

## REPORT ON MACHINERY

No. 39805

Received at London Office

THU. APR 8 1920

Date of writing Report

1 April 1920

When handed in at Local Office

6 4

1920 Port of

Glasgow

No. in Survey held at  
Reg. Book.

Glasgow

Date, First Survey

16/10/19

Last Survey

25.3

1920

(Number of Visits)

31

on the

S.S. Somerset Coast.

Master

Built at

Glasgow

By whom built

Harland &amp; Wolff Ltd (592G)

When built

1920

Engines made at

Glasgow

By whom made

A. &amp; J. Inglis Ltd (444)

when made

1920

Boilers made at

Glasgow

By whom made

A. &amp; J. Inglis Ltd (604)

when made

1920

Registered Horse Power

Owners

Coast Lines Ltd

Port belonging to

Liverpool.

Nom. Horse Power as per Section 28

203.8

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes.

## ENGINES, &amp;c.—Description of Engines

Triple

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

18" 30" 50"

Length of Stroke

36"

Revs. per minute

91

Dia. of Screw shaft

as per rule 10.8"

Material of

S.

Is 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

in the propeller boss

Yes

If the liner is in more than one length are the joints burned

No

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

No

If two

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

No

Length of stern bush

4' 0"

Dia. of Tunnel shaft

as per rule 9.3"

as fitted 10"

Dia. of Crank shaft journals

as per rule 9.44"

as fitted 10"

Dia. of Crank pin

10"

Size of Crank webs

6 1/2" x 18 1/2"

Dia. of thrust shaft under

collars

10"

Dia. of screw

14' 0"

Pitch of Screw

12' 3"

No. of Blades

4

State whether moveable

No

Total surface

76 sq

No. of Feed pumps

2

Diameter of ditto

2 7/8"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

2 7/8"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

Sizes of Pumps

2 Weir Feed 7" x 5" x 15"

Dawson &amp; Downie Ballast 8" x 9" x 8"

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

In Engine Room

2 - 2 1/2" Dia. Stokehold 2 - 2 1/2" Dia.

In Holds, &amp;c. No. 1 &amp; 2 Holds 2 each @ 2 1/2" Dia.

No. of Bilge Injections

1

sizes

5 1/2"

Connected to condenser, or to circulating pump

C.P.

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

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

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

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

What pipes are carried through the bunkers

Forward hold suction

How are they protected

wood casings

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

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes

worked from

Yes

## BOILERS, &amp;c.—(Letter for record

8)

Manufacturers of Steel

David Colville &amp; Sons Ltd

R.S.B.

Total Heating Surface of Boilers

3702 sq

Is Forced Draft fitted

No

No. and Description of Boilers

Two Single End

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

27 &amp; 28.1.20

No. of Certificate

15065 &amp; 15058

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

58 sq

No. and Description of Safety Valves to

each boiler

2 Spring Loaded

Area of each valve

7.06 sq

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

12' 0"

Mean dia. of boilers

14' 1 1/2"

Length

10' 6"

Material of shell plates

S

Thickness

1 1/2"

Range of tensile strength

28/32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

D.R.

long. seams

D.B.S., T.R.

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 1/2"

Lap of plates or width of butt straps

18 1/2"

Per centages of strength of longitudinal joint

rivets 94.2%

plate 85.04%

Working pressure of shell by rules

180.5 lbs

Size of manhole in end shell

16" x 12"

Size of compensating ring

Plate flanged in

No. and Description of Furnaces in each boiler

3 Morrison

Material

S

Outside diameter

43 1/2"

Length of plain part

top

bottom

Thickness of plates

crown 1 1/2"

bottom 1 1/2"

Description of longitudinal joint

Weld.

