

REPORT ON MACHINERY.

No. 39089.

Received at London Office

Date of writing Report

19

When handed in at Local Office

6/9

19

Port of

Glasgow

THU. 11 FEB 1919

No. in Survey held at

Glasgow

Date, First Survey

19/6/1917

Last Survey

27/8

1919.

Reg. Book.

on the

S.S. "Benvorlich"

(Number of Visits 66.

Master

Built at Glasgow

By whom built C. Connell & Co. No 390

Tons

Gross 5192

Net 3222.

When built

1919

Engines made at

Glasgow

By whom made

Dunsmuir & Jackson. Nos 1500

when made

1919

Boilers made at

Glasgow

By whom made

Fanfulds & Co. No 542

when made

1919

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

514

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

27 x 44 x 73

Length of Stroke

48

Revs. per minute

80

Dia. of Screw shaft

as per rule 14.7

Material of

8

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

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

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

Length of stern bush

60 1/2

Dia. of Tunnel shaft

as per rule 13.3

as fitted 13 1/2

Dia. of Crank shaft journals

as per rule 13.9

as fitted 14 1/2

Dia. of Crank pin

14 1/2

Size of Crank webs

28 x 9

Dia. of thrust shaft under collar

14 1/2

Dia. of screw

17-6

Pitch of Screw

18-6

No. of Blades

4

State whether moveable

No

Total surface

102 sq

No. of Feed pumps

2

Diameter of ditto

4

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

Sizes of Pumps

1 feed 9 1/2 x 4 x 18

General 9 1/2 x 4 x 18

Ballast 10 1/2 x 4 x 24

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

In Engine Room

2 @ 3 1/2

Stokehold

2 @ 3 1/2

No. 3

No. 4

@ 3 1/2

Lunnet well

1 @ 3 1/2

In Holds, &c. No. 1. 2 @ 3 1/2 No. 2. 2 @ 3 1/2 Cross bunkers

No. of Bilge Injections

1

sizes

12

Connected to condenser, or to circulating pump

C.P.

Is a separate Donkey Suction fitted in Engine room & 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

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

For Suctions

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

Yes

Is it fitted with a watertight door

Yes

worked from

Top platform

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Wm Beardmore & Co. Ltd

Total Heating Surface of Boilers

4668 sq

Is Forced Draft fitted

Yes

No. and Description of Boilers

Three Single ended multitubular

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

9.5.19

19.5.19

24.5.19

No. of Certificate

14726

14735

14750

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

63-3 sq

No. and Description of Safety Valves to each boiler

Two Spring loaded

Area of each valve

9-62 sq

Smallest distance between boilers or uptakes and bunkers or woodwork

1'-0"

INT.

Mean dia. of boilers

15'-6"

Length

11'-6"

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

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

plate

No. and Description of Furnaces in each boiler

Material

Outside diameter

Size of compensating ring

top

Thickness of plates

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 fixed 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

UPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

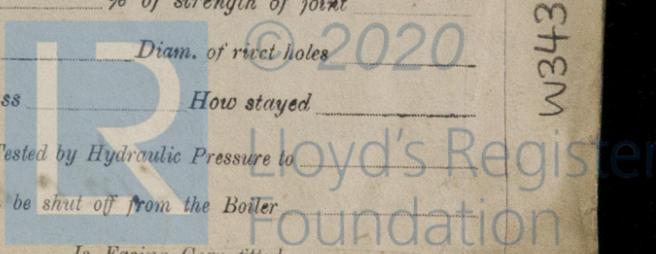
Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

RETAIN



W343-0029

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two top end bolts & nuts, Two bottom end bolts & nuts, Two main bearing bolts & nuts, 6 Coupling bolts & nuts, 1 set of feed & bilge pump valves, Assorted iron & bolts and nuts.

The foregoing is a correct description, DUNSMITH & JACKSON, Limited.

James Elliker

Manufacturer.

Dates of Survey while building: During progress of work in shops, During erection on board vessel, Total No. of visits. Is the approved plan of main boiler forwarded herewith? Yes

Dates of Examination of principal parts: Cylinders, Slides, Covers, Pistons, Rods, Connecting rods, Crank shaft, Thrust shaft, Tunnel shafts, Screw shaft, Propeller, Stern tube, Steam pipes tested, Engine and boiler seatings, Engines holding down bolts, Completion of pumping arrangements, Boilers fixed, Engines tried under steam, Completion of fitting sea connections, Stern tube, Screw shaft and propeller, Main boiler safety valves adjusted, Thickness of adjusting washers, Material of Crank shaft, Identification Mark on Do., Material of Tunnel shafts, Identification Marks on Do., Material of Steam Pipes, Laphelded hot iron, Test pressure, 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 machinery of this vessel has been built under special survey in accordance with the Rules and approved plans, materials and workmanship are good. It has been securely fitted on board the vessel and tried under steam with satisfactory results.

The machinery is eligible, in our opinion, to be Classed LMC 8.19.

It is submitted that this vessel is eligible for THE RECORD. + LMC.8.19. F.D.

J.W.D. 15/9/19

The amount of Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses (if any)

J. Elliker, M.A. Fraser, M.S. Murray, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 10 SEP. 1919 Assigned + LMC 8.19

