

REPORT ON MACHINERY.

No. 49715

Port of *Newcastle-on-Tyne*Received at London Office *14th 21 NOV 1905*No. in Survey held at
Reg. Book.*South Shields*Date, first Survey *Mar 30*Last Survey *Oct 18* 1905(Number of Visits *31*)

on the

S.S. TROJAN

Master

Built at

South Shields

By whom built

Hepple & Co Ltd

Tons

Gross *165*Net *67*When built *1905*

Engines made at

South Shields

By whom made

*Hepple & Co Ltd*when made *1905*

Boilers made at

South Shields

By whom made

*J. F. Stritham & Co*when made *1905*

Registered Horse Power

34

Owners

*The Crown Agents of the Colonies
Government of Southern Nigeria*

Port belonging to

Nom. Horse Power as per Section 28

33.89

Is Refrigerating Machinery fitted

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

*Compound*No. of Cylinders *2*No. of Cranks *2*

Dia. of Cylinders

13" X 26"

Length of Stroke

18

Revs. per minute

110

Dia. of Screw shaft

as per rule *5.9*

Material of screw shaft

Iron

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

no liner

Is the after end of the liner made water tight

in the propeller boss

☒

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

Length of stern bush *25"*

Dia. of Tunnel shaft

as per rule *5.9*

Dia. of Crank shaft journals

as per rule *5.5*

Dia. of Crank pin

5 3/4

Size of Crank webs

6 1/2 x 1 1/4

collars

5 3/4

Dia. of screw

6-6"

Pitch of screw

10 ft

No. of blades

3

No. of Feed pumps

1

Diameter of ditto

2 1/4"

Stroke

9"

Can one be overhauled while the other is at work

☒

No. of Bilge pumps

1

Diameter of ditto

2 1/4"

Stroke

9"

Can one be overhauled while the other is at work

☒

No. of Donkey Engines

1

SIZES of Pumps

*4 1/4 x 2 3/4 x 4"**duplex*

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

In Engine Room

on 2"

In Holds, &c.

on 2"

No. of bilge injections

1

sizes

3 1/2"

Connected to

condenser

or to circulating pump

Pump

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

no

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

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

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

14th Oct 1905

Is the screw shaft tunnel watertight

machinery aft

Is it fitted with a watertight door

☒

worked from

☒

BOILERS, &c.—

(Letter for record *S*)

Total Heating Surface of Boilers

656 sq ft

Is forced draft fitted

no

No. and Description of Boilers

1 Single Ended

Working Pressure

130

Tested by hydraulic pressure to

260

Date of test

17-7-05

Can each boiler be worked separately

☒

Area of fire grate in each boiler

30 sq ft

No. and Description of safety valves to

each boiler

each boiler

Two Spring loaded

Area of each valve

4.9

Pressure to which they are adjusted

135 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

9"

Mean dia. of boilers

9'6"

Length

9'

Material of shell plates

Steel

Thickness

3/4"

Range of tensile strength

28-32

Are they welded or flanged

no

Descrip. of riveting: cir. seams

Lap D. R

long. seams

Diameter of rivet holes in long. seams

1 1/8"

Pitch of rivets

4 1/2"

Lap of plates or width of butt straps

7 7/8"

Per centages of strength of longitudinal joint

rivets *75*

Working pressure of shell by rules

133

Size of manhole in shell

12 x 16

Size of compensating ring

7 1/2 x 3/4

No. and Description of Furnaces in each boiler

2 Plain

Material

Steel

Outside diameter

36"

Length of plain part

top *6'8"*

Thickness of plates

crown *9/16"*

Description of longitudinal joint

Lap Single riveted

No. of strengthening rings

1

Working pressure of furnace by the rules

137

Combustion chamber plates: Material

Steel

Thickness: Sides

9/16"

Back

1/2"

Top

Pitch of stays to ditto: Sides

9 3/4"

Back

9 1/2"

Top

10 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

Material of stays

Steel

Diameter at smallest part

1 1/2"

Area supported by each stay

10 x 9

Working pressure by rules

149

End plates in steam space:

Material

Steel

Thickness

1 5/16"

Pitch of stays

20 1/4 x 15

How are stays secured

D. Nut & W'

Working pressure by rules

Diameter at smallest part

2 9/16"

Area supported by each stay

16 x 18 5/8

Working pressure by rules

141

Material of Front plates at bottom

Steel

Thickness

1 5/16"

Material of Lower back plate

Steel

Thickness

1 5/16"

Greatest pitch of stays

1 1/4 x 10

Working pressure of plate by rules

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/4 x 4 5/8

Material of tube plates

Steel

Thickness: Front

1 5/16"

Back

Pitch across wide water spaces

14"

Working pressures by rules

140

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

Length as per rule

Working pressure by rules

160

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

yes

Diameter

15"

Length

15'

Thickness of shell plates

1 5/16"

Material

Steel

Description of longitudinal joint

Pitch of rivets

4"

Working pressure of shell by rules

133

Diameter of flue

15"

Material of flue plates

Steel

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

131

End plates: Thickness

1 5/16"

How stayed

yes

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

yes

Lloyd's Register

Foundation

W1605-0162

DONKEY BOILER—

No.

Description

Made at

By whom made

When made

Where fixed

Working pressure

tested by hydraulic pressure to

No. of Certificate

Fire grate area

Description of safety 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

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

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

Thickness of furnace crown plates

Stayed by

Working pressure of shell by rules

Working pressure of furnace by rules

Diameter of uptake

Thickness of uptake plates

Thickness of water tubes

SPARE GEAR. State the articles supplied:—

2 Top end, 2 bottom end, 2 main bearing bolts & nuts, 1 set coupling bolts, 1 set pump valves, 1 set piston rings & springs
Bolts, nuts & iron assorted

p.p. HEPPLE & CO. LTD, Engine Builders.

W. S. Hepple

MANAGING DIRECTOR

The foregoing is a correct description,

J. G. Thompson
Surveyor

Manufacturers of Boilers

Dates of Survey while building
During progress of work in shops—
During erection on board vessel—
Total No. of visits 31

ENG. 1905 June 20 July 28 Aug 8 25 Sep 18 20 27 Oct 23 29 11.14.18

B.L.R. 1905 Mch 30 Apr 6 12 27 May 3 8 15 23 25 29 June 1 8 15 20 July 6 17

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " ✓

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

The machinery of this vessel has been built under Special Survey & in my opinion is eligible for record F.L.M.C. 10.05

It is submitted that
this vessel is eligible for
THE RECORD F.L.M.C. 10.05.

Jms.

23.11.05

J.S.
23.11.05

Hawcastle-on-Tyne

Certificate (if registered) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee. £

Special £

Donkey Boiler Fee £

Travelling Expenses (if any) £

When applied for,

22 NOV 1905

When received,

24/11/05

FRI. 24 NOV 1905

Committee's Minute

Assigned

+ Lmb 1005

G. A. Dayden Towne

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



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Lloyd's Register
FoundationMACHINERY CERTIFICATE
WRITTEN.