

REPORT ON MACHINERY

No. 26763

WED. 26 JUL. 1916

Received at London Office

Date of writing Report 20-7-16 When handed in at Local Office 21-7-16 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 7 May 1916 Last Survey 20-7-1916
Reg. Book. 265 on the new steel s/s "MIRITA". (Number of Visits 62)

Master W. Nickers Built at Sunderland By whom built Sir James Laing & Sons Ltd When built 1916
Engines made at Sunderland By whom made George Black Ltd (No. 1016) when made 1916
Boilers made at Sunderland By whom made George Black Ltd (No. 1016) when made 1916

Registered Horse Power Owners W. Wilhelmson Port belonging to London
Nom. Horse Power as per Section 28 498 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 26 1/2, 44, 73 Length of Stroke 48 Revs. per minute 65 Dia. of Screw shaft as per rule 14.76 Material of screw shaft as fitted 14 1/8" S.M. Steel

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 - 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 5'-0"

Dia. of Tunnel shaft as per rule 13.214 Dia. of Crank shaft journals as per rule 13.87 Dia. of Crank pin 14" Size of Crank webs 2 1/4 x 8 1/8" Dia. of thrust shaft under collars 14 3/8" Dia. of screw 17.10 1/2 Pitch of Screw 16'-4" No. of Blades 4 State whether moceable no Total surface 97 #

No. of Feed pumps 2 Diameter of ditto 7 1/2 x 9 1/2 Stroke 21" Can one be overhauled while the other is at work yes Woodson Independent.
No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 26" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 9 x 10 x 10 7 1/2 x 5 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Three @ 3 1/2". (Alston @ 4" in hold to fuel pumps) Holds, &c. Cargo hold 1 - 2 @ 2 1/2" connected to bilge pump in cargo hold (forward) only. 2 @ 3" in pump room, connected to cargo pumps only

No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump B.P. Is a separate Donkey Suction fitted in Engine room & size yes, 4"
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 5-1-16 of Stern Tube 7-6-16 Screw shaft and Propeller 9-6-16
Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door - worked from Inchy aft

BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel John Spence & Sons Ltd
Total Heating Surface of Boilers 7212 # Is Forced Draft fitted yes No. and Description of Boilers three single ended marine
Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 20-1-16 No. of Certificate 3324

Can each boiler be worked separately yes Area of fire grate in each boiler 58 # No. and Description of Safety Valves to each boiler two direct spring Area of each valve 9.620" Pressure to which they are adjusted 185 Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 2'-0" dia. of boilers 15'-0" Length 11'-7" Material of shell plates steel

Thickness 1 1/2" Range of tensile strength 29 1/2-33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams B.R.
long. seams B.B.S.T.R Diameter of rivet holes in long. seams 15/16" Pitch of rivets 9 3/8" Lap of plates or width of butt straps 20"

Per centages of strength of longitudinal joint rivets 92.7 plate 86 Working pressure of shell by rules 182 Size of manhole in shell 16" x 12" FOR B.L.R. do in ends of AFTER B.L.R.

Size of compensating ring 8 1/4" x 1 1/4" No. and Description of Furnaces in each boiler 3 Deighton's Material steel Outside diameter 41"
Length of plain part top 31" bottom 64" Thickness of plates crown 31" Description of longitudinal joint welded No. of strengthening rings -

Working pressure of furnace by the rules 186 Combustion chamber plates: Material steel Thickness: Sides 13/16" Back 3/32" Top 3/4" Bottom 13/16"
Pitch of stays to ditto: Sides 9 3/4" x 10 3/4" Back 10" x 9 1/2" Top 10 1/4" x 9 1/8" If stays are fitted with nuts or riveted heads nuts in use Working pressure by rules 185

Material of stays steel Diameter at smallest part 2.030" Area supported by each stay 950" Working pressure by rules 192 End plates in steam space:
Material steel Thickness 1 1/32" Pitch of stays 23 x 21" How are stays secured B.N. Working pressure by rules 182 Material of stays steel

