

## REPORT ON MACHINERY.

No. 38564.

Received at London Office

WED. 12 MAR. 1919

of writing Report

19

When handed in at Local Office

19

Port of Glasgow

in Survey held at  
Book.  
on the

Glasgow

Date, First Survey 4<sup>th</sup> April 1918. Last Survey 27<sup>th</sup> Feb 1919  
(Number of Visits 48)

S.S. "LAPLACE"

ster

Built at Dumbarton

By whom built

A. McMillan &amp; Son (No 676) When built 1919

ines made at

Glasgow

By whom made

No Rowan &amp; Co (No 676)

when made 1919

ilers made at

do.

By whom made

No. (No 676)

when made 1919

istered Horse Power

666

Owners

(Lampson &amp; Holch.)

Port belonging to Liverpool

n. Horse Power as per Section 28

666

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

GINES, &amp;c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

No. of Cylinders

29-47-78

Length of Stroke

54

Revs. per minute

76

Dia. of Screw shaft

as per rule 15.8

Material of screw shaft

Steel

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

Yes

Is the after end of the liner made water tight

the propeller boss

Yes

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

Yes

If two

s are fitted, is the shaft lapped or protected between the liners

Length of stern bush

5-6

No. of Tunnel shaft

as per rule 14.522

Dia. of Crank shaft journals

as per rule 15.248

Dia. of Crank pin

15 3/4

Size of Crank webs

30 1/2 x 10 1/2

Dia. of thrust shaft under

bars

16

Dia. of screw

18-6

Pitch of Screw

18-0

No. of Blades

4

State whether moveable

No

Total surface

118 ft

No. of Feed pumps

2

Diameter of ditto

4 1/2

Stroke

27

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4 1/2

Stroke

27

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

4

Sizes of Pumps

(1) 10 1/2 x 14 x 24  
(2) 9 1/2 x 7 x 18  
(3) 4 1/2 x 6 x 6

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

Engine Room

7 ton, 8 3/2

In Holds, &amp;c. No. 1 Two 8 3/2 No. 2 Two 8 3/2 No. 3 Two 8 3/2

No. of Bilge Injections

1

size

10

Connected to condenser, or to circulating pump

Pump

Is a separate Donkey Suction fitted in Engine room &amp; 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

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

Below

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

Dates of examination of completion of fitting of Sea Connections

5.12.18

of Stern Tube

5.12.18

Screw shaft and Propeller

5.12.18

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from Cylinder Platform

MILLERS, &amp;c.—(Letter for record)

S

Manufacturers of Steel

W. Beardon &amp; Co. Ltd., Lamark Street 860, 861

Total Heating Surface of Boilers

10224

Is Forced Draft fitted

Yes

No. and Description of Boilers

4

Single ended

Working Pressure

180 lb

Tested by hydraulic pressure to

360 lb

Date of test

14.11.18

No. of Certificate

14512

14524

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

60.5 ft

No. and Description of Safety Valves to

In boiler

Two Spring loaded

Area of each valve

9.620

Pressure to which they are adjusted

185 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2-4

Mean dia. of boilers

15-6

Length

11-6

Material of shell plates

Steel

Thickness

1 1/4

Range of tensile strength

28 to 32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

No Lap

g. seams

T.R.O.B.S.

Diameter of rivet holes in long. seams

1 5/16

Pitch of rivets

9 1/8

Lap of plates or width of butt straps

19 1/2

Percentages of strength of longitudinal joint

rivets 88.3

plate 85.6

Working pressure of shell by rules

183

Size of manhole in shell

16 x 12

Use of compensating ring

No

No. and Description of Furnaces in each boiler

3

Corrugated

Material

Steel

Outside diameter

50 3/16

Length of plain part

top

bottom

Thickness of plates

crown 19

bottom 32

Description of longitudinal joint

Weld

No. of strengthening rings

-

Working pressure of furnace by the rules

188

Combustion chamber plates: Material

Steel

Thickness: Sides

3/32

Back

1/16

Top

3/32

Bottom

3/32

Pitch of stays to ditto: Sides

10 5/8 x 9 1/4

Back

10 1/4 x 8 3/4

Top

10 5/8 x 9 1/4

If stays are fitted with nuts or riveted heads

No

Working pressure by rules

180

Material of stays

Steel

Diameter at smallest part

2 3/4

Area supported by each stay

980

Working pressure by rules

219

End plates in steam space:

