

REPORT ON MACHINERY.

Port of *Newcastle*

SAT. 27 JAN 1894

Received at London Office

No. in Survey held at *South Shields* Date, first Survey *11th Oct. 1893* Last Survey *11th Jan. 1894*
 Reg. Book. *19* on the *Iron* screw steamer *"Leigh"* (Number of Vents *19*)
 Master *C. Greenlade* Built at *S. Shields* By whom built *J. P. Remoldson & Sons* When built *1894*
 Engines made at *South Shields* By whom made *J. P. Remoldson & Sons* when made *1894*
 Boilers made at *South Shields* By whom made *J. J. Eltringham & Co* when made *1894*
 Registered Horse Power *45* Owners *D. W. Bain & Co* Port belonging to *Penzance*
 Nom. Horse Power as per Section 28

ENGINES, &c.— Description of Engines *Compound Surface Condensing* No. of Cylinders *2*
 Diameter of Cylinders *17" & 34"* Length of Stroke *22"* Revolutions per minute *as per rule 6 1/8"*
 Diameter of *thrust* shaft *as per rule 5 1/8"* Diameter of Crank shaft journals *6 1/8"* Diameter of Crank pin *6 1/8"* Size of Crank webs *4" x 7 1/2"*
 Diameter of screw *4-9"* Pitch of screw *12-0"* No. of blades *4* State whether moveable *no* Total surface *18.9 sq ft*
 No. of Feed pumps *one* Diameter of ditto *3"* Stroke *11"* Can one be overhauled while the other is at work
 No. of Bilge pumps *one* Diameter of ditto *3"* Stroke *11"* Can one be overhauled while the other is at work
 No. of Donkey Engines *one* Sizes of Pumps *4 1/2" x 2 1/4" x 6"* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *2 - 2"* In Holds, &c. *3 - 2" dia*
 No. of bilge injections *one* sizes *3 1/4"* Connected to ~~condenser~~ circulating pump *yes* 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 *yes*
 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 Is the screw shaft tunnel watertight *no*
 Is it fitted with a watertight door worked from

BOILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *864 sq ft*
 No. and Description of Boilers *One Cyl. Multitubular Single ended* Working Pressure *100 lbs* Tested by hydraulic pressure to *200 lbs*
 Date of test *5-12-93* Can each boiler be worked separately Area of fire grate in each boiler *30 sq ft* No. and Description of safety valves to
 each boiler *2 spring* Area of each valve *7.07* Pressure to which they are adjusted *103 lbs* Are they fitted
 with casing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *12"* Mean diameter of boilers *10-0"*
 Length *9-4"* Material of shell plates *Steel* Thickness *1/16"* Description of riveting: circum. seams *lap double* long. seams *lap treble*
 Diameter of rivet holes in long. seams *1 1/16"* Pitch of rivets *4 1/4"* Lap of plates *width of butt straps 4 1/2"*
 Per centages of strength of longitudinal joint rivets *75* Working pressure of shell by rules *104 lbs* Size of manhole in shell *12" x 16"*
 Size of compensating ring *4" x 1 1/16"* No. and Description of Furnaces in each boiler *2 plain* Material *Steel* Outside diameter *37"*
 Length of plain part top *6-0"* Thickness of plates crown *1/2"* Description of longitudinal joint *lap single riv?* No. of strengthening rings *none*
 bottom *8-0"* bottom *19/32"* Working pressure of furnace by the rules *101 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *19/32"*
 Pitch of stays to ditto: Sides *10"* Back *9 3/4"* Top *palms* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *109 lbs*
 Material of stays *Steel* Diameter at smallest part *1 3/8"* Area supported by each stay *97.5 sq ft* Working pressure by rules *121 lbs* End plates in steam space:
 Material *Steel* Thickness *2 1/32"* Pitch of stays *14" x 14 1/2"* How are stays secured *D. & W.* Working pressure by rules *110 lbs* Material of stays *Steel*
 Diameter at smallest part *2 1/8"* Area supported by each stay *297.5 sq ft* Working pressure by rules *105 lbs* Material of Front plates at bottom *Steel*
 Thickness *3/4"* Material of Lower back plate *Steel* Thickness *2 1/32"* Greatest pitch of stays *12"* Working pressure of plate by rules *103 lbs*
 Diameter of tubes *3 1/2"* Pitch of tubes *4 3/4" x 4 7/8"* Material of tube plates *Steel* Thickness: Front *2 1/32" & 3/4"* Back *1/16"* Mean pitch of stays *13"*
 Pitch across wide water spaces *14"* Working pressures by rules *106 lbs* Girders to Chamber tops: Material *none* Depth and
 thickness of girder at centre Length as per rule Distance apart Number and pitch of Stays in each
 Working pressure by rules Superheater or Steam chest; how connected to boiler *neck* Can the superheater be shut off and the boiler worked
 separately *no* Diameter *3-0"* Length *3-9"* Thickness of shell plates *3/8"* Material *Steel* Description of longitudinal joint *lap double* diam. of rivet
 holes *7/8"* Pitch of rivets *3"* Working pressure of shell by rules *146 lbs* Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness *9/16"* How stayed *dished 3-0 rad.*
 Working pressure of end plates Area of safety valves to superheater Are they fitted with casing 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 boilers can enter the donkey boiler _____

Description of riveting long. seams _____ Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____

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:— *2 Top end bolts & nuts, 2 Bottom end bolts & nuts, 2 Main bearing bolts, 1 set of Coupling bolts, 1 set of feed & bidge pump valves, assorted bolts & nuts, Iron of various sizes, Spare propeller.*

The foregoing is a correct description,
J. W. Pitt Manufacturers of Engines *W. T. Cunningham* Manufacturers of _____

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 which renders the vessel, in my opinion, eligible to have record Δ I.M.C. 1, 94 in the Register book

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 1-94
N.A. 27-1-94

The Surveys are requested not to apply on or below the space for Committee's Minute.

Certificate (if required) to be sent to _____ MACHINERY CERTIFICATE *Newcastle Office* WRITTEN.

The amount of Entry Fee..	£ / : " : "	When applied for,
Special	£ 8 : " : "	26.1.18.94
Donkey Boiler Fee	£ " : " : "	When received,
Travelling Expenses (if any) £	" : " : "	22.1.18.94

J. W. Pitt
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **TUES. 30 JAN 1894**

Assigned *+ L.M.C. 1, 94*
Apr Feb 29/94

