

REPORT ON MACHINERY.

No. 7495
MON. FEB. 15. 1915

Date of writing Report 11 Feb 1915 When handed in at Local Office Belfast Received at London Office Belfast
 No. in Survey held at Belfast Port of Belfast
 Reg. Book. S.S. Carmarthenshire Date, First Survey 27 Feb 1914 Last Survey 6 Feb 1915
 on the S.S. Carmarthenshire (Number of Visits 81)
 Master Built at Belfast By whom built Workman Clark Tons Gross 7823
 Engines made at Belfast By whom made Workman Clark Net 4969
 Boilers made at Belfast By whom made Workman Clark when made 1913
 Registered Horse Power 735 Owners Royal Mail S. P. Coy Port belonging to Belfast
 Nom. Horse Power as per Section 28 735 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Single Screw, Quadruple Expansion No. of Cylinders 4 No. of Cranks 4
 Dia. of Cylinders 27 1/2 - 39 1/2 - 57 - 82 Length of Stroke 54 Revs. per minute 70 Dia. of Screw shaft as per rule 16.35 Material of Cast 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
 in the propeller boss Yes If the liner is in more than one length are the joints burned Yes 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 Yes Length of stern bush 5' 9"
 Dia. of Tunnel shaft as per rule 14.87 Dia. of Crank shaft journals as per rule 15.61 Dia. of Crank pin 16.8 Size of Crank webs 17 x 22 1/2 Dia. of thrust shaft under
 collars 16 1/2 Dia. of screw 19.6 Pitch of Screw 18.9 No. of Blades 4 State whether moveable Yes Total surface 125.25 sq ft.
 No. of Feed pumps None Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two Diameter of ditto 5 Stroke 27 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Five Sizes of Pumps General 10 x 8 x 10 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 - 3 1/2 Feed 12 x 4 x 14 Water 5 x 5 x 8 In Holds, &c. 12 - 3 1/2 6 - 2 1/2
 No. of Bilge Injections Two Connected to condenser, or to circulating pumps Yes a separate Donkey Suction fitted in Engine room & size 2 - 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 Yes
 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 Both
 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 Four 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 22-9-14 of Stern Tube 14-10-14 Screw shaft and Propeller 14-10-14
 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) Manufacturers of Steel Beardmore & Co L^{td}
 Total Heating Surface of Boilers 10500 Is Forced Draft fitted Yes No. and Description of Boilers 4 Single End Cylind^r
 Working Pressure 215 lbs Tested by hydraulic pressure to 430 lbs Date of test 13-10-14 No. of Certificate 467
 Can each boiler be worked separately Yes Area of fire grate in each boiler 65 sq ft No. and Description of Safety Valves to
 each boiler Two Direct Spring of each valve 9.62 sq Pressure to which they are adjusted 215 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork About 19 Mean dia. of boilers 15-4 1/2 Length 11-6 Material of shell plates Steel
 Thickness 3/4 Range of tensile strength 30-33 1/2 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap W.P.S.
 long. seams Butt Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 10 1/2 Lap of plates or width of butt straps 23 1/2
 Per centages of strength of longitudinal joint 89.7 Working pressure of shell by rules 251 lbs Size of manhole in shell 16 x 12
 Size of compensating ring McNeill No. and Description of Furnaces in each boiler 4 - Munsie Material Steel Outside diameter 42 1/2
 Length of plain part 2 Thickness of plates 3/4 Description of longitudinal joint Weld No. of strengthening rings 4
 Working pressure of furnace by the rules 240 lbs combustion chamber plates: Material Steel Thickness: Sides 3/4 Back 3/2 Top 3/4 Bottom 3/8
 Pitch of stays to ditto: Sides 8 x 6 Back 8 1/2 x 7 1/2 Working pressure by rules 215 lbs Working pressure by rules 225 lbs plates in steam space:
 Material of stay Steel Diameter at smallest part 1 7/8 supported by each stay Working pressure by rules 219 lbs Material of stays Steel
 Material Steel Thickness 1 7/8 Pitch of stays 15 x 15 How are stays secured Weld Working pressure by rules 219 lbs Material of stays Steel
 Diameter at smallest part 1 7/8 supported by each stay Working pressure by rules 258 lbs Material of Front plates at bottom Steel
 Thickness 1 Material of Lower back plate Steel Thickness 3/2 Greatest pitch of stays 3 1/2 x 7 1/2 Working pressure of plate by rules 235 lbs
 Diameter of tubes 2 1/2 Pitch of tubes 3 1/2 x 3 5/8 Material of tube plates Steel Thickness: Front 1 1/4 Back 1 1/2 Mean pitch of stays 7 1/2 x 7 1/2
 Pitch across wide water spaces 13 1/2 Working pressures by rules 215 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9 1/2 x (3/4 x 2) Length as per rule 31 1/2 Distance apart 8 1/2 x 8 1/2 Number and pitch of stays in each 3 - 7 1/2
 Working pressure by rules 216 lbs Superheater or Steam chest; how connected to boiler Yes Can the superheater be shut off and the boiler worked
 separately Yes Diameter 16 Length 16 Thickness of shell plates 3/4 Material Steel Description of longitudinal joint Weld Diam. of rivet
 holes 1 1/2 Pitch of rivets 1 1/2 Working pressure of shell by rules 216 lbs Diameter of flue 16 Material of flue plates Steel Thickness 3/4
 If stiffened with rings Yes Distance between rings 16 Working pressure by rules 216 lbs End plates: Thickness 3/4 How stayed Weld
 Working pressure of end plates 216 lbs Area of safety valves to superheater 16 Are they fitted with easing gear Yes

