

REPORT ON MACHINERY.

No. 28299

Received at London Office

FRI 17 MAR 1922

Date of writing Report

19

When handed in at Local Office

15 March 1922 Port of SUNDERLAND.

No. in Survey held at

SUNDERLAND.

Date, First Survey

13th April 1920

Last Survey

11th March 1922

Reg. Book.

on the SS "BLYTHMOOR"

(Number of Visits by)

Master

Built at Sunderland

By whom built

Messrs Wm Dredford & Sons (551)

Tons } Gross 6582
Net 4032
When built 1922

Engines made at Sunderland

By whom made Messrs Wm Dredford & Sons (552)

when made 1922

Boilers made at Sunderland

By whom made Messrs Wm Dredford & Sons (554)

when made 1922

Registered Horse Power

Owners U. Runciman & Co. Ltd

Port belonging to London

Nom. Horse Power as per Section 28

577

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted YES

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders

3

No. of Cranks 3

Dia. of Cylinders 27.44 75°

Length of Stroke 54"

Revs. per minute 70

Dia. of Screw shaft

as per rule 15.16
as fitted 15.3/4

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

at the propeller boss 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 5-10

Dia. of Tunnel shaft

as per rule 13.91
as fitted 14 1/8

Dia. of Crank shaft journals

as per rule 14.6
as fitted 14 3/4

Dia. of Crank pin

14 3/4

Size of Crank webs

20 7/8 x 9 3/4

Collars 14 3/4

Dia. of screw 18-0

Pitch of Screw 18-0

No. of Blades 4

State whether moveable No

Total surface 102 5/8

No. of Feed pumps 2

Diameter of ditto 5"

Stroke 30"

Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2

Diameter of ditto 6"

Stroke 30"

Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3

Sizes of Pumps 11x12x4, 10 1/2 x 8 x 2 1/2, 7 1/2 x 5 x 6

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

In Engine Room 4 @ 3 1/2" in oil well 3 1/2"

In Holds, &c. In No 1, 2, 2 each @ 3 1/2" in No 3, 2 @ 3 1/2"

+ 2 @ 3" in No. 4 hold with 1 @ 3 1/2" Tunnel with 1 @ 3" in Coffers in E. room 2 @ 2 1/2"

No. of Bilge Injections 1

sizes 9"

Connected to condenser or to circulating pump Yes

Is a separate Donkey Suction fitted in Engine room & size 4 1/2 @ 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

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

None

How are they protected

—

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 Upper Platform

OILERS, &c.—(Letter for record

5

Manufacturers of Steel Spencer & Sons

Total Heating Surface of Boilers

8530 5/8

Is Forced Draft fitted

Yes

No. and Description of Boilers

Three Single Ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

5.10.21, 10.10.21 No. of Certificate 3778, 3779, 3780

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

63 5/8

No. and Description of Safety Valves to

each boiler 2 Spring valves

Area of each valve

12.56

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

Way Bunkers

Mean dia. of boilers

15-11

Length

12-0

Material of shell plates

S

Thickness

1 5/16

Range of tensile strength

28 1/2 - 32 3/8

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams Lap & etc

long. seams

2 1/2" x 1 1/2" riv.

Diameter of rivet holes in long. seams

1 5/16

Pitch of rivets

8 3/4

Lap of plates or width of butt straps

19"

Per centages of strength of longitudinal joint

rivets 87
plate 85

Working pressure of shell by rules

189

Size of manhole in shell

16 x 12

END

Size of compensating ring

Flanged

No. and Description of Furnaces in each boiler

3 Monian

Material

S

Outside diameter 4-5 3/4

Length of plain part

top 3 3/8
bottom 3 1/4

Thickness of plates

3 3/8
3 1/4

Description of longitudinal joint

Weld

No. of strengthening rings

—

Working pressure of furnace by the rules

181

Combustion chamber plates: Material

S

Thickness: Sides

5/8

Back

5/8

Top

5/8

Bottom

15/16

Pitch of stays to ditto: Sides

7 1/8 x 7 7/8

Back

7 1/8 x 7 7/8

Top

7 1/8 x 7 7/8

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

217

Material of stays

S

Area at smallest part

1.44 sq in

Area supported by each stay

62 sq in

Working pressure by rules

186

End plates in steam space:

Material

S

Thickness

1 1/4

Pitch of stays

21 3/4 x 16

How are stays secured

d.n.r.w.

