

Received at London Office

PLYMOUTH

MON. APR. 27. 1914

Date of writing Report 25-4-14 When handed in at Local Office

Port of

No. in Survey held at Dartmouth

Date, First Survey 19th March Last Survey 9th April 1914

Reg. Book.

on the Wood screw tug & cargo launch "Laflo" (Number of Visits Five)

Master

Built at Dartmouth By whom built Philip Son Ltd.

Tons { Gross
Net

When built 1914

Engines made at Dartmouth

By whom made Philip Son Ltd.

when made 1914.

Boilers made at Dartmouth

By whom made Philip Son Ltd.

when made 1914.

Registered Horse Power

Owners The Bethlehem Chile Iron Mines Co. Ltd. Port belonging to Cruz Grande.

Nom. Horse Power as per Section 28 14

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted no

ENGINES, &c.—Description of Engines Compound surface Condensing Vertical Type No. of Cylinders Two No. of Cranks Two

Dia. of Cylinders $4\frac{1}{2} \times 15$ Length of Stroke 12 Revs. per minute 280 Dia. of Screw shaft as per rule 3.67 as fitted 3.31 Material of Mild Steel screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no 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 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 Painted Length of stern bush 1'-2 $\frac{3}{4}$ "Intermediate as per rule 3.26 Dia. of shaft as fitted 3.31 Dia. of Crank shaft journals as per rule 3.43 as fitted 3.34 Dia. of Crank pin 4" Size of Crank webs 4 $\frac{1}{2}$ x 2 $\frac{1}{2}$ Dia. of thrust shaft undercollars 3 $\frac{3}{4}$ Dia. of screw 4'-0" Pitch of Screw 5'-6" No. of Blades 4 State whether moveable no Total surface 709 ft.No. of Feed pumps one Diameter of ditto 1 $\frac{1}{2}$ Stroke 6" Can one be overhauled while the other is at workNo. of Bilge pumps one Diameter of ditto 1 $\frac{1}{2}$ Stroke 6" Can one be overhauled while the other is at workNo. of Donkey Engines one Sizes of Pumps 2 $\frac{1}{2}$ steam, 1 $\frac{1}{2}$ water, 3 stroke No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room one to Bilge pumps 2" dia, one to Donkey pump 2" In Holds, &c. none

No. of Bilge Injections one sizes 2" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size no

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 Valves, cocks on Blow down.

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 none How are they protected

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 3 April of Stern Tube 26 Mar Screw shaft and Propeller 26 Mar

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

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 325 sqft Is Forced Draft fitted no No. and Description of Boilers one Steel Return Late Type.

Working Pressure 140 lbs Tested by hydraulic pressure to 280 lbs Date of test 26 Mar No. of Certificate 193

Can each boiler be worked separately Area of fire grate in each boiler 12 sqft. No. and Description of Safety Valves to

each boiler 2 Spring Loaded. Area of each valve 2.40 Pressure to which they are adjusted 140 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 4" Mean dia. of boilers 6'-5 $\frac{5}{8}$ " Length 6'-5 $\frac{5}{8}$ " Material of shell plates Mild SteelThickness 1 $\frac{1}{2}$ Range of tensile strength 28/32 tons Are the shell plates welded or flanged flanged Descrip. of riveting: cir. seams Rapped, Singlelong. seams Double Rivet Diameter of rivet holes in long. seams 1 $\frac{1}{8}$ Pitch of rivets 3 $\frac{1}{2}$ Lap of plates or width of butt straps 8 $\frac{1}{4}$

Per centages of strength of longitudinal joint rivets 94.9 plate 76.8 Working pressure of shell by rules 154. Size of manhole in shell 16" x 12"

Size of compensating ring 6" x 5 $\frac{1}{8}$ " No. and Description of Furnaces in each boiler one plain Material Mild Steel Outside diameter 3'-0"

Length of plain part top 3'4" bottom 3'4" Thickness of plates crown 8" bottom 8" Description of longitudinal joint Welded No. of strengthening rings none

Working pressure of furnace by the rules 156 Combustion chamber plates: Material Mild Steel Thickness: Sides 1 $\frac{1}{8}$ Back 1 $\frac{1}{8}$ Top 1 $\frac{1}{8}$ Bottom 1 $\frac{1}{8}$ Pitch of stays to ditto: Sides 9 $\frac{1}{2}$ Back 8' x 8" Top 7 $\frac{1}{2}$ Bottom 7 $\frac{1}{2}$ If stays are fitted with nuts or riveted heads nuts Working pressure by rules 170

