

# REPORT ON MACHINERY.

No. 8197

Registered at London Office

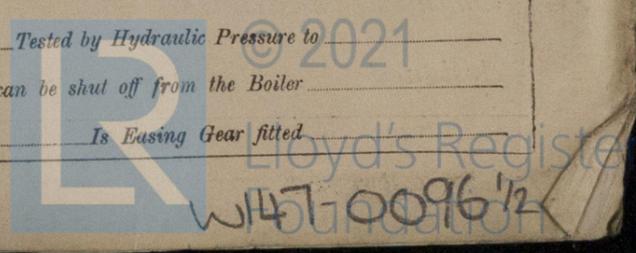
FRI 30 SEP 1919

Date of writing Report 3<sup>rd</sup> Sep 1919 When handed in at Local Office Belfast 10 Port of Belfast  
 No. in Survey held at Belfast Date, First Survey 1918, 6<sup>th</sup> Aug Last Survey 28<sup>th</sup> Aug 1919  
 Reg. Book. on the S.S. New Mexico (Number of Visits 49) Tons } Gross 6566  
 } Net 4043  
 Master Belfast Built at Belfast By whom built Hauland & Wolff L<sup>r</sup> When built 1919  
 Engines made at Belfast By whom made - when made -  
 Boilers made at Belfast By whom made - when made -  
 Registered Horse Power 578 Owners Elder Dempster & Coy L<sup>r</sup> 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 screw shaft 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 13.875 Dia. of Crank shaft journals 14.0 as per rule 13.9 Dia. of Crank pin 14.25 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 moceable 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 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 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<sup>r</sup>  
 Total Heating Surface of Boilers 7668 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 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. seam Lap & Butt  
 long. seams Butt & Lap Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 9 1/8 Lap of plates or width of butt straps 19 1/2  
 Per centages of strength of longitudinal joint 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 3/8  
 Length of plain part top 5 bottom 8 Thickness of plates crown 2 1/4 bottom 3 1/2 Description of longitudinal joint Weld 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 23/32 Bottom 23/32  
 Pitch of stays to ditto: Sides 10 1/8 x 9 1/4 Back 10 1/2 x 8 1/2 Top 10 1/8 x 9 1/4 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs  
 Material of stay Steel Area at smallest part 2.89-3.4 Area 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 21 1/2 x 21 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 3/32 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 1/4 Pitch of tubes 4 x 8 1/2 Material of tube plates Steel Thickness: Front 3/32 Back 3/4 Mean pitch of stays 2 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 (7 x 2) Length as per rule 35 7/8 Distance apart 10 1/8 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 2021  
 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 -



W147-0096/2

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. E. Hebeck* Manufacturer.

Dates of Survey while building: During progress of work in shops -- *5<sup>th</sup> Aug 1918 to 28<sup>th</sup> Aug 1919*  
 During erection on board vessel ---  
 Total No. of visits *47*

Dates of Examination of principal parts—Cylinders *1* Slides *1-19* Covers *1* Pistons *1* Rods *1*  
 Connecting rods *23-6-19* Crank shaft *9* Thrust shaft *1* Tunnel shafts *2* Screw shafts *19* Propeller *17-6-19*  
 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 *23-8-19* Thickness of adjusting washers *7-12-32*  
 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. *do* Material of Screw shafts *do* Identification Marks on Do. *do*  
 Material of Steam Pipes *W. Iron* Test pressure *570 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 *S.S. New Georgia*

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 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 "Faced draft" + Electric Light*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 8.19. F.D.

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

Additional The amount of Entry Fee ... £ 3 : - :  
 Special ... £ 45 : 18 :  
 Donkey Boiler Fee ... £ 7 : 0 :  
 Travelling Expenses (if any) £ : :  
 Chargeable ...

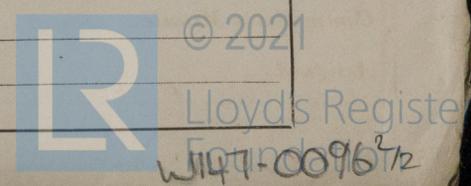
Committee's Minute  
 Assigned  
 + L.M.C. 8.19  
 F.D.

Rpt. 9a. Port of *Belfast* Continuation of Report No. 8197 dated *3<sup>rd</sup> Sep 1919* on the

*S.S. New Mexico*  
*Turbinium Pumps*  
 1 Feed *9 1/2" x 7" x 18"* ✓  
 1 General *9 1/2" x 7" x 18"* ✓  
 1 Ballast *10 1/2" x 14" x 24"* ✓  
 1 Fresh Water *3" x 3" x 4"* ✓  
 Principal items of Spare Gear

- 2 Connecting Rod top end bolts + nuts ✓
- 2 - - - - - bottoms - - - - - ✓
- 2 Main bearing bolts + nuts ✓
- 6 Shaft coupling bolts - ✓
- 2 Feed pump valves ✓
- 2 Belts - - - - - ✓
- 3 Main feed check valves ✓
- 3 Donkey - - - - - ✓
- 50 Bolts + nuts. ✓
- 1 Propeller, C. Iron ✓
- 12 Condenser tubes ✓
- 50 - - - - - ferrules ✓
- 6 Air pump valves ✓
- 7 Spare Fan engine ✓
- 1, L.P. valve spindle ✓
- 1 Valve cover + spindle main boiler stop valve ✓
- 1 - - - - - nut ✓
- 4 Spindles four Check valves. ✓
- 1 Feed pump escape valve spring ✓
- 1 Filter bucket + 50 lbs canvas fibres ✓
- Spare gear for Aux. pumps, etc ✓

*R. J. Beveridge*



This document is required to be sent to the Registrar of Shipping and to be filed in the office of the Registrar of Shipping.