

REPORT ON MACHINERY.

No. 28259

Received at London Office

Date of writing Report

19

When handed in at Local Office

23 JAN 1922

Port of

SUNDERLAND.

No. in Survey held at
Reg. Book.

SUNDERLAND.

Date, First Survey

Feb 23 '21

Last Survey

Jan 20 1922

(Number of Visits

26

Master

Built at

Sunderland

By whom built

S.P. Austin & Son Ltd (S/N 298)

When built

1922

Engines made at

Sunderland

By whom made

Richardson Westgarth & Co Ltd (N 2166)

when made

1922

Boilers made at

Sunderland

By whom made

Richardson Westgarth & Co Ltd (N 2166)

when made

1922

Registered Horse Power

Owners

Normandy Shipping Co Ltd (S/N 298)

Port belonging to

London

Nom. Horse Power as per Section 28

205

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

20 1/2" 33" 54"

Length of Stroke

39"

Revs. per minute

70

Dia. of Screw shaft

as per rule 11 1/2"

Material of screw shaft

Screw Iron

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

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

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

Length of stern bush

4'-1 1/2"

Dia. of Tunnel shaft

as per rule 10'-32"

Dia. of Crank shaft journals

as per rule 10'-85"

Dia. of Crank pin

11 3/4"

Size of Crank webs

22"x7"

collars

11"

Dia. of screw

14'-3"

Pitch of Screw

15'-3"

No. of Blades

4

State whether moveable

no

Total surface

62 sq ft

No. of Feed pumps

2

Diameter of ditto

2 3/4"

Stroke

21"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3 1/4"

Stroke

21"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

Sizes of Pumps

9 1/2"x10" 5 1/2"x6"

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

In Engine Room

2 @ 3"

In Holds, &c. Forehold - 2 @ 3", Main hold - 2 @ 3".

No. of Bilge Injections

1

sizes

5"

Connected to condenser, or to circulating pump

b.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

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

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

Is the Screw Shaft Tunnel watertight

none

Is it fitted with a watertight door

yes

worked from

BOILERS, &c.—(Letter for record (S))

Manufacturers of Steel

John Spooner & Sons Limited.

Total Heating Surface of Boilers

3268 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

Two single ended marine

Working Pressure

180

Tested by hydraulic pressure to

220

Date of test

1-11-21

No. of Certificate

3781

Can each boiler be worked separately

yes

Area of fire grate in each boiler

43.75 sq ft

No. and Description of Safety Valves to

each boiler

two spring loaded

Area of each valve

82 sq in

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-6"

Mean dia. of boilers

13'-3"

Length

10'-6"

Material of shell plates

steel

Thickness

1 3/32"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

DR

long. seams

DBS. TR

Diameter of rivet holes in long. seams

1 1/8"

Pitch of rivets

7 1/8"

Lap of plates or width of butt straps

15"

Per centages of strength of longitudinal joint

rivets 88.8

plate 85.7

Working pressure of shell by rules

181

Size of manhole in steel

16"x12"

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

3 plain

Material

steel

Outside diameter

36 1/2"

Length of plain part

top 74 1/2"

Thickness of plates

crown 7 1/2"

bottom 7 1/2"

Description of longitudinal joint

welded

No. of strengthening rings

none

Working pressure of furnace by the rules

194

Combustion chamber plates: Material

steel

Thickness: Sides

1 1/16"

Back

3 1/2"

Top

1 1/16"

Bottom

1 1/16"

Working pressure by rules

180

Pitch of stays to ditto: Sides

9 5/8"x8 1/8"

Back

9 3/8"x8"

Top

9 5/8"x9 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180

Material of stays

steel

Area at smallest part

1.73 sq in

Area supported by each stay

7.5 sq in

Working pressure by rules

202

End plates in steam space:

Material

steel

Thickness

1 1/2"

Pitch of stays

18 1/2"

How are stays secured

DN & W

Material of stays

steel

Thickness

1 1/2"

Pitch of stays

18 1/2"

How are stays secured

DN & W

Working pressure by rules

182

Material of stays

steel

Area at smallest part

6.10 sq in

Area supported by each stay

342.20 sq in

Working pressure by rules

196

Thickness

7/8"

Material of Lower back plate

steel

Thickness

13/16"

Greatest pitch of stays

13 1/2"

Working pressure of plate by rules

198

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2"x4 3/8"

Material of tube plates

steel

Thickness: Front

7/8"

Back

13/16"

Mean pitch of stays

11"

Pitch across wide water spaces

14 1/4"

Working pressures by rules

185

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

9"x1 1/2"

Length as per rule

30.56"

Distance apart

9 1/2"

Number and pitch of stays in each

2-9 5/8"

Working pressure by rules

198

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

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

Lloyd's Register

Foundation

008040-008048-0096

IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded? -

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

The foregoing is a correct description,
FOR RICHARDSONS, WESTGARTH & CO., LTD.

Frederic H. Russell

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1921 Feb. 23 June 2. 15. 17 July 12. 20. 27. Sep. 1. Oct. 7. 25 Nov. 1. 24. 22. 25 Dec. 6. 12. 13. 21. 22.
During erection on board vessel - - - 1922 Jan. 4. 17. 18. 19. 20.
Total No. of visits 26

Is the approved plan of main boiler forwarded herewith yes
" " " donkey " " " -

Dates of Examination of principal parts—Cylinders 7-10-21 Slides 1-11-21 Covers 25-10-21 Pistons 25-10-21 Rods 7-10-21
Connecting rods 1-11-21 Crank shaft W.H.pl Thrust shaft 14-11-21 Tunnel shafts none Screw shaft 14-11-21 Propeller 18-11-21
Stern tube 8-11-21 Steam pipes tested 25-11-21 Engine and boiler seatings 22-11-21 Engines holding down bolts 13-12-21
Completion of pumping arrangements 20-1-22 Boilers fixed 13-12-21 Engines tried under steam 22-12-21
Completion of fitting sea connections 22-11-21 Stern tube 22-11-21 Screw shaft and propeller 6-12-21
Main boiler safety valves adjusted 17-1-22 Thickness of adjusting washers Port boiler: P $\frac{3}{8}$ " S $\frac{7}{16}$ " Starboard boiler: P $\frac{7}{16}$ " S $\frac{3}{8}$ "
Material of Crank shaft I. steel Identification Mark on Do. 6017 RPS Material of Thrust shaft I. steel Identification Mark on Do. LLOYD'S NO 2166 14-11-21 L.C.D.
Material of Tunnel shafts none Identification Marks on Do. - Material of Screw shafts dup 2m Identification Marks on Do. -
Material of Steam Pipes solid drawn copper Test pressure 400 lbs per square inch

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 + L M C 1, 2 2

It is submitted that
this vessel is eligible for
THE RECORD.

+ L. M. C. - 1.22.

C.L.

Ans. 30/1/22.

The amount of Entry Fee ... £ 4 : -
Special ... £ 51 : 5
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :

When applied for,

24 JAN 1922

When received,

21. 2. 22

L.C. Davis.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FREE FEB 3 1922

Assigned

+ L.M.C. 1.22
C.L.

CERTIFICATE WRITTEN



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