

REPORT ON MACHINERY.

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Date of writing Report 20th Oct 17 when handed in at Local Office Belfast Port of Belfast
 No. in Survey held at Belfast Date, First Survey 27th Jan 17 Last Survey 16th Oct 17
 Reg. Book. on the S.S. War Trefoil (Number of Visits 6)
 Master Thomas Drummond Built at Belfast By whom built Harland & Wolff L^{td} Gross 5166 Tons
 Engines made at Belfast By whom made Harland & Wolff L^{td} Net 3138 Tons
 Boilers made at Belfast By whom made Harland & Wolff L^{td} When built 1917
 Registered Horse Power 490 ✓ Owners The Shipping Controller Port belonging to London
 Is Refrigerating Machinery fitted for cargo purposes No ✓ Is Electric Light fitted Yes ✓

ENGINES, &c.—Description of Engines Single Screw Triple Expansion of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 27"-44"-73" Length of Stroke 48" Revs. per minute 78 Dia. of Screw shaft 14.6" as per rule 14.6" Material of Steel
 as fitted 15.5" screw shaft
 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 60 1/2"
 Dia. of Tunnel shaft 13.3" as per rule 13.3" Dia. of Crank shaft journals 13.99" as per rule 13.99" Dia. of Crank pin 14 1/2" Size of Crank web 28 x 9" Dia. of thrust shaft under
 collars 14 1/2" as fitted 13.5" Dia. of screw 14"-6" Pitch of Screw 16"-6" No. of Blades 4 State whether moveable No Total surface 102 1/2 sq ft.
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes ✓
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes ✓
 No. of Donkey Engines See other sheet No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4-3 1/2" In Holds, &c. 9-3 1/2" & 1-3"
 No. of Bilge Injections 1 size 8" Connected to condenser, or to circulating pump Pumps a separate Donkey Suction fitted in Engine room & size 4-3 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 Except main Ballast Inlets 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 Fore hold suction How are they protected Wood Casings
 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 6-9-17 of Stern Tube 6-9-17 Screw shaft and Propeller 1-9-17
 Is the Screw Shaft Tunnel watertight Yes ✓ Is it fitted with a watertight door No - W.T. Trunk from deck
 worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel D. Colville & Sons L^{td}
 Total Heating Surface of Boilers 7020 sq ft Forced Draft fitted Yes No. and Description of Boilers 3 Single End Cylind^r
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 14-9-17 No. of Certificate 578
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63 1/2 sq ft No. and Description of Safety Valves to
 each boiler 2-Direct Spring Area of each valve 9.62 sq 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 Hands ft Mean dia. of boilers 15'-6" Length 11'-6" Material of shell plates Steel
 Thickness 1 1/4" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seam Lap & But
 long. seams Butt Lap Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 9 1/8" Strip of plates on width of butt straps 19 1/2"
 Per centages of strength of longitudinal joint rivets 89.1 plate 85.6 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring Plate Flanged and Description of Furnaces in each boiler 3-Beighton Material Steel Outside diameter 50 7/8"
 Length of plain part 8" Thickness of plates 3 1/2" Description of longitudinal joint Weld No. of strengthening rings 0
 Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material Steel Thickness: Sides 2 3/32" Back 1/4" Top 2 3/32" Bottom 2 3/32"
 Pitch of stays to ditto: Sides 10 5/8" x 9 1/4" Back 10" x 9" Top 10 1/2" x 9 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs
 Material of stays Steel Diameter at smallest part 2.07 to 3.148 supported by each stay 98 1/2 sq Working pressure by rules 180 lbs and plates in steam space
 Material Steel Thickness 1 1/2" Pitch of stays 21 1/2" x 21 1/2" How are stays secured By Nuts Working pressure by rules 180 lbs Material of stays Steel
 Diameter at smallest part 8.29 sq supported by each stay 459 3/8 sq Working pressure by rules 187 lbs Material of Front plates at bottom Steel
 Thickness 3 1/2" Material of Lower back plate Steel Thickness 2 1/2" Greatest pitch of stays 13 3/8" Working pressure of plate by rules 189 lbs
 Diameter of tubes 3" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 3 1/2" Back 2" Mean pitch of stays 12 1/2" x 8 1/2"
 Pitch across wide water spaces 13 5/8" Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 11" x (6 1/2" x 2) Length as per rule 38 1/2" Distance apart 10" x 10 5/8" Number and pitch of stays in each 3-9 1/4"
 Working pressure by rules 182 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 rivets
 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 ✓

