

REPORT ON MACHINERY.

No.

9093

Port of Hull

No. in Survey held at Boreley & Hull

Date, first Survey Apr. 30 1894

Last Survey Jan 28-18 94

Reg. Book.

Ship on the Iron Steam Trawler

Rio

(Number of Visits Eight)

Tons { Gross 117 Net 36

Master Built at Boreley By whom built Cochrane & Cooper

When built 1894

Engines made at Hull By whom made Charles & Holmes & Co when made 1894

Boilers made at Hull By whom made Charles & Holmes & Co when made 1894

Registered Horse Power 44 Owners G & J Sleight Port belonging to Grimsby

Nom. Horse Power as per Section 28

ENGINES, &c.— Description of Engines Compound Saturated & Acting No. of Cylinders Two
Diameter of Cylinders 17" x 32" Length of Stroke 21" Revolutions per minute 110 Diameter of Screw shaft as per rule 5.78" as fitted 6.71"
Diameter of Tunnel shaft as per rule 5.49" as fitted 5.71" Diameter of Crank shaft journals 6" Diameter of Crank pin 6" Size of Crank webs 8" x 4 1/2"
Diameter of screw 7" x 9" Pitch of screw 10" x 6" x 9" x 1" No. of blades 4 State whether moveable — Total surface 23 sq ft
No. of Feed pumps One Diameter of ditto 2 1/2" Stroke 18" Can one be overhauled while the other is at work —
No. of Bilge pumps One Diameter of ditto 2 1/2" Stroke 18" Can one be overhauled while the other is at work —
No. of Donkey Engines One Sizes of Pumps 3" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room One 2" In Holds, &c. One 2"

Also Ejector with suction in the Engine room bilge and discharge on deck.
No. of bilge injections one sizes 3 1/2" Connected to condenser, or to circulating pump pump Is a separate donkey suction fitted in Engine room & size 2" x 1/2" x 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 suction to forward How are they protected wood casing
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 how new Is the screw shaft tunnel watertight in tunnel
Is it fitted with a watertight door — worked from —

OILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 780 sq ft
No. and Description of Boilers One Cylindrical Shell Working Pressure 90 lb Tested by hydraulic pressure to 180 lb
Date of test 7/6/94 Can each boiler be worked separately — Area of fire grate in each boiler 27 sq ft No. and Description of safety valves to each boiler two Spring loaded Area of each valve 4.91 Pressure to which they are adjusted 95 lb Are they fitted with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 7" Mean diameter of boilers 10" x 6"
Length 9" x 0" Material of shell plates steel Thickness 10/16" Description of riveting: circum. seams butt & lap long. seams 3/16" riv lap
Diameter of rivet holes in long. seams 1" Pitch of rivets 5 1/2" Lap of plates or width of butt straps 7 1/2"
Per centages of strength of longitudinal joint rivets 81.4% Working pressure of shell by rules 95 lb Size of manhole in shell 16" x 12" plate 80.9%
Size of compensating ring 6" x 1 1/2" No. and Description of Furnaces in each boiler two Plain Material steel Outside diameter 34"
Length of plain part top 6" x 0" Thickness of plates crown 1/2" Description of longitudinal joint welded No. of strengthening rings — bottom 6" x 4" bottom 1/2"
Working pressure of furnace by the rules 100 lb Combustion chamber plates: Material steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 9/16"
Pitch of stays to ditto: Sides 9" Back 8 1/2" Top 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 95 lb
Material of stays steel Diameter at smallest part 1 1/2" Area supported by each stay 9" x 9" Working pressure by rules 97 lb End plates in steam space: Material steel Thickness 1 1/2" Pitch of stays 15 1/2" How are stays secured all nut Working pressure by rules 94 lb Material of stays steel
Diameter at smallest part 2" Area supported by each stay 15 1/2" x 2" Working pressure by rules 113 lb Material of Front plates at bottom steel
Thickness 10/16" Material of Lower back plate steel Thickness 1 1/4" Greatest pitch of stays 8 1/2" Working pressure of plate by rules 90 lb
Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" Material of tube plates steel Thickness: Front 10/16" Back 10/16" Mean pitch of stays 14 1/2" x 9 1/2"
Pitch across wide water spaces 15" Working pressures by rules 90 lb Girders to Chamber tops: Material steel Depth and thickness of girder at centre 5 1/2" x 1 1/2" Length as per rule 25" Distance apart 7 1/2" Number and pitch of Stays in each two 9"
Working pressure by rules 120 lb Superheater or Steam chest; how connected to boiler 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
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

HVL409-0042

DONKEY BOILER— Description *No Donkey Boiler*

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
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
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:— *Two top end bolts. Two bottom end bolts. Two main beam
bolts. One set coupling bolts. One set feed pump valves. One set bilge pump valves.
One set check valves. Safety valve spring*

The vessel effcient with masts and sail as a Hawker.

The foregoing is a correct description,

C. J. Holmes & Co Manufacturer.

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

*The Machinery and Boiler of this Steam Hawker have
been constructed under Special Survey and placed on board in accordance
with the Society's Rules. They are now in my opinion in safe working
condition and the case is respectfully submitted for the certification
+ L.M.C. 6-94 in the Register Book.*

It is submitted that
this vessel is eligible for
THE RECORD + L.M.C. 6-94

*H. A.
10-7-94*

Certificate (if required) to be sent to *Hall*

The amount of Entry Fee..	£	1	:	0	:	When applied for,
Special	£	0	:	0	:	<i>9/7/94</i>
Donkey Boiler Fee	£	-	:	-	:	When received,
Travelling Expenses (if any) £	-	-	:	-	:	<i>18-7-94</i>

Committee's Minute *13 JUL 1894*

Assigned *+ L.M.C. 6-94*

James Jones
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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Foundation