

REPORT ON MACHINERY.

No. 1314

Shve. J. 30983

NOV 1894

Port of *Middlesbrough-on-Sea*

Received at London Office

13

No. in Survey held at *Stockton-on-Sea*

Date, first Survey *9th June*

Last Survey *19th Sept. 1894*

Reg. Book.

77 on the *Ss "Banffshire"*

(*Hawthorn, Leslie & Co. 1071-1324*)

(Number of Visits *10*)

Gross *5526.21*

Net *3603.14*

Master *B. Coull*

Built at *Newcastle*

By whom built

R. M. Hawthorn, Leslie & Co.

When built *1894*

Engines made at *Newcastle*

By whom made

R. & H. Hawthorn, Leslie & Co. Ltd.

when made

1894

Boilers made at *Stockton-on-Sea*

By whom made

Riley Bros.

when made

1894

Registered Horse Power *600*

Owners

P. & S. Steam Shipping Co.

Port belonging to

Glasgow.

Nom. Horse Power as per Section 28 *379*

Turnbull, Martin & Co. Managers

ENGINES, &c.—

Description of Engines

Diameter of Cylinders	Length of Stroke	Revolutions per minute	No. of Cylinders
Diameter of Tunnel shaft as per rule	Diameter of Crank shaft journals	Diameter of Crank pin	Diameter of Screw shaft as per rule
Diameter of screw	Pitch of screw	No. of blades	Size of Crank webs
No. of Feed pumps	Diameter of ditto	Stroke	Total surface
No. of Bilge pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work
No. of Donkey Engines	Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps	In Holds, &c.

No. of bilge injections *sizes* Connected to condenser, or to circulating pump *Is a separate donkey suction fitted in Engine room of size*

Are all the bilge suction pipes fitted with roses *Are the roses in Engine room always accessible* *Are the sluices on Engine room bulkheads always accessible*

Are all connections with the sea direct on the skin of the ship *Are they Valves or Cocks*

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *Are the discharge pipes above or below the deep water line*

Are they each fitted with a discharge valve always accessible on the plating of the vessel *Are the blow off cocks fitted with a spigot and brass covering plate*

What pipes are carried through the bunkers *How are they protected*

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *Is the screw shaft tunnel watertight*

Is it fitted with a watertight door *worked from*

BOILERS, &c.—

(Letter for record)

Total Heating Surface of Boilers

No. and Description of Boilers *One: by 1st. Multi- Single ended* Working Pressure *160 lbs.* Tested by hydraulic pressure to *320 lbs.*

Date of test *10/9/94* Can each boiler be worked separately *yes* Area of fire grate in each boiler *50 sq. ft.* No. and Description of safety valves to each boiler *Two, Spring* Area of each valve *5.94 sq. in.* Pressure to which they are adjusted *162 lbs.* Are they fitted with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *this boiler fitted between main boiler* Mean diameter of boilers *12' 0"*

length *10' 0"* Material of shell plates *Steel* Thickness *1 1/2"* Description of riveting: circum. seams *Lap Double* long. seams *Butt Straps*

diameter of rivet holes in long. seams *1 1/8"* Pitch of rivets *7/8"* *3 1/4"* Lap of plates or width of butt straps *16"*

percentages of strength of longitudinal joint *87%* Working pressure of shell by rules *141 lbs.* Size of manhole in shell *16" x 12"*

size of compensating ring *4" x 1 1/2"* No. and Description of Furnaces in each boiler *3: plain* Material *Steel* Outside diameter *36"*

length of plain part *3' 6"* Thickness of plates *1 1/2"* Description of longitudinal joint *welded* No. of strengthening rings *1: Adamson*

Working pressure of furnace by the rules *162 lbs.* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16"* Back *9/16"* Top *5/8"* Bottom *1/2"*

pitch of stays to ditto: Sides *7/8" x 7/8"* Back *7/8" x 7/8"* Top *8" x 7/8"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *182 lbs.*

Material of stays *Steel* Diameter at smallest part *1 1/4"* Area supported by each stay *60 sq. in.* Working pressure by rules *167 lbs.* End plates in steam space:

Material *Steel* Thickness *1 1/2"* Pitch of stays *16" x 17"* How are stays secured *Steel Nuts & Washers* Working pressure by rules *195 lbs.* Material of stays *Steel*

diameter at smallest part *2 1/2"* Area supported by each stay *242 sq. in.* Working pressure by rules *162 lbs.* Material of Front plates at bottom *Steel*

thickness *3/2"* Material of Lower back plate *Steel* Thickness *3/4"* Greatest pitch of stays *11"* Working pressure of plate by rules *160 lbs.*

diameter of tubes *3 1/4"* Pitch of tubes *4 1/2" x 4 1/2"* Material of tube plates *Steel* Thickness: Front *3/2"* Back *5/8"* Mean pitch of stays *9"*

pitch across wide water spaces *15"* Working pressures by rules *160 lbs. & 172 lbs.* Girders to Chamber tops: Material *Steel* Depth and

thickness of girder at centre *8 1/2" x 1 1/2"* Length as per rule *27"* Distance apart *9"* Number and pitch of Stays in each *2: 7/8"*

Working pressure by rules *180 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
Pitch of rivets	Working pressure of shell by rules	Diameter of flue	Material of flue plates	Thickness	
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

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 _____ 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 :—

The foregoing is a correct description,
Manufacturer.

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

This Boiler was built under Special Survey and
the materials and workmanship are good. When completed
it was tested by hydraulic pressure to 320 lbs per sq. inch
and found tight & sound. This boiler has been examined
under steam, the safety valves adjusted, and found to work well.
H. Stoddard

Certificate (if required) to be sent to

The amount of Entry Fee. . . £ : : When applied for,
Special £ 4 : 4 : 4 : 18 : 44
Donkey Boiler Fee . . . £ : : When received,
Travelling Expenses (if any) £ : : 19/10/94

Committee's Minute

Assigned

FRIDAY 23 NOV 1894

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



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Foundation