

REPORT ON MACHINERY.

Port of Newcastle-on-Tyne Received at London Office TUES. 24 JUN 1902
 No. in Survey held at South Shields Date, first Survey Dec 13 Last Survey June 10 1902
 Book. S.S. STATIA (Number of Visits 28)
 on the S.S. STATIA Tons { Gross 2947 Net 1872
 Built at South Shields By whom built Messrs J. Readhead & Son When built 1902
 Engines made at South Shields By whom made Messrs J. Readhead & Son when made 1902.6
 Boilers made at South Shields By whom made Messrs J. Readhead & Son when made 1902.6
 Registered Horse Power 316 Owners Scullion Sons & Co Port belonging to London
 Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion Surface Condensing No. of Cylinders 3 No. of Cranks 3
 No. of Cylinders 2 5 1/2 x 4 2 x 6 8 Length of Stroke 4 5 Revs. per minute 65 Dia. of Screw shaft 13 5/8 as per rule 13 5/8 as fitted 14 1/4 Lgth. of stern bush 4.8
 Dia. of Tunnel shaft 12 3/4 as per rule 12 3/4 as fitted 12 3/4 Dia. of Crank shaft journals 13 3/8 as per rule 13 3/8 as fitted 13 3/8 Dia. of Crank pin 13 1/2 Size of Crank webs 9 x 18 1/2 Dia. of thrust shaft under
 Dia. of screw 14 1/2 Dia. of screw 16.3 Pitch of screw 17.6 as fitted 20 No. of blades 4 State whether moveable No Total surface 75 sq
 No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 2 4 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 3/8 Stroke 2 4 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Two Sizes of Pumps Ballast 7 1/2 x 8 1/4 x 6 Duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 2 Wing 3" diam 1 centre 3 1/2 diam In Holds, &c. Fore hold 2 Wing 3" diam Main hold
Wing 3" diam, After hold 2 Wing 3" diam, After well one 2 1/2 diam
 No. of bilge injections 1 sizes 5 1/2 Connected to condenser or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes 3 1/2 diam
 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
 How are they protected None
 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
 Were stern tube, propeller, screw shaft, and all connections examined in dry dock Yes Is the screw shaft tunnel watertight Yes
 Is it fitted with a watertight door Yes worked from Engine room grating Is forced draft fitted Yes

BOILERS, &c.— (Letter for record 7) Total Heating Surface of Boilers 3679 sq Is forced draft fitted Yes
 No. and Description of Boilers 2 Multitubular Cyl. Single ended Working Pressure 180 Tested by hydraulic pressure to 360 lbs
 Can each boiler be worked separately Yes Area of fire grate in each boiler 367 sq No. and Description of safety valves to
 boiler 2 Spring loaded Area of each valve 9.62 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
 Least distance between boilers or uptakes and bunkers or woodwork 1.6 Mean dia. of boilers 13' 3" Length 11.6 Material of shell plates Steel
 Range of tensile strength 28-32 Are they welded or flanged No Descrip. of riveting: cir. seams Lap Joints long. seams Butt Straps 10 rows
 Diameter of rivet holes in long. seams 1 5/16 Pitch of rivets 8 3/4 Lap of plates or width of butt straps 18 3/4
 Percentages of strength of longitudinal joint rivets 86.5 Working pressure of shell by rules 207 Size of manhole in shell 12 x 16
 Diameter of compensating ring 8 1/2 x 1 3/32 No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 36"
 Thickness of plates top 1/2 crown 1/2 bottom 1/2 Description of longitudinal joint L No. of strengthening rings L
 Working pressure of furnace by the rules 209 Combustion chamber plates: Material Steel Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 7/8
 Diameter of stays to ditto: Sides 8 x 8 1/2 Back 9 x 8 Top 9 x 8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 187
 Material of stays Iron Diameter at smallest part 1 9/16 Area supported by each stay 72 sq Working pressure by rules 197 End plates in steam space:
 Material Steel Thickness 1 3/16 Pitch of stays 19 1/2 x 16 How are stays secured D. Nuts & washers Working pressure by rules 214 Material of stays Steel
 Diameter at smallest part 3" Area supported by each stay 312 sq Working pressure by rules 224 Material of Front plates at bottom Steel
 Material of Lower back plate Steel Thickness 1 1/16 Greatest pitch of stays 12" Working pressure of plate by rules 237
 Pitch of tubes 2 1/2 Pitch of tubes 3 3/4 Material of tube plates Steel Thickness: Front 3/4 Back 1 1/16 Mean pitch of stays 7 1/2"
 Working pressures by rules 267 Girders to Chamber tops: Material Steel Depth and
 Distance apart 9" Number and pitch of Stays in each 3 8"
 Working pressure by rules 180 Superheater or Steam chest; how connected to boiler L Can the superheater be shut off and the boiler worked
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
 Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

