

# REPORT ON MACHINERY.

No. 25123

TUES. APL 16 1907

Port of Glasgow

Received at London Office 19

Survey held at Glasgow

Date, first Survey 25 July 06 Last Survey 1<sup>st</sup> April 1907

Book. on the S.S. "Volpone"

(Number of Visits)

Built at Worthington

By whom built R. Williamson & Son (No 206)

Gross Tons }  
Net Tons }  
When built 1907

as made at Glasgow

By whom made Ross & Duncan (No 692)

when made 1907

as made at do

By whom made do (No 1102)

when made 1907

rated Horse Power

Owners Rodgers & Bright

Port belonging to Liverpool

Horse Power as per Section 28 100

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion

No. of Cylinders 3

No. of Cranks 3

of Cylinders 14", 22 1/2", 37" Length of Stroke 27"

Revs. per minute 92

Dia. of Screw shaft as per rule 7.97"

Material of screw shaft iron

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

propeller boss yes If the liner is in more than one length are the joints burned ✓

If the liner does not fit tightly at the part

in the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓

If two

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

Length of stern bush 33"

Dia. of Tunnel shaft as per rule 6.95"

Dia. of Crank shaft journals as per rule 7.3"

Dia. of Crank pin 7 3/8"

Size of Crank webs 10 1/2" x 4 7/8" Dia. of thrust shaft under

s 7 3/8" Dia. of screw 10'-0" Pitch of Screw 13'-0"

No. of Blades 4

State whether moceable yes Total surface 40 sq ft

Feed pumps 2 Diameter of ditto 2 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work yes

Bilge pumps 2 Diameter of ditto 2 3/4" Stroke 13 1/2" Can one be overhauled while the other is at work yes

Donkey Engines 3 Sizes of Pumps Seed Donkey 6" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Bilge & Donkey pumps 2-2", Bilge pump 1-2 1/4" In Holds, &c. Forward hold 2-2"

Bilge Injections 1 sizes 3 1/4" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes, 2"

Are the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes 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 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 pipes carried through the bunkers held & tank systems How are they protected with casing

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes

Is examination of completion of fitting of Sea Connections and of Stern Tube and Screw shaft and Propeller at Worthington

Is Screw Shaft Tunnel watertight none Is it fitted with a watertight door ✓ worked from ✓

MANUFACTURERS, &c.—(Letter for record P) Manufacturers of Steel David Colville & Sons Ltd.

Heating Surface of Boilers 1898 sq ft Is Forced Draft fitted no No. and Description of Boilers one single ended

Working Pressure 170 lbs Tested by hydraulic pressure to 340 lbs Date of test 14.2.07 No. of Certificate 8755

Can each boiler be worked separately ✓ Area of fire grate in each boiler 53 sq ft No. and Description of Safety Valves to

boiler Pair spring loaded Area of each valve 5.41 sq ft Pressure to which they are adjusted 170 lbs Are they fitted with easing gear yes

Least distance between boilers or uptakes and bunkers or woodwork 3'-0" Mean dia. of boilers 14'-0" Length 10'-0" Material of shell plates steel

Thickness 1 3/32" Range of tensile strength 28/32 tons Are the shell plates welded or flanged D.B.S. Descrip. of riveting: cir. seams D. Riv.

seams T. R. D. B. S. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/2" Lap of plates or width of butt straps 16 3/8"

Percentages of strength of longitudinal joint rivets 90.3% Working pressure of shell by rules 172 lbs Size of manhole in shell 16" x 12"

of compensating ring 6 3/4" x 1 3/32" No. and Description of Furnaces in each boiler 3 corrugated Material steel Outside diameter 44 1/4"

Thickness of plain part top 1 1/2" Thickness of plates crown 1 1/2" Description of longitudinal joint weld No. of strengthening rings ✓

Working pressure of furnace by the rules 170 lbs Combustion chamber plates: Material steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"

of stays to ditto: Sides 9 1/4" x 8 1/4" Back 9" x 8 1/2" Top 9" x 7 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 176 lbs

Material of stays steel Diameter at smallest part 1.76" Area supported by each stay 76.5 sq in Working pressure by rules 184 lbs End plates in steam space:

Material steel Thickness 1 1/8" Pitch of stays 19" x 17 1/4" How are stays secured D. nuts Working pressure by rules 172 lbs Material of stays steel

Diameter at smallest part 5.69" Area supported by each stay 327.75 sq in Working pressure by rules 180 lbs Material of Front plates at bottom steel

Thickness 5/16" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 13 1/4" x 9" Working pressure of plate by rules 206 lbs

