

REPORT ON MACHINERY.

No. 27224

WED. 1-MAY. 1918

Received at London Office

Port of Sunderland

30 APR. 1918

in Survey held at Sunderland

Date, First Survey 12 Oct 1917

Last Survey 2-4-1918

on the new steel S/S "WAR LOCH"

Number of Visits 27

Gross 2950

Master W. T. Hall Built at Stockton

By whom built W. Craig Taylor & Co. Ltd. (S/S No 198)

When built 1918

Engines made at Sunderland

By whom made North Eastern Marine Eng. Co. Ltd. (No. 2329)

when made 1918

Boilers made at Sunderland

By whom made North Eastern Marine Eng. Co. Ltd. (No. 2329)

when made 1918

Registered Horse Power

Owners The Shipping Controller (J. Chadwick & Son) Port belonging to London

Net Horse Power as per Section 28 430

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

GINES, &c.—Description of Engines Triple expansion

No. of Cylinders 3

No. of Cranks 3

dia. of Cylinders 15-41-68 Length of Stroke 45

Revs. per minute 80

Dia. of Screw shaft as per rule 13.58

Material of Scrap Iron

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 no

If the liner does not fit tightly at the part no

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

If two no

Are the liners are fitted, is the shaft lapped or protected between the liners no

Length of stern bush 5-0"

dia. of Tunnel shaft as per rule 12.4"

Dia. of Crank shaft journals as per rule 13.05"

Dia. of Crank pin 13 1/4"

Size of Crank webs 8 1/2" x 2 1/2"

dia. of Thrust shaft under 13 1/2"

Dia. of screw 16-0"

Pitch of Screw 16-5"

No. of Blades 4 State whether moveable no Total surface 75 sq ft

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 @ 10 1/2" x 21", 2 @ 9 1/2" x 18" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 4 @ 3" In Holds, &c. 2 @ 3" each hold except aftermost where

2 @ 2 1/2" on @ 3 1/2" Tunnel Well on @ 2 1/2"

No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump 6.P. 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 main discharge below, all others 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

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 12.3.18 of Stern Tube A-A-18 Screw shaft and Propeller A-A-18

Is the Screw Shaft Tunnel watertight see hull R.M. Is it fitted with a watertight door no entered worked from deck by trunk

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

Total Heating Surface of Boilers 6304 sq ft Is Forced Draft fitted yes No. and Description of Boilers three single ended marine

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 6-2-18 No. of Certificate 3406

Can each boiler be worked separately yes Area of fire grate in each boiler 51 sq ft No. and Description of Safety Valves to

each boiler two, direct spring Area of each valve 8.29 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 5-0" Mean dia. of boilers 14-0" Length 11-8 5/16" Material of shell plates Steel

Thickness 1 1/8" Range of tensile strength 28 3/4 - 33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams WR

g. seams WBS, TR Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 1-6"

Percentages of strength of longitudinal joint 86.1 Working pressure of shell by rules 187.1 Size of manhole in shell 16 x 12"

Are compensating ring flanged No. and Description of Furnaces in each boiler 3 Weighton Material Steel Outside diameter 3-7"

Length of plain part top 14" Thickness of plates bottom 13 1/2" Description of longitudinal joint welded No. of strengthening rings yes

Working pressure of furnace by the rules 190 Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 3/4" Top 1/16" Bottom 1/16"

Pitch of stays to ditto: Sides 9 3/8" x 9" Back 9" x 10 1/2" Top 9" x 9 3/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 194

Material of stays Steel Diameter at smallest part 2.03" Area supported by each stay 94.5 sq in Working pressure by rules 216 End plates in steam space:

Material Steel Thickness 1 1/32" Pitch of stays 13 3/4" x 19 1/2" How are stays secured Nuts Working pressure by rules 181 Material of stays Steel

Diameter at smallest part 8.29" Area supported by each stay 464 sq in Working pressure by rules 186 Material of Front plates at bottom Steel

Thickness 3/32" Material of Lower back plate Steel Thickness 3/32" Greatest pitch of stays 13 1/2" x 9" Working pressure of plate by rules 185

Diameter of tubes 2 3/4" Pitch of tubes 4" x 4" Material of tube plates Steel Thickness: Front 3/32" Back 3/4" Mean pitch of stays 10"

Pitch across wide water spaces 13 1/2" Working pressures by rules 184 Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 10 1/2" x 3 1/4" Length as per rule 2-11 1/2" Distance apart 9 3/8" Number and pitch of stays in each 3 @ 9"

Working pressure by rules 200 Superheater or Steam chest; how connected to boiler 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

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

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

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

W1030-0182



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, bilge and air 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 Weir

Manufacturer.

Manager.

Dates of Survey while building: During progress of work in shops - 1917 Oct 12, 19, 21, 23, 27, Nov 9, 12, 14, 21, Dec 13, 28, Jan 16, 18, 22, 28, Feb 17, 4, 5, 6, 7, 12, 14, 18, 21. During erection on board vessel - Mar 4, 12, 27, Apr 4, 16, 18, 19, 24, At. Indl. Mar 12, May 1, 7, 9, 16, 23, 24, 27. Total No. of visits *11*

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

" " " donkey " " " *yes*

Dates of Examination of principal parts - Cylinders 12-11-17 Slides 18-2-18 Covers 22-1-18 Pistons 2-2-18 Rods 4-2-18 Connecting rods 5-2-18 Crank shaft 18-1-18 Thrust shaft 1-2-18 Tunnel shafts 5-2-18 Screw shaft 4-3-18 Propeller 28-1-18 Stern tube 27-3-18 Steam pipes tested 19-4-18 Engine and boiler seatings 12-9-18 Engines holding down bolts 16-4-18 Completion of pumping arrangements *see note* 24-4-18 & 23-5-18 Boilers fixed 18-4-18 Engines tried under steam 24-4-18 Main boiler safety valves adjusted 24-4-18 Thickness of adjusting washers Port. br $P\frac{5}{16}$, S $\frac{3}{8}$, Centre br both $\frac{3}{8}$, Std br $P\frac{3}{16}$, S $\frac{5}{16}$. Material of Crank shaft *Steel* Identification Mark on Do. 3092N WC Material of Thrust shaft *Steel* Identification Mark on Do. 3092N WC Material of Tunnel shafts *See note* Identification Marks on Do. 3449 WL Material of Screw shafts *See note* Identification Marks on Do. 3449 WC Material of Steam Pipes *lapwelded wrought iron* Test pressure 540 lbs per sq in 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*

General Remarks (State quality of workmanship, opinions as to class, &c.)

To complete the survey the tunnel requires to be made watertight and the hold and tunnel sections to be fitted. The vessel has left for the builders yard to finish. Middlesex surveyors advised. Hold and tunnel sections fitted and survey satisfactorily completed - *W.M.*

The material and workmanship is good. The machinery has been constructed under special survey and is eligible in my opinion for classification and the record + LMC 5.18. when the survey is complete.

This vessel is fitted with Electric Light and "Winders" *W.M.*

It is submitted that this vessel is eligible for THE RECORD + LMC 5.18. F.D.

W.D.
14/6/18.

The amount of Entry Fee ... £ : : When applied for, Special ... £ 69:6:8 5/6/1918. Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 22-6-18

J. H. Davis & Wm Morrison
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRIDAY JUN 1918*
Assigned *+ LMC 5.18 F.D.*

SUNDERLAND

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

MACHINERY CERTIFICATE WRITTEN



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