

# REPORT ON MACHINERY.

26093

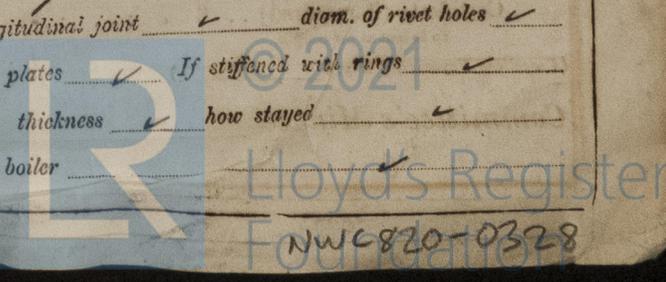
Port of Newcastle Received at London 23 July 1891  
 Date, first Survey 12 Dec 90 Last Survey 8 July 1891  
 in Survey held at Newcastle (Number of Visits 23) Tons 2221  
 on the S.S. Woolloomooloo  
 Built at Newcastle By whom built Wigham Richardson Co When built 1891  
 Made at Newcastle By whom made Wigham Richardson Co when made 1891  
 Made at do By whom made do when made 1891  
 Indicated Horse Power 500 Owners William Lund Port belonging to London

**ENGINES, &c.**  
 Position of Engines Triple expansion on three cranks  
 Diameter of Cylinders 28.45.73 Length of Stroke 32 No. of Rev. per minute 62 Point of Cut off, High Pressure 67 Low Pressure 5.7  
 Diameter of Screw shaft 13 3/4 Diam. of Tunnel shaft 13 1/4 Diam. of Crank shaft journals 13 3/4 Diam. of Crank pin 13 3/4 size of Crank webs 65 x 8 3/8  
 Diameter of screw 17.0 Pitch of screw 21 No. of blades 4 state whether moveable ys total surface 86 sq  
 Diameter of Feed pumps 2 diameter of ditto 3 1/2 Stroke 28 Can one be overhauled while the other is at work ys  
 Diameter of Bilge pumps 2 diameter of ditto 4 Stroke 28 Can one be overhauled while the other is at work ys  
 Where do they pump from all tanks holds & bilges - aft - bilge holds only.  
 Number of Donkey Engines Two Size of Pumps 9 x 4 x 9 x 9 x 9 x 9 Where do they pump from Ballast - all tanks & bilge  
 Are all the bilge suction pipes fitted with roses ys Are the roses always accessible ys Are the sluices on Engine room bulkheads always accessible ys  
 Are the pumps worked by levers over condenser frame after engine  
 Are all connections with the sea direct on the skin of the ship ys Are they Valves or Cocks both  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates ys 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 ys Are the blow off cocks fitted with a spigot and brass covering plate ys  
 How are they protected wrot. iron tube.  
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times ys  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges ys  
 Were stern tube, propeller, screw shaft, and all connections examined in dry dock ys  
 Is the screw shaft tunnel watertight ys and fitted with a sluice door ys worked from top platform.

