

Rpt. 4.

REPORT ON MACHINERY.

No. 27560

Date of writing Report 19 When handed in at Local Office

19 Port of

Received at London Office

THE 9-JUL-1919

Date, First Survey 6th June 1918 Last Survey 1st July 1919
(Number of Visits 58)No. in Survey held at
Reg. Book.

613 on the new steel S/S "WAR RAYNE".

Tons { Gross 3100
Net

Master

Built at

Sunderland

By whom built

R. Thompson & Sons Ltd (No 2363)

When built

1919

Engines made at

Sunderland

By whom made

North Eastern Marine Engineering Co Ltd (No 2363)

When made

1919

Boilers made at

Sunderland

By whom made

North Eastern Marine Engineering Co Ltd (No 2363)

When made

1919

Registered Horse Power

358

Is Refrigerating Machinery fitted for cargo purposes

no

Electric Light fitted

yes

Nom. Horse Power as per Section 28

No. of Cylinders

3

No. of Cranks

3

ENGINES, &c.—Description of Engines

Triple expansion

Dia. of Cylinders

25-41-68

Length of Stroke

45

Revs. per minute

76

Dia. of Screw shaft

as per rule 13.58

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

If the liner does not fit tightly at the part

in the propeller boss

yes

If the liner is in more than one length are the joints burned

yes

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

yes

Length of stern bush

5-0"

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

yes

Dia. of Tunnel shaft

as per rule 12.4

Dia. of Crank shaft journals

as per rule 13.03

Dia. of Crank pin

13.4

Size of Crank webs

8 1/2 x 20 1/2

Dia. of thrust shaft under

Total surface

75 sq ft

collars

13 1/4

Dia. of screw

16-0

Pitch of Screw

16-3

No. of Blades

4

State whether moveable

no

Can one be overhauled while the other is at work

yes

No. of Feed pumps

2

Diameter of ditto

3 1/2

Stroke

24

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2

Stroke

24

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

SIZES OF PUMPS

1 @ 1 1/2 x 21

2 @ 2 1/2 x 18

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

No. 1 hold 2 @ 3

No. 2 hold 2 @ 3

No. 3 hold 2 @ 3

In Engine Room

yes

In Engine Room

5 @ 3" (additional suction being found of sea well)

In Holds, &c.

No. 1 hold 2 @ 3

No. 2 hold 2 @ 3

No. 3 hold 2 @ 3

Tunnel well

1 @ 2 1/2"

Is a separate Donkey Suction fitted in Engine room & size

yes 3 1/2"

No. of Bilge Injections

1

sizes

11"

Connected to condenser, or to circulating pump

yes

Are the roses in Engine room always accessible

yes

Are the sluices on Engine room bulkheads always accessible

none

Are all the bilge suction pipes fitted with roses

yes

Are the roses in Engine room always accessible

yes

Are they Valves or Cocks

both

Are the Discharge Pipes above or below the deep water line

main below, all others above

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

yes

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

How are they protected

under timber boards

What pipes are carried through the bunkers

forward hold suction

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

Is a Report also sent on the Hull of the Ship?

yes

Is a Report also sent on the Hull of the Ship?

yes

BOILERS, &c.—(Letter for record)

(5)

Manufacturers of Steel

John Spencer & Sons Ltd

No. and Description of Boilers

Three single ended marine

S. P. C.

No. of Certificate

3536, 3539, 3540

Total Heating Surface of Boilers

5814 sq ft

Is Forced Draft fitted

no

Date of test

2, 25 & 28-2-19

No. of Certificate

3536, 3539, 3540

Working Pressure

180

Tested by hydraulic pressure to

360

Area of fire grate in each boiler

54 sq ft

No. and Description of Safety Valves

No. 1

No. 2

No. 3

No. 4

No. 5

No. 6

No. 7

No. 8

No. 9

No. 10

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No. 159

No

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.*

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD

Geo. D. Heer

Manufacturer.

Dates of Survey while building { During progress of work in shops -- *1918. June 6-10. September 13. 16-17. 18-30. October 8-10. 15-18. 21-23-25-29-31*
During erection on board vessel -- *Nov 18-21-23-25-27-28. Dec. 6-10-11-17-30. Jan 6-9-16-17-23-24-29. Feb 3-10-11-18-20-21-24-25-26-28*
Total No. of visits *March 3-10-20-24-28. Apr 4-10-11-14-15-24. June 4-5 July 1st* Is the approved plan of main boiler forwarded herewith *yes*
58 visits.

Dates of Examination of principal parts—Cylinders *23-11-18* Slides *6-12-18* Covers *29-10-18* Pistons *28-11-18* Rods *11-12-18*
Connecting rods *25-11-18* Crank shaft *21-11-18* Thrust shaft *21-11-18* Tunnel shafts *24-1-19* Screw shaft *3-3-19* Propeller *6-1-19*
Stern tube *10-2-19* Steam pipes tested *14-4-19* Engine and boiler seatings *26-2-19* Engines holding down bolts *10-4-19*

Completion of pumping arrangements *24-4-19* Boilers fixed *11-4-19* Engines tried under steam *24-4-19*
Completion of fitting sea connections *26-2-19* Stern tube *26-2-19* Screw shaft and propeller *20-3-19*

Main boiler safety valves adjusted *24-4-19* Thickness of adjusting washers *Roller, P 2 1/2 S 17/32; back br. br. 9/16; st. 1/16 P 1 1/2 S 17/32*

Material of Crank shaft *Steel* Identification Mark on Do *4119N. WC* Material of Thrust shaft *Steel* Identification Mark on Do *4119N. WC*

Material of Tunnel shafts *Steel* Identification Marks on Do *4119N. WC* Material of Screw shafts *Steel* Identification Marks on Do *4119N. WC*

Material of Steam Pipes *Lapwelded wrought iron* Test pressure *540 pounds per sq. in.* *4119N. WC*

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 *Standard "C" type* **(NATURAL DRAUGHT)**

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 period + LMC 4.19*

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

*Jim J.W.D. RCH
8.7.19.*

The amount of Entry Fee ... £ *68 16 3* When applied for, *7-7-1919*
Special ... £ *✓* When received, *21-7-1919*
Donkey Boiler Fee ... £ *✓*
Travelling Expenses (if any) £ *✓*

Committee's Minute *FRI. 11 JUL. 1919*

Assigned *L.M.C. 7.19.*

MACHINERY CERTIFICATE
WRITTEN.

L. H. Davis.
Engineer Surveyor to Lloyd's Register of Shipping.