

REPORT ON MACHINERY.

3487

3487
8861

No. in Survey held at
Book.

Port of *Glasgow.*

Glasgow.

Date, first Survey *14th April*

Received at London Office

20 NOV 1888

Last Survey *29th Sept 1888*

(Number of Visits *19*)

1801

Tons *1168*

on the

Wallace Built at *Belfast.*

By whom built *Workman, Black & Co*

When built *1888*

Lines made at *Glasgow.*

By whom made *M^r King & Co*

when made *1888*

Painters made at *Do.*

By whom made *Do.*

when made *1888*

Registered Horse Power *190*

Owners *James R. Guthrie & Co*

Port belonging to *Glasgow.*

GINES, &c.—

Description of Engines *Immersed Direct Acting - Triple expansion - Surface Condensing.*

Diameter of Cylinders *19, 32, 52.* Length of Stroke *42"* No. of Rev. per minute *85* Point of Cut off, High Pressure *128"* Low Pressure *24"*

Diameter of Screw shaft *10 1/2"* Diam. of Tunnel shaft *10 1/4"* Diam. of Crank shaft journals *10 1/2"* Diam. of Crank pin *10 1/2"* size of Crank webs *7 1/2" x 14 3/4"*

Diameter of screw *13-0"* Pitch of screw *14-6"* No. of blades *Four* state whether moveable *Solid* total surface *600 sq. ft.*

No. of Feed pumps *Two* diameter of ditto *4"* Stroke *21"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *Two* diameter of ditto *4"* Stroke *21"* Can one be overhauled while the other is at work *yes*

Where do they pump from *Holds & Engine Room.*

No. of Donkey Engines *Two.* Size of Pumps *Ballast 8 1/2" pump x 12" stroke. Feed 6 1/2" x 4" x 6"* Where do they pump from *Pair of double acting feed pumps.*

Sea, bilges, tank & Hotwell. Ballast from Sea, bilges, tank & condenser.

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

No. of bilge injections *One* and sizes *3 1/2" dia* Are they connected to condenser, or to circulating pump *Circulating.* Port *Port 3rd* *yes.*

Are the pumps worked *By levers from Crosshead of Low pressure engine.*

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 *Above.*

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*

Are all pipes carried through the bunkers *None.* How are they protected *✓*

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times *yes*

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *yes*

Were stern tube, propeller, screw shaft, and all connections examined in dry dock *Before launching.* See Belfast Report N^o 3484.

Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *Engine room platform.*

BOILERS, &c.—

No. of Boilers *One* Description *Cylindrical. Mult.* Whether Steel or Iron *Steel*

Working Pressure *160 lbs.* Tested by hydraulic pressure to *320 lbs.* Date of test *July 12th 1888.*

Description of superheating apparatus or steam chest *None.*

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

Area of square feet of fire grate surface in each boiler *102 sq. ft.* Description of safety valves *Direct springs* No. to each boiler *Two*

Area of each valve *14.19 sq. in.* 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 or woodwork *12"* Diameter of boilers *12-9"*

No. of boilers *17-8"* description of riveting of shell long. seams *Butt. three runs* circum. seams *Lap. double.* Thickness of shell plates *1 3/16"*

Size of rivet holes *1 5/16"* whether punched or drilled *Drilled* pitch of rivets *7 3/4" + 3 1/8"* Lap of plating *20 1/4" x 1 1/16" butt.*

Age of strength of longitudinal joint *83* working pressure of shell by rules *174 lbs.* size of manholes in shell *16" x 12"*

Compensating rings *Double riveted plate. M^c Nich.* No. of Furnaces in each boiler *One*

Diameter *35"* length, top *7-0"* bottom *1/2"* thickness of plates *1/2"* description of joint *Weld* if rings are fitted *Annular*

Length between rings *9"* working pressure of furnace by the rules *170 lbs.* combustion chamber plating, thickness, sides *9/16"* back *-* top *3/4"*

Stays to ditto, sides *7 3/4" x 7 1/2"* back *-* top *Hemispherical* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by *160 lbs.*

Diameter of stays at smallest part *1 1/2"* working pressure of ditto by rules *180 lbs.* end plates in steam space, thickness *3/4" double 10 x 16*

Stays to ditto *13 1/2" x 13 1/2"* how stays are secured *Nuts* working pressure by rules *160 lbs.* diameter of stays at *-*

Smallest part *2 1/4" fine thread* working pressure by rules *160 lbs.* Front plates at bottom, thickness *13/16"* Back plates, thickness *✓*

St pitch of stays *✓* working pressure by rules *✓* Diameter of tubes *3 1/2"* pitch of tubes *4 1/2"* thickness of tube *✓*

Stays, front *3/4"* back *3/4"* how stayed *Lutes* pitch of stays *15 1/2" x 9"* width of water spaces *6"*

No. of Superheater or Steam chest *None.* length *✓* thickness of plates *✓* description of longitudinal joint *✓* diam. of rivet holes *✓*

No. 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

B6655-0008

DONKEY BOILER— Description *Vertical. Four cross tubes.*
Made at *Gateshead* by whom made *Black Chapman & Parsons* when made *1888* where fixed *In Motehold*
Working pressure *60 lb* tested by hydraulic pressure to *120 lb* No. of Certificate *2568* fire grate area *21 sq ft* description of safety
valves *Direct spring* No. of safety valves *One* area of each *12 sq in* if fitted with easing gear *Yes* if steam from main boilers can
enter the donkey boiler *No* diameter of donkey boiler *6-6"* length *12-9"* description of riveting *Lap double*
Thickness of shell plates *3/8"* diameter of rivet holes *3/4"* whether punched or drilled *Punched & annealed* pitch of rivets *2 3/4"* lap of plating *3 5/8"*
per centage of strength of joint *72.7* thickness of crown plates *9/16"* stayed by *Five stay 1 3/16" effective dia*
Diameter of furnace, top *5-2"* bottom *5-6 3/4"* length of furnace *6-2"* thickness of plates *1/2"* description of joint *Lap single*
Thickness of furnace crown plates *1/2"* stayed by *Same as above* working pressure of shell by rules *69.9 lb*
Working pressure of furnace by rules *60 lb* diameter of uptake *15"* thickness of plates *3/16"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *Two top & bottom end bolts & nuts - Two main bearing bolts - One set of coupling bolts - Feed & bilge pump valves - Assorted bolts &c.*

The foregoing is a correct description,

Wm. King & Co Manufacturer.

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

These engines & boilers have been constructed under special survey - they are of good material & workmanship - they have been well fitted on board - satisfactorily tested under steam and I am of opinion they are eligible to be classed + L.M.C. 10-88 in the Register Book.

Appended hereto are eighteen Reports on Steel Lugs and two Reports on forging.

The amount of Entry Fee .. £ *2* : - : received by me,
Special .. £ *28* : *10* : -
Donkey Boiler Fee .. £ - : - :
Certificate (if required) .. £ - : - :
To be sent as per margin.

(Travelling Expenses, if any, £ ..)

Committee's Minute

+ Lmb #188

FRIDAY 29 NOV 1888

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



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