

REPORT ON MACHINERY.

No. 39313

Date of writing Report

19

When handed in at Local Office

1-11-19

Port of

Received at London Office

Glasgow.

1919

in Survey held at
g. Book.

Paisley

Date, First Survey

4

April 1918

Last Survey

31st

Oct.

1919.

(Number of Visits 39.

on the Coasting Steamer "SAINT BARCHAN"

Master

Built at

Bowling

By whom built

Messrs. Scott & Sons (283)

Tons

Gross

Net

When built

1919

Engines made at

Paisley

By whom made

Fishers Ltd (220)

when made

1919

Boilers made at

Paisley

By whom made

A. F. Craig & Co Ltd (646)

when made

1919

Registered Horse Power

Owners

Port belonging to

Horse Power as per Section 28

40

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

GINES, &c.—Description of Engines

Compound, Surface Condensing

No. of Cylinders

2

No. of Cranks

2

Diameter of Cylinders

16" - 34"

Length of Stroke

24"

Revs. per minute

112

Dia. of Screw shaft

as per rule 4.23"

Material of

Iron

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

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

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

Yes

Length of stern bush

30"

Diameter of Tunnel shaft

as per rule 6.75"

Dia. of Crank shaft journals

as per rule 4.03"

Dia. of Crank pin

1 1/4"

Size of Crank webs

13 1/2 x 5 1/2"

Dia. of thrust shaft under

Diameter of

7 1/4"

Dia. of screw

8-6"

Pitch of Screw

10'-9"

No. of Blades

4

State whether moveable

No

Total surface

24 1/2 sq ft

No. of Feed pumps

One

Diameter of ditto

2 1/2"

Stroke

12"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

One

Diameter of ditto

2 1/2"

Stroke

12"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

One

Sizes of Pumps

6" x 4" x 6"

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

Engine Room

2 @ 2" dia. in Br. Room, 1 @ 2" in

In Holds, &c.

2 @ 2" dia in hold, 1 @ 2" in Forepeak

Eng. in Room.

No. of Bilge Injections

1

sizes

3"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes 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

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

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 Suction

How are they protected

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.

Dates of examination of completion of fitting of Sea Connections

22.9.19.

of Stern Tube

22.9.19.

Screw shaft and Propeller

22.9.19.

the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes

worked from

Yes

MILERS, &c.—(Letter for record S)

Manufacturers of Steel

David Colville & Sons Ltd

Total Heating Surface of Boilers

1388 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

One Single Ended.

Working Pressure

130

Tested by hydraulic pressure to

260

Date of test

26.9.19

No. of Certificate

14909

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

42 sq ft

No. and Description of Safety Valves to

each boiler

2 Spring loaded

Area of each valve

5.939 sq in

Pressure to which they are adjusted

135

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

4'-0"

Mean dia. of boilers

12'-6"

Length

10'-0"

Material of shell plates

S

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

Percentages of strength of longitudinal joint

rivets..... plate.....

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

crown..... bottom.....

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

Diameter 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

Diameter 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

See

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

Superheater or Steam chest; how connected to boiler

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

Thickness

How stayed

stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

002101-002108-0246

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description	When made	Where fixed
Made at	By whom made	No. of Certificate	Fire grate area
Working pressure	tested by hydraulic pressure to	Date of test	Description of Safe
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	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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
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 Connecting Rod bolts and nuts. 2 Piston Rod bolts and nuts. 2 Main Bearing bolts and nuts. One set Coupling bolts and nuts. One Set of Feed and Bilge Pump valves. One Set of H. P. Ramsbottom Kings. Iron of various sizes. A quantity of assorted bolts and nuts.

The foregoing is a correct description,

Manufacturer.

C. Fisher, Managing Director

Dates of Survey while building	During progress of work in shops	1917 Dec. 4, 1918 Apr. 4, Sept. 2, 20 Dec. 12, 16, 20, 1919 Jan. 9, 15, 17, 22, July 14, 18, 21, 28, Mar. 4, 1920
	During erection on board vessel	Apr. 1, 15, 29, May 12, 20, June 5, 23, Aug. 5, Sept. 11, 12, 18, 19, 22, Oct. 3, 7, 14, 17, 21, 22, 29, 31
	Total No. of visits	39

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts	Cylinders	14. 1. 19	Slides	14. 2. 19	Covers	18. 2. 19	Pistons	29. 4. 19	Rods	29. 4. 19	
Connecting rods	29. 4. 19	Crank shaft	4. 12. 19	Thrust shaft	11. 9. 19	Tunnel shafts	✓	Screw shaft	11. 9. 19	Propeller	11. 9. 19
Stern tube	11. 9. 19	Steam pipes tested	21. 10. 19	Engine and boiler seatings	3. 10. 19	Engines holding down bolts	14. 10. 19	Engines tried under steam	31. 10. 19		
Completion of pumping arrangements	31. 10. 19	Boilers fixed	14. 10. 19	Engines tried under steam	31. 10. 19						
Main boiler safety valves adjusted	29. 10. 19	Thickness of adjusting washers	Port Valve 5/16"	Star Valve 3/16"							
Material of Crank shaft	Steel	Identification Mark on Do.	LLOYDS 4815 J.R.W.	Material of Thrust shaft	Steel	Identification Mark on Do.					
Material of Tunnel shafts	none	Identification Marks on Do.	✓	Material of Screw shafts	Iron	Identification Marks on Do.					
Material of Steam Pipes	S.D. Copper	Test pressure	260 lbs/sq. in.								

General Remarks (State quality of workmanship, opinions as to class, &c.) The Engines and boiler have been built under Special Survey in accordance with the approved plans and the Rules of the Society.

The workmanship and the materials are of good quality. The machinery has been securely fitted on board the vessel and tried under steam with satisfactory results. It is now eligible, in my opinion, to have a notification of LMC 10.19. in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 10.19

The amount of Entry Fee	£ 1 : 0	When applied for	11/11/19
Special	£ 10 : 10	When received	15/11/19
Donkey Boiler Fee	£ :		
Travelling Expenses (if any)	£ :		

Committee's Minute

Assigned + LMC 10.19

H. Fraser, Engineer Surveyor to Lloyd's Register of British & Foreign Ships



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