**BOILERS, &c.**  
 Number of Boilers Two Description cyl. dble ended Whether Steel or Iron Steel  
 Working Pressure 153 lbs Tested by hydraulic pressure to 310 lbs Date of test May 27<sup>th</sup> 1891. 3594  
 Description of superheating apparatus or steam chest none  
 Can each boiler be worked separately ys Can the superheater be shut off and the boiler worked separately ys  
 Area of square feet of fire grate surface in each boiler 110.417 sq Description of safety valves spring No. to each boiler two  
 Area of each valve 12.56 sq Are they fitted with easing gear ys No. of safety valves to superheater ys area of each valve ys  
 Are they fitted with easing gear ys Smallest distance between boilers and bunkers or woodwork 2 feet Diameter of boilers 15.0  
 Length of boilers 16.0 description of riveting of shell long. seams d b t s circum. seams d t t s p Thickness of shell plates 19/16  
 Diameter of rivet holes 13/8 whether punched or drilled d pitch of rivets 7/8 Lap of plating 2 1/8  
 Percentage of strength of longitudinal joint 82.5 working pressure of shell by rules 156 size of manholes in shell 16 x 12  
 Size of compensating rings flange No. of Furnaces in each boiler eight  
 Outside diameter 36 length, top 5.9 bottom 5.9 thickness of plates 2 1/2 description of joint d b s. if rings are fitted ys  
 Greatest length between rings 5.9 working pressure of furnace by the rules 160 combustion chamber plating, thickness, sides ys back ys top ys  
 Pitch of stays to ditto, sides 8 3/4 back ys top 8 If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 156  
 Diameter of stays at smallest part 1 3/8 working pressure of ditto by rules 153 end plates in steam space, thickness 1  
 Pitch of stays to ditto 15 3/16 how stays are secured d n r w working pressure by rules 153 diameter of stays at smallest part 2 1/4  
 working pressure by rules 153 Front plates at bottom, thickness 1 1/6 Back plates, thickness ys  
 Greatest pitch of stays ys working pressure by rules ys Diameter of tubes 3 1/4 pitch of tubes 4 5/8 thickness of tube ys  
 plates, front 13/16 back 13/16 how stayed tube pitch of stays as plan width of water spaces 6 1/2  
 Diameter of Superheater or Steam chest ys length ys thickness of plates ys description of longitudinal joint ys diam. of rivet holes ys  
 Pitch of rivets ys working pressure of shell by rules ys diameter of flue ys thickness of plates ys If stayed with rings ys  
 Distance between rings ys working pressure by rules ys end plates of superheater, or steam chest; thickness ys how stayed ys  
 Superheater or steam chest; how connected to boiler ys

Report recd. 10/7/91. Sent to London 22/7/91

Description of furnaces



**DONKEY BOILER**— Description *Vertical "Cylinder" steel*  
 Made at *Guthrie* by whom made *Clark Chapman & Co* when made *28/5/91* where fixed *Strathclyde*  
 Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *3545* fire grate area \_\_\_\_\_ description of safety  
 valves *spring* No. of safety valves *two* area of each \_\_\_\_\_ if fitted with easing gear *Y* if steam from main boilers can  
 enter the donkey boiler *no* diameter of donkey boiler *7.0* length *14.0* description of riveting *L dr*  
 Thickness of shell plates *13/32* diameter of rivet holes *7/8* whether punched or drilled *d* pitch of rivets *3 3/16* lap of plating *4 1/2*  
 per centage of strength of joint *68* thickness of crown plates *5/8* stayed by *9 stays 1 1/16 diam*  
 Diameter of furnace, top *3.6* bottom *6.4 1/2* length of furnace *4.3* thickness of plates *5/8* description of joint *lap simple*  
 Thickness of furnace crown plates *3/16* stayed by *as shell crown* working pressure of shell by rules *81*  
 Working pressure of furnace by rules *80* diameter of uptake *1 1/2 x 12* thickness of plates *7/16* thickness of water tubes *3/8*

**SPARE GEAR.** State the articles supplied:— *Eight emptying bolts, air pump rod, bucket, &  
 head tube, circulating pump rod & bucket, stop end bolts, 2 bottom  
 end bolts, 2 main bearing bolts; four crank pin brasses, 2 propeller  
 blades, piston springs, fly wheel valves, valve springs bolts nuts & washers  
 The foregoing is a correct description,  
 J. H. Richardson & Co. Manufacturer. *usual engine room outfit.**

**General Remarks** (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel  
 has been constructed under special survey the materials and  
 workmanship are sound and good and eligible in my opinion  
 to be classed + L.M.C. 7-91 in the Society Register Book.*

*Plating surface 7776 sq  
 N. H. P. 453*

*It is submitted that this vessel is  
 eligible to have + L.M.C. 7-91 recorded  
 J.H.R.  
 23-7-91*

The amount of Entry Fee .. £ *3* : : received by me  
 Special .. £ *42* : *13* :  
 Donkey Boiler Fee .. £ . : :  
 Certificate (if required) .. £ . : : *24/7/1891*

*John L. ...*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **TUES. 28 JUL 1891**

