. Duplex Diameter of ditto 5" x 5" 3" x 2" Stroke 5" Can one be overhauled while the other is at work yes

No. of Donkey Engines 1. Small Service Sizes of Pumps 3" x 3" x 5" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room one 2 1/2" dia. to Bilge Pump, one 2 1/2" to Main Bilge Pump in Holds, &c. Pipe 2" Suctions 3 Port and 3 Starboard one 2" Suction from fore cargo hold.

No. of Bilge Injections one sizes 6 dia Connected to condenser, or to circulating pump in Dupl's a separate Donkey Suction fitted in Engine room & size 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 no

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 no

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 Jan 14-16-22 of Stern Tube Oct 23-24 - Dec 13-14 Screw shaft and Propeller Sept 5-9 - Oct 10-14
Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door. none worked from no

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Plates Stewart & Lloyd, Glasgow Stago Steel Co of Scotland
Total Heating Surface of Boilers 3465 sq ft Is Forced Draft fitted yes No. and Description of Boilers Two 3. Furnaces in Hull S. Eng.
Working Pressure 140 lbs Tested by hydraulic pressure to 280 lbs Date of test Jan 27 No. of Certificate 1969

Can each boiler be worked separately yes Area of fire grate in each boiler 52 sq ft No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 9.621" 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" 9" Length 10" 4" Material of shell plates Steel
Thickness 27/32" Range of tensile strength 28/32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams lap D. 7/8"

long. seams lap D. 7/8" Diameter of rivet holes in long. seams 15" Pitch of rivets 6.375" Lap of plates or width of butt straps 13 13/16"
Per centages of strength of longitudinal joint 95.4% Working pressure of shell by rules 141 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 11" 1/2" x 3/32" No. and Description of Furnaces in each boiler 3. Furnaces in Hull S. Eng. Material Steel Outside diameter 3' 3 1/2"
Length of plain part top 7" bottom 7" Thickness of plates top 7/16" bottom 7/16" Description of longitudinal joint welded No. of strengthening rings no

Working pressure of furnace by the rules 157.8 Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 1/16"
Pitch of stays to ditto: Sides 7 3/8" x 7" Back 7 5/8" x 7 1/16" Top 7 1/4" x 7" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 13 13/16" x 142.1

Material of stays Steel Diameter at smallest part 1.215" Area supported by each stay 53.85 sq in Working pressure by rules 170.8 End plates in steam space: Material Steel Thickness 29/32" Pitch of stays 17 1/2" x 15" How are stays secured nuts & washers Working pressure by rules 146.4 Material of stays Steel

Diameter at smallest part 2 5/16" Area supported by each stay 262.5 sq in Working pressure by rules 166 lbs Material of Front plates at bottom Steel
Thickness 27/32" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 13 13/32" x 6 5/8" Working pressure of plate by rules 198 lbs

Diameter of tubes 2 1/2" Pitch of tubes 3 3/32" x 3 3/16" Material of tube plates Steel Thickness: Front 29/32" Back 13/16" Mean pitch of stays 8 15/16"
Pitch across wide water spaces 13 1/2" Working pressures by rules 173 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 5 5/8" x 27/32" Length as per rule 2' 2 1/2" Distance apart 7 1/4" Number and pitch of stays in each three 7"

Working pressure by rules 150 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately yes
Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet no

Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no
Stays stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no

Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

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