

REPORT ON MACHINERY.

No. 8197

Date of writing Report 3rd Sep^r 1919 When handed in at Local Office 10 Port of Belfast
No. in Survey held at Belfast Date, First Survey 1918, 6th Aug^r Last Survey 28th Aug^r 1919
Reg. Book. on the S.S. New Mexico (Number of Visits 47) Tons { Gross 6566
Net 4043
When built 1919
Master Belfast Built at Belfast By whom built Hauland & Wolff L^r when made -
Engines made at Belfast By whom made - when made -
Boilers made at Belfast By whom made - when made -
Registered Horse Power 518 Owners Edwin Newport & Co L^r Port belonging to Liverpool
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 No. of Cranks 3
Dia. of Cylinders 27-44-73 Length of Stroke 48 Revs. per minute 79 Dia. of Screw shaft 14.75 Material of I. 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 Yes 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 Yes If two
liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 63
Dia. of Tunnel shaft 13.33 as per rule 13.33 Dia. of Crank shaft journals 14.0 as per rule 13.9 Dia. of Crank pin 14.2 Size of Crank webs 28-7 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 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 Yes
Are all connections with the sea direct on the skin of the ship Yes-Except main tank inlets Are they fitted with 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 Four hold suction How are they protected Iron 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 Upper deck

BOILERS, &c.—(Letter for record S) Manufacturers of Steel D. Colville & Sons L^r
Total Heating Surface of Boilers 7668 sq ft Forced Draft fitted Yes No. and Description of Boilers 3 Single End Cylind^r
Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 7-8-19 No. of Certificate 549
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-Reduced 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 14 Mean 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. seams Lap Stitches Double
long. seams Butt Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 9 1/2 Lap of plates or width of butt straps 19 1/2
Per centages of strength of longitudinal joint 88 1/2 rivets 88 1/2 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"
Size of compensating ring Plate flanged No. and Description of Furnaces in each boiler 3-Beighten Material Steel Outside diameter 50 1/2
Length of plain part 5 top 5 bottom 8 Thickness of plates 32 crown 32 Description of longitudinal joint Weld No. of strengthening rings 1
Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material Steel Thickness: Sides 32 Back 16 Top 32 Bottom 32
Pitch of stays to ditto: Sides 10 1/2 x 9 1/2 Back 10 1/2 x 8 1/2 Top 10 1/2 x 9 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs
Material of stay Steel Area at smallest part 2.39-3.4 supported by each stay 98 1/2 sq Working pressure by rules 180 lbs End plates in steam space:
Material Steel Thickness 1 1/2 Pitch of stays 2 1/2 x 2 1/2 How are stays secured Nuts Working pressure by rules 180 lbs Material of stays Steel
Area at smallest part 8.29 sq Area supported by each stay 4.59 sq Working pressure by rules 187 lbs Material of Front plates at bottom Steel
Thickness 3 1/2 Material of Lower back plate Steel Thickness 27 Greatest pitch of stays 1 3/8 Working pressure of plate by rules 189 lbs
Diameter of tubes 2 1/4 Pitch of tubes 4 x 8 1/2 Material of tube plates Steel Thickness: Front 3 1/2 Back 3 1/2 Mean pitch of stays 2 x 7 1/2
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 10 x 8 x 2 Length as per rule 35 7/8 Distance apart 10 1/2 Number and pitch of stays in each 3-9 1/2
Working pressure by rules 182 lbs Steam dome: description of joint to shell Yes % 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

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— *La Other Sheet*

The foregoing is a correct description,
For HARLAND & WOLFF Ltd,

7 Ebbes

Manufacturer.

Dates of Survey while building	{	During progress of work in shops --	5 th Aug ^r 1918	5 28 th Aug ^r 1919
		During erection on board vessel --		
		Total No. of visits	47	

Is the approved plan of main boiler forwarded herewith *No - 174*
N. to 102

Dates of Examination of principal parts—Cylinders 1 Slides -19 Covers do Pistons do Rods do
Connecting rods 23-6-19 Crank shaft 9-12-36 Thrust shaft do Tunnel shafts do Screw shaft 19 Propeller 17-6
Stern tube 17-6-19 Steam pipes tested 17-1-19 Engine and boiler seatings 10-8-19 Engines holding down bolts 18-8-19
Completion of pumping arrangements 23-8-19 Boilers fixed 18-8-19 Engines tried under steam 28-8-19
Completion of fitting sea connections 31-5-19 Stern tube 31-5-19 Screw shaft and propeller 24-6-19
Main boiler safety valves adjusted 22-8-19 Thickness of adjusting washers $\frac{7-13}{32}$
Material of Crank shaft do Identification Mark on Do. do 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 do 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 *SS. New England*

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

The machining of this vessel has been constructed under Special Survey, and in accordance with the Rules. The materials and the workmanship 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. 8-19
with notation "Forced Draft" + Electric Light"

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 8.19. FD

<p><i>Additional</i> The amount of Entry Fee ... £ 3 : - : When applied for, <i>percentage fee 0</i></p>	
<p><i>Special</i> <i>as per Board of Admiralty</i> ... £ 45 : 18 : 3-9-1919 <i>Donkey Boiler Fee</i> ... £ 7 : 0 : 7-9-19 <i>as per Rules 1907</i></p>	
<p>Travelling Expenses (if any) £ : : When received, <i>as per 27/9/19</i> <i>25/25-181 27/9/19 1919 29</i></p>	
<p>Payable by ...</p>	

Committee's Minute

Assigned

+ Lm. 6. 8. 19

F. D.

MACHINERY CERTIFICATE
WRITTEN

Rpt. 9a.

Port of

Belfast Continuation of Report No. 8197 dated 3^d Sep^r 1919 on the

PS. New Mexico

Turallium Pumps

1 Feed	$9\frac{1}{2}^- \times 7^- \times 18^- \checkmark$
1 General	$9\frac{1}{2}^- \times 7^- \times 18^- \checkmark$
1 Ballard	$10\frac{1}{2}^- \times 14^- \times 24^- \checkmark$
1 Fresh Water	$3^- \times 3^- \times 4\frac{1}{2}^- \checkmark$

Principal items of Space Gear

2 Connecting Rod top end bolts & nuts ✓
2 - - - - - bottom - - - ✓

2 Main bearing bolts snuts ✓

6 Shaped coupling bolts - ✓

2 Feed pump values

2 Bills - - - - -

3 Main feed back check values

3 Monkey - - - - -

50 Bathing suits.

1 Propeller; C. Iron ✓

12 Condenser tubes

50 - females ✓

6 km Pump values

7 Spare Fan Engine.

1. $\frac{1}{2}$ Pa. Pa. a. sch. d. z. m. L. i. u.

(Faint handwritten notes at the bottom of the page)

4 Sp. also have Check values.

1. Food pump escape value shown

1 Filter bucket + 56 lbs Can. Fibre

I have seen her Aug¹ - 1860. etc

W B Beveridge