

REPORT ON MACHINERY.

5489

No. 5489

No. in Survey held at

Bull

Date, first Survey July 23/85

Last Survey 2nd Oct 1885

Reg. Book.

on the iron screw tug vessel Alexandra

(Number of Plates 14)

65.54

Tons 11.32.

Master

Built at Bull

By whom built Charles B.

When built 1885

Engines made at

Bull

By whom made Charles B. (Lm)

when made 1885

Boilers made at

d.

By whom made d.

when made 1885

Registered Horse Power

45

Owners Hull & Barnsley Railway & Dock Co. Port belonging to Bull

ENGINES, &c.—

Description of Engines Vertical triple compound cylinders direct acting surface condensing
 Diameter of Cylinders 11 1/2, 17 + 30 Length of Stroke 21 No. of Rev. per minute 110 Point of Cut off, High Pressure .59 Medium pressure .6 Low Pressure .53
 Diameter of Screw shaft 5 1/2 Diam. of Tunnel shaft 5 Diam. of Crank shaft journals 5 1/2 Diam. of Crank pin 5 1/2 size of Crank webs 17 1/2 x 3 1/2 x 3 1/2 aft
 Diameter of screw 7 1/8 Pitch of screw 8' 0" to 9' 3" No. of blades 4 state whether moveable no total surface 20 sq. feet
 No. of Feed pumps one diameter of ditto 2 Stroke 10 Can one be overhauled while the other is at work y
 No. of Bilge pumps one diameter of ditto 3 Stroke 10 Can one be overhauled while the other is at work y
 Where do they pump from Main compartment Engine room & after compartment
 No. of Donkey Engines one Size of Pumps 12 dia x 2 1/2 Stroke 10 Where do they pump from The fire engine is permanently fitted with suction valves is supplied with portable fittings & hoses to draw water from other sources outside (or inside) the vessel. The feed donkey is connected to the bilge system & a hot well & delivers water to the deck, bunkers or the condensers
 Are all the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes
 No. of bilge injections one and sizes 2 1/2 inch Are they connected to condenser, or to circulating pump & circulating pump.
 How are the pumps worked by rocking levers from piston rod crosshead
 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 y
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Nov 1885 Launched 24/8.85
 Is the screw shaft tunnel watertight no tunnel and fitted with a sluice door y worked from y

BOILERS, &c.—

Number of Boilers one Description Circular multitubular with 3rd compound tubes Whether Steel or Iron Steel (see slip attached)
 Working Pressure 150 lbs Tested by hydraulic pressure to 300 lbs Date of test 18th September 1885
 Description of superheating apparatus or steam chest none fitted
 Can each boiler be worked separately y Can the superheater be shut off and the boiler worked separately y
 Area of square feet of fire grate surface in each boiler 21 Description of safety valves Spring loaded No. to each boiler Two
 Area of each valve 7 sq. in Are they fitted with easing gear yes No. of safety valves to superheater y Area of each valve y
 Are they fitted with easing gear y Smallest distance between boilers and bunkers or woodwork 4" Diameter of boilers 9' 0"
 Length of boilers 8' 6" description of riveting of shell long. seams all riv' butts with circum. seams all in laps Thickness of shell plates 7/8" 2 1/2
 Diameter of rivet holes 13/16 whether punched or drilled drilled pitch of rivets 4 3/4 Lap of plating 1 1/4 straps
 Percentage of strength of longitudinal joint 75 working pressure of shell by rules 152 lbs size of manholes in shell 16" x 12"
 Size of compensating rings 28" x 28" x 7/8 No. of Furnaces in each boiler 2
 Inside diameter 34" length, top 6' 0" bottom 6' 0" thickness of plates 7/8" full description of joint welded if rings are fitted longitudinal
 Greatest length between rings 6' 6" working pressure of furnace by the rules 150 lbs combustion chamber plating, thickness, sides 9/16 back 9/16 top 9/16
 Pitch of stays to ditto, sides 8' back 8' top 8' If stays are fitted with nuts or riveted heads rub working pressure of plating by
 Rules 150 lbs Diameter of stays at smallest part 1 7/8 working pressure of ditto by rules 169 lbs end plates in steam space, thickness 1"
 Pitch of stays to ditto 15" x 12 hour stays are secured all rub working pressure by rules 159 lbs diameter of stays at
 Smallest part 2" working pressure by rules 157 lbs Front plates at bottom, thickness 3/4 Back plates, thickness 7/8
 Greatest pitch of stays 8' working pressure by rules 187 lbs Diameter of tubes 3 1/2 pitch of tubes 4 1/2 thickness of tube
 Plates, front 3/4 back 3/4 how stayed 28 lbs tubes pitch of stays 13 1/4 in min width of water spaces 1/4
 Shipping diameter of Superheater or Steam chest length thickness of plates description of longitudinal joint diam. of rivet holes
 Pitch of rivets working pressure of shell by rules diameter of flue thickness of plates If stiffened with rings
 Distance between rings working pressure by rules end plates of superheater, or steam chest; thickness how stayed
 Superheater or steam chest; how connected to boiler No Superheater or Steam Chest

DONKEY BOILER—

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 _____ if fitted with easing gear _____ if steam from main boilers can
 enter the donkey boiler _____ diameter of donkey boiler _____ length _____ description of riveting _____
 Thickness of shell plates _____ diameter of rivet holes _____ whether punched or drilled _____ pitch of rivets _____ lap of plating _____
 per centage of strength of joint _____ thickness of crown plates _____ stayed by _____
 Diameter of furnace, top _____ bottom _____ length of furnace _____ thickness of 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 plates _____ thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *No spare gear. used for river service only.*

The foregoing is a correct description,

A. Seddon

Manufacturer.

GENERAL MANAGER

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

The machinery & boiler of this vessel constructed under Special Survey are now in my opinion in safe working condition, and the case is respectfully submitted as eligible for the notification. L.M.C. 10.85 in the Register Book

It is submitted that this vessel is eligible to have the notification + L.M.C. 10.85 recorded.

9/11/85

The amount of Entry Fee .. £ *1* : " : " received by me,
 Special .. £ *8* : *8* : "
 Donkey Boiler Fee .. £ " : " : "
 Certificate (if required) .. £ " : " : "
 To be sent as per margin.
 (Travelling Expenses, if any, £ ☒)

Committee's Minute

TUESDAY 10 NOV 1885

John B. Stevens
 Engineer Surveyor to Lloyd's Register of British & Foreign Ships