Working pressure by rules

192

Area at smallest part

8.48 sq in

Area supported by each stay

348 sq in

Working pressure by rules

253

Material of Front plates at bottom

S

Thickness

2 9/32

Material of Lower back plate

S

Thickness

5 3/4

Greatest pitch of stays

14 1/8

Working pressure of plate by rules

181

Diameter of tubes

2 1/2

Pitch of tubes

3 5/8 x 3 3/4

Material of tube plates

S

Thickness: Front

2 9/32

Back

3/4

Mean pitch of stays

7 1/2 x 7 1/4

Pitch across wide water spaces

12 1/2

Working pressures by rules

201

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

9 1/2 x 1 1/2

Length as per rule

35 1/2

Working pressure by rules

185

Steam dome: description of joint to shell

None

% 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

None

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

—

Is Easing Gear fitted

IS A DONKEY BOILER FITTED? **No.**

If so, is a report now forwarded? **—**

SPARE GEAR. State the articles supplied:— *Two top end + two bottom end connecting rod bolts and nuts, two main bearing bolts, one set coupling bolts, one set feed and bilge pump valves assorted bolts and nuts, two various sizes, one propeller, one propeller shaft.*

The foregoing is a correct description,
WILLIAM DOXFORD & SONS, Limited

Approved

1922

Manufacturer.

Dates of Survey while building
During progress of work in shops: 1920. Apr. 13, May 19, June 8, 16, 17, 29, July 26, Aug. 4, 16, Sep. 3, 15, 17, Oct. 8, 21, 26, 27, Nov. 8, 16, 29, Dec 6, 13
During erection on board vessel: 1921. Jan. 5, 17, 17, 20, 26, Feb. 29, 14, 17, 18, 25, Mar. 11, Aug. 10, 22, Sep. 2, 9, 22, 28, Oct. 5, 16, 20, Jan. 9, 10, 11, 13, 17, 19, 23
Total No. of visits: *64*
Is the approved plan of main boiler forwarded herewith **YES**

Dates of Examination of principal parts—Cylinders *25.2.21* Slides *2.2.21* Covers *11.3.21* Pistons *11.3.21* Rods *25.2.21*
Connecting rods *11.3.21* Crank shaft *25.2.21* Thrust shaft *25.2.21* Tunnel shafts *25.2.21* Screw shaft *9.2.21* Propeller *11.3.21*
Stern tube *29.11.20* Steam pipes tested *25.2.21, 14.2.22* Engine and boiler seatings *16.2.22* Engines holding down bolts *16.2.22*
Completion of pumping arrangements *24.2.22* Boilers fixed *21.2.22* Engines tried under steam *7.3.22*
Completion of fitting sea connections *26.1.22* Stern tube *26.1.22* Screw shaft and propeller *16.2.22*
Main boiler safety valves adjusted *7.3.22* Thickness of adjusting washers *P/B. P⁵/₈ S³/₈ CEN B. P⁵/₈ S³/₈ STAB. P⁵/₈ S³/₈*

Material of Crank shaft *Steel* Identification Mark on Do. *552 GAH* Material of Thrust shaft *Steel* Identification Mark on Do. *552 GAH*
Material of Tunnel shafts *Steel* Identification Marks on Do. *552 GAH* Material of Screw shafts *Steel* Identification Marks on Do. *552 GAH*
Material of Steam Pipes *Copper* (All replaced by S.D. steel in 1932 when engine holder was fitted. New 894 lbs) Test pressure *400 lbs*
Is an installation fitted for burning oil fuel **YES** Is the flash point of the oil to be used over 150°F. **YES**

Have the requirements of Section 49 of the Rules been complied with **YES**
Is this machinery duplicate of a previous case **YES, Except Superheater** If so, state name of vessel *S.S. HALLGYN.*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been built under special survey. The materials and workmanship are sound and good. The oil fuel installation has been tested and tried under working conditions. The machinery renders the vessel eligible in my opinion to have the award of L.M.C. 3.22. Fitted for burning oil fuel F.P. above 150° 3.22

It is submitted that this vessel is eligible for THE RECORD. *L.M.C. - 3.22 F.D. C.L.*
Fitted for Oil Fuel, 3.22, F.P. above 150° F.

W. A. Hall
20/3/22.

The amount of Entry Fee ... £ *6* : :
Special ... £ *103* : *17* :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for. *14 MAR 1922*
When received. *16 MAR 1922*

W. A. Hall
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *MAR 21 1922*
Assigned *+ L.M.C. 3.22 F.D. C.L.*

MACHINERY CORRECTLY WRITTEN

L.M.C. 3.22 F.P. above 150° F.