

REPORT ON MACHINERY.

No. 8114

Received at London Office MON. 19. MAY. 1919

Date of writing Report 12th May 1919 When handed in at Local Office 10 Port of Belfast

No. in Survey held at Belfast Date, First Survey 18th March 1918 Last Survey 8th May 1919
Reg. Book. (Number of Visits) 47 Gross 6509

on the S.S. Vasmuth Master T.W. Major Built at Belfast By whom built Harland & Wolff L^{td} Tons 4015 When built 1919

Engines made at Belfast By whom made - when made -
Boilers made at - By whom made - when made -

Registered Horse Power - Owners Lt. Brazil & Sons Plate S. Wood belonging to Liverpool
Nom. Horse Power as per Section 28 578 517 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Single Screw Triple Expansion Cylinders 3 No. of Cranks 3
Dia. of Cylinders 27-44-73 Length of Stroke 48 Revs. per minute 79 Dia. of Screw shaft as per rule 14.76 Material of J. Steel
as fitted 15.75 screw shaft

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 63

Dia. of Tunnel shaft as per rule 13.33 Dia. of Crank shaft journals as per rule 13.9 Dia. of Crank pin 14.3 Size of Crank webs 28x9 Dia. of thrust shaft under
collars 15 Dia. of screw 17-9 Pitch of Screw 16-6 No. of Blades 4 State whether moveable No Total surface 100 sq ft.

No. of Feed pumps 2 Diameter of ditto 4 1/2 Stroke 24 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 24 Can one be overhauled while the other is at work Yes
No. of Donkey Engines See other pumps sheet No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 4-3 1/2 + 1-3 In Holds, &c. 8-3 1/2, 2-4 1/2, 1-9, 6-2 1/2

No. of Bilge Injections 1 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 ✓
Are all connections with the sea direct on the skin of the ship Yes-Except main tank suction 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 Iron casings
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 Upper deck

OILERS, &c.—(Letter for record D) Manufacturers of Steel D. Colville & Sons L^{td}

Total Heating Surface of Boilers 7668 sq ft Forced Draft fitted Yes No. and Description of Boilers 3, Single End by link
Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 25-1-19 No. of Certificate 539
26-2-19 540

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 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 14 Mean dia. of boilers 15-6 Length 11-6 Material of shell plates Steel
Thickness 1/4 Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seam Lap Double
long. seams Butt Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 9 1/2 Gap of plates or width of butt straps 19 1/2

Per centages of strength of longitudinal joint rivets 88.1 Working pressure of shell by rules 182 lbs Size of manhole in end plate
plate 85.6 16 x 12

Size of compensating ring Plate flanged No. and Description of Furnaces in each boiler 3-Deighten Material Steel Outside diameter 50 3/16
Length of plain part top 5 Thickness of plates bottom 3/32 Description of longitudinal joint Weld No. of strengthening rings ✓
bottom 8 3/32

Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32 Back 1/16 Top 23/32 Bottom 23/32
Pitch of stays to ditto: Sides 10 1/8 x 9 1/4 Back 9 1/2 x 8 1/4 Top 10 1/8 x 9 1/4 stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs

Material of stay Steel Area at smallest part 2.19 x 3.49 supported by each stay 98 1/2 sq Working pressure by rules 186 lbs End plates in steam space:
Material Steel Thickness 1/32 Pitch of stays 21 1/4 x 21 1/4 How are stays secured Nuts Working pressure by rules 180 lbs Material of stays Steel
21 1/4 x 20

Area at smallest part 8.29 sq area supported by each stay 459 1/2 sq Working pressure by rules 187 lbs Material of Front plates at bottom Steel
Thickness 3/32 Material of Lower back plate Steel Thickness 27/32 Greatest pitch of stays 13 1/8 Working pressure of plate by rules 189 lbs

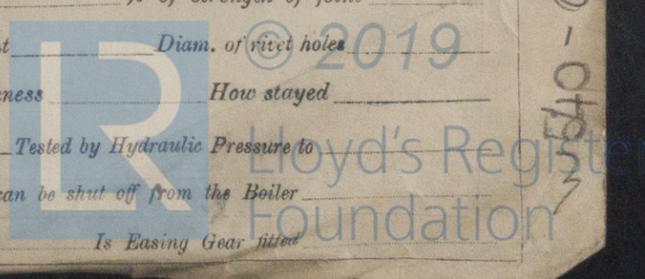
Diameter of tubes 2 3/4 Pitch of tubes 4 x 3 1/8 Material of tube plate Steel thickness: Front 3/32 Back 3/4 Mean pitch of stays 2 x 7 1/4
Pitch across wide water spaces 13 1/8 Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 10 x (5 1/2 x 2) Length as per rule 35 1/16 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 -