Diameter of tubes 3 1/2" Pitch of tubes 4 5/8" x 4 1/2" Material of tube plates steel Thickness: Front 5/16" Back 3/4" Mean pitch of stays 9 1/8"

Working pressures across wide water spaces 172 lbs Girders to Chamber tops: Material iron Depth and

Working pressure of girder at centre 6 1/4" x 2" Length as per rule 27 3/8" Distance apart 7 3/4" Number and pitch of stays in each 2 @ 9"

Working pressure by rules 176 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

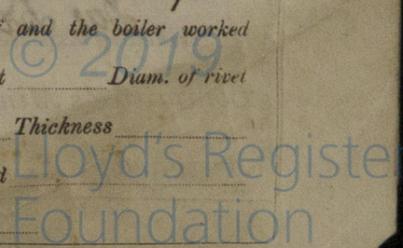
Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

Secured 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

IF THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

W377-0135



**VERTICAL DONKEY BOILER—** Manufacturers of Steel

No. \_\_\_\_\_ Description \_\_\_\_\_  
 Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_  
 Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description \_\_\_\_\_  
 Valves \_\_\_\_\_ No. of Safety Valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Date of adjustment \_\_\_\_\_  
 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 \_\_\_\_\_  
 Working pressure of shell by rules \_\_\_\_\_ 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 \_\_\_\_\_  
 Working pressure of furnace by rules \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_  
 Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_ Dates of survey \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:— *As per rules, 1 plst safety valve springs; 2 propeller blades*

The foregoing is a correct description,  
*Ross Duncan* Manufacturer.

Dates of Survey while building  
 During progress of work in shops— 1906 July 25 Aug 6 14 20 Sep 3 7 13 17 24 28 27 Nov 26 Dec 6 12 18 27 1907 Jan 3 Feb 6 9 11  
 During erection on board vessel— 1907 Mar 5 7 12 16 18 26 April 2  
 Total No. of visits *29* Is the approved plan of main boiler forwarded herewith *Y*

Dates of Examination of principal parts—Cylinders *26.11.06* Slides *26.11.06* Covers *26.11.06* Pistons *6.12.06* Rods *12.12.06*  
 Connecting rods *18.12.06* Crank shaft *12.12.06* Thrust shaft *18.12.06* Tunnel shafts \_\_\_\_\_ Screw shaft *12.12.06* Propeller *16.12.06*  
 Stern tube *27.12.06* Steam pipes tested *8.3.07* Engine and boiler seatings *Warrington* Engines holding down bolts *18.3.07*  
 Completion of pumping arrangements *2.4.07* Boilers fixed *5.3.07* Engines tried under steam *2.4.07*  
 Main boiler safety valves adjusted *2.4.07* Thickness of adjusting washers *Port 5/16" Plate 5/16"*  
 Material of Crank shaft *iron* Identification Mark on Do. *692* Material of Thrust shaft *iron* Identification Mark on Do. \_\_\_\_\_  
 Material of Tunnel shafts \_\_\_\_\_ Identification Marks on Do. \_\_\_\_\_ Material of Screw shafts *iron* Identification Marks on Do. \_\_\_\_\_  
 Material of Steam Pipes *Copper* Test pressure *340 lbs per sq inch*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*The machinery has been built under special survey; the material and workmanship being good; and satisfactorily tried under steam. It is submitted that above vessel will be eligible for a record of + L.M.C. 4.07 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. *L.M.C. 4107.*

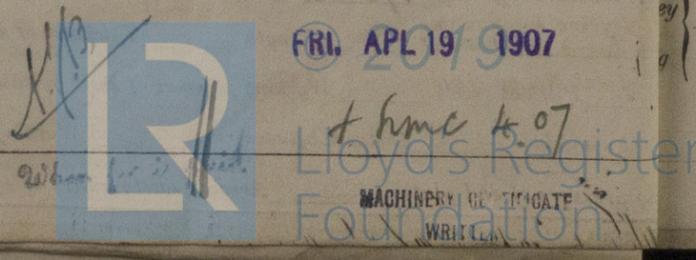
*17/4/07*  
*17.4.07*

The amount of Entry Fee... £ *2.0.0* When applied for, *3 APR 1907*  
 Special ... £ *15.0.0*  
 Donkey Boiler Fee ... £ \_\_\_\_\_  
 Travelling Expenses (if any) £ *1.0.0* When received, *20 APR 1907*

*A. J. Thomas*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute *Glasgow 15 APR 1907*

Assigned *+ L.M.C. 4.07.*  
 (Subject to classification of hull)



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