

REPORT ON MACHINERY.

No. 23425

WED. 28 FEB 1906

JAN 16 1906

Port of Glasgow.

Received at London Office _____ 19

Date, first Survey 27th Sept

Last Survey 20th Dec. 1905

(Number of Visits 2)

No. in Survey held at _____

Reg. Book.

on the Engines for S.S. "Victoria"

Gross Tons }
Net Tons }

Master _____

Built at Aberdeen

By whom built The John Duffie Foundry S.B.C. When built _____

Engines made at Coatbridge

By whom made W. & E. Hodgkinwood, N^o 209 when made 1905-6

Boilers made at Aberdeen

By whom made Jas. Abernethy & Co. when made 1905-6

Registered Horse Power _____

Owners The Glasgow Steam Traction Co. Port belonging to _____

Nom. Horse Power as per Section 28 72

Is Refrigerating Machinery fitted for cargo purposes _____

Is Electric Light fitted _____

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12" 20" 33" Length of Stroke 23" Revs. per minute _____

Dia. of Screw shaft 6.818 as per rule 7.2 as fitted Material of screw shaft Iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight _____

in the propeller boss Yes If the liner is in more than one length are the joints burned Yes If the liner does not fit tightly at the part _____

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two _____

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 2'-6"

Dia. of Tunnel shaft 6.12 as per rule None Dia. of Crank shaft journals 6.465 as per rule 6.78 as fitted Dia. of Crank pin 6.8" Size of Crank webs 11 3/4 x 4 1/2 Dia. of thrust shaft under _____

collars 6.8" Dia. of screw 8'-3" Pitch of screw 11'-6" No. of blades 4 State whether moveable No Total surface 26 sq

No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 11 1/2" Can one be overhauled while the other is at work _____

No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 11 1/2" Can one be overhauled while the other is at work _____

No. of Donkey Engines 1 Sizes of Pumps _____ No. and size of Suctions connected to both Bilge and Donkey pumps _____

In Engine Room 2 - 2" dia. In Holds, &c. 2 - 2" dia.

No. of bilge injections 1 sizes 3" Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes 2"

Are all the bilge suction pipes fitted with roses Yes 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 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 _____ 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.—No. of Certificate _____ (Letter for record _____) Total Heating Surface of Boilers _____ Is forced draft fitted _____

No. and Description of Boilers One multitubular Working Pressure 180 lbs. Tested by hydraulic pressure to _____

Date of test _____ Can each boiler be worked separately _____ Area of fire grate in each boiler _____ 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 dia. of boilers _____ Length _____ Material of shell plates _____

Thickness _____ Range of tensile strength _____ Are they welded or flanged _____ Descrip. of riveting: cir. seams _____ long. seams _____

Diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____

Per centages of strength of longitudinal joint _____ rivets _____ Working pressure of shell by rules _____ Size of manhole in shell _____

Size of compensating ring _____ No. and Description of Furnaces in each boiler _____ Material _____ Outside diameter _____

Length of plain part _____ top _____ Thickness of plates _____ crown _____ Description of longitudinal joint _____ No. of strengthening rings _____

Working pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____

Pitch of stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____

Material of stays _____ Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space: _____

Material _____ Thickness _____ Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____

Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____

Thickness _____ Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____

Diameter of tubes _____ Pitch of tubes _____ Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____

Pitch across wide water spaces _____ Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and _____

thickness of girder at centre _____ Length as per rule _____ Distance apart _____ Number and pitch of Stays in each _____

Working pressure by rules _____ 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 _____



DONKEY BOILER— No. _____ Description _____
 Made at _____ By whom made _____ Date of test _____ 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 _____
 Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile strength _____
 Descrip. of riveting long. seams _____ Dia. 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: *with Engines. 2 Connecting Rod top end bolts & nuts, 2 Connecting Rod bottom end bolts & nuts, 2 Main bearing bolts & nuts, 1 set feed & bilge pump valves, 1 set air pump valves, 1 set circulating pump valves, 6 joint ring bolts & nuts, 6 gland studs assorted, 12 condenser tubes, 24 condenser tubes ferrules, a quantity of assorted bolts & nuts, iron in various sizes, 1 set coupling bolts.*
 The foregoing is a correct description,
 for W.V. Lidgerwood Manufacturer.

Dates of Survey while building: During progress of work in shops - 1905: Sep 27, Oct 3, 16, 21, Nov 9, 13, 26, Dec 20
 During erection on board vessel -
 Total No. of visits 8
 Is the approved plan of main boiler forwarded herewith " " " donkey " " "

General Remarks (State quality of workmanship, opinions as to class, &c.)
These engines have been built under special survey and in accordance with the Rules, the materials and workmanship are good and under the vessel eligible in my opinion to have the notation of L.M.C. with a date in the Register book, when they have been satisfactorily fitted on board, together with the auxiliary engines, shafting, propeller, stern tube, sea connections, boiler &c.

Certificate (if required) to be sent to Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee... £ 13-72-0
 Special ... £
 Donkey Boiler Fee ... £
 Travelling Expenses (if any) £
 When applied for, 1905
 When received, 1905
 J. Cairns
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Glasgow 15 JAN 1906
 signed Deferres for completion