

REPORT ON MACHINERY.

No. 27567

Received at London Office

Date of writing Report

19

When handed in at Local Office

22. 7. 1919. Port of

SUNDERLAND.

WED. 23 JUL. 1919

No. in Survey held at

Sunderland

Date, First Survey 8. 1. 19

Last Survey 15-7-1919

Reg. Book.

on the S/S "HORNCHURCH"

(Number of Visits 24)

Gross 2162.41

Master

Built at Sunderland

By whom built Messrs. Macdonald & Partners

When built 1919

Engines made at

Sunderland

By whom made Messrs. Macdonald & Partners (299)

when made 1919

Boilers made at

Sunderland

By whom made Messrs. Macdonald & Partners (299)

when made 1919

Registered Horse Power

Owners

John Hudson & Co. Ltd.

Port belonging to London

Nom. Horse Power as per Section 28

231

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triph

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders 21. 35. 58

Length of Stroke 34

Revs. per minute 77

Dia. of Screw shaft

as per rule 12.05

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

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

Length of stern bush

Dia. of Tunnel shaft

as per rule 10.57

Dia. of Crank shaft journals

as per rule 11.10

Dia. of Crank pin

11. 3/8

Size of Crank webs

16. 7/8

Dia. of thrust shaft under

collars

11. 3/8

Dia. of screw

15.0

Pitch of Screw

16.0

No. of Blades

4

State whether moveable

no

Total surface

75. 5/8

No. of Feed pumps

2

Diameter of ditto

3. 1/2

Stroke

20

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3. 1/2

Stroke

20

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

Sizes of Pumps

6. 1/2 x 8. 1/2 x 8, 6 x 4 x 6

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

In Engine Room

3, 3"

In Holds, &c. 2 in hold 2. 3/4, 2 in main, 2 in after hold

No. of Bilge Injections

1

sizes

5. 1/2

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

yes

Are all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

yes

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

yes

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

yes

Is it fitted with a watertight door

yes

worked from upper platform

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Spencer & Sons

Total Heating Surface of Boilers

3616. 5/8

Is Forced Draft fitted

no

No. and Description of Boilers

Two single end

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test 16.5.19, 23.5.19

No. of Certificate 3562, 3567

Can each boiler be worked separately

yes

Area of fire grate in each boiler

59. 1/2

No. and Description of Safety Valves to

each boiler

Two spring valves

Area of each valve

5. 9/16

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

15"

Mean dia. of boilers

14.5

Length

10.6

Material of shell plates

S

Thickness

1/8

Range of tensile strength

29. 3/4 - 33. 3/4

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

Lap

long. seams

6. 1/2 x 1/4

Diameter of rivet holes in long. seams

1. 3/16

Pitch of rivets

8. 1/4

Lap of plates on width of butt straps

17. 5/8

Per centages of strength of longitudinal joint

rivets

88.7

plate

88.6

Working pressure of shell by rules

184

Size of manhole in shell

12 x 16

Size of compensating ring

7. 1/2 x 1. 1/8

No. and Description of Furnaces in each boiler

3 plain

Material

S

Outside diameter

3. 8"

Length of plain part

top

6. 4

bottom

5. 9

Thickness of plates

crown

5. 1/4

bottom

5. 1/4

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

185

Combustion chamber plates: Material

S

Thickness: Sides

1/8

Back

1/8

Top

1/8

Bottom

1/8

Pitch of stays to ditto: Sides

9. 3/4 x 5. 5/8

Back

11 x 8. 5/8

Top

10. 3/4 x 5. 1/2

If stays are fitted with nuts or riveted heads

yes

Working pressure by rules

182

Material of stays

S

Area at smallest part

2. 13. 0"

Area supported by each stay

95. 0"

Working pressure by rules

192

End plates in steam space:

Material

S

Thickness

1. 1/4

Pitch of stays

15 x 23

How are stays secured

A. N. & L.

Working pressure by rules

185

Material of stays

S

Area at smallest part

6. 1. 0"

Area supported by each stay

345. 0"

Working pressure by rules

183

Material of Front plates at bottom

S

Thickness

1"

Material of Lower back plate

S

Thickness

3. 1/2

Greatest pitch of stays

13. 1/4

Working pressure of plate by rules

185

Diameter of tubes

3. 1/4

Pitch of tubes

4. 3/4 x 4. 1/2

Material of tube plates

S

Thickness: Front

1"

Back

3. 1/2

Mean pitch of stays

14. 1/4 x 9

Pitch across wide water spaces

14. 1/2

Working pressures by rules

182

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

7. 3/4 x 2. 1/2

Length as per rule

28"

Distance apart

10. 3/8

Number and pitch of stays in each

2, 8. 1/2

Working pressure by rules

187

Steam dome: description of joint to shell

yes

% of strength of joint

yes

Diameter

yes

Thickness of shell plates

yes

Material

yes

Description of longitudinal joint

yes

Diam. of rivet holes

yes

Pitch of rivets

yes

Working pressure of shell by rules

yes

Crown plates

yes

Thickness

yes

How stayed

yes

SUPERHEATER. Type

yes

Date of Approval of Plan

yes

Tested by Hydraulic Pressure to

yes

Date of Test

yes

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

yes

Diameter of Safety Valve

yes

Pressure to which each is adjusted

yes

Is Easing Gear fitted

yes

W403-0163

Lloyd's Register Foundation

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR.

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

The foregoing is a correct description,

MACCOLL & POLLOCK, LTD.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1919 Jan. 8, 13, 22, Feb. 19, 25, March 7, 13, 21, 25, April 4, 7, 9, 25, May 5, 13, 14, 16, 22, 23, 29, 31, June 5, July 19, 15.
During erection on board vessel - - -
Total No. of visits 24

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 4.4.19 Slides 5.3.19 Covers 25.4.19 Pistons 25.4.19 Rods 5.3.19

Connecting rods 5.3.19 Crank shaft 4.4.19 Thrust shaft 4.4.19 Tunnel shafts 4.4.19 Screw shaft 4.4.19 Propeller 14.5.19

Stern tube 25.4.19 Steam pipes tested 25.3.19, 31.5.19 Engine and boiler seatings 13.5.19 Engines holding down bolts 29.5.19

Completion of pumping arrangements 29.5.19 Boilers fixed 5.6.19 Engines tried under steam 9.7.19

Completion of fitting sea connections 13.5.19 Stern tube 13.5.19 Screw shaft and propeller 22.5.19

Main boiler safety valves adjusted 9.7.19 Thickness of adjusting washers Rostell P 3" 5 13/32". Stbd blr. - both 13/32"

Material of Crank shaft Steel Identification Mark on Do. 4559 J.R.W. Material of Thrust shaft Steel Identification Mark on Do. 2994AH

Material of Tunnel shafts Steel Identification Marks on Do. 2994AH Material of Screw shafts Steel Identification Marks on Do. 2994AH

Material of Steam Pipes Copper Test pressure 36 lbs A"

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 If so, state name of vessel C.S. Tyne

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been

built under special survey, the materials and workmanship are sound and

good and under the vessel shipfit in my opinion to have record of L.M.C. 7.19

It is submitted that this vessel is eligible for THE RECORD + LMC 7.19

The amount of Entry Fee ... £ : : When applied for, 14 JUL 1919
Special ... £ 48 : 1 : 1 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : When received, 1/24 1919

Committee's Minute TUE. 29 JUL. 1919

Assigned + Lm 6 7.19

MACHINERY CERTIFICATE WRITTEN



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