

## REPORT ON MACHINERY.

WED. MAR. 5-1913

No.

75218

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of London

No. in Survey held at

Hewbury

Date, First Survey

12<sup>th</sup> Sept

Last Survey

15<sup>th</sup> Nov

1911

Reg. Book.

on the *Enigma*

No. 2210 for S.S. 'B.A.M.W. No 15'

(Number of Visits)

4

Gross 449.35

Net 232.68

When built 1913.2

Master

Built at

Sudbrook

By whom built

C.N. Walker &amp; Co

Engines made at

Hewbury

By whom made

Plenty &amp; Son Ltd

when made

1912

Boilers made at

Stockton

By whom made

The Sudron &amp; Co Ltd

when made

1912

Registered Horse Power

Owners

C.H. Walker &amp; Co

Port belonging to

Buenos Aires.

Nom. Horse Power as per Section 28

52

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

## ENGINES, &amp;c.—Description of Engines

Cap. Direct, Super Indensing

No. of Cylinders

2

No. of Cranks

2

Dia. of Cylinders

15" - 30"

Length of Stroke

20"

Revs. per minute

150

Dia. of Screw shaft

as per rule 6.31"

Material of

Steel

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

2'-7"

Dia. of Tunnel shaft

as per rule 5.9"

Dia. of Crank shaft journals

as per rule 6.195"

Dia. of Crank pin

6 1/4"

Size of Crank webs

1 1/4" x 4"

Dia. of thrust shaft under

collars

6 1/4"

Dia. of screw

7'-0"

Pitch of Screw

8'-6"

No. of Blades

4

State whether moveable

No

Total surface

17.6 sq ft

No. of Feed pumps

One

Diameter of ditto

2 1/2"

Stroke

9"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

One

Diameter of ditto

2 1/2"

Stroke

9"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

7 1/2 + 5 3/4 x 6; 4 1/2 + 2 3/4 x 4 1/2

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

4 - 2"

In Holds, &amp;c.

2 - 2"

No. of Bilge Injections

One

sizes

3"

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room &amp; size

Yes, 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

Yes

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

Yes

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

Jan 10

of Stern Tube

Jan 10

Screw shaft and Propeller

Jan 10

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes

worked from

Yes

## BOILERS, &amp;c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

1054 sq ft

No. and Description of Boilers

Forced Draft fitted

Working Pressure

125 lbs

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

1'-3"

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

End plates in steam space:

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of stays

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of Front plates at bottom

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Working pressure of plate by rules

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Back

Mean pitch of stays

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

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

012954-012954-0380

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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 casing 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 \_\_\_\_\_ Does of survey \_\_\_\_\_

SPARE GEAR. State the articles supplied:— 2 top end, 2 bottom end & 2 main bearing bolts,  
1 set coupling bolts, 1 set feed & bilge pump valves, 1 set piston springs  
Assorted Bolts & nuts & washers

The foregoing is a correct description,

Manufacturer.

per pro. PLENTY & SON, LIMIT'D.

SECRETARY.

Dates of Survey while building { During progress of work in shops - - 1912 - Sept. 12, 18. Nov. 12, 18.  
During erection on board vessel - - 1913 - Jan. 10, 24, 30. Feb. 10.  
Total No. of visits 4 + 4 = 8

Is the approved plan of main boiler forwarded herewith Yes  
" " " donkey " " "

Dates of Examination of principal parts—Cylinders 18.9.12 Slides 13.11.12 Covers 18.9.12 Pistons 18.9.12 Rods 13.11.12  
Connecting rods 13.11.12 Crank shaft 21.9.12 Thrust shaft 25.9.12 Tunnel shafts ✓ Screw shaft 13.11.12 Propeller 13.11.12  
Stern tube 13.11.12 Steam pipes tested 30.1.13 Engine and boiler seatings 24.1.13 Engines holding down bolts 30.1.13  
Completion of pumping arrangements 10.2.13 Boilers fixed 10.2.13 Engines tried under steam 10.2.13  
Main boiler safety valves adjusted 130 lbs Thickness of adjusting washers 3/8 P & S.  
Material of Crank shaft Steel Identification Mark on Do. 1022 Material of Thrust shaft Steel Identification Mark on Do. 1022  
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 529 S  
Material of Steam Pipes Solid drawn copper Test pressure 250 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c. Engines constructed under special survey, material stated as required by the rules & workmanship good. Above intended for an S.S. building by C. H. Walker & Co. Sudbrook & have been forwarded to that port & be fitted on board.

S.P. B.A.H.W. No 15.

The Machinery of this vessel has now been fitted in the vessel, & found satisfactory & reliable to be classed with record of + LMC. 2.13.

It is submitted that this vessel is eligible for THE RECORD, + LMC 2.13.

Travelling Exp. £0-14-8  
The amount of Entry Fee .. £ 1 : 0 : 0 When applied for, 11 Dec 1912  
Special 2/3 Dec 1912 2 - 13 - 4  
Donkey Boiler Fee .. £ : : : When received, 12 Jan 1913  
Travelling Expenses (if any) £ 1 : 9 : 6  
Committee's Minute FRI. MAR. 7 - 1913  
Assigned + LMC 2.13

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



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