

REPORT ON MACHINERY.

No. 23901

SAI. 28 NOV 1908

Port of Sunderland

Received at London Office

No. in Survey held at Sunderland Date, first Survey June 10th Last Survey 21st Nov^r 1908
Reg. Book. S. S. Greenbatt (Number of Visits 56)

Master Sunderland Built at Sunderland By whom built Wm J. Priestman & Co Tons { Gross / Net }
Engines made at Sunderland By whom made North Eastern Marine Eng^r Co L^d when made 1908

Boilers made at Sunderland By whom made ditto when made 1908

Registered Horse Power _____ Owners _____ Port belonging to _____

Nom. Horse Power as per Section 28 180 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Inverted triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 19.31.51 Length of Stroke 36 Revs. per minute 75 Dia. of Screw shaft 10.97 Material of screw shaft Iron

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 3.9

Dia. of Tunnel shaft 9.67 Dia. of Crank shaft journals 10.05 Dia. of Crank pin 10.4 Size of Crank webs 6.5 x 15.5 Dia. of thrust shaft under

collars 10.4 Dia. of screw 13.9 Pitch of Screw 14.6 No. of Blades 4 State whether moveable no Total surface 60

No. of Feed pumps 2 Diameter of ditto 3 Stroke 16.5 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3.5 Stroke 16.5 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 9x11x10 & 5x3.5x5 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 of 2.5 In Holds, &c. 2 of 2.5 in each hold

No. of Bilge Injections one sizes 3.5 Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size 3

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 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 15.10.08 of Stern Tube 15.10.08 Screw shaft and Propeller 14.11.08

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from top platform

BOILERS, &c.—(Letter for record RS) Manufacturers of Steel J. Spencer & Sons

Total Heating Surface of Boilers 2938 Is Forced Draft fitted no No. and Description of Boilers one S.E. Cyl^d Mull^r

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 15.10.08 No. of Certificate 2726

Can each boiler be worked separately Yes Area of fire grate in each boiler 74 No. and Description of Safety Valves to

each boiler 2 spring Area of each valve 8.29 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 19 Mean dia. of boilers 16.9 Length 11.0 Material of shell plates steel

Thickness 1.76 Range of tensile strength 28.5/32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d.r.l.

long. seams Ex d.b.s. Diameter of rivet holes in long. seams 1.32 Pitch of rivets 9.2 Lap of plates or width of butt straps 20

Per centages of strength of longitudinal joint rivets 84.64 Working pressure of shell by rules 180.2 lbs Size of manhole in shell 16x12

Size of compensating ring 7x1.76 No. and Description of Furnaces in each boiler 4 Dighton Material steel Outside diameter 45.5

Length of plain part top 1 bottom 1 Thickness of plates crown 1.76 bottom 1.32 Description of longitudinal joint weld No. of strengthening rings 1

Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material steel Thickness: Sides 3/4 Back 15/32 Top 3/4 Bottom 7/8

Pitch of stays to ditto: Sides 11.5x8.5 Back 11.5x10 Top 8.5x11 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 189 lbs

Material of stays steel Diameter at smallest part 2.43 Area supported by each stay 115 Working pressure by rules 190 lbs End plates in steam space:

Material steel Thickness 1.32 Pitch of stays 25x22.5 How are stays secured d.u.w. Working pressure by rules 180 lbs Material of stays steel

Diameter at smallest part 9.42 Area supported by each stay 562.5 Working pressure by rules 181 lbs Material of Front plates at bottom steel

Thickness 1.3 Material of Lower back plate steel Thickness 1.3 Greatest pitch of stays 14.5x10 Working pressure of plate by rules 180 lbs

Diameter of tubes 3.4 Pitch of tubes 4.16x4.5 Material of tube plates steel Thickness: Front 1.3 Back 1.3 Mean pitch of stays 9.5x11.5

Pitch across wide water spaces 14.5 Working pressures by rules 215.7 lbs Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 8.5x4.5 Length as per rule 30 Distance apart 11 Number and pitch of stays in each 2-8.5

Working pressure by rules 182 lbs Superheater or Steam chest; how connected to boiler Yes Can the superheater be shut off and the boiler worked

separately Yes 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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