

REPORT ON MACHINERY.

No. 8066

Date of writing Report 16-1-1919 When handed in at Local Office 10 Port of Belfast
 No. in Survey held at Belfast Date, First Survey 18 March 1918 Last Survey 9 Feb 1919
 Reg. Book. P.S. War Dream (Number of Visits 40)
 on the P.S. War Dream
 Master Belfast Built at Belfast By whom built Harland & Wolff L. Tons Gross 6498 Net 4012
 Engines made at Belfast By whom made - when made -
 Boilers made at - By whom made - when made -
 Registered Horse Power 517 Owner The Shipping Controller Port belonging to London
 Nom. Horse Power as per Section 28 517 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 79 Dia. of Screw shaft as per rule 14.76 Material of 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 1/2" Size of Crank webs 28" x 9" 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 sheet No. and size of Suctions connected to both Bilge and Donkey pumps
 in Engine Room 4-3 1/2" 1-2" In Holds, &c. 8-3 1/2" 2-4 1/2" 1-3" 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 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
 That 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

Boilers, &c.—(Letter for record S.) Manufacturers of Steel D. Colville & Sons L.
 Total Heating Surface of Boilers 7668 sq ft Forced Draft fitted Yes No. and Description of Boilers 3-Single End by line
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 5-12-18 No. of Certificate 5-36
 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 Plant 14" Mean dia. of boilers 5'-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 & Butt
 Rivet seams Butt & Lap Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 9 1/8" Lap of plates or width of butt straps 19 1/2"
 Percentages of strength of longitudinal joint
 rivets 86% plate 85% Working pressure of shell by rules 182 lbs Size of manhole in 16" x 12"

Size of compensating ring Plate flanged No. and Description of Furnaces in each boiler 3-Rectangular Material Steel Outside diameter 50 3/8"
 Length of plain part
 top 5" Thickness of plates
 crown 3 1/2" Description of longitudinal joint Weld No. of strengthening rings ✓
 bottom 8" bottom 3 1/2"
 Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 1/6" Top 23/32" Bottom 3/32"
 Pitch of stays to ditto: Sides 10 1/2" x 9 1/4" Back 9 1/2" x 8 1/4" Top 10 1/2" x 9 1/4" stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs
 Material of stays Steel Area at smallest part 2'39" x 3'49" supported by each stay 984 sq Working pressure by rules 186 lbs End plates in steam space:
 Material Steel Thickness 1 1/2" Pitch of stays 2 1/2" x 2 1/4" How are stays secured Nuts Working pressure by rules 180 lbs Material of stays Steel
 Area at smallest part 8'29" x 9'29" Area supported by each stay 459 3/8 sq Working pressure by rules 187 lbs Material of Front plates at bottom Steel
 Thickness 3/2" Material of Lower back plate Steel Thickness 3/2" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 189 lbs
 Diameter of tubes 2 1/4" Pitch of tubes 4" x 3 1/8" Material of tube plates Steel Thickness: Front 3/32" Back 3/4" Mean pitch of stays 12" x 7 1/2"

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 (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
 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

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.

George Smith

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1918, March 18 to 9th Jan 1919
During erection on board vessel -
Total No. of visits 40
Is the approved plan of main boiler forwarded herewith? *No - Plan*
Dates of Examination of principal parts: Cylinders 10 Stiles 6 - 18 Covers 10 Pistons 10 Rods 10
Connecting rods 25-11-18 Crank shaft 3-7 Thrust shaft 10 Tunnel shaft 10 Screw shaft 2-12-18 Propeller 4-11-18
Stern tube 4-11-18 Steam pipes tested 6-11-18 Engine and motor seatings 9-12-18 Engines holding down bolts 9-12-18
Completion of pumping arrangements 8-1-19 Boilers fixed 9-12-18 Engines tried under steam 9-1-18
Completion of fitting sea connections 29-10-18 Stern tube 3-11-18 Screw shaft and propeller 3-12-18
Main boiler safety valves adjusted 8-1-19 Thickness of adjusting washers 7-12-18
Material of Crank shaft *Steel* Identification Mark on Do. *A. J. B.* Material of Thrust shaft *do* Identification Mark on Do. *do*
Material of Tunnel shafts *do* Identification Marks on Do. *do* Material of Screw shafts *do* Identification Marks on Do. *do*
Material of Steam Pipes *W. Iron* Test pressure 540 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 *St. 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, and with the instructions of the Controller of Shipping. 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. 1-19, with notation "Forced Draft" and "Electric Light".

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 1. 19. F.D.

Handwritten initials and date

R. F. Bewridge
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ : :
Special Fee at ... £ 144-8-0
When applied for, 11-1-19
When received, 11-3-19
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
12-3-19

Committee's Minute

Assigned

FRI JAN 24 1919

+ Lmb 1.19

MACHINERY CERTIFICATE
WHITTEN

Rpt. 9a.

Port of

Belfast

Continuation of Report No. 8066 dated 16th Jan 1919 on the

St. War Music

1 Auxiliary Feed Pump 9 1/2 x 7 x 18 ✓
1 General Service 9 1/2 x 7 x 18 ✓
1 Ballast 10 1/2 x 14 x 24 ✓
1 Fresh Water 3 x 3 x 24 ✓

Spare Gen. Principal Items

2 Top end & two bottom end bolts & nuts ✓
2 Main bearing bolts & nuts ✓
6 Coupling bolts ✓
2 Feed & 2 Ball 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 fire pump valves ✓
2 Piston rod packing rings ✓
2 Valve spindle ✓
200 Fire bars ✓
9 Furnace baffle plates ✓
1 Filter basket & 50 lbs cow fibre ✓
Set spare sea circulating pump ✓
- Feed -
- General -
- Ballast -
- piston pump & engine ✓
12 Boiler tubes plain ✓
1 Feed Pump escape valve spring ✓
1 Diaphragm each size reboiling valve ✓
1 Valve disc for Main Engine Stop valve ✓
6 Studs for Cylinder covers ✓
6 - Steam chest -
6 - each size in Boiler mounting covers etc.

R. F. Bewridge

Certificate (if required) to be sent to this office