

REPORT ON MACHINERY.

Port of London

Received at London Office

FRI 14 OCT 1892

No. in Survey held at London

Date, first Survey 2nd Jan^y Last Survey 10th Aug^t 1892

Reg. Book.

(Number of Visits 9)

on the New Boilers for the iron S/s "Widgeon"

Tons { Gross
Net

Master

Built at

By whom built

When built

Engines made at

By whom made

when made

Boilers made at

Deptford (London)

By whom made

The Gent. St. Nav. Co^y

when made 1892

Registered Horse Power

Owners

The Gent. St. Nav. Co^y

Port belonging to London

Nom. Horse Power as per Section 28

ENGINES, &c.—

Description of Engines

No. of Cylinders

Diameter of Cylinders Length of Stroke Revolutions per minute Diameter of Screw shaft as per rule. as fitted 9 1/2
Diameter of Tunnel shaft as per rule. as fitted 9 Diameter of Crank shaft journals 10 Diameter of Crank pin 10 1/4 Size of Crank webs
Diameter of screw Pitch of screw No. of blades State whether moveable Total surface
No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work
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 Engine Room In Holds, &c.

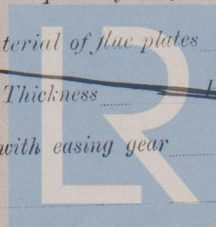
No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size
Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
Are all connections 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 S)

Total Heating Surface of Boilers 2494 sq ft

No. and Description of Boilers Two Cylindrical Multitubular Working Pressure 70 lbs Tested by hydraulic pressure to 140 lbs
Date of test 10/8/92 Can each boiler be worked separately Yes Area of fire grate in each boiler 35.75 sq ft No. and Description of safety valves to each boiler Two Spring Area of each valve 11.04 sq in Pressure to which they are adjusted 60 lbs Are they fitted with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 30 in Mean diameter of boilers 11.3 in
Length 10'6" Material of shell plates Steel Thickness 5/8 Description of riveting: circum. seams double (lap) long. seams double (butt)
Diameter of rivet holes in long. seams 7/8 Pitch of rivets 3 5/8 Lap of plates on width of butt straps 9 in
Per centages of strength of longitudinal joint rivets 78.7 plate 75.8 Working pressure of shell by rules 87.6 lbs Size of manhole in shell 16" x 13"
Size of compensating ring 2'8" x 2'5" x 5/8 No. and Description of Furnaces in each boiler Two Cylindrical Material Steel Outside diameter 3'4"
Length of plain part top 7'1" bottom 9'4" Thickness of plates crown 1/2 Description of longitudinal joint butt riv. lap No. of strengthening rings none
Working pressure of furnace by the rules 79 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/2 Back 1/2 Top 1/2 Bottom 1/2
Pitch of stays to ditto: Sides 9 Back 9 Top 12 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 94.7
Material of stays Iron Diameter at smallest part 1 3/8 Area supported by each stay 81 sq in Working pressure by rules 109.6 lbs End plates in steam space:
Material Steel Thickness 3/4 Pitch of stays 17 How are stays secured nuts Working pressure by rules 79.7 lbs Material of stays Steel
Diameter at smallest part 1 3/8 Area supported by each stay 289 sq in Working pressure by rules 85.9 lbs Material of Front plates at bottom Steel
Thickness 1/6 Material of Lower back plate Steel Thickness 1/6 Greatest pitch of stays 14 Working pressure of plate by rules 88.2
Diameter of tubes 3 Pitch of tubes 4 1/8 Material of tube plates Steel Thickness: Front 1/6 Back 1/6 Mean pitch of stays 12 3/8
Pitch across wide water spaces 14 Working pressures by rules 86.5 lbs Girders to Chamber tops: Material Steel 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 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 plates 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



53759 *Lon*

DONKEY BOILER— Description *Vertical with side uptake & two cross tubes*
 Made at *Deptford* By whom made *Genl. St. Marks & Co.* When made *1892* Where fixed *Main deck*
 Working pressure *70 lbs* tested by hydraulic pressure to *140 lbs* No. of Certificate *250* Fire grate area *17 1/2 sq ft* Description of safety valves *Spring*
 No. of safety valves *One* Area of each *7.06* Pressure to which they are adjusted *70 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Diameter of donkey boiler *5' 6"* Length *12' 0"* Material of shell plates *Steel* Thickness *3/8"*
 Description of riveting long seams *double riv. lap* Diameter of rivet holes *3/4"* Whether punched or drilled *drilled* Pitch of rivets *2 1/2"*
 Lap of plating *3 1/8"* Per centage of strength of joint *80:5* Thickness of shell crown plates *1 1/16"* Radius of do. *flat* No. of stays to do. *five*
 Dia. of stays *2 1/2"* Diameter of furnace Top *4' 0"* Bottom *4' 8"* Length of furnace *4' 7"* Thickness of furnace plates *9/16"* Description of joint *Single lap* Thickness of furnace crown plates *1/2"* Stayed by *Stays to top of boiler* Working pressure of shell by rules *79.75 lbs*
 Working pressure of furnace by rules *79.0 lbs* Diameter of uptake *15"* Thickness of uptake plates *1/2"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Johar Preston.

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

The foregoing Main and Donkey boilers were built under special survey, and in accordance with the rules, - the materials and workmanship being good and efficient. The boilers were afterwards satisfactorily tested by hydraulic to twice the working pressure.

*For recommendations
See attached report
19 10 92*

Certificate (if required) to be sent to

The amount of Entry Fee..	£	:	:	When applied for,
Special	£	6	10	0 19/10 1892
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	22/11 1892

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

Committee's Minute TUES 1 NOV 1892

Assigned



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