

REPORT ON MACHINERY.

No. 12791

Received at London Office MON. AUG. 29 1921

of writing Report *24 Aug 1921* When handed in at Local Office *26th Aug 1921* Port of *Aberdeen*
 in Survey held at *Aberdeen* Date, First Survey *6th Dec 1920* Last Survey *23rd Aug 1921*
 Book. on the *S.S. "Oriole"* (Number of Visits *44*)

ter *A. Parkinson* Built at *Aberdeen* By whom built *J. Lewis & Co* N° *72* When built *1921*
 ines made at *Aberdeen* By whom made *J. Lewis & Co* N° *168* when made *1921*
 ery made at *Aberdeen* By whom made *J. Lewis & Co* N° *128* when made *1921*

red Horse Power Owners *Gen. Steam. Nav. Co. Ltd* Port belonging to
 orse Power as per Section 28 *84.3 83* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *No*

VES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *3* No. of Cranks *3*
 Cylinders *12½" 21" 34"* Length of Stroke *24"* Revs. per minute *102 normal* Dia. of Screw shaft *7.25* Material of *iron*
 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
 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
 the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *no space* If two
 are fitted, is the shaft lapped or protected between the liners *✓* Length of stern bush *2-6½"*
 Tunnel shaft *as per rule 6.34* Dia. of Crank shaft journals *as per rule 6.68* Dia. of Crank pin *4"* Size of Crank webs *12½" x 4½"* Dia. of thrust shaft under
4" Dia. of screw *9-0"* Pitch of Screw *11-3"* No. of Blades *4* State whether moveable *No* Total surface *306*
 Feed pumps *2* Diameter of ditto *2½"* Stroke *12"* Can one be overhauled while the other is at work *yes*
 Bilge pumps *2* Diameter of ditto *2½"* Stroke *12"* Can one be overhauled while the other is at work *yes*
 Donkey Engines *Two* Sizes of Pumps *5½" 3½" x 5" 6" 7" x 8"* No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room *one at 2½"* *Two at 2¼"* *one at 2" 5" 6" 8" 10" 12" 14" 16" 18" 20" 22" 24" 26" 28" 30" 32" 34" 36" 38" 40" 42" 44" 46" 48" 50" 52" 54" 56" 58" 60" 62" 64" 66" 68" 70" 72" 74" 76" 78" 80" 82" 84" 86" 88" 90" 92" 94" 96" 98" 100"* In Holds, &c. *Two at 2"*

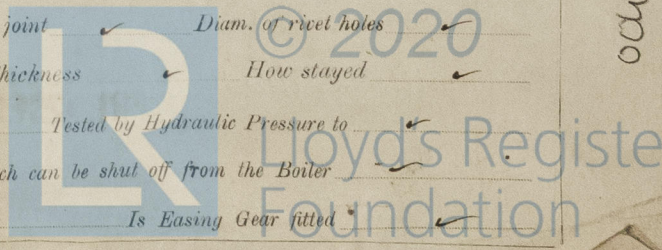
Bilge Injections / sizes *3"* Connected to condenser, or to circulating pump *cp.* Is a separate Donkey Suction fitted in Engine room & size *yes 2½"*
 Are the bilge suction pipes fitted with roses *yes* Are the roses in Engine room always accessible *yes* Are the sluices on Engine room bulkheads always accessible *✓*
 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*
 Are pipes carried through the bunkers *Hold Suctions* 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*

Screw Shaft Tunnel watertight *✓* Is it fitted with a watertight door *✓* worked from *✓*
 LERS, &c.—(Letter for record *S*) Manufacturers of Steel *David Colville & Sons Ltd Motherwell*
 Heating Surface of Boilers *1618.6* Is Forced Draft fitted *No* No. and Description of Boilers *one Single Ended*
 Working Pressure *180 lbs* Tested by hydraulic pressure to *320 lbs* Date of test *12-8-21* No. of Certificate *1009*
 Can each boiler be worked separately *✓* Area of fire grate in each boiler *52.14* No. and Description of Safety Valves to
 boiler *2 direct Spring* Area of each valve *5.93* Pressure to which they are adjusted *✓* Are they fitted with easing gear *yes*
 Greatest distance between boilers or uptakes and bunkers or woodwork *INT* Mean dia. of boilers *13-0"* Length *10-6"* Material of shell plates *S*
 Thickness *1½"* Range of tensile strength *26/32 lbs* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *D.R. Lap.*
 rivets *T.R.D.B.S* Diameter of rivet holes in long. seams *1¾"* Pitch of rivets *8½"* Lap of plates or width of butt straps *17½"*
 Centages of strength of longitudinal joint *88.9* Working pressure of shell by rules *193* Size of manhole in shell *16" x 12"*
 of compensating ring *7" x 14"* No. and Description of Furnaces in each boiler *3 plain* Material *S* Outside diameter *3-3½"*

