

REPORT ON MACHINERY

NOW 13 FEB 1899

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Port of *Glasgow*

Received at London Office 18

No. in Survey held at
Reg. Book.*Glasgow*Date, first Survey *23 Novr. 1897* Last Survey *4th Feby 1899.*

(Number of Visits)

on the

*S S Maplemore*Tons { Gross *7717*
Net *5013*When built *1898.9*Master *R Campbell* Built at*Glasgow* By whom built *C. Connell & Co*

Engines made at

Glasgow

By whom made

*D Rowan & Son*when made *1899*

Boilers made at

Glasgow

By whom made

*D Rowan & Son*when made *1899*

Registered Horse Power

Owners

Steam Ship Montrose Ltd

Port belonging to

*Liverpool*Nom. Horse Power as per Section 28 *608.**H Johnston & Co.*

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple Expansion Surface Condensing

No. of Cylinders

3

No. of Cranks

*3*Diameter of Cylinders *28, 14 1/2, & 7 1/2*

Length of Stroke

60"

Revolutions per minute

65

Diameter of Screw shaft

as per rule *16.2*as fitted *17.0*

Diameter of Tunnel shaft

as fitted *16.0*

Diameter of Crank shaft journals

17"

Diameter of Crank pin

17"

Size of Crank webs

30" x 12"

Diameter of screw

19-6"

Pitch of screw

2 1/2-6 1/2

No. of blades

4

State whether moveable

yes

Total surface

113.5 sq ft

No. of Feed pumps

2

Diameter of ditto

3"

Stroke

30"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

7"

Stroke

30"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

*1*Sizes of Pumps *8 x 5 x 8 & 9 x 10 x 12*

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

In Engine Room *one 3 1/2" Port, one 3 1/2" Starboard, & one 3 1/2" independent*In Holds, &c. *one 3 1/2" Port, one 3 1/2" Starboard in No 1**hold, and similarly for Nos 2, 3, 4 & 5 holds, and one 3" in tunnel well.*

No. of bilge injections

*one*sizes *9"*Connected to *condenser* to circulating pump

Is a separate donkey suction fitted in Engine room & size

yes 3 1/2"

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

valves & cocks.

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

all pipes to holds and tanks forward of engine room

How are they protected

Wood covering.

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

Is it fitted with a watertight door

*yes*worked from *top platform in engine room.*

DB 8040.

Is forced draft fitted

no

BOILERS, &c.—

(Letter for record *S*)

Total Heating Surface of Boilers

10261 sq ft

Is forced draft fitted

no

No. and Description of Boilers

Two Dented and one Sented

Working Pressure

200

Tested by hydraulic pressure to

400

Date of test

2/11/98

Can each boiler be worked separately

yes

Area of fire grate in each boiler

SE 62.5 sq ft

No. and Description of safety valves to

each boiler

each boiler

Two backburns

Area of each valve

SE 5.94 sq ft

Pressure to which they are adjusted

205 lb

Are they fitted

yes

with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

8 feet.

Mean diameter of boilers

15-0"

Length

SE 17-3

Material of shell plates

Steel

Thickness

1 1/2"

Description of riveting: circum. seams

Riveted

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

10"

Lap of plates or width of butt straps

21 1/2" x 1 1/2"

Size of manhole in shell

16" x 12"

Per centages of strength of longitudinal joint

86.5%

Working pressure of shell by rules

230 lb

Size of manhole in shell

16" x 12"

Material

Steel

Size of compensating ring

16" x 1 1/2"

No. and Description of Furnaces in each boiler

SE 3

Material

Steel

Outside diameter

Length of plain part

top 11 1/2"

Thickness of plates

bottom 1 1/2"

Description of longitudinal joint

Welded

No. of strengthening rings

*SE 5T**DE 5T*

Working pressure of furnace by the rules

274

Combustion chamber plates: Material

Steel

Thickness: Sides

5/8"

Back

Pitch of stays to ditto

Sides SE 8-7 1/2"

Back

SE 7-7 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

*210**202*

Material of stays

Steel

Diameter at smallest part

5/8"

