

## REPORT ON MACHINERY.

No. 28939

Received at London Office

25 OCT 1924

Date of writing Report

19

When handed in at Local Office

24 OCT 1924

Port of

Sunderland

No. in Survey held at  
Reg. Book.

Sunderland

Date, First Survey

21st Nov 24

Last Survey

9 Oct

1924

on the new steel

S/S "QUEENWORTH"

(Number of Visits

31)

Tons

Gross

2065

Net

1163

Master

Built at Sunderland

By whom built

S.F. Austin &amp; Son Ltd (S/S N° 307)

When built

1924

Engines made at

Sunderland

By whom made

J. Dickinson &amp; Son Ltd (N° 876)

when made

1924

Boilers made at

Sunderland

By whom made

J. Dickinson &amp; Son Ltd (N° 876)

when made

1924

Registered Horse Power

Owners

Watergate S.S. Co. Ltd

Port belonging to

Newcastle

Nom. Horse Power as per Section 28

222

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

21" 35" 57"

Length of Stroke

36"

Revs. per minute

72

Dia. of Screw shaft

as per rule 11.4"

Material of

S. 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' 0"

Dia. of Tunnel shaft

as per rule 10.15"

New Rule

Dia. of Crank shaft journals

as per rule 10.66"

Dia. of Crank pin

10 7/8"

Size of Crank webs

6 3/4" x 19 3/4"

Dia. of thrust shaft under

collars

collars

10 7/8"

Dia. of screw

15' 0"

Pitch of Screw

14' 9"

No. of Blades

4

State whether moceable

no

Total surface

680 sq ft

No. of Feed pumps

2

Diameter of ditto

3"

Stroke

18"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

4"

Stroke

18"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

SIZES OF PUMPS

2 @ 6" x 4" x 6"

1 @ 8" x 7" x 8"

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

In Engine Room

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

In Holds, &amp;c.

Ford hold - 2 @ 3" app. 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 &amp; 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 staves 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

hold suction

How are they protected

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

none

Is it fitted with a watertight door

mch. app.

worked from

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

Manufacturers of Steel

Steel Company of Scotland Ltd &amp; John Pender &amp; Son Ltd

Total Heating Surface of Boilers

3560 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

two single ended marine

Working Pressure

180

Tested by hydraulic pressure to

320

Date of test

10-7-24

No. of Certificate

3889

Can each boiler be worked separately

yes

Area of fire grate in each boiler

490 sq ft

No. and Description of Safety Valves to

each boiler

two direct spring

Area of each valve

5.950"

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

14' 0"

Length

10' 6"

Material of shell plates

steel

Thickness

1 1/8"

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

W.B.S.T.R.

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 3/8"

Lap of plates or width of butt straps

18 1/4"

Per centages of strength of longitudinal joint

rivets 98.9

plate 85

Working pressure of shell by rules

180

Size of manhole in shell

16" x 12"

Size of compensating ring

8 1/2" x 1 1/8"

No. and Description of Furnaces in each boiler

3 Morrison

Material

steel

Outside diameter

3' 6"

Length of plain part

top 3 1/2"

bottom 3 1/2"

Thickness of plates

crown 3 1/2"

bottom 3 1/2"

Description of longitudinal joint

welded

No. of strengthening rings

-

Working pressure of furnace by the rules

185

Combustion chamber plates: Material

steel

Thickness: Sides

11/16"

Back

11/16"

Top

11/16"

Bottom

11/16"

Pitch of stays to ditto: Sides

9 3/8" x 9 3/8"

Back

9 3/8" x 9 3/8"

Top

9 3/8" x 9 3/8"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180

Material of stays

steel

Area at smallest part

2.030"

Area supported by each stay

990"

Working pressure by rules

182

End plates in steam space:

Material

steel

Thickness

1 3/32"

Pitch of stays

18" x 17"

How are stays secured

W.N.W.

Working pressure by rules

186

Material of stays

steel

Area at smallest part

5.050"

Area supported by each stay

3060"

Working pressure by rules

180

Material of Front plates at bottom

steel

Thickness

7/8"

Material of Lower back plate

steel

Thickness

25/32"

Greatest pitch of stays

13 1/4" x 9 3/8"

Working pressure of plate by rules

181

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

steel

Thickness: Front

7/8"

Back

7/8"

Mean pitch of stays

9" x 11 1/4"

Pitch across wide water spaces

4 1/4" (16 B.P.)

Working pressures by rules

182

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

2 @ 6 3/4" x 1"

Length as per rule

30 3/2"

Distance apart

9"

Working pressure by rules

193

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

W210-0105



IS A DONKEY BOILER FITTED? - no ✓

If so, is a report now forwarded? no

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

For  
The foregoing is a correct description,

W. H. Williams  
Director.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1924 Mar. 21, May 7, 20, 26, 28, 30, June 4, 12, July 2, 3, 10, 12, 15, 28, Aug. 5, 6, 8, 11, 13, 18, 22,  
During erection on board vessel -- 27, Sep. 3, 10, 15, 22, 24, 26, Oct. 3, 7, 9  
Total No. of visits 31

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 2-7-24 Slides 28-7-24 Covers 12-6-24 Pistons 28-7-24 Rods 30-8-24

Connecting rods 12-6-24 Crank shaft 12-7-24 Thrust shaft 12-7-24 Tunnel shafts none Screw shaft 13-8-24 Propeller 15-7-24

Stern tube 27-8-24 Steam pipes tested 3&22-9-24 Engine and boiler seatings 22-9-24 Engines holding down bolts 24-9-24

Completion of pumping arrangements 26-9-24 Boilers fixed 24-9-24 Engines tried under steam 26-9-24

Completion of fitting sea connections 10-9-24 Stern tube 22-9-24 Screw shaft and propeller 22-9-24

Main boiler safety valves adjusted 26-9-24 Thickness of adjusting washers Port boiler - bolt 3/8". Star boiler - both 1/2"

Material of Crank shaft 1. steel Identification Mark on Do. LLOYD'S NO 82 L.C.D. 12-7-24 Material of Thrust shaft 1. steel Identification Mark on Do. LLOYD'S NO 82 L.C.D. 12-7-24

Material of Tunnel shafts none Identification Marks on Do. 12-7-24 Material of Screw shafts 1. steel Identification Marks on Do. LLOYD'S NO 82 L.C.D. 12-7-24

Material of Steam Pipes 6 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. no

Have the requirements of Section 49 of the Rules been complied with no

Is this machinery duplicate of a previous case no ✓ If so, state name of vessel no

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 10.24.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 10.24. CL.

W. H. Williams  
27/10/24

S. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 4 :

Special ... £ 55 : 10

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for.

15 OCT 1924

When received.

17 OCT 1924

Committee's Minute

TUES. 28 OCT 1924

Assigned

+ LMC 10.24  
C.L.

TUES. 21 JUL 1925

WRITTEN.



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Foundation