

REPORT ON MACHINERY.

Port of *Glasgow*

MON. FEB 5 1900

No. in Survey held at
Reg. Book.*Glasgow*

Date, first Survey

19 August 1898

Received at London Office

(Number of Visits)

Last Survey

31 January 1900

590 on the

S. S. Trent

Tons

Gross *5348.46*
Net *3084.89*

Master

Monstantine

Built at

Glasgow

By whom built

R Napier & Sons

When built

1900

Engines made at

Glasgow

By whom made

R Napier & Sons

when made

1900

Boilers made at

do

By whom made

do

when made

1900

Registered Horse Power

Owners

Royal Mail S. P. Co.

Port belonging to

London

Nom. Horse Power as per Section 28

1050

Is Refrigerating Machinery fitted

Ships use only

Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

37.58-97

Length of Stroke

66"

Revs. per minute

70

Dia. of Screw shaft

19"

as per rule

19"

as fitted

19"

Lgth. of stern bush

6-7

Dia. of Tunnel shaft

17.23

as per rule

18.5

as fitted

Dia. of Crank shaft journals

18.14

as per rule

19.5

as fitted

19.5

Dia. of Crank pin

21"

Size of Crank webs

34x42

Dia. of thrust shaft under

*collars**19.5*

Dia. of screw

20-0

Pitch of screw

27-0

No. of blades

4

State whether moveable

Yes

Total surface

120

No. of Feed pumps

4

Diameter of ditto

10x15.5

Stroke

26

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

6"

Stroke

36"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

*6x7.5x6-2**6x6x6*

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

*In Engine Room**4-3.5*

In Engine Room

4-3.5

Suctions

1-2.5

In Holds, &c.

*7-3**95-3.5*

No. of bilge injections

1

sizes

9"

Connected to

condenser, or to circulating pump

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

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

19.9.99

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Spar Deck level

BOILERS, &c.—

(Letter for record (5))

Total Heating Surface of Boilers

15384

Is forced draft fitted

Howdens

No. and Description of Boilers

Six S. E. Mult.

Working Pressure

180

Tested by hydraulic pressure to

360 lbs

Date of test

21.4.99 (2)

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

58

No. and Description of safety valves to

*each boiler**2 Spring loaded*

Area of each valve

9.62

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

9"

Mean dia. of boilers

15-3

Length

11-9

Material of shell plates

Steel

Thickness

1.32

Range of tensile strength

29/32

Are they welded or flanged

no

Descrip. of riveting: cir. seams

Butt

long. seams

Butt

Diameter of rivet holes in long. seams

1.3/8

Pitch of rivets

9.1/4

Lap of plates or width of butt straps

1-8.3/4

Per centages of strength of longitudinal joint

88.5

Working pressure of shell by rules

205 lbs

Size of manhole in shell

17x12.5

Size of compensating ring

See rules

No. and Description of Furnaces in each boiler

3 Morrison

Material

Steel

Outside diameter

3.11.5

Length of plain part

*top**bottom*

Thickness of plates

19

Description of longitudinal joint

welded

No. of strengthening rings

—

Working pressure of furnace by the rules

198

Combustion chamber plates: Material

Steel

Thickness: Sides

9/16

Back

9/16

Top

9/16

Bottom

1"

Pitch of stays to ditto: Sides

8x7.5

Back

7.5x7.5

Top

7.5x7.5

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

182

Material of stays

Steel

Diameter at smallest part

1.41

Area supported by each stay

60

Working pressure by rules

188

End plates in steam space:

*Material**Steel*

Thickness

1.3/16

Pitch of stays

16.5x15.5

How are stays secured

2. Nuts

Working pressure by rules

246

Material of stays

Steel

Diameter at smallest part

6.4

Area supported by each stay

256

Working pressure by rules

250

Material of Front plates at bottom

Steel

Thickness

1.3/16

Material of Lower back plate

Steel

Thickness

1.3/16

Greatest pitch of stays

13

Working pressure of plate by rules

233

Diameter of tubes

2.5

Pitch of tubes

3.5x3.5

Material of tube plates

Steel

Thickness: Front

1.3/16

Back

3/4

Mean pitch of stays

10.9/16

Pitch across wide water spaces

1-2.5

Working pressures by rules

181 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

(9x3.5)

