

REPORT ON MACHINERY.

No. 40301
WED. SEP. 1 1920

Received at London Office

Date of writing Report 30.8.1920

When handed in at Local Office

30.8.1920

Port of Glasgow

No. in Survey held at

Glasgow

Date, First Survey 20 Oct 1919

Last Survey 14th Aug 1920

Reg. Book.

on the

S.S. "Evelyn"

(Number of Visits 17)

Gross
Tons
Net

Master

Built at

Ardrossan

By whom built

Cochran & D.D.B. & L^{td} (315)

When built 1920

Engines made at

Glydebank

By whom made

Aitchison Blair L^{td} (124)

when made 1920

Boilers made at

Grunoch

By whom made

John Kincaid & L^{td} (79)

when made 1920

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

85.9 86

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

no.

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 13" 21" 35"

Length of Stroke 24"

Revs. per minute 122

Dia. of Screw shaft

as per rule 6.24" Material of screw shaft Steel

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

Yes

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

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

Length of stern bush 2'-6"

Dia. of Tunnel shaft

as per rule 6.5" as fitted

Dia. of Crank shaft journals

as per rule 6.81" as fitted

Dia. of Crank pin 6"

Size of Crank webs 16x12"

Dia. of thrust shaft under

collars 6"

Dia. of screw 9'-3"

Pitch of Screw 9'-1"

No. of Blades 4

State whether movable

No

Total surface 29'8"

No. of Feed pumps 2

Diameter of ditto 1 7/8"

Stroke 14"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 2"

Stroke 14"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 2

Sizes of Pumps 6" x 4" x 6" 7" x 8" x 8" Ballast

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

In Engine Room 3-2"

In Holds, &c. 4-2"

No. of Bilge Injections 1

size 3 1/2"

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

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

None

Are all connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

Valves

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

Forward bilge suction

How are they protected

Strong wood casing

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, &c.—(Letter for record)

S

Manufacturers of Steel

Robt. Taylor & Steel Co.

Total Heating Surface of Boilers

1610 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

one Single Ended.

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test 7.5.20

No. of Certificate 1453

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

51'18"

No. and Description of Safety Valves to

each boiler 2 Spring Loaded

Area of each valve

4'9"

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

8'-0"

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

bottom

Thickness of plates

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

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

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Lloyd's Register
Foundation

002085-002093-0209

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 each top & bottom end bolts & nuts & main bearings
 1 set coupling bolts, 1 set feed & bilge pump valves. Quantity assorted bolts & nuts.
 Iron of various sizes.

The foregoing is a correct description,

MITCHISON, BLAIR LTD.

Arch Blair

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1919 Oct 20, 29 Nov 10, 19 Dec 15 (1920) Jan 13 Feb 2, 12 Mar 2, 12 Jun 7, 24 July 5, 9-28, 30 Aug 14
 { During erection on board vessel - - - }
 Total No. of visits 14.

Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 29/10/19 Slides 13/1/20 Covers 13/1/20 Pistons 15/12/19 Rods 15/12/19
 Connecting rods 13/1/20 Crank shaft 13/1/20 Thrust shaft 29/10/19 Tunnel shafts *none* Screw shaft 29/10/19 Propeller 15/12/19
 Stern tube 21/6/20 Steam pipes tested 9/4/20 Engine and boiler seatings 24/6/20 Engines holding down bolts 9/4/20
 Completion of pumping arrangements 13/8/20 Boilers fixed 13/8/20 Engines tried under steam 14/8/20
 Completion of fitting sea connections 24/6/20 Stern tube 24/6/20 Screw shaft and propeller 24/6/20
 Main boiler safety valves adjusted 13/8/20 Thickness of adjusting washers PV $\frac{3}{8}$ bar SV $\frac{13}{32}$.

Material of Crank shaft *S* Identification Mark on Do. *M 13/1/20* Material of Thrust shaft *S* Identification Mark on Do. *M 29/10/19*Material of Tunnel shafts *none* Identification Marks on Do. *✓* Material of Screw shafts *S* Identification Marks on Do. *M 10/19*Material of Steam Pipes *Copper*Test pressure *360 lb/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.)

These Engines have been built under Special Survey. The workmanship & materials are good. Engines & Boiler have been well fitted on board, tried under steam and found to work satisfactorily.

The Machinery of this vessel is eligible in our opinion for the record of + L.M.C. 8.20 in the Register Book.

It is submitted that
 this vessel is eligible for
 THE RECORD, + L.M.C. 8.20

Rell

2/9/20

J. P. R.

Certificate (if required) to be sent to

Sub. 1.0.0.
 Eng. Survey 6.9.0
 Fitting out 3.4.6
 Sup. 2.7.6

The amount of Entry Fee ... £

When applied for,

Special *✓* £

When received,

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

Committee's Minute

Assigned

+ L.M.C. 8.20

GLASGOW
 MACHINERY DEPT.
 9/9/20

J. Barr.
 The S. Murray, M. Ellis.
 Engineer Surveyor to Lloyd's Register of Shipping.

Survey Fee ...

Travelling Expenses

Committee's Minute

Assigned

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