

REPORT ON MACHINERY.

10757 No. 12098

Port of *Glasgow*

MON. 10 APL 1893

No. in Reg. Book. *13* Survey held at *Glasgow*

Date, first Survey *15th Dec. 1891* Last Survey *21 March 1893*

Received at London Office

on the *S. S. Vanland.*

(Number of Visits *26*)

Tons { Gross *1741.00*
Net *772.12*

Master *John Brown* Built at *Campbeltown* By whom built *Campbeltown J. B. Cay* When built *1892-3*

Engines made at *Greenock* By whom made *Wincaid & Co (Lim^d)* when made *1892 & 3*

Boilers made at *Glasgow* By whom made *H. Wallace & Co* when made *1892-3*

Registered Horse Power *115* Owners *Angfartys Aktiebolaget i Sverige* Port belonging to *Göteborg.*

Nom. Horse Power as per Section 28 *112*

ENGINES, &c.— Description of Engines *See Greenock Report.* No. of Cylinders

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 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 *S.*) Total Heating Surface of Boilers *1665.22 feet.*

No. and Description of Boilers *One Multitubular* Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs*

Date of test *27.5.92* Can each boiler be worked separately — Area of fire grate in each boiler *68.25 sq feet* No. and Description of safety valves to each boiler *Two Direct Spring* Area of each valve *8.3 sq in.* Pressure to which they are adjusted *165 lbs* Are they fitted with easing gear *yes.* Smallest distance between boilers or uptakes and bunkers or woodwork *9"* Mean diameter of boilers *14'-0"*

Length *10'-6"* Material of shell plates *steel* Thickness *1 1/2"* Description of riveting: circum. seams *lap* long. seams *d. butt str.*

Diameter of rivet holes in long. seams *1 5/16"* Pitch of rivets *7 3/4" x 3 7/8"* Lap of plates or width of butt straps *2 3/2"*

Per centages of strength of longitudinal joint rivets 83.1 plate 83.1 Working pressure of shell by rules *160 lbs* Size of manhole in shell *12" x 16"*

Size of compensating ring *18" Neils* No. and Description of Furnaces in each boiler *3. Purvis* Material *steel* Outside diameter *43"*

Length of plain part top bottom — Thickness of plates crown bottom *5 1/2"* Description of longitudinal joint *welded* No. of strengthening rings —

Working pressure of furnace by the rules *162 lbs* Combustion chamber plates: Material *steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *9/16"*

Pitch of stays to ditto: Sides *7 3/4"* Back *7 3/4"* Top *7 3/4"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *162 lbs*

Material of stays *steel* Diameter at smallest part *1 1/2"* Area supported by each stay *60 sq in* Working pressure by rules *164 lbs* End plates in steam space: Material *steel* Thickness *1 3/8"* Pitch of stays *16"* How are stays secured *d. nuts* Working pressure by rules *160 lbs* Material of stays *steel*

Diameter at smallest part *2 1/2"* Area supported by each stay *256 sq in* Working pressure by rules *171 lbs* Material of Front plates at bottom *steel*

Thickness *1 3/16"* Material of Lower back plate *steel* Thickness *1 3/16"* Greatest pitch of stays *11 1/4"* Working pressure of plate by rules *160 lbs*

Diameter of tubes *3 1/2"* Pitch of tubes *4 3/4"* Material of tube plates *steel* Thickness: Front *1 3/16"* Back *3/4"* Mean pitch of stays *9 1/2"*

Pitch across wide water spaces *12 1/2"* Working pressures by rules *160 lbs* Girders to Chamber tops: Material *steel* Depth and thickness of girder at centre *7" x 1"* Length as per rule *2'-6"* Distance apart *7 3/4"* Number and pitch of Stays in each *2. 7 3/4"*

Working pressure by rules *187 lbs* Superheater or Steam chest; how connected to boiler — 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 —

Lloyd's Register Foundation GR4323-0242

REPORT ON

DONKEY BOILER— Description *Multitubular*
 Made at *Glasgow* By whom made *H. Wallace & Co* When made *1893* Where fixed *on deck*.
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *3356* Fire grate area *14.5 sq ft* Description of safety valves *Direct Spring*.
 No. of safety valves *one* Area of each *7.5* Pressure to which they are adjusted *80 lbs* If fitted with casing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *7'-0"* Length *7'-7 1/2"* Material of shell plates *Steel* Thickness *3/16"*
 Description of riveting long seams *d. riv. lap* Diameter of rivet holes *7/8"* Whether punched or drilled *drill* Pitch of rivets *3 1/2"*
 Lap of plating *4 1/2"* Per centage of strength of joint *75* Rivets *75.5* Thickness of shell crown plates *—* Radius of do. *—* No. of stays to do. *—*
 Dia. of stays. *—* Diameter of furnace Top *39* Bottom *—* Length of furnace *5'-4"* Thickness of furnace plates *3/16"* Description of joint *d. butt str.* Thickness of furnace crown plates *1/2" & 3/16"* Stayed by *Acro Hays 8" pitch* Working pressure of shell by rules *80 lbs*
 Working pressure of furnace by rules *80 lbs* Diameter of uptake *2"* Thickness of uptake plates *5/8"* Thickness of water tubes *—*

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,
 For *H. Wallace & Co* Manufacturer. *John G. Muncie*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The above mentioned boilers have been built under Special Survey and are of good material and workmanship. The boilers have been forwarded to Greenock where they will be fitted onboard the vessel. — This Report forwarded to Greenock Surveyor for completion. —*

Wm Sanderford
Glasgow 25/3/93

Certificate (if required) to be sent to *Greenock Office*

The amount of Entry Fee..	£	:	:	When applied for,
Special	£	5	11	5 th April 1893
Donkey Boiler Fee .. .	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	8 th April 1893

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

Committee's Minute *TUES. 11 APR 1893*
 Assigned



For Surveys are requested not to write on or below the space for Committee's Minute.