

REPORT ON MACHINERY.

Port of

Glasgow

THUR, AUG 20 1896

Received at London Office

No. in Survey held at

Glasgow

Date, first Survey

Oct 29th 1895

Last Survey

Aug 1st 1896

Reg. Book.

35 on the

S. S. La Plata

(Number of Vials 82)

Gross 3300

Net 2067

When built 1896

Master

Built at Glasgow

By whom built

R. Napier & Sons Ltd

Engines made at

Glasgow

By whom made

R. Napier & Sons Ltd

when made 1896

Boilers made at

Glasgow

By whom made

R. Napier & Sons Ltd

when made 1896

Registered Horse Power 500

Owners Royal Mail S.P.C. (Lm)

Port belonging to Glasgow

Nom. Horse Power as per Section 28 441

ENGINES, &c.—

Description of Engines

Triple expansion

No. of Cylinders

Three

Diameter of Cylinders

26", 42", 70"

Length of Stroke

54"

Revolutions per minute

63

Diameter of Screw shaft

as per rule 13.5"

Diameter of Tunnel shaft

as per rule 12.9"

Diameter of Crank shaft journals

14.5"

Diameter of Crank pin

17"

Size of Crank webs 10" x 32"

Diameter of screw

17.0"

Pitch of screw

21.6" to 24.6"

No. of blades

4

State whether moveable

yes

Total surface

80 sq ft

No. of Feed pumps

automatic

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

two

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

five

Sizes of Pumps

Donkey duplex 10" x 8" x 21"

Ballast double acting 7.5" x 9" x 10"

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

Two duplex 6" x 6" x 6"

Sanitary 5.5" x 4.5" x 5"

In Engine Room

Three

3" in Boiler room

two 3"

In Holds, &c.

four 3" wing suction in forward

holds, and three 3" wing and center suction in aft holds.

No. of bilge injections

one

size 6.5" Connected to condenser or to circulating pump

Is a separate donkey suction fitted in Engine room & size 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

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

bilge & feed pipes

How are they protected

in a tunnel

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

before launching

Is the screw shaft tunnel watertight

apparently

Is it fitted with a watertight door

yes

worked from

upper platform.

BOILERS, &c.—

(Letter for record S.)

Total Heating Surface of Boilers

6000

How does forced draft.

No. and Description of Boilers

Three cylindrical (and one Auxiliary)

See attached report

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

28.3.96

Can each boiler be worked separately

yes

Area of fire grate in each boiler

57.5/4"

No. and Description of safety valves to

each boiler

two spring loaded

with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

12"

Mean diameter of boilers

165"

Length

11' 3"

Material of shell plates

Steel

Thickness

15/16"

Description of riveting: circum. seams

lap 2 Rivets long. seams

8. Butts 5 Rivets

Diameter of rivet holes in long. seams

15/16"

Pitch of rivets

8 3/8"

Lap of plates or width of butt straps

19 3/4" x 15 1/2"

Per centages of strength of longitudinal joint

rivets 94.7

plate 84.3

Working pressure of shell by rules

193 lbs

Size of manhole in shell

17 x 12"

Size of compensating ring

12" x 17"

No. and Description of Furnaces in each boiler

3 Morrisons

Material

Steel

Outside diameter

44 1/4"

Length of plain part

top 1.9" tubes

Thickness of plates

crown 9/16"

Description of longitudinal joint

weld

No. of strengthening rings

corrugated

Working pressure of furnace by the rules

199 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

9/16"

Back

9/16"

Top

9/16"

Pitch of stays to ditto: Sides

7 3/4" x 7"

Back

7 3/4" x 7"

Top

7 3/4" x 7"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

182 lbs

Material of stays

Steel

Diameter at smallest part

1 1/4" 49"

Area supported by each stay

54 1/2" 49"

Working pressure by rules

207 lbs

End plates in steam space:

Section

Material

Steel

Thickness

1 3/16"

Pitch of stays

17" x 15"

How are stays secured

Double Nuts

Working pressure by rules

231 lbs

Material of Front plates at bottom

Steel

Diameter at smallest part

5 1/4" 49"

Area supported by each stay

24 3/4" 49"

Working pressure by rules

201 lbs

Material of stays

Steel

Thickness

1 3/16"

Material of Lower back plate

Steel

Thickness

1 3/16"

Greatest pitch of stays

13 1/2"

Working pressure of plate by rules

190 lbs

Diameter of tubes

2 1/2"

Pitch of tubes

3 3/4"

Material of tube plates

Steel

Thickness: Front

13/16"

Back

3/4"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

240 360 lbs

Girders to Chamber tops: Material

Iron

Depth and

thickness of girder at centre

8 1/4" x 2 x 3/4"

Length as per rule

28 3/4"

Working pressure by rules

190 lbs

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

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

yes

Lloyd's Register

Foundation

605175-0-76

146 10 gds

DONKEY BOILER— Description *See attached report.*

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 _____ Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____
Description of riveting long. seams _____ Diameter 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:— *As required by the rules, also one eccentric rod and straps complete, one air and circulating pump rod & bucket, one slide valve rod, one spring for each safety valve and escape valve.*

The foregoing is a correct description,

R. NAPIER & SONS, Limited.

Manufacturer.

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

*These engines and boilers have been constructed under Special Survey. They have been securely fitted on board, are of good material & workmanship. They have been tried under steam satisfactorily and in our opinion are eligible to have the notification *+ LMC 8.96* in the Register Book.*

The Engines of the main & donkey boilers have been retained until the completion of duplicate boilers for a sister vessel.

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

+ LMC 8.96 F.D.

20.8.96

20.8.96

Certificate (if required) to be sent to

Glasgow.

The amount of Entry Fee..

£ 3

When applied for,

Special ..

£ 42

When received,

Donkey Boiler Fee ..

£

Travelling Expenses (if any) £

Committee's Minute

FRI. AUG 21 1896

Assigned

+ LMC 8.96

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

A. M. Clark

MACHINERY CERTIFICATE
WRITTEN.



© 2019

Lloyd's Register
Foundation