

## REPORT ON MACHINERY.

No. 22904

Received at London Office JUL 30 AUG 1910

Date of writing Report 29. 8 1910 When handed in at Local Office 29. 8 1910 Port of Hull

No. in Survey held at Selby + Hull Date, First Survey May 31<sup>st</sup> Last Survey Aug 12<sup>th</sup> 1910  
 Reg. Book. (Number of Visits 14. 20. 5)

8 Supp. on the Steel S. K. Prince Victor Tons } Gross 207  
 Net 94

Master Built at Selby By whom built Messrs Lochrane & Sons When built 1910

Engines made at } By whom made } Messrs when made 1910  
 Boilers made at } Hull By whom made } Charles D. Holmes & Co when made 1910

Registered Horse Power Owners H. Bernstein Port belonging to Grimsby.

Nom. Horse Power as per Section 28 66 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

Dia. of Cylinders 12" ~ 21" ~ 34" Length of Stroke 24" Revs. per minute 112 Dia. of Screw shaft as per rule 7" Material of screw shaft as fitted 7 3/8" I

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 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 31"

Dia. of Tumbler shaft as per rule 6" Dia. of Crank shaft journals as per rule 6.6" Dia. of Crank pin 6 1/8" Size of Crank webs 13" x 4 1/2" Dia. of thrust shaft under collars 6 1/8" Dia. of screw 8" ~ 6" Pitch of Screw 11" ~ 3" to 10" ~ 3" No. of Blades 4 State whether moveable No Total surface 27.5 sq ft

No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 24" Can one be overhauled while the other is at work —

No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 24" Can one be overhauled while the other is at work —

No. of Donkey Engines One Sizes of Pumps 2 1/4" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2", One 2 1/2" In Holds, &c. One 2" to fore hold, One 2"

To slush well, and ejector to these parts

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 2 1/2" Ejector

Are all 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 None

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

What pipes are carried through the bunkers hold suction How are they protected wood 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

Dates of examination of completion of fitting of Sea Connections 7. 7. 10 of Stern Tube 7. 7. 10 Screw shaft and Propeller 7. 7. 10

Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel The Steel Co. of Scotland.

Total Heating Surface of Boilers 10,700 sq ft Is Forced Draft fitted No No. and Description of Boilers 1 Cyl. Multi 8 Ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29. 7. 10 No. of Certificate 1761

Can each boiler be worked separately Area of fire grate in each boiler 33 sq ft No. and Description of Safety Valves to each boiler Two Spring Area of each valve 3.94 sq ft Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6 1/2" Main dia. of boilers 12" ~ 3 1/2" Length 10' ~ 0" Material of shell plates S

Thickness 1 1/2" Range of tensile strength 28 ~ 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L D

long. seams D. B. S. J. R Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 4" Lap of plates or width of butt straps 15"

Per centages of strength of longitudinal joint rivets 88 ~ 69 Working pressure of shell by rules 183 lbs Size of manhole in shell 16" x 12"

plate 85 ~ 26 No. and Description of Furnaces in each boiler Two plain Material S Outside diameter 43"

Size of compensating ring 4" x 1 1/2" Length of plain part top 5' ~ 10 1/4" Thickness of plates crown 4 1/2" Description of longitudinal joint welded No. of strengthening rings None

bottom 6 1/2" Working pressure of furnace by the rules 184 lbs Combustion chamber plates: Material S Thickness: Sides 3 1/2" Back 7/8" Top 3 1/2" Bottom 3 1/2"

Pitch of stays to ditto: Sides 9" x 10" Back 9 1/2" x 8 1/2" Top 10" x 8 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 198 lbs

Material of stays S Diameter at smallest part 1 5/8" Area supported by each stay 90 sq in Working pressure by rules 207 lbs End plates in steam space:

Material S Thickness 1 1/2" Pitch of stays 17" x 17" How are stays secured D. B. W. Working pressure by rules 185 lbs Material of stays S

Area at smallest part 6.33 Area supported by each stay 289 sq in Working pressure by rules 227 lbs Material of Front plates at bottom S

