

REPORT ON MACHINERY.

No. 8138

Date of writing Report 7th Aug 1919 When written at Local Office 10 Port of Belfast 6161 N 181 181
 No. in Survey held at Belfast Date, First Survey 24th Sep 1918 Last Survey 3rd June 1919
 Reg. Book. on the P.S. Muneric (Number of Visits 44) Gross 5145
 Master Belfast Built at Belfast By whom built Warkman Clark & Co Ltd Tons 3209
 Engines made at Belfast By whom made Warkman Clark & Co Ltd When built 1919
 Boilers made at Belfast By whom made Warkman Clark & Co Ltd when made 1919
 Registered Horse Power ✓ Owners The Crossburn Steamship Co 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 13.9 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 87.2 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 See others of Pampse 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 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 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' 6 1/2 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 on width of butt straps 19 1/2"
 Per centages of strength of longitudinal joint 88.3 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" Thickness of plates bottom 3 1/2" 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 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 9 1/2 Top 10 5/8 x 9 1/2 Bottom 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 3/4 x 3 1/4 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 2 1/4 x 2 1/4 How are stays secured Nuts & Washers Working pressure by rules 180 lbs Material of stays Steel
 Area at smallest part 2 3/4 x 2 3/4 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 3/4" 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 1/2" Back 3 1/4" Mean pitch of stays 2 x 7 3/4"
 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 1/8 x 2) Length as per rule 35 7/8" 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 1/2

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

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders *P-Slide 0-18* Covers *0* Pistons *0* Rods *0*
 Connecting rods *6-5-19* Crank shaft *2* Thrust shaft *9-18* Tunnel shafts *0* Screw shaft *10-4-19* Propeller *14-4-19*
 Stern tube *14-4-19* Steam pipes tested *13-5-19* Engine and boiler seatings *5-5-19* Engines holding down bolts *24-5-19*
 Completion of pumping arrangements *28-5-19* Boilers fixed *5-5-19* Engines tried under steam *3-6-19*
 Completion of fitting sea connections *15-4-19* Stern tube *15-4-19* Screw shaft and propeller *16-4-19*
 Main boiler safety valves adjusted *28-5-19* Thickness of adjusting washers *7-15-32*
 Material of Crank shaft *9-Steel* Identification Mark on Do. *LL0YDS* Material of Thrust shaft *0* Identification Mark on Do. *LL0YDS*
 Material of Tunnel shafts *0* Identification Marks on Do. *23-1-19* Material of Screw shafts *0* Identification Marks on Do. *28-3-19*
 Material of Steam Pipes *W. Iron* Identification Marks on Do. *LL0YDS* Test pressure *600 lbs* *10-2-19*

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 SS. War Battle

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 Specification 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 record + 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. Roll
 13-6-19

R. F. Beveridge

Engineer Surveyor to Lloyd's Register of Shipping

The amount of Entry Fee ... £ 3 : - :) When applied for

Special £ 45⁰⁰ 18 9-6-30/

For additional fee
Donkey Boiler Fee

Payable by <i>Quarterly</i>	When received,
Travelling Expenses	15/

Letter to [unclear] 9-6-19 33

Chapman Ch. Mrs. Committee's Minute. FBI 203-23-6-19

THE STATE OF NEW YORK
IN SENATE
JANUARY 11, 1906.

Assigned + L.M.L.

MACHINERY OF THE
SYSTEM.

F.D.

Rpt. 9a.

Port of

Rpt. 9a.

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

P.S. Munnich

Donkey Pump

	County	Dimensions
1	Ballet	10 $\frac{1}{2}$ " x 14" x 24"
2	Mewis Feed	10 $\frac{1}{2}$ " x 8" x 21"
2	General	9 $\frac{1}{2}$ " x 7" x 18"

Principal Items of Spare Loan

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 & Bilge Pump suction & discharge valves
3 Main Feed Check valves
3 Wrench - - -
200 Fine Gage
27 Furnace Baffle plates
12 Barler tubes plain
2 Eccentric rods bolts & nuts
Feed Pump escape valve spring
Set studs & nuts each side of barler mountings
Set spare gear for Wrens Feed pumps
- - - General -
- - - Ballast -
Iron bars, bolts, nuts etc.

R. F. Bennett



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Foundation

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