

REPORT ON MACHINERY.

Nwc. 78098.
No. 28828

Date of writing Report

When handed in at Local Office - 2 JUN 1924

Received at London Office MON. JUL 21 1924

No. in Survey held at
Reg. Book.

Sunderland

Date, First Survey

Feb 22

Last Survey

May 27 1924

on the new steel S/S GALLIUM

(Number of Vents 17 + 5
Tons Gross 1771
Net

Master

Built at Blyth

By whom built

Blyth S/S Co. Ld. (S/S No. 228)

When built 1924

Engines made at

Sunderland

By whom made

N.E. Marine Eng. Co. Ld. (No. 2559)

when made 1924

Boilers made at

Sunderland

By whom made

N.E. Marine Eng. Co. Ld. (No. 2559)

when made 1924

Registered Horse Power

Owners

a. Lemoine et Fils.

Port belonging to

Rouen

Nom. Horse Power as per Section 28

244

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

21" - 34" - 56"

Length of Stroke

36"

Revs. per minute

78

Dia. of Screw shaft

as per rule 11.67

Material of

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

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

4' 2"

Dia. of Tunnel shaft

as per rule 10.4

Dia. of Crank shaft journals

as per rule 10.92

Dia. of Crank pin

11 1/4"

Size of Crank webs

17 1/2 x 6 1/8"

Dia. of thrust shaft under

collars

11 1/4"

Dia. of screw

14 3/8"

Pitch of Screw

13-9"

No. of Blades

4

State whether moveable

no

Total surface

63 sq ft

No. of Feed pumps

2

Diameter of ditto

3"

Stroke

21"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2"

Stroke

21"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

SIZES OF PUMPS

7 1/2 x 9 1/2 x 10 1/2, 8 x 5 x 8"

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

In Engine Room

3 @ 3"

In Holds, &c. No. 1 hold - 2 @ 3". No. 2 hold - 2 @ 3"

No. of Bilge Injections

1

SIZES

6"

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

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

main below all

others 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 timber boards

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

2-5-24

of Stern Tube

15-5-24

Screw shaft and Propeller

15-5-24

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

Bridge Deck, in E.R.

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

John Spence & Son Ltd & W. B. White & Son Ltd.

Total Heating Surface of Boilers

4224 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

two single ended marine

Working Pressure

190

Tested by hydraulic pressure to

335

Date of test

28-4-24

No. of Certificate

3876

Can each boiler be worked separately

yes

Area of fire grate in each boiler

52.5 sq ft

No. and Description of Safety Valves to

each boiler

two direct spring

Area of each valve

12.5 sq in

Pressure to which they are adjusted

195

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Mean dia. of boilers

14-9 1/16"

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

W.R.

long. seams

W.B.S.M.R.

Diameter of rivet holes in long. seams

1 5/16"

Pitch of rivets

9 5/16"

Lap of plates or width of butt straps

1-7 5/8"

Per centages of strength of longitudinal joint

rivets 87.5

plate 85.9

Working pressure of shell by rules

192

Size of manhole in shell

16 x 12

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

3 Deighton

Material

steel

Outside diameter

36 7/8"

Length of plain part

top

Thickness of plates

crown 1 9/16"

Description of longitudinal joint

welded

No. of strengthening rings

4

Working pressure of furnace by the rules

192

Combustion chamber plates: Material

steel

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

11 1/2 x 9 1/2"

Back

11 1/2 x 9 1/2"

Top

11 1/2 x 9 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

192

Material of stays

steel

Diameter at smallest part

2.360"

Area supported by each stay

1110"

Working pressure by rules

191

End plates in steam space

Material

steel

Thickness

1 3/32"

Pitch of stays

21 1/2 x 19 1/2"

Diameter at smallest part

7.44"

Area supported by each stay

4070"

Working pressure by rules

210

Material of Front plates at bottom

steel

Thickness

1/8"

Material of Lower back plate

steel

Thickness

29/32"

Greatest pitch of stays

14 1/2 x 9 7/8"

Working pressure of plate by rules

220

Diameter of tubes

3 1/2"

Pitch of tubes

4 9/16 x 4 7/16"

Material of tube plates

steel

Thickness: Front

7/8"

Back

25/32"

Mean pitch of stays

10.4"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

192

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

23 8/16 x 15"

Length as per rule

30 1/2"

Distance apart

11 1/2"

Number and pitch of stays in each

20 9 1/2"

Working pressure by rules

194

Superheater or Steam chest; how connected to boiler

none

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

holes

Pitch of rivets

Working pressure of shell by rules

If 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

yes

002825-002829-0193

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 bolt various sizes, one propeller.

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO. LTD.

C. T. Adams

Manager.

Manufacturer.

Dates of Survey while building

During progress of work in shops --
During erection on board vessel ---
Total No. of visits

1924. Feb. 22, 26. Mar. 6, 24. Apr. 5, 9, 24, 25, 28, 29. May 2, 6, 15, 22, 23, 26, 27.
1924. Apr. 23, 24. May 2, 13. June 24. 30. + July 2nd
Is the approved plan of main boiler forwarded herewith

yes

none

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 24-4-24 Slides 2-5-24 Covers 24-4-24 Pistons 2-5-24 Rods 9-4-24
Connecting rods 9-4-24 Crank shaft 24-4-24 Thrust shaft 6-5-24 Tunnel shafts 6-5-24 Screw shaft 6-5-24 Propeller 29-4-24
Stern tube 6-5-24 Steam pipes tested 22-5-24 Engine and boiler seatings 24-4-24 Engines holding down bolts 24-5-24
Completion of pumping arrangements 30-6-24 Boilers fixed 23-5-24 Engines tried under steam 27-5-24
Main boiler safety valves adjusted 27-5-24 Thickness of adjusting washers 10 lb. F 3/8" A 1 1/2". 5 lb. F 5/16" A 1/2".

Material of Crank shaft Steel Identification Mark on Do.

LLOYDS
Nº 6801
L.C.D.
Notes on plate

Material of Thrust shaft J. Steel Identification Mark on Do.

LLOYDS
Nº 6801
L.C.D.
6-5-24

Material of Tunnel shafts Steel Identification Marks on Do.

Material of Screw shafts J. Steel Identification Marks on Do.

Material of Steam Pipes Lapwelded wrought iron

Test pressure 600 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 our opinion for classification and the record + LMC. 7-24.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 7-24 CL

J. D. C. Auld
21/7/24

The amount of Entry Fee ... £ 4

Special ... £ 61

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

31 MAY 1924

When required, as all
as per advice
dated 19/7/24
J. D. C. Auld

S. C. Davis & J. R. Beveridge

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute FRI 25 JUL 1924

Assigned + LMC 7-24

C. L.



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Foundation