

REPORT ON MACHINERY.

Newcastle Report No 71957

No. 27588
WED. 4 JUN. 1919

Received at London Office

Form of writing Report

19

When handed in at Local Office - 3 JUN 1919

Port of Sunderland

Survey held at Sunderland

Date, First Survey 22 May 1918

Last Survey 24 May 1919

Book No. 15 on the new steel S/S "AYMERIC"

(Number of Visits)

Master Smith Built at Sunderland By whom built R. Thompson & Sons Ltd (No. 307)

Tons { Gross 5250 5196
Net 5200 3157

Engines made at Sunderland By whom made North Eastern Marine Engineering Co. Ltd (No. 2343) when made 1919

Boilers made at Sunderland By whom made North Eastern Marine Engineering Co. Ltd (No. 2343) when made 1919

Registered Horse Power _____ Owners The Shipping Controller (Woods Taylor & Brown) Port belonging to London

Net Horse Power as per Section 28 517 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

No. of Cylinders 27-44-73 Length of Stroke 48 Revs. per minute 75 Dia. of Screw shaft as per rule 15.39 Material of 9. Steel

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

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

shafts are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 5-0 1/2

No. of Tunnel shaft as per rule 13.32 Dia. of Crank shaft journals as per rule 14 Dia. of Crank pin 1-2 1/2 Size of Crank webs 10 1/2 x 9 Dia. of thrust shaft under

bars 1-2 3/4 Dia. of screw 17-6 Pitch of Screw 16-6 No. of Blades 4 State whether moveable no Total surface 98.2 sq ft

No. of Feed pumps 2 Diameter of ditto 4 Stroke 2-0 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 Stroke 2-0 Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 20 9/16 x 7 x 18. 1 @ 10 1/2 x 14 x 24 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 4 @ 3 1/2 In Holds, &c. No. 1 hold - 2 @ 3 1/2. No. 2 hold - 2 @ 3 1/2

No. of Bilge Injections 1 sizes 13 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 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 the pipes carried through the bunkers forward hold suction How are they protected under limber 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

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door no worked from access by trunk from deck.

MANUFACTURERS, &c.—(Letter for record (5)) Manufacturers of Steel John Spencer & Sons Ltd.

Total Heating Surface of Boilers 76680 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 27-11-18, 30-11-18, 6-12-18 No. of Certificate 3512, 3514, 3518

Can each boiler be worked separately yes Area of fire grate in each boiler 63 sq ft No. and Description of Safety Valves to

each boiler two direct spring Area of each valve 9.60 Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 1-8 Mean dia. of boilers 15-6 Length 11-8 5/16 Material of shell plates steel

Thickness 1 1/4 Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR.

Longitudinal seams DRS, TR Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 9 1/8 Lap of plates or width of butt straps 1-8 1/2

Percentages of strength of longitudinal joint rivets 85.5 Working pressure of shell by rules 182 Size of manhole in shell 16 x 12

Material of compensating ring flanged No. and Description of Furnaces in each boiler 3 Deighton Material steel Outside diameter 4-2 3/16

Length of plain part top 7-19 Thickness of plates crown 3/32 Description of longitudinal joint welded No. of strengthening rings yes

Working pressure of furnace by the rules 188 Combustion chamber plates: Material steel Thickness: Sides 25/32 Back 25/32 Top 25/32 Bottom 25/32

Distance of stays to ditto: Sides 10 3/8 x 10 3/8 Back 11 1/8 x 9 1/2 Top 10 3/8 x 10 3/8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays steel Area at smallest part 2.360 Area supported by each stay 112.60 Working pressure by rules 187 End plates in steam space:

Material steel Thickness 1 1/2 Pitch of stays 21 x 21 1/4 How are stays secured DN&W Working pressure by rules 187 Material of stays steel

Area at smallest part 7.980 Area supported by each stay 4560 Working pressure by rules 182 Material of Front plates at bottom steel

Thickness 3/32 Material of Lower back plate steel Thickness 7/8 Greatest pitch of stays 13 3/4 x 9 1/2 Working pressure of plate by rules 190

