

REPORT ON MACHINERY.

No. 21404

Received at London Office THRS. 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. 50 on the S. S. HALLER (Number of Visits 52)
 Master Sully Built at Sully By whom built Lockman & Sons When built 1909
 Engines made at Hull By whom made G. D. Holmes & Co. when made 5
 Boilers made at Hull By whom made Hull when made 5
 Registered Horse Power 125 Owners G. R. Haller, Ltd. Port belonging to Hull
 Nom. 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 x 26 1/2 x 43 Length of Stroke 30 Revs. per minute 98 Dia. of Screw shaft 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 Dia. of Crank shaft journals 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 12-0 No. of Blades 4 State whether moveable No Total surface 44 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 3/8 Stroke 18 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 3/8 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 (fore hold - aft hold)

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 10-6 Length 10-0 Material of shell plates Steel
 Thickness 1/2 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 5/8 lap
 long. seams 5/8 lap Diameter of rivet holes in long. seams 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
 plate 85.2 Size of compensating ring 7 x 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 1/2 bottom 5/16 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 3/8 Back 1/2 Top 2/8 Bottom 2/8
 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 1/8 Area supported by each stay 109 sq in Working pressure by rules 199 End plates in steam space:
 Material Steel Thickness 1/2 Pitch of stays 17 x 17 How are stays secured Drumhead Working pressure by rules 185 Material of stays Steel
 Diameter at smallest part 5 9/16 Area supported by each stay 289 sq in Working pressure by rules 208 Material of Front plates at bottom Steel
 Thickness 3/8 Material of Lower back plate Steel Thickness 3/8 Greatest pitch of stays 14 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 3/8 Back 3/8 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 x 1 1/2 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 10 Length 10 Thickness of shell plates 3/8 Material Steel Description of longitudinal joint Welded Diam. of rivet
 holes 1/2 Pitch of rivets 7 Working pressure of shell by rules 180 Diameter of flue 10 Material of flue plates Steel Thickness 3/8
 If stiffened with rings Yes Distance between rings 10 Working pressure by rules 180 End plates: Thickness 3/8 How stayed None
 Working pressure of end plates 180 Area of safety valves to superheater 10 Are they fitted with easing gear Yes

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
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		Date of adjustment
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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
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 valves, 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	Mar 17, 23, 26, Apr 1, 2, 8, 14, 19, 22, 26, May 7, 4, 5, 7, 11, 15, 17, 21, 26, 29, June 2, 4, 5, 8, 10, 12, 15, 16
During erection on board vessel	19, 22, 29, Jul 2, 6, 8, 9, 16, 20, 22, 23, 27, 31, Aug 5, 7, 14, 19, 21, 24, 26, 27, Sept 3, 11, 16
Total No. of visits	52

Is the approved plan of main boiler forwarded herewith *Yes*

Is the approved plan of donkey boiler forwarded herewith *Yes*

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

Stern tube 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 board in accordance with the Rules. They are now in good working condition & eligible in my opinion to have record of + L.M.P. 9-09 in the Register Book.*

Certificate (if required) to be sent to

It is submitted that this vessel is eligible for THE RECORD
+ L.M.C. 9 09
J.W.G.
2/9/09

The amount of Entry Fee .. £ 2 : 00

Special .. £ 18 : 15

Donkey Boiler Fee .. £ :

Traveling Expenses (if any) £ : 8 2

When applied for, 20/9/09

When received, 30.9.09

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

Committee's Minute
 Assigned *+ L.M.C. 9.09*
 FRI. 24 SEP 1909

These particulars

Signal Letters

Official Number

1292

No., Date, and Port

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 tanks and their capacity

Total to quarter the depth to bottom of keel

No. of sets of Engines.

Description

One *Direct triple inverted*

No. of Shafts.

Particulars

One *Iron*

Under Tonnage Decks

Space or spaces between

Turret or Tank

Forecastle

Bridge space

Poop or Break

Side Houses

Deck Houses

Chart House

Spaces for machinery

Section 78 (2) of 1894.

Excess of Hatchways

Gross Tonnage

Deductions, as per Register

NOTE.—The only s

Name of I

No. of Owners

Name, Residence,

Geo R. Alfred

Dated *24th*



MACHINERY CERTIFICATE WRITTEN.