No. of strengthening rings

No

Working pressure of furnace by the rules

189.2 lbs

Combustion chamber plates: Material

S

Thickness: Sides

5/8"

Back

5/8"

Top

5/8"

Bottom

3/4"

Pitch of stays to ditto: Sides

8 3/4" x 8"

Back

9 1/4" x 7 1/2"

Top

8" x 7 1/2"

If stays are fitted with nuts or riveted heads

No

Working pressure by rules

190.3

Material of stays

S

Area at smallest part

1.69

Area supported by each stay

70 sq

Working pressure by rules

193 lbs

End plates in steam space:

Material

S

Thickness

1 1/2"

Area at smallest part

6.23 sq

Area supported by each stay

350 sq

Working pressure by rules

187

Material of Front plates at bottom

S

Thickness

5/8"

Material of Lower back plate

S

Thickness

3/4"

Greatest pitch of stays

13 1/2" x 7 1/2"

Working pressure of plate by rules

191 lbs

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

S

Thickness: Front

3/4"

Back

3/4"

Mean pitch of stays

10"

Pitch across wide water spaces

14 1/4"

Working pressures by rules

201

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

8 1/4" x 7 1/2" (2)

Length as per rule

30 5/8"

Distance apart

8 1/2"

Working pressure by rules

250 lbs

Steam dome: description of joint to shell

None

% of strength of joint

No

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

## SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

002298-002304-0013



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two top end & two bottom end bolts & nuts for connecting rods.  
Two main bearing bolts & nuts. One set coupling bolts. One set feed and bilge pump valves.  
Iron of various sizes. Quantity assorted bolts & nuts.

The foregoing is a correct description,

A. & J. INGLIS LIMITED.

William Booth, Secy.  
Manufacturers.

Dates of Survey while building { During progress of work in shops - 1919 Oct 1-21. 23. 28. 30 Nov 10. 12. 19. 21. 28. Dec 3. 5. 8. 12. 14. 19  
During erection on board vessel - 1920 Jan 10. 12. 20. 28. 29. 30. Feb 5. 10. 13. 16. 24. 14. 25. Mar 4. 25  
Total No. of visits 31

Is the approved plan of main boiler forwarded herewith do

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders 16.7.19 Slides 12.1.20 Covers 12.1.20 Pistons 28.10.19 Rods 12.1.20

Connecting rods 12.1.20 Crank shaft 12.11.19 Thrust shaft 14.12.19 Tunnel shafts done Screw shaft 5.12.19 Propeller 16.2.20

Stern tube 3.12.19 Steam pipes tested 12.12.19 5.2.20 Engine and boiler seatings 10.1.20 Engines holding down bolts 25.2.20

Completion of pumping arrangements 4.3.20 Boilers fixed 13.2.20 Engines tried under steam 4.3.20

Completion of fitting sea connections 19.12.19 Stern tube 24.2.20 Screw shaft and propeller 24.2.20

Main boiler safety valves adjusted 4.3.20 Thickness of adjusting washers last boiler P.L.S. 1/2. Star boiler P.L.S. 3/8

Material of Crank shaft S Identification Mark on Do. 3164 Material of Thrust shaft S Identification Mark on Do. 3164

Material of Tunnel shafts done Identification Marks on Do. Material of Screw shafts S Identification Marks on Do. 3164

Material of Steam Pipes Lapwelded wrought iron Test pressure 540 lbs per sq. in.

Is an installation fitted for burning oil fuel ✓ Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case ✓ If so, state name of vessel

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

The Engines & Boilers of this vessel have been built under Special Survey, the workmanship and materials are good, they have been well fitted on board, tried under steam and found to work satisfactorily.

The Machinery of this vessel is eligible in my opinion for the record of + LMC 3.20 in the Register book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 3.20

JUD. 9/4/20  
A.R.R.

The amount of Entry Fee ... £ 2 : :  
Special ... £ 30 : 4 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 7.4.1920  
When received, 10/4/1920

W.S. Murray  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 7-APR 1920

Assigned + LMC 3.20

MACHINERY CERT  
WRITTEN  
9.4.20



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