DONKEY BOILER— No. _____ Description *Multitubular Cylindrical (Marine Type)*
 Made at *South Shields* By whom made *Messrs J. Readhead & Sons* When made *1901* Where fixed *Above Main Boilers*
 Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *6298* Fire grate area *249* Description of safety valves *1 Spring loaded*
 No. of safety valves *1* Area of each *12.56* Pressure to which they are adjusted *80* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *10'-0"* Length *9'-6"* Material of shell plates *Steel* Thickness *5/8* Range of tensile strength *27/32* Descrip. of riveting long seams *Lap double* Dia. of rivet holes *5 1/16* Whether punched or drilled *Drilled* Pitch of rivets *3 1/6*
 Lap of plating *5 1/8* Per centage of strength of joint *68* Rivets *68* Thickness of shell crown plates *3/4* Radius of do. *L* No. of Stays to do. *104*
 Dia. of stays *1 15/16* Diameter of furnace *Top 36" Bottom* Length of furnace *6'-0"* Thickness of furnace plates *1 1/2" + 9/16"* Description of joint *Lap* Thickness of *Comb. Chambers* plates *1/2* Stayed by *Screwed stays 1 1/4" x 8 1/2" pitch* Working pressure of shell by rules *88*
 Working pressure of furnace by rules *116* Diameter of *tube* *3 1/4* Thickness of *plate* plates *1 1/8" + 1/16"* Thickness of *stay* water tubes *1/4*

SPARE GEAR. State the articles supplied:— *Spare Propeller shaft & Propeller, 1 set feed, 1 set bilge pump valves, 1 set Air Pump valves, 1 set feed check valves. 2 Safety Valve springs, 6 coupling 2 bottom 2 top end, 2 Main Bearing bolts & nuts. 1 set feed donkey, 1 set ballast donkey valves 1 set H.P. Piston rings, 1 set H.P. Piston Valve rings, assorted iron & bolts*

The foregoing is a correct description,
John Readhead & Sons Manufacturers.

Dates of Survey while building
 During progress of work in shops— *1901 Dec. 13, 1902 Jan. 8, 14, 22, 25 Feb. 12, 26 March 12, 24 April 15, 22, 29, 30 May 2, 9, 16, 22, 28 June 9, 10*
 During erection on board vessel —
 Total No. of visits *23* Is the approved plan of main boiler forwarded herewith *No*
 " " " donkey " " " *No*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been built under special survey & is in my opinion eligible to have record of **L.M.C 6.02***

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 —
 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 —

It is submitted that this vessel is eligible for THE RECORD — L M C 6.02

P.H.A.
25.6.02

R.S.
25.6.02

Certificate (if required) to be sent to Newcastle-on-Tyne.

The amount of Entry Fee £ *2*
 Special *32.14*
 Donkey Boiler Fee £ *3.14*
 Travelling Expenses (if any) £

When applied for, *21 JUN 1902*
 When received, *27.6.02*

G.A. Dryden *Yoyme*
 (Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.)

Committee's Minute **WED. 25 JUN 1902**

Assigned

+ 2 we 6.02 7D

MACHINERY CERTIFICATE WRITTEN



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