

# REPORT ON MACHINERY.

No. 8304

MON. 15 MAR. 1920

Date of writing Report 9<sup>th</sup> March 1920 When handed in at Local Office Belfast Port of Belfast  
 No. in Survey held at Belfast Date, First Survey 4<sup>th</sup> Nov. 1918 Last Survey 4<sup>th</sup> March 1920  
 Reg. Book. on the S.S. Maine (Number of Visits 6)  
 Master Belfast Built at Belfast By whom built Hauland & Wolff L<sup>rs</sup> Tons { Gross 6600  
 Engines made at Belfast By whom made - when made - Net 4073  
 Boilers made at - By whom made - when made -  
 Registered Horse Power - Owners Atlantic Transport Co Import belonging to -  
 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 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 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 as per rule 13.33 Dia. of Crank shaft journals as per rule 13.99 Dia. of Crank pin 14 3/4 Size of Crank webs 28" x 9" Dia. of thrust shaft under  
 as fitted 13.87 as fitted 14.75 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 sheets of Pumps 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 Pumps 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 Injections 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 Live hold Suctions 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.V.) Manufacturers of Steel D. Colville & Sons L<sup>rs</sup> S.S.B.  
 Total Heating Surface of Boilers 7668 sq ft Forced Draft fitted Yes No. and Description of Boilers 3 Single End Cylin<sup>rs</sup>  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29-10-19 No. of Certificate 538  
 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 flange 1/4" 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 Double  
 long. seams B. Butt Diameter of rivet holes in long. seams 1 5/16" 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 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 and Description of Furnaces in each boiler 3 - Daylight Material Steel Outside diameter 50 3/8"  
 Length of plain part top 5" bottom 8" Thickness of plates crown 19/32" bottom 3/32" Description of longitudinal joint Weld No. of strengthening rings 0  
 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 1/2" x 9 1/2" Back 9 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 to 3.4 sq supported by each stay 98 1/2 sq Working pressure by rules 186 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 45.93 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 18 1/2" x 18 1/2" Working pressure of plate by rules 189 lbs  
 Diameter of tubes 2 1/2" Pitch of tubes 4" x 3 1/2" Material of tube plate Steel Thickness: Front 31/32" Back 3/4" Mean pitch of stays 12" 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 9/16" 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 Yes % of strength of joint Yes  
 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 V 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 -



