

REPORT ON MACHINERY.

Port of *Glasgow*.

Received at London Office

THUR 11 NOV 1897

No. in Survey held at *Dumbarton*Date, first Survey *26 August*Last Survey *1st Nov 1897*

Reg. Book.

(Number of Visits *9*)*204* on the *Screw Steamer "Manora"*Tons { Gross *4697*
Net *2995*Master *J. Henderson* Built at *Dumbarton*By whom built *Denny & Brown*When built *1883*Engines made at *Dumbarton*By whom made *Denny & Brown*when made *1883*Boilers made at *Dumbarton*By whom made *Denny & Brown*when made *1883*

Registered Horse Power

Owners *British India S.S. Co. Ltd.*Port belonging to *Glasgow*

Nom. Horse Power as per Section 28

Is Electric Light fitted

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

Diameter of Tunnel shaft

as per rule

Diameter of Crank shaft journals

Diameter of Crank pin

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

Total Heating Surface of Boilers

Is forced draft fitted

No. and Description of Boilers *one 448" multi: single ended* Working Pressure *80 lb* Tested by hydraulic pressure to *160 lb*Date of test *1/11/97* Can each boiler be worked separatelyArea of fire grate in each boiler *38 1/2 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 *11' 6"*Length *9' 0"* Material of shell plates *Steel*Thickness *7/16"*Description of riveting: circum. seams *Lap double* long. seams *Butt Straps*Diameter of rivet holes in long. seams *13/16"*Pitch of rivets *3 1/2"*Lap of plates or width of butt straps *9"*

Per centages of strength of longitudinal joint

rivets *78.5%*plate *76.4%*Working pressure of shell by rules *80 lb*Size of manhole in shell *14 x 13"*Size of compensating ring *10' x 36"*No. and Description of Furnaces in each boiler *2: plain*Material *Steel* Outside diameter *48"*

Length of plain part

top *3' 9"*bottom *3' 9"*

Thickness of plates

crown *3/8"*bottom *3/8"*Description of longitudinal joint *Welded*

No. of strengthening rings

Working pressure of furnace by the rules *91 lb*Combustion chamber plates: Material *Steel* Thickness: Sides *1/2"*Back *1/2"*Top *1/2"*Bottom *7/16"*

with taper

Pitch of stays to ditto: Sides *9 x 9"*Back *9 x 8 1/4"*Top *9 x 8 1/4"*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 1/8"*Area supported by each stay *81 sq in*Working pressure by rules *98 lb* End plates in steam space:Material *Steel* Thickness *3/4"*Pitch of stays *16 x 16"*How are stays secured *By nuts & washers*Working pressure by rules *104 lb* Material of stays *Steel*Diameter at smallest part *1 1/8"*Area supported by each stay *256 sq in*Working pressure by rules *90 lb*Material of Front plates at bottom *Steel*Thickness *3/4"*Material of Lower back plate *Steel*Thickness *3/8"*Greatest pitch of stays *15"*Working pressure of plate by rules *101 lb*Diameter of tubes *3"*Pitch of tubes *4 1/2 x 4 1/2"*Material of tube plates *Steel*Thickness: Front *3/4"*Back *3/4"*Mean pitch of stays *10' 6"*Pitch across wide water spaces *15"*Working pressures by rules *90 lb*Front *180 lb*Back *180 lb*Girders to Chamber tops: Material *Iron*

Depth and

thickness of girder at centre *5' x 1 1/4"*Length as per rule *27'*Distance apart *8 1/4"*Number and pitch of Stays in each *2: 9"*Working pressure by rules *98 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?

Is a Report also sent on the Hull of the Ship?

[1076-5000-24/280-Copyrighted Ink.]

15605. gls.

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.

Deputy of

Dates of Survey while building
During progress of work in shops -
During erection on board vessel -
Total No. of visits

1894. - August 25, Sept 1. 9. 11. 21. Oct 1. 13. 25. Nov 1. -

9

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

This Boiler has been built under special survey and the materials and workmanship are good. When finished it was tested by hydraulic pressure to 160 lbs. and found tight & sound.

This Boiler appears to have been constructed under special survey but as it does not appear to be intended for a classed vessel it is submitted that no further action need be taken

11/11/97

The amount of Entry Fee. £ :

Special £ :

Donkey Boiler Fee £ 2 : 2

Travelling Expenses (if any) £ :

When applied for,

5/11/94

When received,

9/11/94

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

Committee's Minute

Assigned

Not for Council
(Discharged)



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Foundation