Material

Steel

Thickness

1 3/16

Pitch of stays

2 3/4 x 20 1/2

How are stays secured

No 5 x 1/4

Working pressure by rules

151

Material of stays

Steel

Diameter at smallest part

2 1/4

Area supported by each stay

4580

Working pressure by rules

187

Material of Front plates at bottom

Steel

Thickness

7/8

Material of Lower back plate

Steel

Thickness

27

Greatest pitch of stays

13 5/8 x 8 3/4

Working pressure of plate by rules

187

Mean pitch of stays

9 7/8

Diameter of tubes

2 3/4

Pitch of tubes

4 x 3 7/8

Material of tube plates

Steel

Thickness: Front

3/16

Back

3/4

Mean pitch of stays

9 7/8

Pitch across wide water spaces

13 5/8

Working pressures by rules

181

Girders to Chamber tops: Material

Steel

Depth and

Diam. of rivet

Pitch

Pitch

Pitch

Pitch

Thickness of girder at centre

10 x 7/8 (2)

Length as per rule

35 7/8

Distance apart

10 5/8

Number and pitch of stays in each

Three

9 1/4

Working pressure by rules

188

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



VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description					
Made at	By whom made		When made		Where fixed	
Working pressure	tested by hydraulic pressure to		Date of test	No. of Certificate	Fire grate area	Description of
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted		Date of adjustment	
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 Plates	
Working pressure of shell by rules	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		
Working pressure of furnace by rules	Thickness of furnace crown plates		Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey			

SPARE GEAR. State the articles supplied:— 2 Top end bolts & nuts, 2 bottom end bolts and nuts, 2 main bearing bolts & nuts, 1 set coupling bolts and nuts, 1 feed and a belge Pump valves, Iron, assorted bolts and nuts Propeller and a shaft.

The foregoing is a correct description,

David Rowan & Co Ltd Manufacturer.

Dates of Survey while building	During progress of work in shops --	1918 Apr 14. 10. May 2 June 5. 14. 24. 29. Aug 5. 15. 19. Sept 2. 11. 26. Oct. 1. 4. 18. 16. 30. Nov. 4. 5. 8. 11. 13.
	During erection on board vessel --	18. 19. Dec 3. 4. 5. 11. 12. 13. 16. 18. 24 (1919) Jan 6. 15. 17. 20. 22. 24. Feb 10. 18. 20. 25. 27.
	Total No. of visits	48

Is the approved plan of main boiler forwarded herewith ☒

Dates of Examination of principal parts—Cylinders 2.9.18 Slides 2.9.18 Covers 2.9.18 Pistons 4.10.18 Rods 4.10.	
Connecting rods 4.10.18 Crank shaft 30.10.18 Thrust shaft 3.12.18 Tunnel shafts 18.11.18 Screw shaft 15.11.18 Propeller 15.11.	
Stern tube 15.11.18 Steam pipes tested 26.9.18 21.1.19 Engine and boiler seatings 22.1.19 Engines holding down bolts 22.1.19	
Completion of pumping arrangements 10.2.19 Boilers fixed 15.1.19 Engines tried under steam 24.1.19. 20.2.19	
Main boiler safety valves adjusted 24.1.19 Thickness of adjusting washers all $\frac{3}{8}$	
Material of Crank shaft Steel Identification Mark on Do. 30.10.18 2158-2173-2172-2032-2202-2174-2157-1811-18JE.	Material of Thrust shaft Steel Identification Mark on Do. 1931
Material of Tunnel shafts Steel Identification Marks on Do. 1	Material of Screw shafts Steel Identification Marks on Do. 1930
Material of Steam Pipes Iron	Test pressure 540 lb

General Remarks (State quality of workmanship, opinions as to class, &c. The Machinery of this Vessel has been constructed under special survey in accordance with the Rules and approved Plans, and has been seen satisfactorily working under steam. Materials and workmanship are good.

The Machinery is eligible in my opinion to be Classed  $\nabla$  LMC 2.19.

It is submitted that this vessel is eligible for THE RECORD + LMC 2.19. F.D.

Handwritten signatures and date 13/3/19.

The amount of Entry Fee .. £ 3 : 0 :	When applied for,
Special .. .. £ 53 . 6 :	14-3-1919
Donkey Boiler Fee .. .. £ :	When received,
Travelling Expenses (if any) £ :	10-3-1919

Committee's Minute GLASGOW 11 MAR 1919

Assigned + LMC 2.19

Handwritten signature and title Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

