

## REPORT ON MACHINERY.

No. 28983

Received at London Office - 6 JAN 1925

Date of writing Report

19

When handed in at Local Office

5 JAN 1925

Port of

SUNDERLAND.

No. in Survey held at  
Reg. Book.

SUNDERLAND.

Date First Survey

28 Dec. '22

Last Survey

5 Jan 1925

1925

on the new steel

S/S

Buckleigh

(Number of Visits)

Tons

Gross 507 1/4

Net 31 1/6

Master

Built at

Sunderland

By whom built

Bartram &amp; Sons Ltd (S/N 256)

When built

1924

Engines made at

Sunderland

By whom made

J. Dickinson &amp; Sons Ltd (N° 870)

when made

1924

Boilers made at

Sunderland

By whom made

J. Dickinson &amp; Sons Ltd (N° 870)

when made

1924

Registered Horse Power

Owners

A. J. Latern. Ltd

Port belonging to

London

Nom. Horse Power as per Section 28

476

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

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

Triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

27 1/2" - 45" - 75"

Length of Stroke

48"

Revs. per minute

68

Dia. of Screw shaft

as per rule 14.89"

Material of

Screw shaft

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

If two

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

Length of stern bush

5' 3"

Dia. of Tunnel shaft

as per rule 13.5"

Dia. of Crank shaft journals

as per rule 14.18"

Dia. of Crank pin

14 1/2"

Size of Crank webs

9 1/2" x 26"

Dia. of thrust shaft under

collars

14 1/2"

Dia. of screw

17' 9"

Pitch of Screw

16' 9"

No. of Blades

4

State whether moveable

no

Total surface

99 sq ft

No. of Feed pumps

2

Diameter of ditto

8"

Stroke

22"

Can one be overhauled while the other is at work

yes (Wain's)

No. of Bilge pumps

2

Diameter of ditto

5"

Stroke

22"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

Sizes of Pumps

9 1/2" x 10"

1 1/2" x 4 1/2" x 10"

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

In Engine Room

3 @ 3" &amp; 1 @ 3 1/2"

In Holds, &amp;c.

N° 1 hold - 2 @ 3". N° 2 hold - 2 @ 3".

No. of Bilge Injections

1

sizes

7"

Connected to condensers, or to circulating pump

b.p.

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

yes, 4 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

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 hold suction

How are they protected under 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

yes

Is it fitted with a watertight door

yes

worked from

Top platform

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

S)

Manufacturers of Steel

John Spencer &amp; Sons Ltd

Total Heating Surface of Boilers

8055 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

Three single ended marine

Working Pressure

180

Tested by hydraulic pressure to

320

Date of test

11-5-23

No. of Certificate

3833

Can each boiler be worked separately

yes

Area of fire grate in each boiler

68 sq ft

No. and Description of Safety Valves to

each boiler

two direct spring

Area of each valve

9.50"

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

6' 0"

Mean dia. of boilers

16' 1 1/2"

Length

11' 10 1/2"

Material of shell plates

steel

Thickness

1 1/2"

Range of tensile strength

28 1/2 - 32 1/2 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

DR

long. seams

DR S. TR

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

9 5/16"

Lap of plates or width of butt straps

20 1/2"

Per centages of strength of longitudinal joint

rivets

95.84

Working pressure of shell by rules

180

Size of manhole in shell

16" x 12"

end

16" x 12"

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

3 Heighton

Length of plain part

top

bottom

Thickness of plates

crown

19"

Description of longitudinal joint

welded

No. of strengthening rings

—

Working pressure of furnace by the rules

184

Combustion chamber plates: Material

steel

Thickness: Sides

23/32"

Back

11/16"

Top

23/32"

Pitch of stays to ditto: Sides

12" x 7 1/2"

Back

10 1/8" x 8 3/4"

Top

10" x 9"

If stays are fitted with nuts or riveted heads

nut in use

Working pressure by rules

181

Material of stays

steel

Area at smallest part

2.030"

Area supported by each stay

9.00"

