

REPORT ON MACHINERY.

No. 26130

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Date of writing Report 19 When handed in at Local Office - 6 JUN 1914 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 21 Aug. Last Survey 4 June 1914
 Reg. Book. Supp 97 on the new steel S/S "BELRIDGE" Tons Gross 7020 Net 4420
 Master O. O. Olan Built at Sunderland By whom built Singh & Sons of N. 647 When built 1914
 Engines made at Sunderland By whom made George Black L^{td} (N. 996) when made 1914
 Boilers made at Sunderland By whom made George Black L^{td} (N. 996) when made 1914
 Registered Horse Power 555 Owners Akties. Tankpark (W. Wilhelmson) Port belonging to Tonsberg
 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 27.45" 74" Length of Stroke 54" Revs. per minute 74 Dia. of Screw shaft 15.53" Material of steel
 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 no If two
 liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 5.2 1/2"
 Dia. of Tunnel shaft 13.94" as per rule 14.62" Dia. of Crank shaft journals 14.74" as fitted 14.74" Dia. of Crank pin 14.74" Size of Crank webs 23 1/2" x 10" Dia. of thrust shaft under
 collars 14 7/8" Dia. of screw 18.9" Pitch of Screw 17.0" No. of Blades 4 State whether moveable no Total surface 108 sq ft
 No. of Feed pumps 2 Diameter of ditto 8" (10 1/2" steam) Stroke 21" Can one be overhauled while the other is at work yes (Weirs)
 No. of Bilge pumps 2 Diameter of ditto 5" Stroke 30" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 (also Weirs) Sizes of Pumps 9 & 10 x 10" 9 & 5 1/4 x 10" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Three @ 3 1/2" & two @ 2" in oil wells. In Holds, &c. large hold - 2 @ 2 1/2" - connected to ballast
pump in cargo hold (forward) only. 2 @ 2 1/2" in pump room, connected to cargo pumps only.
 No. of Bilge Injections 1 sizes 1 1/2" Connected to condenser, or to circulating pump to P. Is a separate Donkey Suction fitted in Engine room & size yes. 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 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 29-4-14 of Stern Tube 29-4-14 Screw shaft and Propeller 5-5-14
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door machinery worked from

BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel John Spence & Sons L^{td} & Rheinische Stahlwerke - Duisburg
 Total Heating Surface of Boilers 8150 sq ft Is Forced Draft fitted yes No. and Description of Boilers Four single ended marine
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 11-2-14 & 25-2-14 No. of Certificate 3189 & 3193
 Can each boiler be worked separately yes Area of fire grate in each boiler 49 sq ft No. and Description of Safety Valves to
 each boiler two direct spring Area of each valve 8.940" Pressure to which they are adjusted 185 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 1.6" Mean dia. of boilers 13.9" Length 11.9" Material of shell plates steel
 Thickness 1 1/16" Range of tensile strength 29 1/2 - 33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 10 R.
 long. seams 10 B.S. TR Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 3/4" Lap of plates or width of butt straps 17 1/8"
 Per centages of strength of longitudinal joint 89.6 Working pressure of shell by rules 182 Size of manhole in shell 16 x 12
 Size of compensating ring 8 1/2 x 1 1/8" No. and Description of Furnaces in each boiler 3 Morrison (low) Material steel Outside diameter 3.5 1/2"
 Length of plain part top 1 1/2" Thickness of plates bottom 1 1/2" Description of longitudinal joint welded No. of strengthening rings no
 Working pressure of furnace by the rules 182 Combustion chamber plates: Material steel Thickness: Sides 13 1/16" Back 3/4" Top 25 1/32" Bottom 13 1/16"
 Pitch of stays to ditto: Sides 10 3/8 x 10 3/4" Back 10 1/4 x 9 1/8" Top 10 1/2 x 11" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 183 End plates in steam space:
 Material of stays steel Diameter at smallest part 2.360" Area supported by each stay 115.50" Working pressure by rules 183 Material of stays steel
 Material steel Thickness 1 1/32" Pitch of stays 19 7/8 x 18" How are stays secured W.N. Working pressure by rules 185 Material of Front plates at bottom steel
 Diameter at smallest part 5.930" Area supported by each stay 3380" Working pressure by rules 182 Material of Front plates at bottom steel
 Thickness 15 1/16" Material of Lower back plate steel Thickness 15 1/16" Greatest pitch of stays 14 3/4 x 10 1/2" Working pressure of plate by rules 188
 Diameter of tubes 2 1/2" Pitch of tubes 35 1/8 x 3 3/4" Material of tube plates steel Thickness: Front 15 1/16" Back 3/4" Mean pitch of stays 9 5/16"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 184 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 2 @ 9 7/8 x 7 1/8" Length as per rule 3.0" Distance apart 11" Number and pitch of stays in each 2 @ 10 1/2"
 Working pressure by rules 181 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
 separately no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet
 holes no Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no
 If 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

