

# REPORT ON MACHINERY.

3714

Port of Glasgow.

2 JUL 90

Received at London Office

13

No. 9929

No. in Survey held at Glasgow.

Date, first Survey 15<sup>th</sup> Jan<sup>y</sup> 1889 Last Survey 20<sup>th</sup> June 1890

Reg. Book.

(Number of Visits 14)

on the

S.S. "City of Vienna"

Tons { Gross  
Net

Master Anderson

Built at Belfast

By whom built Workman, Clark & Co. Ltd When built 1890

Engines made at Glasgow

By whom made John & James Thomson when made 1890.

Boilers made at Glasgow

By whom made John & James Thomson when made 1890.

Registered Horse Power 850

Owners George Smith & Son Port belonging to Glasgow.

ENGINES, &c.—

Description of Engines

Triple Expansion

No. of Cylinders Three.

Diam. of Cylinders 32", 53" & 87½" Length of Stroke 60" Rev. per minute 65 Point of Cut off, High Pressure Var. Low Pressure Var.

Diameter of Screw shaft 16½" Diam. of Tunnel shaft 15½" Diam. of Crank shaft journals 16½" Diam. of Crank pin 16½" size of Crank webs built

Diameter of screw 19'-6" Pitch of screw 24'-0" No. of blades 4. state whether moveable Yes total surface 104 ft²

No. of Feed pumps 2. diameter of ditto 5½" Stroke 30" Can one be overhauled while the other is at work Yes.

No. of Bilge pumps 2. diameter of ditto 5½" Stroke 30" Can one be overhauled while the other is at work Yes.

Where do they pump from all compartments.

No. of Donkey Engines One set of 2 Size of Pumps 10" x 8" x 24" Weirs Where do they pump from Hotwell, Sea, bilges  
each. 7½ x 5 x 6" Worthington

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 8" Are they connected to condenser, or to circulating pump Yes.

How are the pumps worked Air, feed & bilge of engine. Circulating Separate Centrifugal

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks both pump & engine

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 about

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 —

That pipes are carried through the bunkers Main Steam How are they protected casing

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock See Belfast Report attached

Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from upper platform.

BOILERS, &c.—

No. of Boilers Four. Description Multitubular Forced Draught Material Steel Letter (for record) S.

Working Pressure 160 lbs. Tested by hydraulic pressure to 320 lbs. Date of test 10<sup>th</sup> April 1890.

Description of superheating apparatus or steam chest None

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

No. of square feet of fire grate surface in each boiler 52.2 Description of safety valves d. Spring No. to each boiler two

Area of each valve 9.621 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 15" Diameter of boilers 14'-6"

Length of boilers 11'-6" description of riveting of shell long. seams treb riv'd butt circum. seams d riv. lap Thickness of shell plates 1½"

Diameter of rivet holes 1½" whether punched or drilled drilled pitch of rivets 8½" & 4½" Lap of plating 6½" & 19¼" butt.

Percentage of strength of longitudinal joint 84.5 working pressure of shell by rules 162 lbs. size of manholes in shell 12" x 16"

Size of compensating rings McNeill's No. of Furnaces in each boiler three Description of Furnaces Hanged Seams

Outside diameter 43½" length 7'-9" thickness of plates 9/16" description of joint welded if rings are fitted Yes

Greatest length between rings 18" working pressure of furnace by the rules 160 lbs. combustion chamber plating, thickness, sides 9/16" back 9/16" top 9/16"

Pitch of stays to ditto, sides 7½" back 7½" top 7½" If stays are fitted with nuts or riveted heads into inside working pressure of plating by rules 173 lbs.

Diameter of stays at smallest part 1¼ x 1½" working pressure of ditto by rules 160 lbs. end plates in steam space, thickness 1" & straps

Pitch of stays to ditto 15" x 17" how stays are secured d. nuts working pressure by rules 162 lbs. diameter of stays at smallest part 2 7/8" d. bars

working pressure by rules 160 lbs. Front plates at bottom, thickness 13/16" Back plates, thickness 13/16"

Greatest pitch of stays — working pressure by rules — Diameter of tubes 2½" pitch of tubes 3¾" thickness of tube plates, front 7/8" back 7/8"

how stayed stubs pitch of stays 7½" width of water spaces 7"

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 —

BEL 57-0047

Lloyd's Register Foundation



## DONKEY BOILER—

Description

Multitubular Steel

Made at Glasgow by whom made John &amp; Jas Thomson when made 1890 where fixed on deck

Working pressure 80 lbs tested by hydraulic pressure to 160 lbs No. of Certificate 2683. fire grate area 36 ft<sup>2</sup> description of

valves direct spring No. of safety valves 2. area of each 4.9" if fitted with easing gear yes if steam from main boiler

enter the donkey boiler no diameter of donkey boiler 12'-0" length 10'-0" description of riveting lap treble riv

Thickness of shell plates 7/16 diameter of rivet holes 1" whether punched or drilled drill pitch of rivets 3 7/16 lap of plating 6 7/8

per centage of strength of joint 73% thickness of <sup>steam space</sup> ~~over~~ plates 5/8" stayed by 2 3/4" dia. stays pitched 16 1/4" x 14 1/2"

Diameter of furnace, top 41 bottom — length of furnace 6'-9" thickness of plates 17/32 description of joint lap

Thickness of <sup>C. Ch</sup> furnace crown plates 7/16 stayed by stays 8" x 8" pitch working pressure of shell by rules 80 lbsWorking pressure of furnace by rules 91 lbs diameter of <sup>tubes</sup> uptake 3 1/2" thickness of <sup>tube</sup> plates 10/16 thickness of water tubes —

SPARE GEAR. State the articles supplied:— One length crank shaft, propeller shaft. and two blades. Air pump rod. Crank pin brasses. And bilge pump valves & seats. Top and bottom end bolts. Main bearing & coupling bolts.

The foregoing is a correct description.

Manufacturer.

John &amp; Jas Thomson

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

The above mentioned engines and boilers have been built under Special Survey and are now completed onboard in a satisfactory manner of good workmanship and material. The machinery is in my opinion eligible to the notation of: **+ L.M.C. 6.90.**

This vessel is fitted with two sets of dynamos and engines complete placed in engine room. The double wires for lighting the Saloon &c are carried along the alley ways in wood casings, the wires being properly insulated and protected — No wires come in any way in contact with cargo space —

It is submitted that this vessel is eligible to have + L.M.C. 6.90 recorded

W.A.

2-7-90

The amount of Entry Fee .. £ 3 : - : - received by me,

Special .. .. £ 52 : 10 : -

Donkey Boiler Fee .. .. £ - : - : -

Certificate (if required) .. £ - : - : - 20/6/1890

To be sent as per margin.

(Travelling Expenses, if any, £ )

Committee's Minute

FRI 4 JULY 1890

FRI 25 JULY 1890

+ L.M.C. 6.90

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

John Anderson

Glasgow

Lloyd's Register  
Foundation