

REPORT ON MACHINERY.

Received at London Office

Date of writing Report 7th July 1919 When known to be at Local Office Belfast 10 Port of Belfast 6164 NRP 1813

No. in Survey held at Belfast Date, First Survey 24th Sep^r 1918 Last Survey 3rd June 1919

Reg. Book. P.S. Muneric (Number of Visits 44) Gross 5145 Net 3209

Master Belfast Built at Belfast By whom built Workman Clark & Coy Ltd When built 1919

Engines made at Belfast By whom made - when made -

Boilers made at - By whom made - when made -

Registered Horse Power ✓ Owners The Crossburn Steamship Coy Ltd belonging to Glasgow

Nom. Horse Power as per Section 28 518 517 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Single Screw Triple Expansion of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27"-44"-73" Length of Stroke 48" Revs. per minute 78 Dia. of Screw shaft as per rule 14.6 14.7" Material of 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 60 1/2"

Dia. of Tunnel shaft as per rule 13.3" Dia. of Crank shaft journals as per rule 12.9 14" Dia. of Crank pin 14 1/2" Size of Crank webs 28 x 9" 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 movable Yes Total surface 87 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 See others of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4-3 1/2" In Holds, &c. 9-3 1/2" 1-3"

No. of Bilge Injections 1 sizes 12" 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 ✓

Are all connections with the sea direct on the skin of the ship Yes - Except manse tank collection 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 Below

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 Fore hold suction 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

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform E. Room

BOILERS, &c.—(Letter for record 9) Manufacturers of Steel Port Talbot Steel Works

Total Heating Surface of Boilers 7668 sq ft Forced Draft fitted Yes No. and Description of Boilers 3 Single Tank Cylind

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 26-4-19 No. of Certificate 541

Can each boiler be worked separately Yes Area of fire grate in each boiler 63 1/2 sq ft No. and Description of Safety Valves to each boiler 2 - Direct Spring Area of each valve 9.62 sq in 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 about 2 ft 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. seam Lap 19 Riv long. seams Butt Lap Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 88.7 plate 85.6 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"

Size of compensating ring Plate flange and Description of Furnaces in each boiler 3 - Right Material Steel Outside diameter 50 3/4"

Length of plain part top 5" bottom 8" Thickness of plates crown 3 1/8" bottom 3 3/8" Description of longitudinal joint Weld No. of strengthening rings ✓

Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material Steel Thickness: Sides 2 3/32" Back 1/16" Top 2 3/32" Bottom 2 3/32"

Pitch of stays to ditto: Sides 10 5/8" x 9 1/2" Back 10 5/8" x 8 3/4" Top 10 5/8" x 9 1/2" stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 180 lbs

Material of stay Steel Area at smallest part 2.3 to 3.4 sq in supported by each stay 98 1/2 sq in Working pressure by rules 180 lbs and plates in steam space: Material Steel Thickness 1 1/2" Pitch of stays 21 1/2" x 21 1/2" How are stays secured Nuts & Washers Working pressure by rules 180 lbs Material of stays Steel

Area at smallest part 2.29 sq in Area supported by each stay 459 1/2 sq in Working pressure by rules 187 lbs Material of Front plates at bottom Steel

Thickness 1 1/2" Material of Lower back plate Steel Thickness 2 1/2" Greatest pitch of stays 13 5/8" Working pressure of plate by rules 189 lbs

Diameter of tubes 2 1/4" Pitch of tubes 4" x 3 1/2" Material of tube plate Steel Thickness: Front 3/16" Back 3/16" Mean pitch of stays 12" x 7 1/4"

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 (7/8" x 2) Length as per rule 35 7/16" Distance apart 10 5/8" Number and pitch of stays in each 3-9 1/4"

Working pressure by rules 182 lbs 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 -

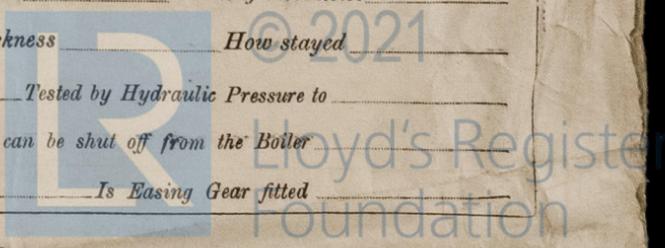
Pitch of rivets - Working pressure of shell by rules - Crown plates - Thickness - How stayed -

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 -

W1199-0101/12



If not, state whether, and when, one will be sent

Is a Report also sent on the Hull of the ship?