Length of plain part *top 8.2" bottom 7.5"* Thickness of plates *top 3.4" bottom 3.4"* Description of longitudinal joint *weld* No. of strengthening rings *one*
 Working pressure of furnace by the rules *180* Combustion chamber plates: Material *S* Thickness: Sides *1½"* Back *3½"* Top *1½"* Bottom *1½"*
 Pitch of stays to ditto: Sides *9½" x 8½"* Back *9½" x 8"* Top *9½" x 7½"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *192.9*
 Material of stays *S* Area at smallest part *1.76* Area supported by each stay *76* Working pressure by rules *185* End plates in steam space:
 Material *S* Thickness *1½"* Pitch of stays *18" x 18"* How are stays secured *DN & W* Working pressure by rules *185* Material of stays *S*
 Area at smallest part *6.32* Area supported by each stay *324* Working pressure by rules *203* Material of Front plates at bottom *S*
 Thickness *1½"* Material of Lower back plate *S* Thickness *2.9"* Greatest pitch of stays *14½"* Working pressure of plate by rules *193*
 Diameter of tubes *3½"* Pitch of tubes *4½" x 4½"* Material of tube plates *S* Thickness: Front *1½"* Back *2.7"* Mean pitch of stays *9½"*
 Pitch across wide water spaces *14½"* Working pressures by rules *181* Girders to Chamber tops: Material *S* Depth and
 Thickness of girder at centre *8½" x 9/16"* Length as per rule *27½"* Distance apart *7½"* Number and pitch of stays in each *2 @ 9½" 9½"*
 Working pressure by rules *219* Steam dome: description of joint to shell *✓* % of strength of joint *✓*

Diameter *✓* Thickness of shell plates *✓* Material *✓* Description of longitudinal joint *✓* Diam. of rivet holes *✓*
 Pitch 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 *✓*
 Date 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 *✓*

004849-006851-0103



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— 2 Top end bolts + nuts. 2 bottom end bolts + nuts. 2 main bearing bolts + nuts. One set of coupling bolts + nuts. 1 main + 1 donkey check valve. 6 pump ring bolts + nuts. 1 set of valves for air, circulating, feed, & bilge pumps. 6 condenser tubes + 12 ferrules. 3 boiler tubes. 1 boiler safety valve spring. 4 gauge glasses. a quantity of iron. a quantity of assorted bolts + nuts. 1 cast iron propeller

The foregoing is a correct description,

FOR JOHN LEWIS & SONS, LTD.,

J. I. Donald

Secy.

Manufacturer.

Dates of Survey while building	{	During progress of work in shops --	6/12/20.	10/12/20.	20/12/20.	29/12/20.	JAN. 1921	FEB 1921	MAR 1921	JULY	AUG					
			12/1/21.	14/1/21.	26/1/21.	29/1/21.	1/2/21.	2/2/21.	4/2/21.	9/2/21.	14/2/21.	18/2/21.	20/2/21.	22/2/21.	23/2/21.	1. 5. 6. 8. 10. 12. 17. 18.
			13/1/21.	14/1/21.	26/1/21.	29/1/21.	1/2/21.	2/2/21.	4/2/21.	9/2/21.	14/2/21.	18/2/21.	20/2/21.	22/2/21.	23/2/21.	
Total No. of visits			44.													

Is the approved plan of main boiler forwarded herewith *No*
Retained for Duplicate ☒
" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders 20-12-20 Slides 20-12-20 Covers 31-1-21 Pistons 7-1-21 Rods 7-1-21
Connecting rods 7-1-21 Crank shaft *Dundee* Thrust shaft 7-1-21 Tunnel shafts ✓ Screw shaft 8-3-21 Propeller 8-3-21
Stern tube 8-3-21 Steam pipes tested 18-8-21 Engine and boiler seatings 13-7-21 Engines holding down bolts 27-7-21
Completion of pumping arrangements 22-8-21 Boilers fixed 16-8-21 Engines tried under steam 22-8-21
Completion of fitting sea connections 13-7-21 Stern tube 13-7-21 Screw shaft and propeller 13-7-21
Main boiler safety valves adjusted 22-8-21 Thickness of adjusting washers *P 7/16. S 7/16*
Material of Crank shaft *Steel* Identification Mark on Do. *896 JHM* Material of Thrust shaft *Steel* Identification Mark on Do. *1372A RR 7-8-21*
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *1373A RR 7-8-21*
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 *"Beaulieu Furth"*.

General Remarks (State quality of workmanship, opinions as to class, &c. *These engines and boiler have been constructed under Special Survey, in accordance with the approved drawing, and the Rules of the Society. The materials and workmanship are sound and good. The machinery has been securely fitted on board the vessel and tried under steam with satisfactory results.*

The machinery is eligible, in my opinion, to have the Record LMC 8-21 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 8.21 .CL.

Robt. Rae
30/8/21
JHM

The amount of Entry Fee ... £	2 : 0 0	When applied for,
Special ... £	21 : 0 0	26 Aug 1921
Donkey Boiler Fee ... £	- : -	When received,
Travelling Expenses (if any) £	- : -	7.9.21

Robert Rae
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 25 SEP. 1921*
Assigned *Lt. Col. S. L. 21*

MACHINERY CERTIFICATE
WRITTEN



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Foundation