

REPORT ON MACHINERY.

No. 21404

Received at London Office **THURS. 21 SEP 1909**

Date of writing Report Sept 17 1909 When handed in at Local Office Sept 18 1909 Port of Hull
 No. in Survey held at Hull Date, First Survey Mar 17 Last Survey Sept 15 1909
 Reg. Book. S. S. HALLER (Number of Visits 52)

Master Sully Built at Sully By whom built Lockman & Sons Tons 52 Gross 52 Net 52
 Engines made at Hull By whom made G. D. Holmes & Co. When built 1909
 Boilers made at Hull By whom made G. D. Holmes & Co. when made 5
 Registered Horse Power 125 Owners G. R. Haller, Esq. Port belonging to Hull

Norm. Horse Power as per Section 28 125 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Inverted triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 16" 26 1/2" 43" Length of Stroke 30" Revs. per minute 98 Dia. of Screw shaft 9 1/2" as per rule 9 1/2" as fitted 9 1/2" 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 39"

Dia. of Tunnel shaft 8 1/2" as per rule 8 1/2" as fitted 8 1/2" Dia. of Crank shaft journals 8 1/2" as per rule 8 1/2" as fitted 8 1/2" Dia. of Crank pin 8 1/2" Size of Crank webs 6 1/2" x 5 1/2" Dia. of thrust shaft under

collars 8 1/2" Dia. of screw 11 1/8" Pitch of Screw 12 1/2" No. of Blades 4 State whether moveable No Total surface 44 sq. ft.

No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 18" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 3/4" Stroke 18" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 8 x 8 x 8 6 x 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 5' 2" (4 wings on centre) In Holds, &c. 4' 2" (for hold-up pump)

No. of Bilge Injections 1 sizes 4 1/2" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2 1/2"

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 Yes

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 4.6.09 of Stern Tube 4.6.09 Screw shaft and Propeller 4.6.09

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Phoenix & Howard, Westphalia

Total Heating Surface of Boilers 2140 sq. ft. Is Forced Draft fitted No No. and Description of Boilers 2 SE Multitubular

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 6.7.09 No. of Certificate 1712

Can each boiler be worked separately Yes Area of fire grate in each boiler 33 sq. ft. No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 3.97 Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 4' 6" Mean dia. of boilers 30 1/2" Length 10' 0" Material of shell plates Steel

Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 5th lap

long. seams 5th lap Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 7" Lap of plates or width of butt straps 15"

Per centages of strength of longitudinal joint rivets 85.6 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 1 1/2" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 2' 7"

Length of plain part top 69 bottom 63 Thickness of plates crown 1 1/2" bottom 1 1/2" Description of longitudinal joint Welded No. of strengthening rings 1

Working pressure of furnace by the rules 187 Combustion chamber plates: Material Steel Thickness: Sides 3 1/2" Back 4 1/2" Top 2 1/2" Bottom 2 1/2"

Pitch of stays to ditto: Sides 10 x 8 1/2" Back 9 1/2 x 8 1/2" Top 10 x 8 1/2" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 190

Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 109 sq. in. Working pressure by rules 198 End plates in steam space:

Material Steel Thickness 1 1/2" Pitch of stays 17 1/2" How are stays secured Drumhead Working pressure by rules 185 Material of stays Steel

Diameter at smallest part 5 7/8" Area supported by each stay 289 sq. in. Working pressure by rules 208 Material of Front plates at bottom Steel

Thickness 3" Material of Lower back plate Steel Thickness 3 1/2" Greatest pitch of stays 4 1/2" x 9 1/2" Working pressure of plate by rules 189

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

Pitch across wide water spaces 16" Working pressures by rules 274 Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9 7/8" Length as per rule 32" Distance apart 8 1/2" Number and pitch of stays in each 20 10"

Working pressure by rules 245 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked

separately Yes Diameter 16" Length 16" Thickness of shell plates 3 1/2" Material Steel Description of longitudinal joint Welded Diam. of rivet

holes 1 1/2" Pitch of rivets 7" Working pressure of shell by rules 180 Diameter of flue 16" Material of flue plates Steel Thickness 3 1/2"

