

REPORT ON MACHINERY.

No. 34859

Received at London Office

of writing Report

10

When handed in at Local Office

6/7/18 Port of Glasgow

o. in Survey held at Glasgow
leg. Book.

Date, First Survey 2nd July 1918 Last Survey 1st May 1918

(Number of Vessels 33)

on the

S.S. Mar Pibroch

aster

Built at

By whom built Forth S.B. & C. Co. (35)

Tons { Gross
Net
When built

engines made at

Glasgow

By whom made

D. Rowan & Co. (690)

when made 1918

oilers made at

Glasgow

By whom made

D. Rowan & Co. (690)

when made 1918

Registered Horse Power

Owners

Controller of Shipping (W. R. Macleod)

Port belonging to London.

om. Horse Power as per Section 28

411

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

yes

GINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

as per rule 12.4

Length of Stroke

45

Revs. per minute

Dia. of Screw shaft

as per rule 13.4

Material of

Material of screw shaft

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

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

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

yes

If two

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

Length of stern bush

Dia. of Tunnel shaft

as per rule 12.4

Dia. of Crank shaft journals

as per rule 13.22

Dia. of Crank pin

13 1/4

Size of Crank webs

8 3/16

Dia. of thrust shaft under

ollars

13 1/4

Dia. of screw

15-6

Pitch of Screw

17" 0"

No. of Blades

4

State whether moveable

yes

Total surface

75 sq ft

No. of Feed pumps

2

Diameter of ditto

3 1/2

Stroke

24

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2

Stroke

24

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

Sizes of Pumps

9 1/2 x 7 x 18

10 1/2 x 12 1/2 x 21

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

In Engine Room

2-3" Bore

In Holds, &c.

one 2 1/2" tunnel well 1-3" after hold 2-3"

all other holds

No. of Bilge Injections

1

sizes

8

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes 3"

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

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

yes

none

How are they protected

yes

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

23/4/18

of Stern Tube

23/4/18

Screw shaft and Propeller

23/4/18

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

no

worked from

OILERS, &c.—(Letter for record

3)

Manufacturers of Steel

Messrs. William Beardmore & Co. Limited

Total Heating Surface of Boilers

5882 sq ft

Is Forced Draft fitted

yes

No. and Description of Boilers

2 Single ended

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

27/4/18

No. of Certificate

14252

Can each boiler be worked separately

yes

Area of fire grate in each boiler

74 sq ft

No. and Description of Safety Valves to

each boiler

1 pair direct spring

Area of each valve

12.56 sq in

Pressure to which they are adjusted

182 lb

Smallest distance between boilers or uptakes and bunkers or woodwork

45"

Mean dia. of boilers

16-6

Length

11-9

Material of shell plates

Steel

Thickness

1 1/2

Range of tensile strength

28 3/4 to 33

Are the shell plates welded or flanged

yes

Descrip. of riveting: cir. seams

double lap

long. seams

double butt

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

9 3/8"

Lap of plates or width of butt straps

20 1/2"

Per centages of strength of longitudinal joint

90-0

Working pressure of shell by rules

210

Size of manhole in shell

16" x 12"

Size of compensating ring

flanged in

No. and Description of Furnaces in each boiler

4 Doughton

Material

Steel

Outside diameter

44 1/2"

Length of plain part

top

bottom

Thickness of plates

9-16

Description of longitudinal joint

Welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

198

Combustion chamber plates: Material

Steel

Thickness: Sides

23

Back

16

Top

23

Bottom

Pitch of stays to ditto: Sides

8 1/2 x 10 1/2

Back

9 x 10 1/2

Top

8 1/2 x 10 1/2

Are stays fitted with nuts or riveted heads

yes

Working pressure by rules

198

Material of stays

Steel

Diameter at smallest part

2-07

Area supported by each stay

89 sq in

Working pressure by rules

210

End plates in steam space:

yes

Material

Steel

Thickness

1 1/2

Pitch of stays

24 x 22 x 19

How are stays secured

22 ft

Working pressure by rules

207

Material of stays

Diameter at smallest part

9-62

Area supported by

stay

473-5

Working pressure by rules

212

Material of Front plates at bottom

Steel

Thickness

13-16

Material of Lower back plate

Steel

Thickness

3

Greatest pitch of stays

13 3/4"

Working pressure of plate by rules

208

Diameter of tubes

2 3/4"

Pitch of tubes

4 x 3 3/8"

Material of tube plates

Steel

Thickness: Front

15 1/16"

Back

3/4"

Mean pitch of stays

9 3/8"

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—22 1/2" bottom end connecting rod bolts nuts, 2 main bearing bolts nuts, a set of coupling bolts nuts, fuel valve valves seats, assorted bolts nuts & iron spars and eyes, one C.I. Propeller, 6 air pump valves.

The foregoing is a correct description,

David Rowan & Co. Ltd. per D.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1914 July 3, Sep 3, 5, 20, Oct 2, 19, Nov 12, 23, Dec 4, 5, 13, 1918 Jan 9, 14, 23, 25, Feb 1, 5, 15, 26, Mar 1, 13, 14, 1922
During erection on board vessel -- 24, Apr 2, 4, 5, 12, 15, 16, 18, 22, 24, May 1, 1922
Total No. of visits 33

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 14/3/18 Slides 15/2/18 Covers 14/3/18 Pistons 16/2/18 Rods 16/2/18
Connecting rods 2/4/18 Crank shaft 1/2/18 Thrust shaft 15/4/18 Tunnel shafts 22/4/18 Screw shaft 4/4/18 Propeller 2/4/18
Stern tube 5/4/18 Steam pipes tested 20/6/18 Engine and boiler seatings 10/6/18 Engines holding down bolts 10/6/18
Completion of pumping arrangements 20/6/18 Boilers fixed 10/6/18 Engines tried under steam 20/6/18
Main boiler safety valves adjusted 17/6/18 Thickness of adjusting washers P 7 3/32 S 6 3/32 S P 4 3/32 S 4 3/32

Material of Crank shaft Steel Identification Mark on Do. 1/2/18 Material of Thrust shaft Steel Identification Mark on Do. 15/4/18

Material of Tunnel shafts Steel Identification Marks on Do. 22/4/18 Material of Screw shafts iron Identification Marks on Do. 4/4/18

Material of Steam Pipes Steel Test pressure 540 lbs see wire 19/7/18

Is an installation fitted for burning oil fuel no Is the flash point of the oil to be used over 150°F. Keith

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

Is this machinery duplicate of a previous case no If so, state name of vessel

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

These engines and boilers have been built under special survey, the materials and workmanship are of good description, they have now been forwarded to Keith where they are to be fitted on board the vessel.

These engines and boilers have now been efficiently fitted on board and the vessel is eligible in my opinion for record of LMC 6-18; see light.

It is submitted that this vessel is eligible for THE RECORD + LMC 6-18

JUR 12/7/18 J. M. Keane

The amount of Entry Fee £ 38 16/8
Special £ 12 18/10
Donkey Boiler Fee £
Travelling Expenses (if any) £ 19 6/10

When applied for, 19

When received, 19

Engineer-Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute GLASGOW 4 JUN 1918

TUE 16 JUL 1918

Assigned Deferred for completion

+ LMC 6-18

Lloyd's Register Foundation