

REPORT ON MACHINERY.

No. H6392

Port of Newcastle on Tyne

Received at London Office WED. 20 JAN 1904

No. in Survey held at Newcastle Date, first Survey April 28 03 Last Survey Jan 16 1904
 Reg. Book. on the 1/2 Lady Strathcona (Number of Visits 20)
 Master Mr. Balls Built at Newcastle By whom built Armstrong Whitworth & Co. When built 1904
 Engines made at Newcastle By whom made Wallsend Shipway Co. when made 1904
 Boilers made at Newcastle By whom made Wallsend Shipway Co. when made 1904
 Registered Horse Power 403 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 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 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 3/4" Size of Crank webs 9 3/8" x 2 1/2" Dia. of thrust shaft under collars 13 1/2" Dia. of screw 17-6 Pitch of screw 17-9 No. of blades 4 State whether moveable no Total surface 95 sq ft
 No. of Feed pumps two 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 2 1/2" 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 pumps
 In Engine Room Iron 3 1/2" In Holds, &c. Iron in each hold 3 1/2" run in
 No. of bilge injections 1 sizes 6" Connected to condenser no 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 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 Nov 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 ft Is forced draft fitted no
 No. and Description of Boilers Three Single Ended Working Pressure 180 lbs Tested by hydraulic pressure to 300 lbs
 Date of test 14/7/03 Can each boiler be worked separately yes Area of fire grate in each boiler 66 sq ft No. and Description of safety valves to each boiler two spring valves Area of each valve 7.07 sq in 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 dup. riv. long. seams dup. 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 rivets No. and Description of Furnaces in each boiler 3 Brighton Material S Outside diameter 48"
 Length of plain part top — bottom — Thickness of plates crown 9/16 bottom 7/16 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 5/8" 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 in Working pressure by rules 202 End plates in steam space: Material S Thickness 1 5/16 Pitch of stays 16 x 24 How are stays secured dup. riv. Working pressure by rules 185 Material of stays S
 Diameter at smallest part 7.24" Area supported by each stay 384 sq in Working pressure by rules 188 Material of Front plates at bottom S
 Thickness 1" Material of Lower back plate S Thickness 1 5/16 Greatest pitch of stays 15 3/4 Working pressure of plate by rules 184
 Diameter of tubes 3 3/4" 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 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 yes 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 —

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 & bilge pump valves, assorted bolts & nuts, 2 in of various sizes.*

The foregoing is a correct description,

FOR THE WALLSEND SHIPWAY & ENGINEERING CO. LIMITED Manufacturer.

M. Murray Secretary

Dates of Survey while building
 During progress of work in shops: 1908. Apr. 28, May 26, June 5, 10, July 7, 14, 17, Aug. 7, 12, 19, 22, 29, Oct. 2, 6, 30, Nov. 11, 24, Dec. 16
 During erection on board vessel: 1908. Jan. 16
 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 clings in my opinion to have merit of +L.M.C. 1.04

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

ES. 20.1.04
MS. 20.1.04

Glasgow - on - Tyne

Certificate (if required) to be sent to the Surveyors and requestee not to write on or below the space for 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

James Coy

MACHINERY CERTIFICATE WRITTEN.



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