

REPORT ON MACHINERY.

No. 71550

Received at London Office

TUE OCT. 22. 1918

Writing Report 20th Sept. 1918 When handed in at Local Office

19 Port of

NEWCASTLE-ON-TYNE

Survey held at Newcastle

Date, First Survey 4th July 1918 Last Survey 9th Oct. 1918

on the S.S. "War Castle"

(Number of Visits 77)

Gross 5585
Net 3558

Built at Newcastle

By whom built Northumberland S. B. Co. When built 1918

made at Newcastle

By whom made H. E. Marine Eng Co 2350 when made 1918

made at do

By whom made do 2350 when made 1918

red Horse Power

Owners The Shipping Controller Port belonging to London

Horse Power as per Section 28 619620 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

VES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Cylinders 27-45-75 Length of Stroke 54 Revs. per minute 79 Dia. of Screw shaft 15-3/4" Material of screw shaft Steel

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

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

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

are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5'-6"

Tunnel shaft as per rule 13-9/16" Dia. of Crank shaft journals as per rule 14-6/16" Dia. of Crank pin 14-7/8" Size of Crank webs 30 1/2" x 9 1/2" Dia. of thrust shaft under

14 7/8" Dia. of screw 17'-9" Pitch of Screw 16'-9" No. of Blades 4 State whether moveable No Total surface 93 ft

Feed pumps 2 (Units) Diameter of ditto 12 x 9" Stroke 21" Can one be overhauled while the other is at work Yes

Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 30" Can one be overhauled while the other is at work Yes

Donkey Engines 2 Sizes of Pumps 10 1/2" x 14" x 24", 9 1/2" x 7" x 18" No. and size of Suctions connected to both Bilge and Donkey pumps

in Room Five 3 1/2" In Holds, &c. No 1 hold 2-3 1/2", No 2 hold 2-3 1/2",

No 3 hold 2-3 1/2", No 4 hold 2-3 1/2", Tunnel Well 1-2 1/2"

Bilge Injections 2 sizes 11" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"

Are 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

connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

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 Both

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

pipes are carried through the bunkers Hold sections How are they protected Wood casing

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Examination of completion of fitting of Sea Connections 22-7-18 of Stern Tube 22-7-18 Screw shaft and Propeller 16-9-18

Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door No worked from

IRS, &c.—(Letter for record S) Manufacturers of Steel John Spence & Sons

Heating Surface of Boilers 9525 sq ft Is Forced Draft fitted Yes No. and Description of Boilers Three, single-ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 1-21-8-18 No. of Certificate 1-9137

Can boiler be worked separately Yes Area of fire grate in each boiler 73.4 sq ft No. and Description of Safety Valves to

each 200 lbs Area of each valve 12.56 sq in Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Distance between boilers or uptakes and bunkers or woodwork 2'-9" Mean dia. of boilers 16'-0" Length 2'-5 13/32" Material of shell plates Steel

Forecast 15 1/2" Range of tensile strength 28 3/4 - 33 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams S. Lap

ms S.B.S. & Riv Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 20 1/2"

ages of strength of longitudinal joint rivets 88-6 plate 88-5-5 Working pressure of shell by rules 191 lbs Size of manhole in shell 16 x 12

compensating ring Flanged No. and Description of Furnaces in each boiler 4, Brighton Material Steel Outside diameter 43"

of plain part top Thickness of plates crown 17 Description of longitudinal joint Welded No. of strengthening rings 1

pressure of furnace by the rules 190 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32 Back 3/4 Top 23/32 Bottom 7/8

stays to ditto: Sides 10 1/2" x 8 3/4" Back 10" x 9 13/16" Top 10 1/2" x 8 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 198 lbs

of stays Steel Diameter at smallest part 2.03" Area supported by each stay 88.59 sq in Working pressure by rules 206 lbs End plates in steam space:

Steel Thickness 17/16" Pitch of stays 23 1/2" x 22 1/2" How are stays secured In L W Working pressure by rules 185 lbs Material of stays Steel

at smallest part 9.62" Area supported by each stay 52.8 sq in Working pressure by rules 189 lbs Material of Front plates at bottom Steel

