

REPORT ON MACHINERY.

No. 13246

NOV 1894

Port of *Glasgow*

Received at London Office 13

No. in Survey held at *Glasgow* Date, first Survey *13th June* Last Survey *2nd November 1894*

Reg. Book. *on the Swire Screw Steamer "Asia"* (Number of Visits *38*)

Tons } Gross *243*
Net *4*

Master *James Stewart* Built at *Glasgow* By whom built *Barelay Curle* When built *1894*

Engines made at *Glasgow* By whom made *" " " "* when made *1894*

Boilers made at *"* By whom made *" " " "* when made *1894*

Registered Horse Power *108* Owners *Southampton Isle of Wight* Port belonging to *Southampton*

Nom. Horse Power as per Section 28 *108*

ENGINES, &c.— Description of Engines *Compound (2 sets)* No. of Cylinders *4*

Diameter of Cylinders *18" 36"* Length of Stroke *24"* Revolutions per minute *100* Diameter of Screw shaft *4 1/2"*

Diameter of Tunnel shaft *4 1/2"* Diameter of Crank shaft journals *4 1/2"* Diameter of Crank pin *4 1/2"* Size of Crank webs *9 x 5"*

Diameter of screw *8' 6"* Pitch of screw *18 ft* No. of blades *3* State whether moveable *Yes* Total surface *20 ft*

No. of Feed pumps *One* Diameter of ditto *8"* Stroke *12"* Can one be overhauled while the other is at work *Yes*

No. of Bilge pumps *One* Diameter of ditto *3 1/2"* Stroke *12"* Can one be overhauled while the other is at work *Yes*

No. of Donkey Engines *One* Sizes of Pumps *Carruthers duplex* and size of Suctions connected to both Bilge and Donkey pumps *1-2" in each*

In Engine Room *2-2"* *5 x 3 1/2 x 8"* In Holds, &c. *1-2" in each*

No. of bilge injections *One* Connected to condenser or to circulating pump *Yes* Is a separate donkey suction fitted in Engine room & size *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 *Below*

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 *None*

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 *on slip before launch* Is the screw shaft tunnel watertight *Yes*

it fitted with a watertight door *Yes* worked from *Upper platform*

BOILERS, &c.— (Letter for record *None*) Total Heating Surface of Boilers *3233 ft*

No. and Description of Boilers *Two (single end)* Working Pressure *110 lbs* Tested by hydraulic pressure to *220 lbs*

Date of test *12/10/94* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *60 1/2 ft* No. and Description of safety valves to each boiler *Two Direct Spring* Area of each valve *9.62"* Pressure to which they are adjusted *110 lbs* Are they fitted with easing gear *Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *about 10"* Mean diameter of boilers *13 ft*

Length *10' 3"* Material of shell plates *Steel* Thickness *1 1/8"* Description of riveting: circum. seams *Double riv. long. seams* *Double riv. long. seams*

Diameter of rivet holes in long. seams *1 1/16"* Pitch of rivets *5 1/8"* Lap of plates or width of butt straps *14 3/4"*

Per centages of strength of longitudinal joint *93%* Working pressure of shell by rules *118 lbs* Size of manhole in shell *16" x 12"*

Size of compensating ring *Double riv. joint* Description of Furnaces in each boiler *3 (plain)* Material *Steel* Outside diameter *3' 8"*

Length of plain part *6' 9 3/16"* thickness of plates *1 1/8"* Description of longitudinal joint *Double butt straps* strengthening rings *Yes*

Working pressure of furnace by the rules *121 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *1 1/32"* Back *7/16"* Top *1 1/32"* Bottom *1 1/32"*

Pitch of stays to ditto: Sides *4 1/2" x 4 1/2"* Back *8 1/4" x 8 1/4"* Top *4 1/2" x 4 1/2"* Are stays fitted with nuts or riveted heads *Nuts* Working pressure by rules *115 lbs*

Material of stays *Steel* Diameter *1 1/2"* Area supported by each stay *68"* Working pressure by rules *116 lbs* End plates in steam space: Material *Steel* Thickness *2 3/32"* Pitch of stays *14 1/2" x 14 1/2"* Are stays secured *by nuts* Working pressure by rules *129 lbs* Material of stays *Steel*

Diameter *2"* Area supported by each stay *210"* Working pressure by rules *212 lbs* Material of Front plates at bottom *Steel*

Thickness *1 1/16"* Material of Lower back plate *Steel* Thickness *9/16"* Greatest pitch of stays *13 1/8"* Working pressure of plate by rules *Yes*

Diameter of tubes *3"* Pitch of tubes *4" x 4 1/8"* Material of tube plates *Steel* Thickness: Front *1 1/16"* Back *1 1/16"* Mean pitch of stays *12 3/8" x 8"*

Pitch across wide water spaces *13 1/2"* Working pressures by rules *131 lbs* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *4 1/4" x 5 7/8"* Length as per rule *2' 8"* Distance apart *4 1/4"* Number and pitch of Stays in each *3 - 4 1/2"*

Working pressure by rules *115 lbs* Superheater or Steam chest; how connected to boiler *None* Can the superheater be shut off and the boiler worked separately *Yes*

Diameter *None* Length *None* Thickness of shell plates *None* Material *None* Description of longitudinal joint *None* Diam. of rivet holes *None* Pitch of rivets *None* Working pressure of shell by rules *None* Diameter of flue *None* Material of flue plates *None* Thickness *None*

If stiffened with rings *None* Distance between rings *None* Working pressure by rules *None* End plates: Thickness *None* How stayed *None*

Working pressure of end plates *None* Area of safety valves to superheater *None* Are they fitted with easing gear *None*

Lloyd's Register Foundation

GLS170-0415

13276 Gls

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 can enter the donkey boiler _____

Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____

Description of ricketing long seams _____ Diameter of rivet holes _____ Whether punched or drilled _____ Pitch of ricket _____

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,

FOR BARCLAY, CURLE & CO., L^{td}

Manufacturer.

James Gilchrist

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

These Engines and Boilers are of good workmanship and materials and are now in good order and safe working condition and eligible in our opinion to be noted in the Register Book. L.M.C. 11/94

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11,94

Q P R
8-11-94

Certificate (if required) to be sent to WRITTEN.

Glasgow

The amount of Entry Fee.. £ 2 : " : When applied for,
Special £ 16 : 4 : 5/11 94
Donkey Boiler Fee £ " : " : When received,
Travelling Expenses (if any) £ " : " : 6/11 94

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

Clyde District

Committee's Minute

FRIDAY 3 NOV 1894

Assigned

+ L.M.C. 11,94



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