Thickness 1/2" Material of Lower back plate S Thickness 3 1/2" Greatest pitch of stays 14 1/2" x 9 1/2" Working pressure of plate by rules 189 lbs

Diameter of tubes 3 1/2" Pitch of tubes 5" x 5" Material of tube plates S Thickness: Front 7/8" Back 7/8" Mean pitch of stays 10"

Pitch across wide water spaces 15" Working pressures by rules 247 lbs Girders to Chamber tops: Material S Depth and

thickness of girder at centre 9" x 17 1/4" Length as per rule 1' ~ 8 1/2" Distance apart 8 1/2" Number and pitch of stays in each Two 10"

Working pressure by rules 229 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

6100-609600-0019



# 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 of Safety
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	Rivets Plates
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	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

**SPARE GEAR.** State the articles supplied:— Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air circulation feed and bilge pump valves, and a quantity of assorted bolts nuts etc

The foregoing is a correct description,  
p. pro CHARLES D. HOLMES & CO. LTD.  
Harold I. Shearson Manufacturer.

Dates of Survey while building	During progress of work in shops --	1910 May 31. June 2. 6. 14. 17. 21. 29 July 5. 7. 8. 12. 20. 26. 29. 30. Aug. 5. 8. 9. 10.
	During erection on board vessel --	Aug. 12
	Total No. of visits	20

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—	Cylinders 20. 4. 10	Slides 20. 4. 10	Covers 20. 4. 10	Pistons 20. 4. 10	Rods 20. 4. 10
Connecting rods 20. 4. 10	Crank shaft 30. 4. 10	Thrust shaft 30. 4. 10	Tunnel shafts	Screw shaft 29. 6. 10	Propeller 29. 6. 10
Stern tube 29. 6. 10	Steam pipes tested 8. 8. 10	Engine and boiler seatings 7. 7. 10	Engines holding down bolts 10. 8. 10		
Completion of pumping arrangements 9. 8. 10	Boilers fixed 10. 8. 10	Engines tried under steam 12. 8. 10			
Main boiler safety valves adjusted 12. 8. 10	Thickness of adjusting washers for 3/8" aft 1/4"				
Material of Crank shaft Iron	Identification Mark on Do. 615 JB	Material of Thrust shaft Steel	Identification Mark on Do. 615 JB		
Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts Iron	Identification Marks on Do. 615 JB		
Material of Steam Pipes Solid drawn Copper	Test pressure 400 lbs				

**General Remarks** (State quality of workmanship, opinions as to class, &c. The engines and boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials and workmanship are good. The boiler tested by hydraulic pressure and with the engines secured on board tested under steam and found satisfactory. They are now in good order and safe working condition and respectfully submitted as being eligible in our opinion to be classed with the notation of L.M.C. 8.10 in the Register Book.

It is submitted that this vessel is eligible for THE REGOED. + L.M.C. 8.10.

The amount of Entry Fee	£ 1 : . : .	When applied for, 29. 8. 1910
Special	£ 9 : 18 : .	When received, 31. 8. 1910
Donkey Boiler Fee	£ : : .	
Travelling Expenses (if any) £	: 8 : 2	

Committee's Minute

Assigned

J.M. JWD 30/8/10  
James Barclay  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping



Lloyd's Register Foundation

These parts

Signal Letter

Official No.

1248

No., Date, and I

Whether British Foreign Built

British

Number of Dec

Number of Ma

Rigged ...

Stern ...

Build ...

Galleries ...

Head ...

Framework an

vessel ...

Number of Bul

Number of wat

and their cap

Total to quarter the d

to bottom of keel

No. of sets of Engines.

Description

Triple

One Direct

Invert

No. of Shafts.

Particulars

Description Number

Iron or Ste

Loaded Pre

Under Tonnage

Space or spaces

Turret or Tank

Forecastle ...

Bridge space

Passer Break C

Side Houses

Deck Houses

Chart Houses

Spaces for mach

Section 78 (2)

1894. ...

Excess of Hatch

Gross T

Deductions, as p

Register

NOTE.—The only

Name of

No. of Owners

Name, Residence

M.O. Henry

Country of

Arthur

Country

Dated 12

30 (65181) Wt. 53