Area supported by each stay

SE 7.51 sq ft

Working pressure by rules

*202**207*

Material

Steel

Thickness

1 1/4"

Pitch of stays

15 x 16"

How are stays secured

12 x 1 1/4"

Working pressure by rules

Material

Steel

Thickness

3/4"

Greatest pitch of stays

SE 14 1/2"

Working pressure of plate by rules

*290**290*

Diameter of tubes

3 1/4"

Pitch of tubes

1 1/2"

Material of tube plates

Steel

Thickness: Front

3/4"

Back

Pitch across wide water spaces

1 1/2"

Working pressures by rules

290

Girders to Chamber tops: Material

Iron

Depth and

*SE four 7 1/2"**DE four 8"*

thickness of girder at centre

SE all other than 2

Length as per rule

SE 34 7/16"

Distance apart

8"

Number and pitch of Stays in each

*SE four 7 1/2"**DE four 8"*

Working pressure by rules

SE 270

Superheater or Steam chest; how connected to boiler

none.

Can the superheater be shut off and the boiler worked

separately

Diameter

*SE 270**DE 270*

Length

SE 270

Thickness of shell plates

SE 270

Material

Steel

Description of longitudinal joint

Welded

Diam. of rivet

Pitch of rivets

SE 270

Working pressure of shell by rules

SE 270

Diameter of flue

SE 270

Material of flue plates

SE 270

Thickness

If stiffened with rings

SE 270

Distance between rings

SE 270

Working pressure by rules

SE 270

End plates: Thickness

SE 270

How stayed

Working pressure of end plates

SE 270

Area of safety valves to superheater

SE 270

Are they fitted with easing gear

*yes**yes**yes**yes*

Lloyd's Register

Foundation

GLS183-015

16763 g/s.

DONKEY BOILER— Description None

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 rules, and the following.

One pair Connecting rod top & bottom end brasses, one air pump rod, one centrifugal pump propeller & shaft, two propeller blades, two valve spindles, one eccentric strap & pulley, set of piston springs, one propeller shaft, one third crank shaft, set of studs for propeller blade, one pump rod & bucket.

The foregoing is a correct description, _____

D. A. D. (Now on Reg.) Manufacturer.

Dates of Survey while building	During progress of work in shops—	1897: Nov. 23. 30. Dec. 8. 21. 29. Jan. 14. 26. Feb. 2. 8. 14. Mar. 4. 18. 28. Apr. 9. May. 9. 19. 24. 31. Jun.
	During erection on board vessel—	July 5. 13. 28. Sep. 3. 19. Oct. 4. 6. 10. 13. 17. 18. 22. 24. 25. 29. Nov. 2. 5. 7. 8. 11. 14. 18. 24. 25. 26. 30. Dec. 2. 7. 8. 9. 10. 13. 16. 20.
	Total No. of visits	74

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

ENGINES—Length of stern bush 68 3/4 Diameter of crank shaft journals 15.4 as per rule. 17.0 as fitted. Diameter of thrust shaft under collars 17 1/8

BOILERS—Range of tensile strength 28/32 Are they welded or flanged Neither **DONKEY BOILERS**—No. one Range of tensile strength _____

Is the approved plan of main boiler forwarded herewith Yes Is the approved plan of donkey boiler forwarded herewith None.

The machinery of this vessel has been built under special survey. The material and workmanship being of good quality. it has been securely fitted on board. and a full speed trial has been run. when all worked satisfactorily.

Two boiler plans, an amended plan of Combustion Chamber top row of stays. and five forging reports now forwarded.

This vessels machinery is now in my opinion eligible for record of LMC 2-99. in register book.

The report on electric lighting will be forwarded as soon as received from the engineers Messrs. H. & A. Allen & Co.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 2.99. Electric Light.

The amount of Entry Fee. £ 3 : . . .	When applied for, 14. 2. 99
Special £ 50 : 8 : .	When received, 9. 2. 18. 99
Donkey Boiler Fee £ : : .	
Travelling Expenses (if any) £ : : .	

Committee's Minute _____ TUES. 14 FEB 1899

Assigned _____

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

Certificate (if required) to be sent to _____

