

REPORT ON MACHINERY.

5788

No. 5788

Port of

Dundee

Received at London Office

MON 3 DEC 1888

No. in Survey held at Reg. Book.

Date, first Survey 18 Sept.

Last Survey 23 Nov. 1888

4110 on the

Iron S.S. Mover

(Number of Visits 15)

Tons 949 602

Master Wolveston

Built at Sunderland

By whom built

Murray & Foster

When built 1875

Engines made at

Dundee

By whom made

Gairley Bros & Co.

when made 1888

Boilers made at

Dundee

By whom made

Gairley Bros & Co.

when made 1888

Registered Horse Power

110

Owners

General Steam Navigation Co Port belonging to London

ENGINES, &c.—

Description of Engines Engines tripled by fitting a 16" cylinder on top the low pressure cylinder

Diameter of Cylinders 16 x 26 x 52 Length of Stroke 33 No. of Rev. per minute Point of Cut off, High Pressure 56 Low Pressure 5

Diameter of Screw shaft Diam. of Tunnel shaft Diam. of Crank shaft journals Diam. of Crank pin size of Crank webs

Diameter of screw Pitch of screw No. of blades state whether moreable 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

Where do they pump from

No. of Donkey Engines Size of Pumps Where do they pump from

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

No. of bilge injections and sizes Are they connected to condenser, or to circulating pump

How are the pumps worked

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 accessible at all times

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection 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 and fitted with a sluice door worked from

BOILERS, &c.—

Number of Boilers One Description Circular tubular Whether Steel or Iron Steel, better of material (S)

Working Pressure 150 Tested by hydraulic pressure to 300 Date of test 20/10/88

Description of superheating apparatus or steam chest

Can each boiler be worked separately Can the superheater be shut off and the boiler worked separately

No. of square feet of fire grate surface in each boiler 54.5 Description of safety valves Springs No. to each boiler Two

Area of each valve 7.07 Are they fitted with easing gear Yes No. of safety valves to superheater area of each valve

Are they fitted with easing gear Smallest distance between boilers and bunkers 12" Diameter of boilers 14' 0"

Length of boilers 10' 6" description of riveting of shell long. seams double riv. d. Ang. circum. seams double riv. lap Thickness of shell plates 1 5/32

Diameter of rivet holes 1 5/32 whether punched or drilled Drilled pitch of rivets 7 7/8 Lap of plating 16 7/8 straps

Per centage of strength of longitudinal joint 84 & 85 working pressure of shell by rules 150 size of manholes in shell 17 x 13

Size of compensating rings 4" x 4" x 3/4 angle No. of Furnaces in each boiler Three

Outside diameter 3' 7 3/4 length, top 7 bottom 7 thickness of plates 33/64 description of joint Furnaces packed if rings are fitted

Greatest length between rings working pressure of furnace by the rules 150 combustion chamber plating, thickness, sides 9/16 back 9/16 top 5/8

Pitch of stays to ditto, sides 7 1/2 back 7 1/2 top 7 If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 172

Diameter of stays at smallest part 1 1/32 working pressure of ditto by rules 318 end plates in steam space, thickness 1 1/16

Pitch of stays to ditto 17 1/2 x 17 1/2 how stays are secured by double nuts working pressure by rules 150 diameter of stays at smallest part 2 7/8

Greatest pitch of stays working pressure by rules 190 Front plates at bottom, thickness 11/16 Back plates, thickness 13/16

plates, front 3/4 back 3/4 Diameter of tubes 3 3/4 pitch of tubes 5 1/8 x 5 1/8 thickness of tube

how stayed stay tubes pitch of stays 10 1/4 x 10 1/4 width of water spaces 6

Diameter of Superheater or Steam chest length thickness of plates description of longitudinal joint diam. of rivet holes

Pitch of rivets working pressure of shell by rules diameter of flue thickness of plates If stiffened with rings

Distance between rings working pressure by rules end plates of superheater, or steam chest; thickness how stayed

Superheater or steam chest; how connected to boiler

Lloyd's Register Foundation

DUN113-0127

DONKEY BOILER—

Description

Vertical Steel

Made at Dundee

by whom made

Gairney Bros. & Co.

when made 1888

where fixed

On deck.

Working pressure 80 $\frac{1}{2}$ tested by hydraulic pressure to 100 $\frac{1}{2}$. No. of Certificate 533 fire grate area 15 $\frac{1}{2}$ sq. ft. description of safety valves *Spring* No. of safety valves *Two* area of each 3.55 $\frac{1}{2}$ sq. ft. if fitted with easing gear *Yes* if steam from main boilers can enter the donkey boiler *No* diameter of donkey boiler 5'6" length 11'0" description of riveting *Double riv. lap*

Thickness of shell plates $\frac{3}{8}$ " diameter of rivet holes $\frac{11}{16}$ " whether punched or drilled *Drilled* pitch of rivets $2\frac{3}{8}$ " lap of plating $3\frac{3}{8}$ " per centage of strength of joint $71\frac{1}{2}$ $\frac{1}{2}$ thickness of crown plates $\frac{11}{16}$ " stayed by *7 solid stays; 2" dia*

Diameter of furnace, top 4'0" bottom 4'8 $\frac{1}{2}$ " length of furnace 6'6" thickness of plates $\frac{9}{16}$ " description of joint *Single riv. lap*

Thickness of furnace crown plates $\frac{17}{32}$ " stayed by *7 solid stays; 2" dia* working pressure of shell by rules 80 $\frac{1}{2}$

Working pressure of furnace by rules 82 $\frac{1}{2}$ diameter of uptake 16" thickness of plates $\frac{3}{8}$ " thickness of water tubes $\frac{3}{8}$ "

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Gairney Brothers & Co

Manufacturer.

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

These boilers have been built under special survey in accordance with the approved plans, which are annexed. The steel used in the construction is tested at the steelworks by one of the Society's Surveyors and the Certificate of Tests are enclosed.

The safety valves have been set at the working pressure of resp. 150 $\frac{1}{2}$ and 80 $\frac{1}{2}$, and one tested under steam.

The workmanship and material are good and their use is in my opinion eligible to remain as classed, and to have the Notification N. B. 11. 88 recorded in the Register.

The amount of Entry Fee .. £ : — : received by me,

Special .. £ : — :

Donkey Boiler Fee .. £ : — :

Certificate (if required) .. £ : — :

To be sent as per margin.

18

(Travelling Expenses, if any, £)

Committee's Minute

TUES 4 DEC 1888

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



Lloyd's Register
Foundation