Diameter at smallest part 8.29" Area supported by each stay 4520" Working pressure by rules 190 Material of Front plates at bottom steel
Thickness 15/16" Material of Lower back plate steel Thickness 15/16" Greatest pitch of stays 15" x 10" Working pressure of plate by rules 187

Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 9/8" Material of tube plates steel Thickness: Front 15/16" Back 3/4" Mean pitch of stays 9 1/4"
Pitch across wide water spaces 13 1/2" Working pressures by rules 185 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 @ 9 1/4" x 7 1/8" Length as per rule 36" Distance apart 9 7/8" Number and pitch of stays in each 2 @ 10 1/4"

Working pressure by rules 183 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
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

Lloyd's Register Foundation

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 eccentric strap. one valve spindle one pair of top and bottom end brasses. one screw shaft. and one propeller.*

The foregoing is a correct description,

FOR GEORGE CLARK, LIMITED

W. S. MULLER

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1915 May 4. 21. 26 Jun 7. 21 Aug 10. 25 Sep 6. 16 Oct 1. 7. 21 Nov 2. 5. 9. 17. 23. 26. 29. 30 Dec 2. 10. 13. 17. Jan 5. 7. 18. 20. 31 Feb 11. 22 Mar 3. 14. 29 Apr 4. 7. 14 May 3. 8. 12. 15. 16. 18. 23. 30. 31 Jun 2. 6. 9. 12. 15. 16. 17. 24. 26. 28 Jul 5. 6. 7. 11. 17. 20 Total No. of visits *63*

Is the approved plan of main boiler forwarded herewith *ye*
" " " donkey " " "

Dates of Examination of principal parts—Cylinders *14-4-16* Slides *8-5-16* Covers *5-11-15* Pistons *12-5-16* Rods *3-5-16*
Connecting rods *15-5-16* Crank shaft *15-5-16* Thrust shaft *6-6-16* Tunnel shafts *none* Screw shaft *6-6-16* Propeller *26-11-15*
Stern tube *30-5-16* Steam pipes tested *24-6-16* ^{*5-7-16*} _{*8-7-16*} Engine and boiler seatings *5-1-16* Engines holding down bolts *2-6-6-16*
Completion of pumping arrangements *17-7-16* Boilers fixed *26-6-16* Engines tried under steam *11-7-16*
Main boiler safety valves adjusted *11-7-16* Thickness of adjusting washers *Top 1/16" 5/8" After P.H. both 3/8" After S.H. both 1/2"*
Material of Crank shaft *Sm. Steel* Identification Mark on Do. *James 1162 N W.C.* Material of Thrust shaft *Sm. Steel* Identification Mark on Do. *672 J.C.*
Material of Tunnel shafts *none* Identification Marks on Do. *-* Material of Screw shafts *Sm. Steel* Identification Marks on Do. *670 & 671 J.C.*
Material of Steam Pipes *Deposited with W.C. 4 @ 5 3/8" dia x 7/16" & 1 @ 9 1/2" dia x 3/8"* Test pressure *540 lbs per sq in*

Is an installation fitted for burning oil fuel *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 *See below*

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 materials and workmanship are good. The machinery has been constructed under special survey and is eligible in my opinion for classification and the records + LMC 7.16. — "Fitted for oil fuel 7.16 FP above 150° F"

The builders state that the vessel having been chartered by the Admiralty for the carriage of oil fuel, a pipe connecting the cargo & oil fuel systems, is required. This connection has been made, enabling the bunkers to be fitted from the cargo tanks. In all other respects the requirements of Section 49 have been complied with.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.16 FD

Fitted for oil fuel 7.16 FP above 150° F

The amount of Entry Fee ... £ 3 : - : When applied for, Special ... £ 44 : 18 : 25 JUL 1916 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 29.7.1916

J. D. Davis
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE. 1-AUG. 1916 FRI. 25.AUG. 1916

Assigned *+ L.M.C. 7.16*
J. D. Fitted for oil fuel 7.16, F.P. above 150° F

