

## REPORT ON MACHINERY.

No. 80399 London

TUE - 5 FEB. 1918

Received at London Office

Date of writing Report

When handed in at Local Office

12

Port of London

4 Bristol

in Survey held at Newbury &amp; Appldore

Date, First Survey 25<sup>th</sup> JuneLast Survey 2<sup>nd</sup> February 1918

(Number of Visits 6 + 4)

g. Book. 94 on the 5/5 Orchis

Tons } Gross 482

Net

When built 1918

Built at Appldore

By whom built P. Cock &amp; Son

Engines made at Newbury

By whom made Plenty &amp; Son Ltd

when made 1918

Machinery made at Middlesbrough

By whom made Rids Bros Ltd

when made 1918

Registered Horse Power

Owners P. Cock &amp; Son

Port belonging to Bedford

Horse Power as per Section 28 72

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

GINES, &amp;c. — Description of Engines

Triple Surface condensing

No. of Cylinders 3

No. of Cranks 3

No. of Cylinders 13-22-34

Length of Stroke 22 1/2

Revs. per minute 120

Dia. of Screw shaft

as per rule 7.35

as fitted 7 3/8

Material of screw shaft

Steel

The screw shaft fitted with a continuous liner the whole length of the stern tube

two liners

Is the after end of the liner made water tight

the propeller boss

no

If the liner is in more than one length are the joints burned

no

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

are fitted, is the shaft lapped or protected between the liners

Lapped &amp; painted

Length of stern bush 2.5 1/2

No. of Tunnel shaft

as per rule 6.39

as fitted 1

Dia. of Crank shaft journals

as per rule 6.37

as fitted 6 3/4

Dia. of Crank pin

6 3/4

Size of Crank webs 12 1/4

Dia. of thrust shaft under

No. of Blades 4

State whether moveable

Yes

Total surface

26 sq ft

No. of Feed pumps

One

Diameter of ditto 3"

Stroke 10"

Can one be overhauled while the other is at work

No. of Bilge pumps

One

Diameter of ditto 3"

Stroke 10"

Can one be overhauled while the other is at work

No. of Donkey Engines

One

Sizes of Pumps 4 1/2 x 2 3/4 x 4 1/2

Duplex

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

In Holds, &amp;c.

Two 2"

In Room

Two 2"

Bilge Injections

One size 3 1/2"

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room &amp; size 3/4 2"

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

connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

Both

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

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

Pipes are carried through the bunkers

Fore hold bilge suction &amp; fuel pipes

How are they protected

Carried under ceiling

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Yes

Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

ERS, &amp;c. — (Letter for record 5)

Manufacturers of Steel

John Spencer &amp; Son

Heating Surface of Boilers

1271

Is Forced Draft fitted

No

No. and Description of Boilers

One Single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

10-8-17

No. of Certificate

5791

Can boiler be worked separately

Yes

Area of fire grate in each boiler

1271 sq ft

No. and Description of Safety Valves to

No

Area of each valve

4.91

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

Distance between boilers or uptakes and bunkers on woodwork

18"

Mean dia. of boilers

12-0

Length

11-0

Material of shell plates

Steel

Range of tensile strength

28-37

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

27 lbs

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

7 7/8"

Lap of plates or width of butt straps

15 1/2 x 7 1/2"

Working pressure of shell by rules

180

Size of manhole in shell

19 x 15"

Compensating ring

7 x 11 inch

No. and Description of Furnaces in each boiler

2 Morrison

Material

Steel

Outside diameter

24 1/4"

Thickness of plates

5 7/16"

Description of longitudinal joint

Weld

No. of strengthening rings

2

Combustion chamber plates: Material

Steel

Thickness: Sides

7/8"

Back

2 1/8"

Top

7/8"

Bottom

1 1/16"

Working pressure of furnace by the rules

195

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

185

End plates in steam space:

Area supported by each stay

7.2

Working pressure by rules

195

Material of stays

Steel

Thickness

1"

Pitch of stays

16 x 15 1/2"

How are stays secured

nuts

Working pressure by rules

185

Material of Front plates at bottom

Steel

Area supported by each stay

261

Working pressure by rules

185

Material of plate by rules

238

Material of Lower back plate

Steel

Thickness

1"

Greatest pitch of stays

14 x 9 3/4"

Working pressure of plate by rules

238

Material of stays

Steel

Pitch of tubes

5 x 4 3/4"

Material of tube plates

Steel

Thickness: Front

1"

Back

1 3/16"

Mean pitch of stays

11 1/6"

Working pressures by rules

181

Girders to Chamber tops: Material

Steel

Depth and

Distance apart

8"

Number and pitch of stays in each

3 of 8 x 1 1/2"

% of strength of joint

Steam dome: description of joint to shell

none

Diam. of rivet holes

Thickness of shell plates

Material

Description of longitudinal joint

How stayed

Working pressure of shell by rules

Crown plates

Thickness

How stayed

Type

none

Date of Approval of Plan

Tested by Hydraulic Pressure to

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Is Easing Gear fitted

Pressure to which each is adjusted

Pressure to which each is adjusted

HEATER.

Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

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Safety Valves

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Pressure to which each is adjusted



IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 top end bolts, 2 bottom end bolts, 2 main bearing bolts, 1 set coupling  
feed & bilge pump valves, 1 set piston rings for each cylinder, 2 condenser tubes & tube  
bolts, nuts & screw assorted

The foregoing is a correct description,

Manufacturer.

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

December 6<sup>th</sup>, 13<sup>th</sup>, Jan 2<sup>nd</sup> & Feb 2<sup>nd</sup>

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods

Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller

Stern tube Steam pipes tested 14.1.18 Engine and boiler seatings 6-12-17 Engines holding down bolts 2-1-18

Completion of pumping arrangements 2-1-18 Boilers fixed 6-12-17 Engines tried under steam 2-1-18

Completion of fitting sea connections 6-12-17 Stern tube 6-12-17 Screw shaft and propeller 6-12-17

Main boiler safety valves adjusted 2-1-18 Thickness of adjusting washers P 3/8 S 5/16

Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

Material of Steam Pipes Copper Test pressure 300 lb by T.R.B.

Is an installation fitted for burning oil fuel Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case If so, state name of vessel

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

This machinery has now been fitted on the above vessel, the  
Main Boiler Safety Valves adjusted under steam to the above pressure &  
engines tried under steam.  
The vessel is eligible in my opinion for record # L.M.C. 2-18

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 2.18.

The amount of Entry Fee ... £ 0 : 0 : 0 When applied for,

Special ... £ 3 : 4 : 0 19.

Donkey Boiler Fee ... £ 3 : 12 : 0 When received,

Travelling Expenses (if any) £ 6 : 9 : 3

Committee's Minute

Assigned

FRI. 15 FEB. 1918

+ L.M.C. 2.18.

Engineer Surveyor to Lloyd's Register of Shipping

G. A. Hyden Toquer

TUE. 18 MAR. 1919

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Lloyd's Register  
Foundation