If stiffened with rings Yes Distance between rings 16" Working pressure by rules 274 End plates: Thickness 3 1/2" How stayed Drumhead

Working pressure of end plates 245 Area of safety valves to superheater 109 sq. in. Are they fitted with easing gear Yes

W.H.H.O.-0321

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	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:—

Two top & two bottom end, connecting rod bolts & nuts, two main bearing bolts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one half set of air pump valves, one main & one donkey feed check valve, assorted bolts & nuts etc.

The foregoing is a correct description,

P. PRO CHARLES & HOLMES & CO. LTD.

Harold P. Sheardown. Manufacturer.

Dates of Survey while building	During progress of work in shops -	During erection on board vessel -	Total No. of visits
May 17, 23, 26, Apr 1, 2, 8, 14, 19, 22, 26, May 7, 14, 15, 17, 21, 26, 29, June 2, 4, 5, 8, 10, 12, 15, 16	19, 22, 29, Jul 2, 6, 8, 9, 16, 21, 22, 23, 27, 31, Aug 5, 7, 14, 19, 21, 24, 26, 27, Sept 3, 11, 16	52	

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders	26.5.09	Slides	16.7.09	Covers	8.6.09	Pistons	16.7.09	Rods	4.5.09
Connecting rods	2.6.09	Crank shaft	17.5.09	Thrust shaft	29.6.09	Tunnel shafts	29.6.09	Screw shaft	29.5.09
Propeller	29.5.09	Steam pipes tested	28.7.09	Engine and boiler seatings	19.6.09	Engines holding down bolts	27.7.09		
Completion of pumping arrangements	16.9.09	Boilers fixed	14.8.09	Engines tried under steam	14.8.09				
Main boiler safety valves adjusted	14.8.09	Thickness of adjusting washers	On Blk 1/2 P 1/2 S	On Blk 1/2 P 1/2 S					
Material of Crank shaft	Iron	Identification Mark on Do.	550.546	Material of Thrust shaft	Iron	Identification Mark on Do.	550.546		
Material of Tunnel shafts	Iron	Identification Marks on Do.	550.546	Material of Screw shafts	Iron	Identification Marks on Do.	550.546		
Material of Steam Pipes	Solid drawn copper	Test pressure	360 lbs.						

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

The machinery & fittings of this vessel have been constructed under Special Survey, are of good material & workmanship & have been fitted & secured in accordance with the Rules. They are now in good working condition & eligible in my opinion to have entry of + L.M.P. 9-09 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD

+ L.M.C. 9-09

J.M.

2/9/09

J.R.B.

The amount of Entry Fee	£ 2	When applied for,	20/9/09
Special	£ 18	When received,	30.9.09
Donkey Boiler Fee	£		
Travelling Expenses (if any)	£		

Committee's Minute

FRI. 24 SEP 1909

Assigned

+ L.M.C. 9-09

John W. Grogan

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



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Lloyd's Register Foundation

These partic

Signal Letters

Official Num

1292

No., Date, and Por

Whether British or Foreign Built.

British

Number of Decks

Number of Masts

Rigged

Stern

Build

Galleries

Head

Framework and

vessel

Number of Bulkheads

Number of water

and their capaci

Total to quarter the depth to bottom of keel

No. of sets of Engines.

Description

One Direct triple inverted

No. of Shafts.

Particular

Description

Number

Iron or Steel

Loaded Press

Gr

Under Tonnage De

Space or spaces be

Turret or Tank

Forecastle

Bridge space

Poop or Break

Side Houses

Deck Houses

Chart House

Spaces for machin

Section 78 (2) of

1894.

Excess of Hatchwa

Gross Ton

Deductions, as per

Register

NOTE.—The only s

Name of I

No. of Owners

Name, Residence,

Geo R. S

alfred

Dated 24th

30 (65181) Wt. 535

Certificate (if required) to be sent to

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