

REPORT ON MACHINERY.

No. 69255

Received at London Office

FRI. 13 OCT. 1916

Date of writing Report 10th Oct. 1916 When handed in at Local Office

10 OCT 1916

Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle
Reg. Book.

Date, First Survey 19 Aug 1916 Last Survey 6 Oct 1916

(Number of Vessels)

Gross

Net

Master Built at Alloa By whom built Louth & B. & Co. Ltd. When built 1911

Engines made at Newcastle By whom made N. E. Marine Eng Co. when made 1916

Boilers made at do By whom made do when made 1916

Registered Horse Power Owners Gascoyne & Co. Ltd. Port belonging to London

Nom. Horse Power as per Section 28 207 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

Dia. of Cylinders 20" 33" 54" Length of Stroke 36" Revs. per minute 28 Dia. of Screw shaft as per rule 11 3/8" Material of screw shaft as fitted 12 3/8" screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner Is the after end of the liner made water tight in the propeller boss 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 If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 4' 6"

Dia. of Tunnel shaft as per rule 9 3/4" Dia. of Crank shaft journals as per rule 10 4 3/8" Dia. of Crank pin 10 5/8" Size of Crank webs 17 x 6 5/8" Dia. of thrust shaft under collars 10 5/8" Dia. of screw 14' 0" Pitch of Screw 14' 0" No. of Blades 4 State whether moveable No Total surface 62 sq

No. of Feed pumps 2 Diameter of ditto 3" 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 7 1/2" x 9 1/2" x 10 1/2" + 5 1/4" x 3 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three — 3" In Holds, &c. No hold 2-2 1/2" Aft hold 3-2 1/2"

Luminal Valve 1-2 1/4"

No. of Bilge Injections 1 size 6" Connected to condenser or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3"

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 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 None How are they protected

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 28.8.16 of Stern Tube 12.9.16 Screw shaft and Propeller 12.9.16

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Lap platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spence & Co.

Total Heating Surface of Boilers 3438 sq Is Forced Draft fitted No No. and Description of Boilers Two, single-ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 17.8.16 No. of Certificate 8887

Can each boiler be worked separately Yes Area of fire grate in each boiler 50.1 sq No. and Description of Safety Valves to

each boiler Two, spring Area of each valve 5.94 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 32" Mean dia. of boilers 13' 6" Length 11' 0" Material of shell plates Steel

Thickness 1 3/32" Range of tensile strength 28 3/4 — 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 8 Lap

long. seams 11BS & Riv Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 1/8" Lap of plates or width of butt straps 17 3/4"

Per centages of strength of longitudinal joint rivets 92.6 Working pressure of shell by rules 184 lbs Size of manhole in shell 16" x 12"

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3, heighten Material Steel Outside diameter 39"

Length of plain part top Thickness of plates crown 1 1/2" Description of longitudinal joint Welded No. of strengthening rings

bottom Thickness of plates bottom 1 1/2" Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 193 lbs Combustion chamber plates: Material Steel Thickness: Sides 13/32" Back 13/32" Top 13/32" Bottom 7/8"

Pitch of stays to ditto: Sides 10 1/4" x 9" Back 9 3/4" x 9 1/2" Top 10 1/4" x 9" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 197 lbs End plates in steam space:

Material of stays Steel Diameter at smallest part 2.03" Area supported by each stay 92 1/4 sq Working pressure by rules 180 lbs Material of stays Steel

Material Steel Thickness 1 3/8" Pitch of stays 25" x 19" How are stays secured & N. U. Working pressure by rules 180 lbs Material of stays Steel

Diameter at smallest part 8.29" Area supported by each stay 475 sq Working pressure by rules 182 lbs Material of Front plates at bottom Steel

Thickness 1" Material of Lower back plate Steel Thickness 29/32" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 186 lbs

Diameter of tubes 3 1/4" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 9 1/2"

Pitch across wide water spaces 14 1/2" Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 8 5/16" x 1 3/4" Length as per rule 31" Distance apart 10 1/2" Number and pitch of stays in each 2-9"

Working pressure by rules 182 lbs Superheater or Steam chest; how connected to boiler None Can the superheaters 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

If 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

W941-0151

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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, one set of coupling bolts & nuts, a set of feed & bilge pump valves, a quantity of assorted bolts nuts & washers, a screw shaft, 1 air & 1 circulating pump rods, 1 feed & 1 bilge pump frame 1 H.P. slide valve spindle, 1 eccentric strap, 3 boiler tubes, 6 condenser tubes.

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

G. Harrison Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1914 Aug. 19-21-24-31. Sep. 2-9-25-29. Oct. 6-19. Dec. 13. 1915 Apr. 19. May 26-31. Jun. 5-19-20. Jul. 17-21-25
{ During erection on board vessel -- } Aug. 4-8-9-10-15-17-18-22. Sep. 4-5-25-26-28-29. Oct. 2-6.
Total No. of visits 36

Is the approved plan of main boiler forwarded herewith ☒ Yes

" " " " " donkey " " " " ☒

Dates of Examination of principal parts—Cylinders 9-9-14 Slides 4-9-16 Covers 9-9-16 Pistons 3-12-14 Rods 9-8-16

Connecting rods 9-8-16 Crank shaft 21-7-16 Thrust shaft 29-9-14 Tunnel shafts 31-8-14 Screw shaft 18-8-16 Propeller 25-7-16

Stern tube 11-8-16 Steam pipes tested 25-9-16 Engine and boiler seatings 22-8-16 Engines holding down bolts 25-9-16

Completion of pumping arrangements 6-10-16 Boilers fixed 25-9-16 Engines tried under steam 29-9-16

Main boiler safety valves adjusted 29-9-16 Thickness of adjusting washers PB. P $\frac{11}{32}$ S $\frac{17}{32}$ SB. P $\frac{1}{2}$ S $\frac{13}{32}$

Material of Crank shaft Steel Identification Mark on Do. L & 7-16 Material of Thrust shaft Steel Identification Mark on Do. CC 9-14

Material of Tunnel shafts L & L Identification Marks on Do. CC 8-14 Material of Screw shafts Iron Identification Marks on Do. L & 8-16

Material of Steam Pipes Copper Test pressure 360 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 ☒

General Remarks (State quality of workmanship, opinions as to class, &c. The engines & boilers 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 safety valves adjusted at the working pressure. The machinery is now in good & safe working condition & eligible in our opinion to have the notation of + LMC 10-16.

A report on the electric installation will be forwarded when received from the electricians.

The pumping plan is returned herewith

It is submitted that
this vessel is eligible for
THE RECORD + LMC 10-16.

J. W. D.
13/10/16

G. R. S.

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for,

Special ... £ 30 : 7 : 0 1.1 OCT 1916

Donkey Boiler Fee ... £ 4 : 0 : 0 When received,

Travelling Expenses (if any) £ 1 : 0 : 0 29/10/16

Committee's Minute FRI. 27 OCT. 1916

Assigned

+ LMC 10-16

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



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MACHINERY CERTIFICATE
WRITTEN.