

REPORT ON MACHINERY.

Port of London.

WED, 4 JAN 1899

Received at London Office

No. in Survey held at London Date, first Survey July 28 Last Survey 29 Dec 1898.
 Reg. Book. 228 on the New Main Boilers for S. S. 'Spig' (Number of Visits 27)
 Mast Adstone Built at London By whom built Levin Streetwell Tons { Gross 987 Net 519
 Engines made at London By whom made J. Watts & Co. when made 1892
 Boilers made at London By whom made J. Newall & Son when made 1898
 Registered Horse Power 236 Owners Gen Steam Navigation Co. Port belonging to London
 Nom. Horse Power as per Section 28, 236 Is Electric Light fitted No.

ENGINES, &c.—Description of Engines No. of Cylinders No. of Cranks
 Diameter of Cylinders Length of Stroke Revolutions per minute Diameter of Screw shaft as per rule as fitted
 Diameter of Tunnel shaft as per rule as fitted Diameter of Crank shaft journals Diameter of Crank pin Size of Crank webs
 Diameter of screw Pitch of screw No. of blades State whether scable 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
 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 looking through 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 1780 sq ft Is forced draft fitted No
 No. and Description of Boilers One Tubular Working Pressure 160 lb Tested by hydraulic pressure to 320 lb
 Date of test 16/12/98 Can each boiler be worked separately Yes Area of fire grate in each boiler 63 sq ft No. and Description of safety valves to each boiler
 Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
 Smallest distance between boilers or uptakes and bunkers or woodwork Mean diameter of boilers 14 - 0
 Length 10 - 10 Material of shell plates Steel Thickness 1/4 Description of riveting: circum. seams Top & Rivd long. seams 2 B Straps rivd
 Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 7/2 3 3/4 Lap of plates or width of butt straps 1 - 7 1/2
 Percentages of strength of longitudinal joint 83 Working pressure of shell by rules 177 lb Size of manhole in shell 16 x 12
 Size of compensating ring McNicol's No. and Description of Furnaces in each boiler 3 Deighton's Material Steel Outside diameter 3.8
 Length of plain part top 6.9 bottom 6.9 Thickness of plates crown 7/32 bottom 17/32 Description of longitudinal joint Welded No. of strengthening rings
 Working pressure of furnace by the rules 86 lb Combustion chamber plates: Material S Thickness: Sides 9/16 Back 5/8 Top 9/16 Bottom 9/16
 Pitch of stays to ditto: Sides 7 5/8 x 7 Back 8 1/2 x 8 Top 8 1/4 x 7 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 160 lb
 Material of stays S Diameter at smallest part 1.378 Area supported by each stay 68.53 Working pressure by rules 160 lb End plates in steam space: Material S Thickness 7/8 Pitch of stays 16 x 15 How are stays secured One washer Working pressure by rules 160 lb Material of stays Steel
 Diameter at smallest part 4.94 Area supported by each stay 240 sq ft Working pressure by rules 80 lb Material of Front plates at bottom Steel
 Thickness 3/4 Material of Lower back plate Steel Thickness 3/4 Greatest pitch of stays 12 Working pressure of plate by rules 95 lb
 Diameter of tubes 2 1/4 Pitch of tubes 4 3/8 - 4 3/8 Material of tube plates S Thickness: Front 3/4 Back 3/4 Mean pitch of stays 9 1/2
 Pitch across wide water spaces 12 3/4 Working pressures by rules 200 lb Girders to Chamber tops: Material S Depth and thickness of girder at centre 7 x 1 1/2 Length as per rule 28 Distance apart 7 3/4 Number and pitch of Stays in each 2 x 8 1/2
 Working pressure by rules 170 lb 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 holes 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

If not, state whether, and when, one will be sent

60590

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.

Dates of Survey while building { During progress of work in shops - } From 13th June until 29th December, 1898.
 { During erection on board vessel - }
 Total No. of visits _____

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

This Boiler has been built under Special Survey. The material and workmanship are good and satisfactory. After completion this Boiler has been tested by hydraulic pressure to 32 lbs per square inch and found tight and sound at that pressure.

The following is the Stamp on above boiler, viz: No. 382 Lloyd's Test 32 lbs P.M. 16. 12. 98.

This Boiler is in my opinion eligible to be classed to a working pressure of 160 lbs per square inch. As the vessel however is not classed in the Society's Register it is respectfully recommended that no further action be taken in this case.

As it appears this Boiler, which has been built under S. Survey, is intended for an unclassified vessel, no further action need be taken.

A.C.H.
 4.1.99.

Certificate (if required) to be sent to _____

The amount of Entry Fee..	£	:	:	When applied for,
Special	£	4	4	4/1 18. 99.
Donkey Boiler Fee .. .	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	27/11 18. 99 P.M.

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

Committee's Minute
 Assigned *Not for Council*

