

REPORT ON MACHINERY.

Port of Newcastle

WED 15 MAR 1895

Received at London Office

Survey held at South Shields Date, first Survey 12/31/94 Last Survey March 1st 1895
 Book Suppl. "Warrior" (Number of Visits 12)
 on the S.S. "Warrior" (Screw Lug) Tons { Gross 190.21
 Net 84.19
 Built at South Shields By whom built J. P. Remoldson & Son When built 1895
 Engines made at South Shields By whom made J. P. Remoldson & Son when made 1895
 Boilers made at South Shields By whom made J. I. Eltringham & Co when made 1895
 Registered Horse Power 98 Owners Messrs Dick & Page Port belonging to London
 Horse Power as per Section 28 75

ENGINES, &c. — Description of Engines Triple, surface condensing No. of Cylinders 3
 Diameter of Cylinders 13 1/2", 22" & 36" Length of Stroke 24" Revolutions per minute 107 Diameter of Screw shaft as per rule 6 1/4"
 Diameter of Tunnel shaft as per rule 6 3/4" Diameter of Crank shaft journals 7" Diameter of Crank pin 7" Size of Crank webs 4 3/8" x 10" built
 Diameter of screw 9-4" Pitch of screw 13-0" No. of blades 4 State whether moveable no Total surface 26 1/2 #
 No. of Feed pumps 1 Diameter of ditto 2 3/4" Stroke 12" Can one be overhauled while the other is at work -
 No. of Bilge pumps 1 Diameter of ditto 3 1/2" Stroke 12" Can one be overhauled while the other is at work -
 No. of Donkey Engines 1 Duplex Sizes of Pumps 5" x 2 3/4" x 4 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room two 2" dia In Holds, &c. one in fore part of ship & one in after part 2" dia each
 No. of bilge injections 1 sizes 3" Connected to condenser, or to circulating pump pump Is a separate donkey suction fitted in Engine room & size yes 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
 Are that 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 25-2-95 Is the screw shaft tunnel watertight no tunnel
 Is it fitted with a watertight door no worked from -

BOILERS, &c. — (Letter for record 5) Total Heating Surface of Boilers 1368 #
 No. and Description of Boilers One Mult. Cyl. single ended Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs
 Date of test 8-1-95 Can each boiler be worked separately ✓ Area of fire grate in each boiler 43 # No. and Description of safety valves to each boiler two ordinary spring
 Area of each valve 7.07 # Pressure to which they are adjusted 165 lbs Are they fitted with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 10" hole covered Mean diameter of boilers 11-10 23/32"
 Length 10-0" Material of shell plates steel Thickness 3/32" Description of riveting: circum. seams lap d. 7" long. seams lap 5 rows
 Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 6 1/2" Lap of plates or width of butt straps 12 3/8"
 Per centages of strength of longitudinal joint rivets 82 Working pressure of shell by rules 163 lbs Size of manhole in shell 16 x 12"
 plate 83
 Size of compensating ring 7 x 1 3/32" No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 36"
 Length of plain part top 6-6" bottom 6-6" Thickness of plates crown 21/32" bottom 21/32" Description of longitudinal joint lap double riveted No. of strengthening rings one
 Working pressure of furnace by the rules 160 lbs Combustion chamber plates: Material steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 21/32"
 Pitch of stays to ditto: Sides 9 x 9" Back 9 x 4 1/8" Top 9 x 9" If stays are fitted with nuts or riveted heads 9 nuts Working pressure by rules 162 lbs
 Material of stays steel Diameter at smallest part 1 1/2" Area supported by each stay 82 1/2 # Working pressure by rules 162 End plates in steam space:
 Material steel Thickness 1 1/8" Pitch of stays 16 x 14 1/4" How are stays secured D. N. Y Working pressure by rules 162 Material of stays steel
 Diameter at smallest part 2 5/16" Area supported by each stay 228 # Working pressure by rules 169 lbs Material of Front plates at bottom steel
 Thickness 7/8" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 14" Working pressure of plate by rules 166
 Diameter of tubes 3 1/2" Pitch of tubes 4 5/8" x 4 5/8" Material of tube plates steel Thickness: Front 15/16" Back 7/8" Mean pitch of stays 11 5/8"
 Pitch across wide water spaces 14" Working pressures by rules 160 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 5 1/4" x 2 3/8" Length as per rule 26 1/2" Distance apart 9" Number and pitch of Stays in each two - 9"
 Working pressure by rules 162 lbs Superheater or Steam chest; ~~how~~ connected to boiler none 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 ✓

DONKEY BOILER— Description *None fitted*

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 easing gear _____ If steam from main boiler _____
enter the donkey boiler _____ Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____
Description of riveting long seams _____ Diameter 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:— *Main bearing bolts, top end bolts, bottom end bolts, two of each, 1 set of coupling bolts & 1 set of piston bolts. 1 set of feed & 1 set of bilge pump valves, a quantity of assorted bolts nuts & pieces*

The foregoing is a correct description,

W. A. Reid Manufacturers of Engines *W. A. Reid* Maker of

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boiler of the vessel have been constructed & fitted on board under special survey the workmanship being good throughout. The main steam pipe has been tested by hydraulic test to 320 lbs. The engines & boiler have been tried under steam & found satisfactory which in my opinion renders the vessel eligible for the record of +LMC 3-95 in the Register Book.*

W. A. Reid
13/3/95
THE BOARD + LMC 3-95

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Certificate (if required) to be sent to *Sewarthe Office*

The amount of Entry Fee.. £ 1 : 0 : 0 When applied for, _____
Special £ 11 : 5 : 0 12/31/1895
Donkey Boiler Fee £ : : : _____
Travelling Expenses (if any) £ : : : _____
When received, *14/3/95*

Robert Haig
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUES 19 MAR 1895
Assigned *+ LMC 3, 95*

VESS	
* These particulars	
Official Number.	
104545	
No., Date, and Port of	
Whether British or Foreign Built.	
British	
Number of Decks	
Number of Masts	
Rigged	
Stern	
Build	
Galleries	
Head	
Framework and description of vessel	
Number of Bulkheads	
Number of water ballast tanks and their capacity	
Total to quarter the deck at side amidships	
No. of Engines	Description
One	Triple boiler surface boiler
Boilers	
Number	
Iron or Steel	
Pressure when laid down	
Gross Tonnage	
Under Tonnage Deck	
Closed-in spaces above	
Space or spaces below	
Poop	
Forecastle	
Round House	
Other closed-in spaces	
Machine	
Gross Tonnage	
Deductions, as per Register	
Name of Master	
No. of Owners	
Name, Residence, & Signature	
M. O. John	
Shipowner	
Dated	

