

REPORT ON MACHINERY.

No. 7063

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 Date of writing Report 21 April 1912 When handed in at Local Office 10 Port of Belfast THU, APR 11 1912
 No. in Survey held at Belfast Date, First Survey 25 Jan 1911 Last Survey 28 March 1912
 Reg. Book. J.S.S. "Patrotic" (Number of Visits 43)
 on the Master Built at Belfast By whom built Harland & Wolff L^{td} Tons { Gross 2254
 Net 937
 Engines made at By whom made when made
 Boilers made at By whom made when made
 Registered Horse Power 5 Owners Belfast S.S. Coys L^{td} Port belonging to Belfast
 Nom. Horse Power as per Section 28 840 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin Screw Lane cylinder Triple Expansion Cylinders No. of Cranks 8
 Dia. of Cylinders 21 1/2" - 35" - 41" - 41" Length of Stroke 36" Revs. per minute 160 Dia. of Screw shaft as fitted 3 1/2" x 11 1/2" Material of P. Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liners Is the after end of the liner made water tight
 in the propeller boss - a lining cap fitted, white metal in stern bush 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 ✓ If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 51"
 Dia. of Tunnel shaft as fitted 11" Dia. of Crank shaft journals as fitted 11 1/2" Dia. of Crank pin 12" Size of Crank web 2 1/2" x 8 1/2" Dia. of thrust shaft under
 collars 1 1/2" Dia. of screw 11" - 3" Pitch of Screw 13" - 0" No. of Blades 3 State whether moveable No Total surface 42 sq ft.
 No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work
 No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work
 No. of Donkey Engines Size of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 - 3 1/2" & 4 - 3" In Holds, &c. 4 - 3"

No. of Bilge Injections 2 sizes 8" Connected to condenser, or to circulating pump Pump Is 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 ✓
 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 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 None How are they protected ✓
 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 26-7-11 of Stern Tube 28-7-11 Screw shaft and Propeller 28-7-11
 Is the Screw Shaft Tunnel watertight Stated to be Is it fitted with a watertight door Yes worked from Upper deck.

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel W. Colvills Sons
 Total Heating Surface of Boilers 11450 sq ft Total Forced Draft fitted Yes No. and Description of Boilers 2 - Double End cylinder
 Working Pressure 195 lbs Tested by hydraulic pressure to 390 lbs Date of test 27-10-11 No. of Certificate 4418
 Can each boiler be worked separately Yes Area of fire grate in each boiler 154 1/2 sq ft. No. and Description of Safety Valves to
 each boiler 4 - Direct Spring Area of each valve 10.32 sq Pressure to which they are adjusted 195 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork about 14" Mean dia. of boilers 16' - 6" Length 19' - 6" Material of shell plates Steel
 Thickness 1 3/4" Range of tensile strength 29-33 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap. B & S.
 long. seams Butt Bevel Diameter of rivet holes in long. seams 1 3/4" Pitch of rivets 10 1/2" Lap of plates or width of butt straps 22 3/4"
 Per centages of strength of longitudinal joint rivets 87.5 Working pressure of shell by rules 227 lbs Size of manhole in shell 16" x 12"
 plate 85.0
 Size of compensating ring No. and Description of Furnaces in each boiler 8 - Munnison's Material Steel Outside diameter 45 1/2"
 Length of plain part top 3' Thickness of plates crown 3 1/2" Description of longitudinal joint Weld No. of strengthening rings 8 to an
 bottom 5' bottom 3 1/2" C.C. bottom
 Working pressure of furnace by the rules 208 lbs Combustion chamber plates: Material Steel Thickness: Sides 2 1/2" Back ✓ Top 2 1/2" Bottom 1 5/8"
 Pitch of stays to ditto: Sides 8 1/2" x 8 1/2" Back ✓ Top 7 1/2" x 7 1/2" If stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 206 lbs
 Material of stay Steel Diameter at smallest part 1 1/2" x 1 1/2" Area supported by each stay 72 1/2 sq Working pressure by rules 219 lbs End plates in steam space:
 Material Steel Thickness 1 3/2" Pitch of stays Various How are stays secured Nuts & Washers Working pressure by rules as approved Material of stays Steel
 Diameter at smallest part 3" x 2 7/8" Area supported by each stay Various Working pressure by rules as approved Front plates at bottom Steel
 Thickness 7/8" Material of Lower back plate ✓ Thickness ✓ Greatest pitch of stays ✓ Working pressure of plate by rules ✓
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/4" Material of tube plate Steel Thickness: Front 7/8" Back 2 5/8" Mean pitch of stay 1 1/2" x 7 1/2"
 Pitch across wide water spaces 13 3/4" Working pressures by rules 196 lbs Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 9" x (3/8" x 2) Length as per rule 51" Distance apart 8 1/2" x 7" Number and pitch of stays in each 6 - 7 1/2"
 Working pressure by rules 294 lbs Superheater or Steam chest; how connected to boiler 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



