

REPORT ON MACHINERY.

No. 62568

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Date of writing Report 24th June 1912 When handed in at Local Office 28th June 1912 Port of Newcastle on Tyne
 No. in Survey held at Newcastle Date, First Survey 11th Dec. 1911 Last Survey 21st Jun 1912
 Reg. Book. 96 on the Machinery of the S.S. "Port Lincoln" (Number of Visits 67)
 Master Built at Newcastle By whom built Hawthorn Leslie & Co. Ltd When built 1912
 Engines made at Newcastle By whom made North Eastern Marine Eng. Co. when made 1912
 Boilers made at " By whom made (2) R. W. Hawthorn Leslie & Co. when made 1912
 Registered Horse Power Owners W. Milburn & Co. Port belonging to London
 Nom. Horse Power as per Section 28 777 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Gross Tons 7243
 Net Tons 4638

ENGINES, &c.—Description of Engines Quadruple No. of Cylinders 4 No. of Cranks 4
 Dia. of Cylinders 27 1/2", 39", 56" & 81 1/2" Length of Stroke 54" Revs. per minute 75 Dia. of Screw shaft as per rule 16.23 Material of iron
 as fitted 16 7/8" screw shafts
 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 ✓ 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 6'-0"
 Dia. of Tunnel shaft as per rule 14.8 Dia. of Crank shaft journals as per rule 15.6 Dia. of Crank pin 16 1/4" Size of Crank webs 2'7" x 10 1/4" Dia. of thrust shaft under
 collars 16 Dia. of screw 18'-9" Pitch of Screw 18'-9" No. of Blades 4 State whether moveable Yes Total surface 120 sq
 No. of Feed pumps 2 Diameter of ditto 9" Stroke 24" Can one be overhauled while the other is at work Yes
 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 Sizes of Pumps 8" x 10" x 10" & 8" x 5 1/2" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4 of 3 1/2" In Holds, &c. 2 of 3 1/2" in each hold &
1 of 3" in tunnel well
 No. of Bilge Injections 1 sizes 10 1/2" Connected to condenser, or to circulating pump pumps a separate Donkey Suction fitted in Engine room & size Yes 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 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
 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 2/4/12 of Stern Tube 2/4/12 Screw shaft and Propeller 2/4/12
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record 15) Manufacturers of Steel J. Spencer & Sons
 Total Heating Surface of Boilers 11420 Is Forced Draft fitted Yes No. and Description of Boilers 4 Single-ended
 Working Pressure 220 lbs Tested by hydraulic pressure to 440 lbs Date of test 18.23/4, 9.10/5/12 No. of Certificate 8306, 8307
 Can each boiler be worked separately Yes Area of fire grate in each boiler 69 sq No. and Description of Safety Valves to
 each boiler 2 direct spring Area of each valve 11.04 sq Pressure to which they are adjusted 225 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 16'-0" Length 12'-0" Material of shell plates steel
 Thickness 1 1/16" Range of tensile strength 30-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d. r. lap
 long. seams d. r. laps Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 10 1/2" Lap of plates or width of butt straps 24 1/4"
 Per centages of strength of longitudinal joint rivets 93.8 Working pressure of shell by rules 257.4 lbs Size of manhole in shell 16" x 12"
 plate 83.9
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 4 Dightons Material steel Outside diameter 41 1/2"
 Length of plain part top Thickness of plates bottom 5/8" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 241 lbs Combustion chamber plates: Material steel Thickness: Sides 2 3/32" Back 2 3/32" Top 2 3/32" Bottom 1 1/8"
 Pitch of stays to ditto: Sides 8" x 8" Back 8" x 8" Top 8" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 278 lbs
 Material of stays steel Diameter at smallest part 2.36 Area supported by each stay 90 sq Working pressure by rules 236 lbs End plates in steam space:
 Material steel Thickness 1 1/32" Pitch of stays 20 3/4" x 15 1/4" How are stays secured d. n. & w. Working pressure by rules 251 lbs Material of stays steel
 Diameter at smallest part 8.29 Area supported by each stay 326.8 Working pressure by rules 264 lbs Material of Front plates at bottom steel
 Thickness 1 1/16" Material of Lower back plate steel Thickness 1 1/32" Greatest pitch of stays 14 1/2" x 8" Working pressure of plate by rules 266 lbs
 Diameter of tubes 2 3/4" Pitch of tubes 4" x 4" Material of tube plates steel Thickness: Front 1 1/16" Back 1 3/16" Mean pitch of stays 8" x 8"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 220 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 9 7/8" x 2" Length as per rule 36" Distance apart 8" Number and pitch of stays in each 3; 8"
 Working pressure by rules 256 lbs Superheater or Steam chest; how connected to boiler none 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 ✓

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