

REPORT ON MACHINERY.

Received at London Office

Date of writing Report 19 When handed in at Local Office 10th June 1919 Port of NEWCASTLE-ON-TYNE

No. in Survey held at South Shields Date, First Survey 8th Oct 1917 Last Survey 19th May 1919
Reg. Book. on the S.S. "Dennistoun" (Number of Vests 53) Gross 5294 Net 3255

Master Thompson Built at South Shields By whom built J. Readhead & Son When built 1919

Engines made at South Shields By whom made J. Readhead & Son when made 1919

Boilers made at South Shields By whom made J. Readhead & Son when made 1919

Registered Horse Power Owners Shankland Russell & Co. Port belonging to Newcastle

Nom. Horse Power as per Section 28 513 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 27 44 73 Length of Stroke 48 Revs. per minute 77 Dia. of Screw shaft as per rule 14.66 as fitted 15.5 Material of screw shaft 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 Yes Length of stern bush 5'-0 1/2

Dia. of Tunnel shaft as per rule 13.384 as fitted 13 1/2 Dia. of Crank shaft journals as per rule 14 1/2 as fitted 14 1/2 Dia. of Crank pin 14 1/2 Size of Crank webs 9 x 2 1/2 Dia. of thrust shaft under

collars 14 3/4 Dia. of screw 17'-6" Pitch of Screw 16'-6" No. of Blades 4 State whether moveable Steel Total surface 95.2 sq ft

No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines Three Sizes of Pumps General service 9 1/2 x 7 x 15 Ballast 10 1/2 x 14 x 24 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 3 1/2" diameter In Holds, &c. Two 3 1/2" in Nos. 1, 2, & 3 holds & Cross

bunker one 3 1/2" in No. 4 hold and one 3" in tunnel well

No. of Bilge Injections One sizes 13" Connected to condenser, or to circulating pump pump 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 Yes

Are all connections with the sea direct on the skin of the ship Yes on recess on ship's side 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 Forward bilge pipes How are they protected Wood casing

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 of Stern Tube Screw shaft and Propeller

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

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Son Ltd

Total Heating Surface of Boilers 7863 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 3 Single Ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 20/12/18 No. of Certificate 9201

Can each boiler be worked separately Yes Area of fire grate in each boiler 63.3 sq ft No. and Description of Safety Valves to

each boiler Two direct Area of each valve 9.62" 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 2'-4" Mean dia. of boilers 15'-6" Length 11'-6" 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 2 R Lap.

long. seams 6 R Butte Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9/8" Lap of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 88.3 plate 85.6 Working pressure of shell by rules 182 lbs Size of manhole in shell 16 x 12

Size of compensating ring flanged spigot No. and Description of Furnaces in each boiler 3 Daughlin Material Steel Outside diameter 50 3/16"

Length of plain part top bottom Thickness of plates crown bottom 19/32 Description of longitudinal joint Welded No. of strengthening rings 1

Working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32 Back 7/16 Top 23/32 Bottom 1"

Pitch of stays to ditto: Sides 10 5/8 x 9/4 Back 10 1/4 x 8 3/4 Top 10 5/8 x 9/4 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 181 lbs

Material of stays Steel Diameter at smallest part 2.75" Area supported by each stay 104" Working pressure by rules 219 End plates in steam space:

Material Steel Thickness 1 1/32" Pitch of stays 20 1/2 x 2 1/4 How are stays secured 5 Washers Working pressure by rules 192 Material of stays Steel

Diameter at smallest part 8.48 Area supported by each stay 446" Working pressure by rules 192 Material of Front plates at bottom Steel

Thickness 3/32 Material of Lower back plate Steel Thickness 27/32 Greatest pitch of stays 13 5/8 x 8 3/4 Working pressure of plate by rules 187

Diameter of tubes 2 3/4 Pitch of tubes 4 x 3 7/8 Material of tube plates Steel Thickness: Front 3/32 Back 3/4 Mean pitch of stays 9 7/8

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

thickness of girder at centre 10" x 1 3/4 Length as per rule 35 9/16 Distance apart 10 5/8 Number and pitch of stays in each Three 9 7/8

Working pressure by rules 187 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked

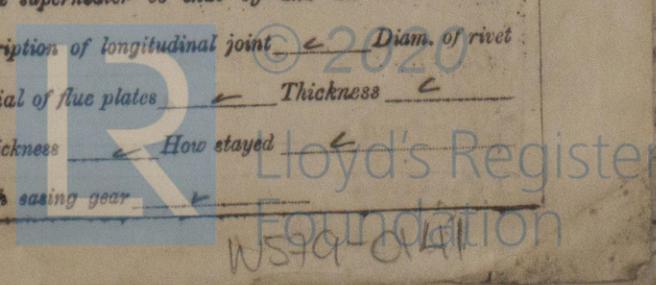
separately Yes Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

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

If sea, static whether, and when, etc. will be sent? If a Report also sent on the Hull of the ship? Sm. 115. T.



