

# REPORT ON MACHINERY.

No. 66141  
TUE. MAY. 26. 1914

Received at London Office

Date of writing Report

19

When handed in at Local Office

MAY 25 1914

Port of

NEWCASTLE-ON-TYNE.

No. in Survey held at

South Shields

Date, First Survey

9th Jan 1914

Last Survey

21st May 1914

Reg. Book.

70 on the

S.S. LINKMOOR

(Number of Visits 35

Tons { Gross 4305.89

Net 2746.36

Master

Built at South Shields

By whom built J. Readhead & Sons Ltd.

When built 1914

Engines made at South Shields

By whom made J. Readhead & Sons Ltd.

when made 1914

Boilers made at South Shields

By whom made J. Readhead & Sons Ltd.

when made 1914

Registered Horse Power

Owners Moor Line Ltd. (N. Rumanian Co.)

Port belonging to London

Nom. Horse Power as per Section 28 386

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted No.

**ENGINES, &c.**—Description of Engines Triple Expansion Surface Condensing No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 26"-42"-69" Length of Stroke 48" Revs. per minute Dia. of Screw shaft as per rule 14.44" Material of screw shaft as fitted 14 1/2" screw shaft 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 in 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 liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 4'-10"

Dia. of Tunnel shaft as per rule 12.93" Dia. of Crank shaft journals as per rule 13.57" Dia. of Crank pin 13 3/4" Size of Crank webs 9"x18" Dia. of thrust shaft under collars 14 1/2" Dia. of screw 17'-6" Pitch of Screw 16'-6" to 18'-6" No. of Blades 4 State whether moveable No. Total surface 87 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 4 3/8" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps Duplex Ballast 8"x8"x8" No. and size of Suctions connected to both Bilge and Donkey pumps 7"x4"x7" 7"x4"x7" 7"x4"x7"

In Engine Room 3. Pul 3 1/2" Centre 3 1/2" Starboard 3 1/2" In Holds, &c. 9- nos. 1. 2. 3. & 4 Holds Port & Starboard 3 1/2" dia also tunnel well suction, 2 1/2" dia.

No. of Bilge Injections 1 sizes 5/2" Connected to condenser, or to circulating pump pumps Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2" dia

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 as applicable 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 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 No. see appx plan

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 9-4-14 of Stern Tube 9-4-14 Screw shaft and Propeller 22-4-14

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top of funnel

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

Total Heating Surface of Boilers 6330.48 sq ft Is Forced Draft fitted No. No. and Description of Boilers 2. S.E. Multitubular

Working Pressure 180 lbs sq in Tested by hydraulic pressure to 360 lbs sq in Date of test 21.4.14 No. of Certificate 8645

Can each boiler be worked separately Yes Area of fire grate in each boiler 68.36 sq ft No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 7.970" Pressure to which they are adjusted 185 lbs sq in Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 17'-19" Length 11'-6" Material of shell plates Steel

Thickness 1 3/8" Range of tensile strength 25/32 lb Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. Lap long. seams 2 R. D. B. Diameter of rivet holes in long. seams 1 7/8" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 1'-9 3/4"

Per centages of strength of longitudinal joint rivets 85.1 plate 85.3 Working pressure of shell by rules 182 Size of manhole in shell 12"x16"

Size of compensating ring 7"x1 3/8" No. and Description of Furnaces in each boiler 3 Deighton Material Steel Outside diameter 4'-3"

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

Working pressure of furnace by the rules 185 Combustion chamber plates: Material Steel Thickness: Sides 3/32" Back 3/32" Top 3/32" Bottom 1"

Pitch of stays to ditto: Sides 9"x10" Back 9 1/2"x9 1/2" Top 9"x10" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 191

Material of stays Iron Diameter at smallest part 2.310" Area supported by each stay 9320" Working pressure by rules 182 End plates in steam space:

