

REPORT ON MACHINERY.

TUE JUN 3 1924

No. 28812

MON. 19 MAY. 1924

Received at London Office

Date of writing Report

19

When handed in at Local Office

17 MAY 1924

Port of

SUNDERLAND.

No. in Survey held at

Sunderland

Date, First Survey

22 Feb '24

Last Survey

9 May 1924

Reg. Book.

on the **new steel S/S "PADDINGTON"**

(Number of Visits)

Tons Gross

Net

Master

Built at **Stockton**

By whom built

Wraig Taylor & Co S/S No 211

When built

1924

Engines made at

Sunderland

By whom made

N.E. Marine Eng Co Ltd (No 2577)

when made

1924

Boilers made at

Sunderland

By whom made

N.E. Marine Eng Co Ltd (No 2577)

when made

1924

Registered Horse Power

Owners

Port belonging to

London

Nom. Horse Power as per Section 28

163

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

17 1/2 - 29 - 48

Length of Stroke

33

Revs. per minute

84

Dia. of Screw shaft

10 1/2

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

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

yes

Length of stern bush

3-5 1/2

Dia. of Tunnel shaft

8.78

Dia. of Crank shaft journals

9.22

Dia. of Crank pin

9 3/8

Size of Crank webs

14 x 5 1/2

Dia. of thrust shaft under collars

9 3/8

Dia. of screw

13-0

Pitch of Screw

12-9

No. of Blades

4

State whether moveable

no

Total surface

52 sq ft

No. of Feed pumps

2

Diameter of ditto

2 3/4

Stroke

16 1/2

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3

Stroke

16 1/2

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

Sizes of Pumps

18 9 x 9, 5 1/2 & 3 1/2 x 5

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

In Engine Room

3 @ 3"

In Holds, &c.

Fore hold 2 @ 3", aft hold 3 @ 3"

Tunnel well one @ 3"

No. of Bilge Injections

1

Connected to condenser, or to circulating pump

yes

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

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, &c.—(Letter for record)

S

Manufacturers of Steel

John Spence & Sons & David Colville & Sons Ltd.

Total Heating Surface of Boilers

2792 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

19-4-24

No. of Certificate

3874

Can each boiler be worked separately

yes

Area of fire grate in each boiler

35 sq ft

No. and Description of Safety Valves to each boiler

two direct spring

Area of each valve

4.90

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

1-8

Mean dia. of boilers

12-3 1/2

Length

10-6

Material of shell plates

steel

Thickness

1 1/4

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

WR

long. seams

WBS. TR

Diameter of rivet holes in long. seams

1 3/32

Pitch of rivets

7 13/16

Lap of plates or width of butt straps

1-4 7/8

Per centages of strength of longitudinal joint

plate

91

Working pressure of shell by rules

180

Size of manhole in shell

16 x 12

Size of compensating ring

Hanged

No. and Description of Furnaces in each boiler

2 of 2 Deighton

Material

steel

Outside diameter

3-4 1/4

Length of plain part

top 33"

Thickness of plates

bottom 6 1/2"

Description of longitudinal joint

welded

No. of strengthening rings

—

Working pressure of furnace by the rules

184

Combustion chamber plates: Material

steel

Thickness: Sides

13/16

Back

3/32

Top

13/16

Bottom

13/16

Pitch of stays to ditto: Sides

12 1/8 x 9 3/4

Back

11 1/8 x 10 1/2

Top

12 1/8 x 9 3/4

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

185

Material of stays

steel

Area at smallest part

2-360

Area supported by each stay

117

Working pressure by rules

180

End plates in steam space:

Material

steel

Thickness

1 3/32

Pitch of stays

2-1 x 1-6 1/2

How are stays secured

WNS&W

Working pressure by rules

180

Material of stays

steel

Area at smallest part

7-670

Area supported by each stay

4620

Working pressure by rules

184

Material of Front plates at bottom

steel

Thickness

1/8

Material of Lower back plate

steel

Thickness

1/8

Greatest pitch of stays

14 1/2 x 14 1/2

Working pressure of plate by rules

187

Diameter of tubes

3 1/4

Pitch of tubes

4 3/4 x 4 1/2

Material of tube plates

steel

Thickness: Front

1/8

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 *W.A.*

The foregoing is a correct description,
THE NORTH EASTERN MARINE ENGINEERING CO., LTD.

W. Campbell Allen
Assistant Secretary. Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1924 Feb. 22. 26. Mar. 6. 27. Apr. 27. 29. 11. 16. 18. 21. May. 25. 29
{ During erection on board vessel - - - }
Total No. of visits 16

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

Dates of Examination of principal parts—Cylinders 2-4-24 Slides 14-4-24 Covers 7-4-24 Pistons 14-4-24 Rods 9-4-24
Connecting rods 9-4-24 Crank shaft 2-4-24 Thrust shaft 9-4-24 Tunnel shafts 24-4-24 Screw shaft 24-4-24 Propeller 24-4-24
Stern tube 24-4-24 Steam pipes tested 2-5-24 Engine and boiler seatings 14-4-24 Engines holding down bolts 8-5-24

Completion of pumping arrangements 9-5-24 Boilers fixed 8-5-24 Engines tried under steam 9-5-24
Completion of fitting sea connections 14-4-24 Stern tube 2-5-24 Screw shaft and propeller 2-5-24

Main boiler safety valves adjusted 9-5-24 Thickness of adjusting washers Port boiler: $F \frac{3}{8} A \frac{5}{16}$ Sld boiler $F \frac{1}{8} A \frac{5}{16}$

Material of Crank shaft *Steel* Identification Mark on Do. *LLOYD'S NO 62* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S NO 62*
Material of Tunnel shafts *Steel* Identification Marks on Do. *L.C.D. date as above* Material of Screw shafts *Steel* Identification Marks on Do. *L.C.D. date as above*

Material of Steam Pipes *Copper* Test pressure 400

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 - 5. 24*

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 5. 24. CL.

Wm Morrison
3/6/24
S. Davis + Wm Morrison
Engineer Surveyors to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : :
Special ... £ 40 : 15 :
Donkey Boiler Fee ... £ ✓ : :
Travelling Expenses (if any) £ ✓ : :
When applied for, 17 MAY 1924
When received, 13 JUN 1924

Committee's Minute
Assigned + LMC 5. 24
C.L.



SUNDERLAND.

Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.