

REPORT ON MACHINERY.

No. 23425

WED. 28 FEB 1906

JAN 1906

Port of Glasgow.

Received at London Office 19

Date, first Survey 17th SeptLast Survey 20th Dec. 1905

(Number of Visits 8)

No. in Survey held at

Reg. Book.

on the *Engine for S.S. "Bictor"*Gross
Tons
Net

Master

Built at Aberdeen

By whom built The John Duffie & Co. S.B.C. When built

Engines made at Coatbridge

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

Boilers made at Aberdeen

By whom made Jas. Alcorn & 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 28" Revs. per minute

Dia. of Screw shaft as per rule 6.818 Material of Iron
as fitted 7.4 screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made water tight

in the propeller boss

If the liner is in more than one length are the joints burned

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

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush 2' 6"

Dia. of Tunnel shaft as per rule 6.12 Dia. of Crank shaft journals as per rule 6.465

Dia. of Crank pin 6.8" Size of Crank webs 11 1/4 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 1/2

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 x 2" dia.

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

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

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 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 End plates in steam space:

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules Material of stays

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom

Diameter at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules

Thickness Material of Lower back plate Thickness Greatest pitch of stays Mean pitch of stays

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

W1106-006

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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 fuel & bilge pump valves, 1 set air pump valves, 1 set circulating pump valves, 6 pump 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 V Liddell & Co. 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. £ *13.12.0* When applied for, _____
 Special £ _____
 Donkey Boiler Fee £ *15* When received, _____
 Travelling Expenses (if any) £ _____

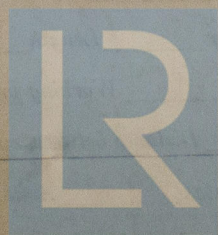
Committee's Minute

Glasgow 15 JAN 1906

FRI. 2 MAR 1906

signed Deferres for completion

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



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