

REPORT ON MACHINERY.

No. 21643

Port of Sunderland

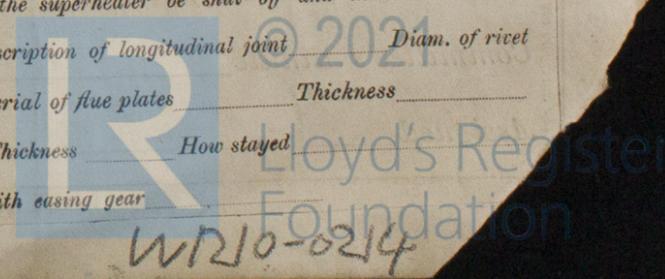
Received at London Office 1904

No. in Survey held at Sunderland Date, first Survey 1 Aug '03 Last Survey 9 Jan 1904
 Reg. Book. 4091 (Number of Visits) 1903-14
 on the Steel Screw Steamer 'Shadwell' Tons { Gross 4091 Net 2593
 Master J. Joubon Built at Sunderland By whom built J. Thompson & Sons, Ld. When built 1903-14
 Engines made at Sunderland By whom made The North Eastern Mar. & Coal when made 1903-14
 Boilers made at Sunderland By whom made do when made 1903-14
 Registered Horse Power 417 Owners (Erack Branfoot) Port belonging to Sunderland
 Nom. Horse Power as per Section 28 417 Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Tri Comp. Surf. condensing No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 26" 44" + 72" Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft 14.72" Material of screw shaft W.S.
 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 No
 If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5'-4 1/2"
 Dia. of Tunnel shaft 13.09" Dia. of Crank shaft journals 13.75" Dia. of Crank pin 14" Size of Crank webs 22" x 8 5/8" Dia. of thrust shaft under collars 14" Dia. of screw 18'-0" Pitch of screw 18'-0" No. of blades 4 State whether moveable No Total surface 98 sq ft
 No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 6" x 4" x 6" + 7 1/2" x 9 1/2" x 10 1/2" 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 + 3 1/2" to Hold + Tunnel well
 No. of bilge injections 1 sizes 5 1/2" Connected to condenser, or to circulating pump CP Is 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 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 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 ✓
 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
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock (New) Yes Is the screw shaft tunnel watertight Yes
 Is it fitted with a watertight door Yes worked from Main deck

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 6789 sq ft Is forced draft fitted No
 No. and Description of Boilers 3 Ordinary marine type Working Pressure 180 Tested by hydraulic pressure to 360
 Date of test 25/9/03 Can each boiler be worked separately Yes Area of fire grate in each boiler 60.5 No. and Description of safety valves to each boiler 2 Spring Area of each valve 7.07 Pressure to which they are adjusted 180 Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 15" Mean dia. of boilers 4'-6 1/2" Length 11'-6" Material of shell plates S
 Thickness 1 1/2" Range of tensile strength 29-32 Are they welded or flanged No Descrip. of riveting: cir. seams Dr. l. long. seams Dr. B.B.
 Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 8 5/16" Lap of plates or width of butt straps 17 3/4"
 Per centages of strength of longitudinal joint: rivets 85.7 plate 84.2 Working pressure of shell by rules 180.89 Size of manhole in shell 16" x 12"
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Doughtons Material S Outside diameter 3'-10" at mouth
 Length of plain part top 17 1/2" bottom 17 1/2" Thickness of plates crown 17 1/32" Description of longitudinal joint Welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 207.5 Combustion chamber plates: Material S Thickness: Sides 3/32" Back 3/32" Top 3/32" Bottom 1"
 Pitch of stays to ditto: Sides 9" x 10 3/4" Back 9 3/4" x 10" Top 8" x 10 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181.6
 Material of stays S Diameter at smallest part 2.1 Area supported by each stay 97.5 Working pressure by rules 193 End plates in steam space: Material S Thickness 1 1/32" Pitch of stays 18 3/8" x 21" How are stays secured n+w Working pressure by rules 180.6 Material of stays S
 Diameter at smallest part 7.24 Area supported by each stay 385.8 sq ft Working pressure by rules 187 Material of Front plates at bottom S
 Thickness 13/16" Material of Lower back plate S Thickness 13/16" Greatest pitch of stays 9 1/4" x 12 1/2" Working pressure of plate by rules 181 lbs.
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates S Thickness: Front 13/16" Back 13/16" Mean pitch of stays 9" x 9"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 249 Girders to Chamber tops: Material S Depth and thickness of girder at centre 9" x 2 1/4" Length as per rule 24.5 Distance apart 10 1/2" Number and pitch of Stays in each 3 of 8"
 Working pressure by rules 187.9 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

Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent?



WR10-0214