Material Steel Thickness 1 7/8" Pitch of stays 1'-9"x2'-1" How are stays secured DN + Washers Working pressure by rules 194 Material of stays Steel

Diameter at smallest part 9.82" Area supported by each stay 5750" Working pressure by rules 194 Material of Front plates at bottom Steel

Thickness 7/8" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 13"x9 1/2" Working pressure of plate by rules 363

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 9 1/2"

Pitch across wide water spaces 14" Working pressures by rules 244 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/2"x2" Length as per rule 2'-6" Distance apart 10" Number and pitch of stays in each 2. 9"

Working pressure by rules 230 Superheater or Steam chest; how connected to boiler None 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

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



IS A DONKEY BOILER FITTED? *Yes* If so, is a report now forwarded? *Yes*  
 SPARE GEAR. State the articles supplied: - 2 Top End Bolts nuts, 2 Bottom End Bolts nuts - 2 main Bearing Bolts  
 1 set Coupling Bolts, 1 set of Dead shaft Pump Valves, One propeller, one propeller shaft, 1 set Valve Spindle  
 a quantity of assorted bolts nuts - none of various sizes.

The foregoing is a correct description,

Manufacturer: *John Readhead & Sons, Limited*  
*John Readhead*

Dates of Survey while building  
 During progress of work in shops - 1914 Jan. 9, 12, 15, 19, 27, 28, Feb. 5, 12, 18, 19, 23, 26, Mar. 9, 16, 17, 19, 20, 27, 31, Apr. 1, 2, 7, 8, 9, 16, 17  
 During erection on board vessel - 21, 22, 24, May 5, 6, 11, 12, 19, 21  
 Total No. of visits 35  
 Is the approved plan of main boiler forwarded herewith *Yes*  
 " " " donkey " " " *Yes*

Dates of Examination of principal parts - Cylinders 27-1-14 Slides 19-2-14 Covers 27-3-14 Pistons 19-2-14 Rods 16-3-14  
 Connecting rods 28-1-14 Crank shaft 16-3-14 Thrust shaft 9-4-14 Tunnel shafts 9-4-14 Screw shaft 9-4-14 Propeller 9-4-14  
 Stern tube 20-3-14 Steam pipes tested 5-4-14 Engine and boiler seatings 17-4-14 Engines holding down bolts 6-5-14  
 Completion of pumping arrangements 11-5-14 Boilers fixed 6-5-14 Engines tried under steam 12-5-14  
 Main boiler safety valves adjusted 12-5-14 Thickness of adjusting washers Pat Boils 5 1/32" Stan Boils 5 3/8"  
 Material of Crank shaft *S.M. Steel* Identification Mark on Do. *110 A-L* Material of Thrust shaft *Steel* Identification Mark on Do. *53 R.L.A.*  
 Material of Tunnel shafts *Scrap Steel* Identification Marks on Do. *5910R.L.A.* Material of Screw shafts *Scrap Iron* Identification Marks on Do. *5910R.L.A.*  
 Material of Steam Pipes *Solid Drawn Copper 5 1/2" dia. wall 5/16"* 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 *Yes* If so, state name of vessel *S.S. "ROSEMOOR"*

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*The Engines and Boilers of this vessel have been constructed under Special Survey. The materials and workmanship are sound and good. The Engines and auxiliary machinery have been tried under steam. The safety valves have been adjusted to the working pressure under steam. The machinery is now in good safe working condition & is eligible, in my opinion to have the notation L.M.C. 5:14 in the Register Book*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 5. 14.

*R. Lee Ames*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee ... £ 3 : - :  
 Special ... £ 39 : 6 :  
 Donkey Boiler Fee ... £ 2 : 2 :  
 Travelling Expenses (if any) £ - : - :  
 When applied for, MAY 25 1914  
 When received, 27. 5. 14

Committee's Minute FRI. MAY. 29. 1914  
 Assigned + L.M.C. 5. 14

NEWCASTLE-ON-TYNE.

