

REPORT ON MACHINERY.

Port of

Glasgow

THUR. MAR 19 1896

Received at London Office

No. in Survey held at

Glasgow

Date, first Survey

10 April 1895

Last Survey

14 March 1896

Reg. Book.

on the

S.S. Polycarp

(Number of Visits)

Tons

Gross 2966

Net 1893

Master R. Oliphant

Built at

Glasgow

By whom built

Barclay Currier & Co.

When built

1896

Engines made at

Glasgow

By whom made

" " " "

when made

1896

Boilers made at

"

By whom made

" " " "

when made

1896

Registered Horse Power

277

Owners

Booth Steam Ship Coy Ltd

Port belonging to

Liverpool

Nom. Horse Power as per Section 28

277 NE

ENGINES, &c.—

Description of Engines

Triple Exp

No. of Cylinders

3

Diameter of Cylinders

23 1/2" 30" 64"

Length of Stroke

42"

Revolutions per minute

about 80

Diameter of Screw shaft

as per rule 1 1/4"

Diameter of Tunnel shaft

as per rule 10 3/4"

Diameter of Crank shaft journals

12 3/4"

Diameter of Crank pin

12 3/4"

Size of Crank webs

8 1/2"

Diameter of screw

15 1/2"

Pitch of screw

16" 6"

No. of blades

4

State whether moveable

No

Total surface

42 ft

No. of Feed pumps

Two

Diameter of ditto

3 1/2"

Stroke

21"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

Two

Diameter of ditto

3 1/2"

Stroke

21"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

Two

Sizes of Pumps

1/2" x 5" x 10"

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

In Engine Room 4 - 2 - 3" + 2 - 4" 1/2" x 4 1/2" x 10"

In Engine Room

4 - 2 - 3" + 2 - 4" 1/2" x 4 1/2" x 10"

In Holds, &c.

2 - 3" in each + 1 1/2" after tunnel well

No. of bilge injections

1

sizes

6"

Connected to condenser, or to circulating pump

Yes

Is a separate donkey suction fitted in Engine room & size

Yes (4")

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

Near to line

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

Bilge & Suction pipes

How are they protected

By 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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

On ship before launch

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Upper platform

OILERS, &c.—

(Letter for record)

Total Heating Surface of Boilers

4328 ft

No. and Description of Boilers

2 Multitubular Single end

Working Pressure

160 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

3/12/95

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

60 ft

No. and Description of safety valves to

each boiler

2 Sweet Spring

Area of each valve

8.0"

Pressure to which they are adjusted

160 lbs

Are they fitted

Yes

with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

No side

Mean diameter of boilers

15" 3"

Length

10' 3"

Material of shell plates

Steel

Thickness

1/16"

Description of riveting: circum. seams

Cap double riveting

seams

Double butting

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 3/8"

Lap of plates or width of butt straps

18" straps

Per centages of strength of longitudinal joint

rivets 84%

plate 86%

Working pressure of shell by rules

160 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

Lumped

No. and Description of Furnaces in each boiler

3 Morrison

Material

Steel

Outside diameter

8' 11 1/4"

Length of plain part

top 6' 7"

Thickness of plates

bottom 8' 1/16"

Description of longitudinal joint

Welded

No. of strengthening rings

—

Working pressure of furnace by the rules

160 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

9' 1/16"

Back

9' 1/16"

Top

9' 1/16"

Bottom

1' 1/16"

Pitch of stays to ditto: Sides

8' x 8"

Back

8' x 7 1/4"

Top

8' x 8"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

190 lbs

Material of stay

Steel

Diameter at smallest part

1 1/2"

Area supported by each stay

6 1/4"

Working pressure by rules

18 1/2 lbs

End plates in steam space:

Material

Steel

Thickness

3/16"

Pitch of stays

16' x 16"

How are stays secured

Double nuts

Working pressure by rules

160 lbs

Material of stays

Steel

Diameter at smallest part

2 1/16"

Area supported by each stay

256"

Working pressure by rules

160 lbs

Material of Front plates at bottom

Steel

Thickness

13' 1/16"

