

Rpt. 4.

REPORT ON MACHINERY.

No. 28862

Date of writing Report

10

When handed in at Local Office

14 JUL 1924

Port of

Received at London Office

Date, First Survey

7 April

Last Survey

10-7-1924

(Number of visits 18)

No. in Survey held at

Reg. Book.

Sunderland

on the new steel S/S "SEATON"

Master

Built at

Stockton

By whom built

Messrs. Taylor & Co (S/N 215)

Tons

Gross

Net

When built 1924

Engines made at

Sunderland

By whom made

N.E. Marine Eng Co Ltd (N 2586)

when made

1924

Boilers made at

Sunderland

By whom made

N.E. Marine Eng Co Ltd (N 2586)

when made

1924

Registered Horse Power

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

10.2

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

yes

Is 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

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

yes

Length of stern bush

3.5

Dia. of Tunnel shaft

8.78

Dia. of Crank shaft journals

9.22

Dia. of Crank pin

9.3

Size of Crank webs

14 1/2 x 5 1/2

Dia. of thrust shaft under

collars

9.3

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

7 1/2 x 9

5 1/2 x 3 1/2 x 5

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

In Holds, &c.

Ford hold - 2 @ 3" after hold -

In Engine Room

3 @ 3"

No. of Bilge Injections

1

Connected to condenser, or to circulating pump

C.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 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 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

12.6.24

of Stern Tube

1-7-24

Screw shaft and Propeller

1-7-24

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

top platform

Manufacturers of Steel

David Bull & Sons Ltd & John Gwynne (Sunderland)

BOILERS, &c. (Letter for record)

(S)

Total Heating Surface of Boilers

2722 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

6.6.24

No. of Certificate

3888

Can each boiler be worked separately

yes

Area of fire grate in each boiler

35 sq ft

No. and Description of Safety Valves to

yes

each boiler

two direct opening

Area of each valve

4.9 sq ft

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

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 ton

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

DR

long. seams

DRS & TR

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

7 1/2"

Lap of plates or width of butt straps

1-4 5/8"

Per centages of strength of longitudinal joint

86

Working pressure of shell by rules

180

Size of manholes in shell

16" x 12"

Material

steel

Outside diameter

3-4 3/8"

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

2052 Deighton

No. of strengthening rings

welded

Length of plain part

top

Thickness of plates

bottom

Description of longitudinal joint

welded

No. of strengthening rings

13

Back

25

Top

13

Bottom

13

Working pressure of furnace by the rules

185

Combustion chamber plates: Material

steel

Thickness: Sides

13

Back

16

Working pressure by rules

185

Pitch of stays to ditto: Sides

12 1/2 x 9 3/4

Back

11 1/2 x 10 1/2

Top

12 1/2 x 9 3/4

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180

End plates in steam spaces

steel

Material of stays

steel

Diameter at smallest part

2-3 1/2"

Area supported by each stay

117 sq in

Working pressure by rules

180

Material of stays

steel

Material

steel

Thickness

1 1/2"

Pitch of stays

25 x 18 1/2

How are stays secured

DR & W

Working pressure of plate by rules

187

Diameter at smallest part

7.67 sq in

Area supported by each stay

46.5 sq in

Working pressure of plate by rules

187

Material of Front plates at bottom

steel

Thickness

7"

Material of Lower back plate

steel

Thickness

7"

Greatest pitch of stays

14 1/2 x 11 1/2

Working pressure of plate by rules

187

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2 x 4 1/2

Material of tube plates

steel

Thickness: Front

7"

Back

3"

Mean pitch of stays

10.5

Pitch across wide water spaces

14 1/2 (3/4 DR)

Working pressure by rules

182

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

2 @ 8 1/2 x 15"

Length as per rule

31 1/2"

Distance apart

12"

Number and pitch of stays in each

2 @ 9 3/4"

Working pressure by rules

182

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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

How stayed

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Lloyd's Register Foundation

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 and one propeller.
2 dozen additional assorted bolts & nuts supplied at Hockton

W.M.

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LTD.

C.T. Adams

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1924. April 7. 29. May 6. 22. 26. 30 June 3. 6. 12. 17. 18 July 1. 8. 14. 7. 8. 9. 10
During erection on board vessel - - - - - M.D.B. - June 12. July 15. 18. 23. 25. 28. Aug. 2
Total No. of visits 18 + 4 = 22

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " none

Dates of Examination of principal parts—Cylinders 6-6-24 Slides 17-6-24 Covers 12-6-24 Pistons 17-6-24 Rods 12-6-24
Connecting rods 26-5-24 Crank shaft 6-6-24 Thrust shaft 6-6-24 Tunnel shafts 6-6-24 Screw shaft 18-6-24 Propeller 18-6-24
Stern tube 12-6-24 Steam pipes tested 4-7-24 Engine and boiler seatings 12-6-24 Engines holding down bolts 9-7-24
Completion of pumping arrangements 10-7-24 & 28-7-24 Boilers fixed 7-7-24 Engines tried under steam 10-7-24
Main boiler safety valves adjusted 10-7-24 Thickness of adjusting washers Port boiler both 3/8" Star boiler 1/4" & 5/16"
Material of Crank shaft Steel Identification Mark on Do. LLOYD'S NO 6853 L.C.D. 6-6-24 Material of Thrust shaft Steel Identification Mark on Do. LLOYD'S NO 6853 L.C.D. 6-6-24
Material of Tunnel shafts Steel Identification Marks on Do. LLOYD'S NO 6853 L.C.D. 6-6-24 Material of Screw shafts Steel Identification Marks on Do. LLOYD'S NO 6853 L.C.D. 6-6-24
Material of Steam Pipes Solid drawn copper Test pressure 400 lbs per sq"

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 yes If so, state name of vessel "Readington"

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 + L.M.C. - 8.24

Note: - After hold and tunnel wall bilge sections now satisfactorily fitted W.M.

The report on the Electric Light will be forwarded in due course W.M.

+ L.M.C. 8.24 C.L.

W.M. 14/8/24

W.M.

The amount of Entry Fee £3 40 15

Special £

Donkey Boiler Fee £

Travelling Expenses (if any) £

When applied for,

14 JUL 1924

Is the vessel,

19/8/24

L.C. Davis & Wm Morrison

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

Committee's Minute TUES 19 AUG 1924

Assigned + L.M.C. 8.24

C.L.



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