Diameter of tubes 2 3/4 Pitch of tubes 4 x 3 1/8 Material of tube plates steel Thickness: Front 3/32 Back 3/4 Mean pitch of stays 9 13/16

Distance across wide water spaces 1-1 1/2 Working pressures by rules 181 Girders to Chamber tops: Material steel Depth and

Thickness of girder at centre 20 9/16 x 7/8 Length as per rule 35 1/2 Distance apart 10 3/8 Number and pitch of stays in each 2 @ 10 3/8

Working pressure by rules 180 Steam dome: description of joint to shell none % of strength of joint

Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____

Material of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

SUPERHEATER. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____

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

Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is Easing Gear fitted _____

W1166-0210

Lloyd's Register Foundation

IF THE SURVIVORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.

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 and one screw shaft.*

The foregoing is a correct description,
FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD

Geo. D. War Manufacturer.
Manager.

Dates of Survey while building
During progress of work in shops -- *1918 May 22, 27, 30 Jun 3, 4, 7, 11, 17, 19, 21 Jul 1, 2, 16, 17 Aug 2, 7, 8, 12, 13, 14, 16, 20 Sep 2, 6, 11, 13, 14, 17, 18, 25, 30*
During erection on board vessel --- *Oct. 1, 10, 14, 15, 18, 21, 23, 25, 29, 31 Nov 4, 26, 27, 30 Dec. 5, 6, 9, 10, 11, 13, 16, 17, 23 Jan 6, 7, 9, 13, 14, 16, 17, 18, 20, 27 Feb 1*
Total No. of visits *Mar 2, 7, 11 Apr 2* Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders *9-8-18* Slides *28-8-18* Covers *13-8-18* Pistons *12-8-18* Rods *13-9-18*
Connecting rods *16-7-18* Crank shaft *11-9-18* Thrust shaft *11-9-18* Tunnel shafts *14-9-18* Screw shaft *9-12-18* Propeller *1-10-18*
Stern tube *30-9-18* Steam pipes tested *13-1-19* Engine and boiler seatings *29-10-18* Engines holding down bolts *14-1-19*
Completion of pumping arrangements *1-2-19* Boilers fixed *14-1-19* Engines tried under steam *18-1-19*
Completion of fitting sea connections *5-12-18* Stern tube *13-12-18* Screw shaft and propeller *24-12-18*
Main boiler safety valves adjusted *18-1-19* Thickness of adjusting washers *Port boiler - P 3/8, 5/16; Centre boiler - P 3/8, 5/16; Starboard boiler - both 5/16.*

Material of Crank shaft *Steel* Identification Mark on Do. *3605N WC* Material of Thrust shaft *Steel* Identification Mark on Do. *3605N WC*
Material of Tunnel shafts *Steel* Identification Marks on Do. *3605N WC* Material of Screw shaft *Steel* Identification Marks on Do. *3605N WC*
Material of Steam Pipes *Lapwelded wrought iron* Test pressure *540 lbs per sq in*

Is an installation fitted for burning oil fuel *no yes* Is the flash point of the oil to be used over 150° F. *yes*
Have the requirements of Section 49 of the Rules been complied with *yes*
Is this machinery duplicate of a previous case *yes* If so, state name of vessel *Standard "A" type*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The material and workmanship are good. The machinery has been constructed under special survey and is eligible in my opinion for classification and the record + LMC 5.19. Fitted for burning oil fuel. above 150° F. The vessel has left for the Type where it is stated an installation is to be fitted for burning oil fuel. Newcastle Surveyors advised. oil fuel. Installation, tested under working conditions & found satisfactory.

It is submitted that this vessel is eligible for THE RECORD, + LMC 5.19. F.D.
Fitted for oil fuel 5.19. F.P. above 150°

The amount of Entry Fee ... £ : : When applied for,
Special ... £ *115: 9 4* *28 MAY 1919*
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : *20/6* 19. 19. 19

L. G. Skallerross
L. G. Skallerross
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE. 17 JUN. 1919*
+ LMC 5.19. F.D.
Fitted for oil fuel 5.19 F.P. above 150° F.

