

REPORT ON MACHINERY.

No 46392

Port of Newcastle-on-Tyne

Received at London Office 20 JAN 1904

No. in Survey held at *Nursth*Date, first Survey *April 28 '03* Last Survey *Jan 16 '04*

Reg. Book.

(Number of Visits *20*)on the *1/2 Lady Strathcona*Tons } Gross *3942*Net *2526*Master *W. Balls*Built at *Nursth*By whom built *Armstrong Whitworth & Co* When built *1904*Engines made at *Nursth*By whom made *Wallsend Shipway Co*when made *1904*Boilers made at *Nursth*By whom made *Wallsend Shipway Co*when made *1904*

Registered Horse Power

Owners *Wm Petersen & Co Ltd*Port belonging to *Newcastle*Nom. Horse Power as per Section 28 *403*Is Refrigerating Machinery fitted *no*Is Electric Light fitted *yes*ENGINES, &c.—Description of Engines *Triple*No. of Cylinders *3*No. of Cranks *3*Dia. of Cylinders *25" 41" 68"* Length of Stroke *48"* Revs. per minute *70*Dia. of Screw shaft as per rule *14.27"* Material of *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

Length of stern bush *5'-3"*Dia. of Tunnel shaft as per rule *12.63"*Dia. of Crank shaft journals as per rule *13.26"*Dia. of Crank pin *13.4"*Size of Crank webs *9 3/8" x 2 1/2"* Dia. of thrust shaft undercollars *13 1/2"* Dia. of screw *17-6* Pitch of screw *17-9"*No. of blades *4*State whether moveable *yes* Total surface *95.5"*No. of Feed pumps *Wells 10 pair* Diameter of ditto *9 1/2" x 7 1/8"* Stroke *✓*Can one be overhauled while the other is at work *yes*No. of Bilge pumps *2* Diameter of ditto *4"* Stroke *24"*Can one be overhauled while the other is at work *yes*No. of Donkey Engines *3*Sizes of Pumps *10 x 10 x 10, 6 x 4 1/2 x 6, 7 x 4 1/2 x 8* No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room *Thru 3 1/2"*In Holds, &c. *Two in each hold 3 1/2" run in**after hold with 3 1/2", one in tunnel with 3"*No. of bilge injections *1* sizes *6"* Connected to condenser, or to circulating pump *yes*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 *yes*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 *yes*Is the screw shaft tunnel watertight *yes*Is it fitted with a watertight door *yes*worked from *Upper Platform*

BOILERS, &c.—

(Letter for record *S*)Total Heating Surface of Boilers *6990 sq*Is forced draft fitted *no*No. and Description of Boilers *Three Single Ended*Working Pressure *180 lbs*Tested by hydraulic pressure to *360 lbs*Date of test *4/7/03* Can each boiler be worked separately *yes*Area of fire grate in each boiler *66 sq*

No. and Description of safety valves to

each boiler *Two spring valves* Area of each valve *7.07 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 *20"*Mean dia. of boilers *15-6*Length *10-6*Material of shell plates *S*Thickness *1 3/32* Range of tensile strength *29-32* Are they welded or flanged *no*Descrip. of riveting: cir. seams *lap & butt*long. seams *lap & butt riv.*Diameter of rivet holes in long. seams *1 1/32"*Pitch of rivets *9 1/8"*Lap of plates or width of butt straps *19 1/4"*

Per centages of strength of longitudinal joint

rivets *86*Working pressure of shell by rules *182*Size of manhole in shell *16 x 12*Size of compensating ring *MS Ribs*No. and Description of Furnaces in each boiler *3 Repeating*Material *S*Outside diameter *48"*

Length of plain part

Thickness of plates

crown *7 3/8"*Description of longitudinal joint *Welded*No. of strengthening rings *✓*Working pressure of furnace by the rules *181*Combustion chamber plates: Material *S*Thickness: Sides *1/8"*Back *1/8"*Top *1/8"*Bottom *3/32"*Pitch of stays to ditto: Sides *9 3/8" x 9 3/8"*Back *9 x 10*Top *9 1/2" x 9*If stays are fitted with nuts or riveted heads *nuts*Working pressure by rules *180*Material of stays *S*Diameter at smallest part *1 5/8"*Area supported by each stay *90 sq*Working pressure by rules *202*

End plates in steam space:

Material *S*Thickness *1 5/8"*Pitch of stays *16 x 24*How are stays secured *by nuts*Working pressure by rules *185*Material of stays *S*Diameter at smallest part *7 1/4"*Area supported by each stay *384 sq*Working pressure by rules *188*Material of Front plates at bottom *S*Thickness *1"*Material of Lower back plate *S*Thickness *1 5/8"*Greatest pitch of stays *15 3/4"*Working pressure of plate by rules *184*Diameter of tubes *3 1/4"*Pitch of tubes *4 1/2" x 4 1/2"*Material of tube plates *S*Thickness: Front *1"*Back *3/4"*Mean pitch of stays *9"*Pitch across wide water spaces *14"*Working pressures by rules *182*Girders to Chamber tops: Material *S*

Depth and

thickness of girder at centre *8 3/4" x 1 1/2"*Length as per rule *30"*Distance apart *9 1/2"*Number and pitch of Stays in each *2. 9"*Working pressure by rules *182*Superheater or Steam chest; how connected to boiler *✓*

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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W763-0074

DONKEY BOILER— No. *None* Description

Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____
 No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ If fitted with casing gear _____ If steam from main boilers can
 enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile
 strength _____ Descrip. of riveting long. seams _____ Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____
 Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays to do. _____
 Dia. of stays _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of
 joint _____ Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____
 Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *One propeller shaft, Two top end, two bottom end
 connecting rod bolts & nuts, two main bearing bolts, one set coupling bolts, one
 set fuel & oil pump valves, assorted bolts & nuts, 2 in of various sizes.*

The foregoing is a correct description,

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED Manufacturer.

Dates { During progress of work in shops— 1908. Apr. 21. May 26. June 5. 10. July 7. 14. 17. Aug. 7. 12. 19. Sep. 10. 22. 29. Oct. 2. 26. 30. Nov. 11. 24. Dec. 16
 of Survey { During erection on board vessel — 1908. Jan. 16
 while building { Total No. of s 20

Is the approved plan of main boiler forwarded herewith *No*

" " " donkey " " " ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The Machinery of this vessel has been built under special survey, the
 materials and workmanship are sound and good and under the
 vessel depth in my opinion to have record of L.M.C. 1.04*

It is submitted that
 this vessel is eligible for
THE RECORD L.M.C. 1.04 ELEC. LIGHT.

ES.
 20.1.04
ImS.
 20.1.04

Hawcote-on-Tyne

Certificate (if required) to be sent to the Committee's Minute.

The amount of Entry Fee. £ 3 : : :
 Special .. £ 40 : 3 : :
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) £ : : :
 When applied for, 19 JAN 1904
 When received, 29.1.04

G. Aslake
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. 22 JAN 1904

Assigned

+ sure 1.04

MACHINERY CERTIFICATE
 WRITTEN.



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