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Propeller, Propeller shaft 2 top end bolts + nuts
2 bottom end bolts + nuts 2 main bearing bolts + nuts 3 Crank shaft coupling bolts
3 Tunnel shaft coupling bolts, one feed pump suction valve, one feed pump discharge valve, one
bilge pump suction + discharge valve 3 main feed check valves, 3 donkey feed check valves
50 bolts + nuts assorted 6 studs of each size for boiler mounting covers 12 cylinder cover
+ steam chest studs 12 junk ring studs + nuts One H.P. Piston Valve 6 Air pump valves
5 bars round iron 3/8" 1/2" 5/8" + 1"

The foregoing is a correct description,

W.P. Dewar Eng^r Manager

Manufacturer.

Messrs. J. Leadhead & Sons

Dates of Survey while building	During progress of work in shops - -	1917. Oct 8. Dec 11. 27	1918. Jan 18 Feb 4. 13. Mar 21. 27. Apr 5. 8. 12. 22. 29. 31	Jun 19. July 2. 11. 11. 21.
		During erection on board vessel - - -	1919. Sep 13. 27. Oct 2. 25. 28. 29. 31. Nov 1. 8. 18. 25. Dec 4. 5. 9. 19. 20. 27.	1919. Jan 9. Feb 2. Mar 13. 31. Apr 4. 8. 9. 11.
			Total No. of visits	53

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

Dates of Examination of principal parts—Cylinders 29, 10, 18 Slides 8, 11, 18 Covers 29, 10, 18 Pistons 29, 10, 18 Rods 29, 10, 18
Connecting rods 19, 11, 18 Crank shaft 19, 11, 18 Thrust shaft 18/11/18, 9/11/19 Tunnel shafts 29/10/18, 9/11/19 Screw shaft 27/11/18, 9/11/19 Propeller 20/12/18
Stern tube 21/2/19 Steam pipes tested 11/4/19 Engine and boiler seatings 13/3/19 Engines holding down bolts 26/4/19
Completion of pumping arrangements 9/5/19 Boilers fixed 8/4/19 Engines tried under steam 9/5/19
Main boiler safety valves adjusted 9/5/19 Thickness of adjusting washers

Port Boiler	Star Boiler	Star Boiler	Star Boiler
PV 3/8"	SV 3/8"	PV 5/16"	SV 13/32"
			SV 9/16"

Material of Crank shaft *Steel* Identification Mark on Do.

LLOYDS	No 2570.0
M.R.	2.7.18

 Material of Thrust shaft *Steel* Identification Mark on Do.

LLOYDS	No 2570.0
M.R.	2.7.18

Material of Tunnel shafts *Scrap Iron* Identification Marks on Do.

LLOYDS	No 927
W.L.H.	9.1.19.

 Material of Screw shafts *Scrap Iron* Identification Marks on Do.

LLOYDS	No 927
W.L.H.	9.1.19.

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 *Yes* If so, state name of vessel *Standard Vessel B. Type*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been constructed under special survey, the materials and workmanship are of good quality, it has been securely fitted on board and satisfactorily tried under steam at moorings for 2 1/2 hours.*

The machinery of this vessel is now in my opinion eligible for record ± L.M.C. 5, 19. (in red) in the register book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 5-19 FI

J.W.D. Roll. 15.6.19

NEWCASTLE-ON-TYNE

The amount of Entry Fee ... £ 3 : :
Special ... £ 45 : 13 : :
Charter ... £ 52 : :
Travelling Expenses (if any) £ : : :
When applied for, 11 June 1919/20. 15. :
When received, 23. 6. 19. 15. :
W.L.H.

Committee's Minute TUE 17 JUN 1919
Assigned + L.M.C. 5, 19
Machinery Certificate