Material of Lower back plate

Steel

Thickness

11' 1/16"

Greatest pitch of stays

13"

Working pressure of plate by rules

220 lbs

Diameter of tube

3 1/4"

Pitch of tubes

4' 3/8" x 4' 3/8"

Material of tube plate

Steel

Thickness: Front

13' 1/16"

Back

12' 1/16"

Mean pitch of stays

8' 3/4"

Pitch across wide water spaces

15"

Working pressures by rules

190 lbs

Girders to Chamber tops: Material

Steel

Depth and

Thickness of girder at centre

8' 1/2" x 1 1/2"

Length as per rule

2' 4"

Distance apart

8"

Number and pitch of Stays in each

3 (8)

Working pressure by rules

190 lbs

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

—

Pitch of rivets

—

Working pressure of shell by rules

—

Diameter of flue

—

Material of flue plates

—

Thickness

—

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

—

Lloyd's Register

Foundation

W149-0136

DONKEY BOILER— Description *Round Multitubular*
 Made at *Glasgow* By whom made *Barclay Curle & Co. Ltd.* When made *1896* Where fixed *On main deck*
 Working pressure *60 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *3918* Fire grate area *26 ft²* Description of safety valves *Direct Spring*
 No. of safety valves *2* Area of each *5.94 ft²* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no*
 Diameter of donkey boiler *9' 6"* Length *8' 6"* Material of shell plates *Steel* Thickness *9/16"*
 Description of riveting long. seams *Lap tub riveted* Diameter of rivet holes *7/8"* Whether punched or drilled *Drilled* Pitch of rivets *3 1/2"*
 Lap of plating *6 1/4"* Per centage of strength of joint *100%* Thickness of shell *9/16"* Radius of do. *—* No. of Stays to do *8*
 Dia. of stays *2 1/2"* Diameter of furnace *2' 6"* Length of furnace *5' 6"* Thickness of furnace plates *9/16"* Description of joint *Double straps* *Comb Chamber* *Stays 4" - 9' 9"* Working pressure of shell by rules *85 lbs*
 Thickness of furnace crown plates *1 1/2"* Stayed by *—* Working pressure of furnace by rules *186 lbs* Diameter of uptake *—* Thickness of uptake plates *—* Thickness of water tubes *—*

SPARE GEAR. State the articles supplied:— *2 main bearing bolts, 2 connecting rod bolts, top & bottom, set coupling bolts, set of valves for pumps, assorted bolts nuts & springs &c.*

The foregoing is a correct description,
Barclay Curle & Co. Ltd. Manufacturer.
J. James Gilchrist Director

General Remarks (State quality of workmanship, opinions as to class, &c.) *These Engines & Boilers are of good workmanship & materials and are now in good order & safe working condition and eligible in opinion eligible to be noted in the Register Book*
L.M.C. 3/96

Electric Lighting Report will be forwarded as soon as received from Ed. Engineers Ltd.

It is submitted that this vessel is eligible for THE RECORD.

L.M.C. 3.96
Elec: Light.
19.3.96
Glasgow

Certificate (if required) to be sent to *Glasgow*

The amount of Entry Fee..	£ 2 : 0 : 0	When applied for, <i>16/3/96</i>
Special	£ 33 : 14 : 0	
Donkey Boiler Fee	£ " : " : "	When received, <i>14/3/96</i>
Travelling Expenses (if any) £	" : " : "	

Committee's Minute *FRI. MAR 20 1896*

Assigned *L.M.C. 3.96* *elec. light*

James Morrison *Wm Sanderford*
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Port of
 No. in Reg. Book
 Owners
 Yard No.
 DESCRIPTION
 Capacity of
 Where is
 Position of
 Positions of
 If cut out
 If vessel is
 Are the cu
 Are all cu
 are p
 Are all su
 Total num
 A *app*
 B *Mid*
 C *Low*
 D *Bar*
 E *Sign*
 F *Eng*
 If are lig
 Where a
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 Main cabl
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 Leads to
 Cargo lig
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