UPERHEATER. Type - Date of Approval of Plan - Tested by Hydraulic Pressure to - Lloyd's Register
Date of Test - Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler - Foundation

Diameter of Safety Valve - Pressure to which each is adjusted - Is Easing Gear fitted -



540-0069 1/2

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 HARLAND & WOLFF Ltd.

J.P. Keay
Manufacturer.

Dates of Survey while building: During progress of work in shops *18th March 1918 to 6th May 1919*
During erection on board vessel *---*
Total No. of visits *47*

Is the approved plan of main boiler forwarded herewith? *No - N/A*

Dates of Examination of principal parts—Cylinders *23*—Slides *7*—Covers *18*—Pistons *8*—Rods *---*
Connecting rods *20-3-19* Crank shaft *5-7-18* Thrust shaft *---* Tunnel shafts *---* Screw shaft *17-3-19* Propeller *28-2-19*
Stern tube *28-2-19* Steam pipes tested *9-12-18* Engine and boiler seatings *9-4-19* Engines holding down bolts *9-4-19*
Completion of pumping arrangements *26-4-19* Boilers fixed *9-4-18* Engines tried under steam *26-4-19*
Completion of fitting sea connections *25-3-19* Stern tube *18-3-19* Screw shaft and propeller *25-3-19*
Main boiler safety valves adjusted *26-4-19* Thickness of adjusting washers *6-17/32*
Material of Crank shafts *Steel* Identification Mark on Do. *LLOYDS* Material of Thrust shaft *Do* Identification Mark on Do. *Do*
Material of Tunnel shafts *Do* Identification Marks on Do. *---* Material of Screw shafts *Do* Identification Marks on Do. *Do*
Material of Steam Pipes *W. Iron* Test pressure *570 lb sq. in.*
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 *"War Music"*

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. The workmanship and the materials, 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. 5-19.
with notation "Forced Draft + Electric Light"

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 5.19. F.D.

Roll 19/5/19
RFB

R. J. Bewick
Engineer Surveyor to Lloyd's Register of Shipping.

Rpt. 9a.

Port of *Belfast*

Continuation of Report No. 8114 dated *12th May 1919* in the

S.D. Naughton

- 1 Aux^y Feed Pump 9 1/2" x 7" x 18"*
- 1 General Sewell*
- 1 Ballast 10 1/2" x 14" x 24"*
- 1 Fresh Water 3" x 3" x 4"*

Spare Gear, Principal Items

- 2 Top end + 2 bottom end bolts + nuts*
- 2 Main bearing bolts + nuts*
- 6 Coupling bolts*
- 2 Feed + 2 Bilge pump valves*
- 3 Main + 3 Donkey feed check valves*
- 50 Bolts + nuts assorted*
- 8 Bars iron*
- 1 C.I. propeller*
- 12 Condenser tubes*
- 50 Ferrules*
- 6 Air pump valves*
- 2 Piston rod packing rings*
- 2 Valve spindle*
- 200 fuel bars*
- 9 Ferrule baffle plates*
- 1 Filter bucket + 50 lbs can fibre*
- Set spare gear Circulating pump*
- Feed*
- General*
- Ballast*
- 2 Piston rings Fan engine*
- 12 Boiler tubes plain*
- 1 Feed pump escape valve spring*
- 1 Diaphragm each size reducing valve*
- 1 Valve disc for Main Engine Stop Valve*
- 6 Studs for cylinder covers*
- 6 Steam chest*
- 6 each size in Boiler Mountings covers etc*

R. J. Bewick

Certificate (if required) to be sent to this office

The amount of Entry Fee *45-18*
When applied for *13.5.19*
When received *19.6.19*
Monkey Boiler Fee *60*
Travelling Expenses (if any) *---*

Committee's Minute *FRI 23 MAY 1919*
Assigned *H.M.C. 5.19 F.D.*
WHITTEN.

