

REPORT ON MACHINERY.

Date of writing Report 25 Sept 17 When handed in at Dock Office 10 Port of Belfast
 No. in Survey held at Belfast Date, First Survey 27-1-17 Last Survey 20-9-17-1917
 Reg. Book. on the P.S. War Claver (Number of Plates 54 Gross 5144)

Master Built at Belfast By whom built Harland & Wolff Ltd When built 1917

Engines made at Glasgow By whom made when made

Boilers made at Belfast By whom made when made

Registered Horse Power 490
 Nom. Horse Power as per Section 28 490
 Owners The Shipping Controller, Thomas Dixon & Sons Limited, Managers, Belfast
 Port belonging to London
 Is Refrigerating Machinery fitted for cargo purposes 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 78 Dia. of Screw shaft as per rule 14.6 Material of L. Steel
 as fitted 15.6 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 60 1/2

Dia. of Tunnel shaft as per rule 13.33 Dia. of Crank shaft journals as per rule 13.99 Dia. of Crank pin 4 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 moveable No Total surface 102 1/2 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 separate sheet 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 7 sizes 8" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room of size 7 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 Injection Are they Values 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 Both

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

Dates of examination of completion of fitting of Sea Connections 2-7-17 of Stern Tube 4-8-17 Screw shaft and Propeller 4-8-17

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door No—Water tight Trunks from deck.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel D. Colvills & Son Ltd

Total Heating Surface of Boilers 7020 sq ft forced Draft fitted Yes No. and Description of Boilers 3 Single End Cylinders

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 18-8-17 No. of Certificate 506-7-8

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 18" 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. seams Lap & Butte long. seams Lap & Butte

Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 9 1/2" Top of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 89.1 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 No. and Description of Furnaces in each boiler 3—Repton Material Steel Outside diameter 50 7/16"

Length of plain part top 8 Thickness of plates crown 3 1/2 Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/32 Back 1/16 Top 2 3/32 Bottom 2 3/32

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

Material of stays Steel Diameter at smallest part 2 0 7/8 Area supported by each stay 9 8 1/4 Working pressure by rules 186 lbs and plates in steam space

Material Steel Thickness 1/16" Pitch of stays 2 1/2 x 2 1/2 stays are secured Nuts Working pressure by rules 180 lbs Material of stays Steel

Diameter at smallest part 8 2 9/16 supported by each stay 4 5 9/16 Working pressure by rules 187 lbs Material of Front plates at bottom Steel

Thickness 3/32 Material of Lower back plate Steel Thickness 3/32 Greatest pitch of stays 13 3/8 Working pressure of plate by rules 189 lbs

Diameter of tubes 3" Pitch of tubes 4 1/2 x 4 1/8 Material of tube plate Steel Thickness: Front 3/32 Back 3/4 Mean pitch of stays 12 3/4 x 8 1/4

Pitch across wide water spaces 13 1/2 Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 11" (8 x 2) Length as per rule 38 1/2 Distance apart 10 4 1/8 Number and pitch of stays in each 3-9 1/2

Working pressure by rules 182 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked separately Yes Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

IS A DONKEY BOILER FITTED? *No* If so, is a report now forwarded?
SPARE GEAR. State the articles supplied: *See separate sheet*

The foregoing is a correct description,
for Sealana, built by Ltd.
George Bennett Manufacturer.

Dates of Survey while building: During progress of work in shops - *Jan 20, 29, 30 Feb 1, 2, 7, 24, 28 up to 20th Sep 1917*
During erection on board vessel - *54*
Total No. of visits *54*

Is the approved plan of main boiler forwarded herewith *Yes* *5/10*

Dates of Examination of principal parts - Cylinders *See Glasgow Report donkey 11708*
Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller *3-9-17*
Stern tube *3-9-17* Steam pipes tested *2-6-17* Engine and boiler seatings *2-9-17* Engines holding down bolts *13-9-17*
Completion of pumping arrangements *15-9-17* Boilers fixed *13-9-17* Engines tried under steam *20-9-17*
Main boiler safety valves adjusted *15-9-17* Thickness of adjusting washers *7-11-17*
Material of Crank shaft *Steel* Identification Mark on Do. *See Glasgow Report 11708*
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.
Material of Steam Pipes *W. Iron* Test pressure *540 lb*

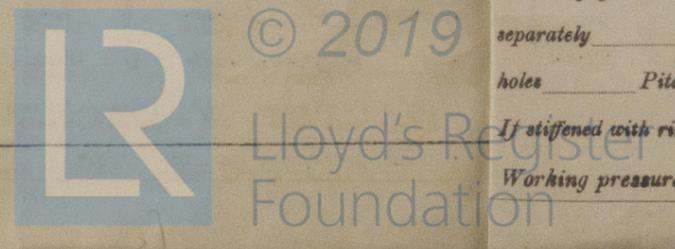
Is an installation fitted for burning oil fuel *No* Is the flash point of the oil to be used over 150°F.
Have the requirements of Section 49 of the Rules been complied with
Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *S. War Shawrock*

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 under steam in Belfast Lough, the machinery worked satisfactorily. In my opinion, it is eligible for record + L.M.C. 9-17, with notation 'Forced Draft + Electric Light'. The work has been carried out in accordance with the Specification and instructions issued by the Shipping Controller, except in regard to arrangements for pumping oil from the Double Bottom and other tanks.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 9.17. F.D.

R. F. Bennett 5/9/17
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee ... £ :
Special £ 100: -
Donkey Boiler Fee £ :
Travelling Expenses (if any) £ :
When applied for, 24-9-17
When received, 30.10.17
Committee's Minute
Assigned + L.M.C. 917
F.D.



Certificate (if required) to be sent to the office

Date of writing Rep
No. in Survey Reg. Book.
on the
Master
Engines made a
Boilers made a
Registered Horse
Nom. Horse Pow
ENGINES, &
Dia. of Cylinder
Is the screw sha
n the propeller
between the bear
liners are fitted,
Dia. of Tunnel sha
collars 14 3/4
No. of Feed pump
No. of Bilge pump
No. of Donkey En
In Engine Room
No. of Bilge Injecti
Are all the bilge su
Are all connections
Are they fixed suffi
Are they each fitte
What pipes are co
Are all Pipes, Co
Are the Bilge Suc
Dates of examina
Is the Screw Sha
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Working Pressu
Can each boiler be
each boiler
Smallest distance be
Thickness
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Per centages of stre
Size of compensatin
Length of plain pa
Working pressure of
Pitch of stays to di
Material of stays
Material
Diameter at small
Thickness Ma
Diameter of tubes
Pitch across wid
thickness of girder
Working pressure
separately
holes Pitch
If stiffened with rin
Working pressure