Length as per rule

2-9

Distance apart

7.5/4

Number and pitch of Stays in each

3-7.5/4

Working pressure by rules

186

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

DONKEY BOILER— No. 1 Description *Cylindrical return tube.*
 Made at *Glasgow* By whom made *R Napier & Sons* When made *1900* Where fixed *Storkhold*
 Working pressure *180* tested by hydraulic pressure to *360* No. of Certificate *4879* Fire grate area *40* Description of safety valves *Spring loaded*
 No. of safety valves *2* Area of each *3.97* Pressure to which they are adjusted *185* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *12' 6"* Length *9' 6"* Material of shell plates *Steel* Thickness *1 5/8"* Range of tensile strength *29/32* Descrip. of riveting long. seams *Butt 5 rivets* Dia. of rivet holes *1 1/4"* Whether punched or drilled *drilled* Pitch of rivets *8"*
Butt straps Lap of plating *1' 6 1/2"* Per centage of strength of joint Rivets *92.86* Thickness of shell crown plates *—* Radius of do. *—* No. of Stays to do. *—*
 Dia. of stays. *—* Diameter of furnace *Top 3' 11 1/2" Bottom 4' 6"* Length of furnace *6' 1 1/2"* Thickness of furnace plates *9/16"* Description of joint *welded* Thickness of furnace crown plates *—* Stayed by *—* Working pressure of shell by rules *208*
 Working pressure of furnace by rules *199* Diameter of uptake *—* Thickness of uptake plates *—* Thickness of water tubes *—*

SPARE GEAR. State the articles supplied:— *As required by the Rules also:— 1/3 crank shaft, propeller shaft with bushes, one each HP, IP & LP pistons complete, sets packing rings for HP & IP piston valves, 1 propeller blade, 2 eccentric shafts & one pulley, air pump bucket with rod & valves complete, etc.*
 The foregoing is a correct description,

R. NAPIER & SONS, Limited.
 Manufacturer. *John McAnultin.*

Dates { During progress of work in shops— 1898: Apr. 19. Sep. 19. 20. 22. 24. 29. Oct. 5. 12. Nov. 9. 14. 17. 21. 25. Dec. 2. 8. 10. 13. 14. 15. 19. 28. Jan. 17. 23. 26. 28. 31. Feb. 3. 10. 13. 15. 16. 20.
 of Survey { During erection on board vessel— Mar. 1. 9. 15. 20. 22. 31. Apr. 6. 8. 10. 11. 17. 19. 21. 24. 27. 28. May 4. 8. 11. 15. 25. 26. 29. 31. Jun 2. 3. 5. 6. 8. 14. 16. 19. 20. 30. Jul 3. 25. 28. Aug 1. 3. 10. 17. 31. Sep 7. 19.
 while building { Total No. of visits *QB.* 1900: Jan. 10. 12. 13. 17. 19. 24. 31
 Is the approved plan of main boiler forwarded herewith *No*
 " " " donkey " " " *Yes*

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

The engines & boilers of this vessel have been constructed under Special Survey, the workmanship & materials are good & they have been satisfactorily tried under steam.

This vessel is in my opinion eligible to have notation
** L.M.C. 1.00 in the Register Book.*

The plan of the Main Boilers was forwarded with Glasgow Report n^o 17425 on the 1st Tagus.

*It is submitted that this vessel is eligible for THE RECORD. *LMC 1.00 FD Ebe. light.*

CM.
5.2.00

RS
6.2.00

The amount of Entry Fee.. £ 3 : : : When applied for,
 Special .. £ 72.10 : : : 2/21/900
 Donkey Boiler Fee .. £ : : : When received,
 Travelling Expenses (if any) £ : : : 8/2/00

Committee's Minute
 Assigned

TUES. 6 FEB 1900

+LMC 1.00

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



© 2019

Lloyd's Register
 Foundation

Certificate (if required) to be sent to Glasgow