

REPORT ON MACHINERY.

Port of Newcastle

Received at London Office MAR. 2 MAR 1905

No. in Survey held at Newcastle

Date, first Survey Nov. 2nd 01 Last Survey 21st Febry 1905

Reg. Book.

(Number of Visits 14)

Master N. Levorius Built at Newcastle By whom built Palmer's S & C^o L^d

Engines made at Newcastle By whom made Palmer's S & C^o L^d when made 1902 & 3

Boilers made at do. By whom made do. when made 1902 & 3

Registered Horse Power 564 Owners Paul March Port belonging to St. Petersburg

Nom. Horse Power as per Section 28 564 Is Refrigerating Machinery fitted no. Is Electric Light fitted yes

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

Dia. of Cylinders 28" 46 1/2" 74" Length of Stroke 54" Revs. per minute 70 Dia. of Screw shaft as per rule 15.78 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 yes If two

liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 5' 6 3/4"

Dia. of Tunnel shaft as per rule 14.25 Dia. of Crank shaft journals as per rule 14.94 Dia. of Crank pin 15 1/2" Size of Crank webs 22 1/2" Dia. of thrust shaft under

rollers 15 1/2" Dia. of screw 19 ft Pitch of screw 19 ft No. of blades 4 State whether moveable yes Total surface 110 sq

No. of Feed pumps 2 Diameter of ditto 5 1/2" Stroke 30" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 6" Stroke 30" Can one be overhauled while the other is at work yes

No. of Donkey Engines 4 Sizes of Pumps 7 1/2" x 7 1/2" x 6 1/2" 7 1/2" x 10 1/2" x 3 1/2" 5 1/2" x 3 1/2" 5 1/2" x 3 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 of 3 1/2" + 1 of 3 1/2" Stroke hold In Holds, &c. Crossbunkers 1 of 3 1/2" Fore

Cargo hold 1 of 5" connected to 6" x 8 1/2" x 6" pumps.

No. of bilge injections 1 sizes 7" Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size yes 5"

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Newcastle Is the screw shaft tunnel watertight none

Is it fitted with a watertight door no worked from no

BOILERS, &c. — (Letter for record S) Total Heating Surface of Boilers 9950 sq Is forced draft fitted no

No. and Description of Boilers 4 Multitubular & Ended. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 14-1-03 Can each boiler be worked separately yes Area of fire grate in each boiler 66 1/2 sq No. and Description of safety valves to

each boiler 2 Spring Area of each valve 4.07 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 18" Mean dia. of boilers 16.3" Length 11 ft Material of shell plates S.

Thickness 1 1/16" Range of tensile strength 29 Are they welded or flanged ends Descrip. of riveting: cir. seams 2 Rivet long. seams DR Rivet

Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 9 1/4" Lap of plates or width of butt straps 20 1/2"

Per centages of strength of longitudinal joint rivets 86.75 plate 85.75 Working pressure of shell by rules 188 lbs Size of manhole in shell end 16" x 12"

Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Morrison's Material S. Outside diameter 4' 1"

Length of plain part top no bottom no Thickness of plates crown 3 1/16" Description of longitudinal joint welded No. of strengthening rings no

Working pressure of furnace by the rules 23 1/2 Combustion chamber plates: Material S Thickness: Sides 7/8 Back 7/8 Top 7/8 Bottom 7/8

Pitch of stays to ditto: Sides 8 1/4" x 8 1/4" Back 8 1/2" x 8 1/2" Top 8 1/2" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 18 1/2

Material of stays S. Diameter at smallest part 1.5" Area supported by each stay 72.25 Working pressure by rules 222 1/2 End plates in steam space:

Material S. Thickness 1 1/8" Pitch of stays 16 1/2" x 19 1/2" How are stays secured 2 nuts Working pressure by rules 195 1/2 Material of stays S.

Diameter at smallest part 2.84 Area supported by each stay 315 Working pressure by rules 194 Material of Front plates at bottom S.

Thickness 3/32 Material of Lower back plate S. Thickness 1" Greatest pitch of stays 15" Working pressure of plate by rules 245 1/2

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates S. Thickness: Front 2 1/32" Back 2 1/32" Mean pitch of stays 11 1/4"

Pitch across wide water spaces 15 1/2" Working pressures by rules 205 1/2 Girders to Chamber tops: Material S. Depth and

thickness of girder at centre 9" x 2" Length as per rule 2' 11 1/2" Distance apart 8 1/2" Number and pitch of Stays in each 3 of 8 1/4"

Working pressure by rules 213 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked

parately 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

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

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