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - *See other sheet*

The foregoing is a correct description,
FOR WORKMAN, CLARK & CO., LIMITED.

M. H. Bell

Manufacturer.

Dates of Survey while building
During progress of work in shops --
During erection on board vessel ---
Total No. of visits

24th Sep^r 1918 to 3rd June 1919

44

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

Dates of Examination of principal parts—Cylinders	<i>8 Slides 0-18</i>	Covers	<i>" donkey "</i>	Pistons	<i>" "</i>	Rods	<i>" "</i>
Connecting rods	<i>6-5-19</i>	Crank shaft	<i>2 Thrust shaft - 18</i>	Tunnel shafts	<i>8</i>	Screw shaft	<i>10-4-19</i>
Stern tube	<i>14-4-19</i>	Steam pipes tested	<i>13-5-19</i>	Engines and boiler seatings	<i>5-5-19</i>	Engines holding down bolts	<i>24-5-19</i>
Completion of pumping arrangements	<i>28-5-19</i>	Boilers fixed	<i>5-5-19</i>	Engines tried under steam	<i>3-6-19</i>		
Completion of fitting sea connections	<i>15-4-19</i>	Stern tube	<i>15-4-19</i>	Screw shaft and propeller	<i>16-4-19</i>		
Main boiler safety valves adjusted	<i>28-5-19</i>	Thickness of adjusting washers	<i>7-15</i>		<i>32</i>		
Material of Crank shaft	<i>Steel</i>	Identification Mark on Do.	<i>LLOYDS</i>	Material of Thrust shaft	<i>Do</i>	Identification Mark on Do.	<i>LLOYDS</i>
Material of Tunnel shafts	<i>Do</i>	Identification Marks on Do.	<i>23-1-19</i>	Material of Screw shafts	<i>Do</i>	Identification Marks on Do.	<i>LLOYDS</i>
Material of Steam Pipes	<i>W. Iron</i>	Test pressure	<i>600 lbs</i>				

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. War Baitle*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed under Special Survey, and in accordance with the Rules, and the Specifications issued by the Controller General of Merchant Shipbuilding.

The workmanship, and the materials used, are of good description and on trial in Belfast Lough, the machinery worked satisfactorily.

In my opinion, it is eligible for records + L.M.C. 6-19 with notation "Forced Draft" + "Electric Light".

It is submitted that this vessel is eligible for THE RECORD. + LMC 6.19 FD

J.W.D. Bell 13.6.19

R. J. Beveridge

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee	£ 3 - -	When applied for,	
Special	£ 45 - 18	When received,	
For additional fee			
Donkey Boiler Fee			
Travelling Expenses (if any)			
Committee's Minute	33 0 - -		

Assigned *+ L.M.C. 6.19*

MACHINERY OF STEAMER
NOTED.

J.D.

Rpt. 9a.

Port of *Belfast* Continuation of Report No. 8138 dated *7th June 1918* on the

S.S. Muneric

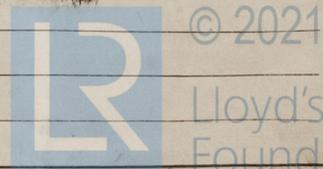
Donkey Pumps

1 Ballast	<i>10 1/2" x 14" x 24"</i>
2 Weir Feed	<i>10 1/2" x 8" x 21"</i>
2 General	<i>9 1/2" x 7" x 18"</i>

Principal Items of Spare Gear

- 1 Propeller Shaft + 2 blades
- 1 Air pump rod + set valves
- 1 Slide Valve Spindle
- 1 set H.P. Piston Packing rings
- 1 - U.S. packing for piston valve rods.
- 12 Condenser tubes + 50 ferrules
- 2 Connecting rod top end bolts + nuts
- 2 - - - - - bottom - - - - -
- 2 Main bearing - - - - -
- 6 Shaft coupling bolts
- Set Feed + Bell's pump suction + discharge valves
- 3 Main Feed Check valves
- 3 Donkey - - - - -
- 200 Fine Wax
- 27 Furnace baffle plates
- 12 Boiler tubes plain
- 2 Eccentric rods bolts + nuts
- Feed pump escape valve spring
- Set studs + nuts each side of boiler mounting
- Set Spare gear for Weir Feed pumps
- - - - - General - - - - -
- - - - - Ballast - - - - -
- Iron bars, bolts, nuts etc.

R. J. Beveridge



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