31/32" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 13 5/8" Working pressure of plate by rules 187 lbs

of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 5/8" Material of tube plates Steel Thickness: Front 31/32 Back 3/4 Mean pitch of stays 9 1/4"

cross wide water spaces 13 5/8" Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and

of girder at centre 10 1/2" x 1 3/4" Length as per rule 36 1/2" Distance apart 10 1/8" Number and pitch of stays in each 3-8 3/4"

pressure by rules 200 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked

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

ed with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— Two top end, two bottom end & two main bearing bolts & nuts, a set of coupling bolts, a set of feed & bidge pump valves, a quantity of assorted bolts nuts & washers & a propeller

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

J. J. Harrison

Manufacturer.

Dates of Survey while building
During progress of work in shops: Feb. 4-6-8-11-13-14-21 Mar. 4-5-6-7-8-12-14-15-19-20-26-27-28 Apr. 8-9-10-11-12-15-16-17-18
During erection on board vessel: 22-23-29-30 May. 1-2-3-6-7-8-10-13-14-15-17-21-31 Jun. 13-18-20 Jul. 1-8-16-22-23-24-30
Total No. of visits: 77

Is the approved plan of main boiler forwarded herewith yes

donkey

Dates of Examination of principal parts—Cylinders 18-6-18 Slides 22-8-18 Covers 17-5-18 Pistons 15-5-18 Rods 6-5-18
Connecting rods 6-5-18 Crank shaft 15-5-18 Thrust shaft 15-4-18 Tunnel shafts 14-5-18 Screw shaft 7-5-18 Propeller 20-8-18
Stern tube 1-7-18 Steam pipes tested 16-9-18 Engine and boiler seatings 22-7-18 Engines holding down bolts 16-9-18
Completion of pumping arrangements 20-9-18 Boilers fixed 16-9-18 Engines tried under steam 20-9-18
Main boiler safety valves adjusted 20-9-18 Thickness of adjusting washers P.B. $\frac{5}{16}$ S $\frac{3}{4}$ C.B. $\frac{1}{4}$ S $\frac{9}{16}$ S.B. $\frac{5}{16}$ S $\frac{3}{4}$
Material of Crank shaft Steel Identification Mark on Do. J. H. 5-18 Material of Thrust shaft Steel Identification Mark on Do. J. H. 4-18
Material of Tunnel shafts Steel Identification Marks on Do. J. H. 5-18 Material of Screw shafts Steel Identification Marks on Do. J. H. 5-18
Material of Steam Pipes Iron Test pressure 540 lbs.

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 Standard F.I.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines & boiler of this vessel have been constructed under special survey & the materials & workmanship are found to be good. The engines have been tried under steam & the boiler safety valves adjusted at the working pressure. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of + LMC 9-18. A report on the electric installation will be forwarded when received from the Electricians.

The vessel is fitted for carrying oil fuel in the double bottom
FP above 150° F in accordance with the requirements for standard vessels

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 10.18 F.D.

The amount of Entry Fee

Special

Donkey Boiler Fee

Travelling Expenses (if any)

When applied for,

10 OCT 1918

When received,

18 OCT 1918

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

Committee's Minute

Assigned

FRI OCT 25 1918

+ LMC 10.18

WRITTEN.

Signal Letter
Official No.

142,66

No., Date, and

Whether British or Foreign Built.

British

Number of Decks

Number of Masts

Rigged

Stern

Build

Galleries

Head

Framework and des

vessel

Number of Bulkheads

Number of water ball

and their capacity

Total to quarter the depth from

to bottom of keel

No. of sets of Engines.

Description of Engines.

One

No. of Shafts.

One

GROSS

Under Tonnage Deck

Space or spaces between

Turret or Trunk

Forecastle

Bridge space

Poop or Break

Side Houses

Deck Houses

Chart House

Spaces for machinery

Section 78 (2) of the

1894

Excess of Hatchways

Gross Tonnage

Deductions, as per Co

Registered T

NOTE 1.—The tonnage of

Deck for prop

NOTE 2.—The underment

Open to

Passenger

Name of Ma

No. of Owners

Name, Residence, and

Ship

Dated 4th

(74343) Wt. 19793 7



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