Material of stays Mild Steel Diameter at smallest part 1.193 Area supported by each stay 64 sqin Working pressure by rules 140 End plates in steam space

Material Mild Steel Thickness Back 9 $\frac{1}{16}$ Pitch of stays 14" How are stays secured Double Nuts Working pressure by rules 164 Material of stays Mild SteelDiameter at smallest part 1 $\frac{1}{8}$ Area supported by each stay 196 Working pressure by rules 146 Material of Front plates at bottom Front plate in

Thickness Material of Lower back plate one piece Thickness Greatest pitch of stays 8' x 8" Working pressure of plate by rules

Diameter of tubes 2 $\frac{1}{2}$ Pitch of tubes 3 $\frac{1}{2}$ x 60" Material of tube plates Mild Steel Thickness: Front 7 $\frac{1}{8}$ Back 7 $\frac{1}{8}$ Mean pitch of stays 16 $\frac{1}{2}$ x 9"

Pitch across wide water spaces Working pressures by rules 147 Girders to Chamber tops: Material Mild Steel Depth and

thickness of girder at centre 5 $\frac{1}{2}$ x 2 plates 5 $\frac{1}{2}$ x 2 Length as per rule 16 Distance apart 9 $\frac{1}{2}$ Number and pitch of stays in each one

Working pressure by rules Superheater or Steam chest; how connected to boiler none 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

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fired _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Sa _____
 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:— 1 piston valve, 1 spare set of piston rings for H. P. and L. P., 1 tail shaft, 1 propeller, 1 set top end bearings and bolts, 1 set bottom end bearings and bolts

The foregoing is a correct description,

For PHILIP & SONS LIMITED

Manufacturer.

Getowell Philip

MANAGING DIRECTOR.

Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel --
 Total No. of visits

April 3.4.9.
 Five

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 9/4 Slides 9/4 Covers 9/4 Pistons 9/4 Rods 9/4
 Connecting rods 9/4 Crank shaft 19/3 9/4 Thrust shaft 19/3 9/4 Tunnel shafts 19/3 9/4 Screw shaft 19/3 9/4 Propeller 19/3
 Stern tube 19/3 Steam pipes tested 19926 Ma Engine and boiler seatings 19/3 Engines holding down bolts 3/4
 Completion of pumping arrangements 9.4.14 Boilers fixed 3.4.14 Engines tried under steam 9.4.14
 Main boiler safety valves adjusted 9.4.14 Thickness of adjusting washers P 18 32
 Material of Crank shaft Mild Steel Identification Mark on Do. ✓ Material of Thrust shaft Mild Steel Identification Mark on Do. ✓
 Material of Tunnel shafts Mild Steel Identification Marks on Do. ✓ Material of Screw shafts Mild Steel Identification Marks on Do. ✓
 Material of Steam Pipes Copper ✓ Test pressure 280 lbs ✓

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

The machinery and Boiler of this vessel are in good and efficient condition; the Boiler has been tested by water pressure to 280 lbs and is tight under steam at 140 lbs per sq. The machinery and Boiler worked very satisfactorily under steam when tried for about 1 1/2 hrs under way, oil fuel being used in the furnace. The quality of workmanship of the Machinery & Boiler is very good and it is submitted that the Machinery & Boiler may be favourably considered by the Committee for L M C.

It is submitted that this vessel is eligible for

THE RECORD + L M C 4.14

Fitted for oil fuel 4.14 F.P. above 150°F.

The amount of Entry Fee .. £ 1 : - : - : -
 Special .. £ 8 : - : - : -
 Donkey Boiler Fee .. £ : : : :
 Travelling Expenses (if any) £ 2 : - : - : -

When applied for,

25-4-14

When received,

30/4/14

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

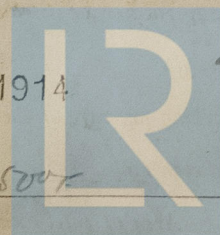
Committee's Minute

FRI. MAY. 1-1914

FRI. MAY. 22. 1914

Assigned

+ L M C 4.14
 Fitted for Oil Fuel 4.14 F.P. above 150°F.



Lloyd's Register Foundation