Working pressure by rules

201

End plates in steam space:

Material

steel

Thickness

1 1/8"

Pitch of stays

20 3/8" x 18"

How are stays secured

W N &amp; W

Working pressure by rules

181

Material of stays

steel

Area at smallest part

6.10"

Area supported by each stay

36.60"

Working pressure by rules

183

Material of Front plates at bottom

steel

Thickness

1 1/8"

Greatest pitch of stays

13" x 10 1/8"

Pitch across wide water spaces

14 1/4" (1 1/8" DR)

Working pressures by rules

182

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

2 @ 8 1/4" x 1 1/8"

Length as per rule

37 1/16"

Distance apart

9"

Working pressure by rules

189

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

9700-4801W

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IS A DONKEY BOILER FITTED?

yes

If so, is a report now forwarded?

yes

SPARE GEAR.

State the articles supplied:—Two connecting rod top and bottom end bolt and nuts. Two main bearing bolts. one set of coupling bolts. one set of feed and bilge pump valves. iron and bolt of various sizes one propeller and one propeller shaft.

The foregoing is a correct description,

S. Dickin Sm

Direct Manufacturer.

Dates of Survey while building  
During progress of work in shops -- 1922 Dec. 28<sup>th</sup> Jan. 8, 15 Feb. 1, 23, 27. Mch. 7, 19, 22, 23. Apr. 12, 17, 18, 20, 30. May 1, 4, 9, 11, 14, 15, 23  
During erection on board vessel -- 28 June, 4, 5, 7, 12 July, 14<sup>th</sup> Feb. 6, 14, 18, 20, 22, 27, 29. Mch. 3, 4, 5, 7, 12, 13, 14. 1925 Jan. 5  
Total No. of visits 43

Is the approved plan of main boiler forwarded herewith

yes

Is the approved plan of donkey boiler forwarded herewith

yes

Dates of Examination of principal parts—Cylinders 23-6-23 Slides 28-6-23 Covers 28-6-23 Pistons 12-6-23 Rods 5-6-23

Connecting rods 7-6-23 Crank shaft 15-5-23 Thrust shaft 15-5-23 Tunnel shafts 15-6-23 Screw shaft 14-2-24 Propeller 14-2-24

Stern tube 14-2-24 Steam pipes tested 18-8-24 Engine and boiler seatings 20-2-24 Engines holding down bolts 3-3-24

Completion of pumping arrangements 14-3-24 Boilers fixed 29-2-24 Engines tried under steam 7-3-24

Completion of fitting sea connections 20-2-24 Stern tube 22-2-24 Screw shaft and propeller 27-2-24

Main boiler safety valves adjusted 7-3-24 Thickness of adjusting washers Port 1/4" F 3/4" A 1/2" bent 1/4" - P 3/4" S 1/2" S 1/2" F 1/2" A 1/2"

Material of Crank shaft I. steel Identification Mark on Do. LLOYD'S No. 6462 Material of Thrust shaft I. steel Identification Mark on Do. 6462

Material of Tunnel shafts I. steel Identification Marks on Do. LLOYD'S No. 15-5-23 Material of Screw shafts S. M. S. Identification Marks on Do. 2924

Material of Steam Pipes Solid drawn copper Test pressure 400 lbs per sq. in.

Is an installation fitted for burning oil fuel no 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 no If so, state name of vessel

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

The materials and workmanship are good.  
The machinery has been constructed under special survey and is eligible in my opinion for classification and the record +LMC 4, 24.

This vessel has been laid up since completion in April 1924.  
A general examination of machinery has now been made and same is eligible in my opinion to have the record as recommended above.

George Anderson

5<sup>th</sup> Jan 1925

It is submitted that this vessel is eligible for THE RECORD +LMC 1.25. CL.

The amount of Entry Fee ... £ 5 : :  
Special ... £ 96 : 8 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 1 APR 1924  
When received, 3 APR 1924

Committee's Minute

Assigned

FRI. 9 JAN 1925

+LMC 1.25  
C.L.



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