

# REPORT ON BOILERS.

No. 7024.

WED. DEC. 27. 1911

Received at London Office

Date of writing Report 22<sup>nd</sup> Dec 1911 When handed in at Local Office 22<sup>nd</sup> Dec 1911 Port of Belfast  
 No. in Survey held at Belfast Date, First Survey 23<sup>rd</sup> March Last Survey 21<sup>st</sup> Dec 1911  
 Reg. Book. T. S. S. "Etna" (Number of Visits ) Gross Tons  Net Tons   
 on the T. S. S. "Etna"  
 Master Belfast Built at Belfast By whom built Workman Clark & Co Ltd When built 1911  
 Engines made at Belfast By whom made Workman Clark & Co Ltd (No 308) when made 1911  
 Boilers made at Do By whom made Do when made 1911  
 Registered Horse Power Do Owners British India Steam Nav. Co Port belonging to Glasgow

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Wm Beardmore & Steel Co of Scotland

Letter for record S. Total Heating Surface of Boilers 5576 sq ft Is forced draft fitted Yes No. and Description of Boilers 2 single ended Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 28.9.11  
 No. of Certificate 445 Can each boiler be worked separately Yes Area of fire grate in each boiler 65 sq ft No. and Description of safety valves to each boiler double spring loaded Area of each valve 9.62 sq in Pressure to which they are adjusted 205 lbs  
 Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler   
 Smallest distance between boilers or uptakes and bunkers or woodwork 14" Mean dia. of boilers 15.9" Length 12.0"  
 Material of shell plates Steel Thickness 1 3/4" Range of tensile strength 28/32 tons Are the shell plates welded or flanged no  
 Descrip. of riveting: cir. seams D. & T. Riv long. seams T. R. D. B. S. Diameter of rivet holes in long. seams 1 5/8" Pitch of rivets 10 1/2"  
 Width of butt straps 23 1/4" Per centages of strength of longitudinal joint rivets 91.6 plate 84.5 Working pressure of shell by rules 233 lbs Size of manhole in shell 17" x 13" Size of compensating ring W. H. H. H. No. and Description of Furnaces in each boiler 4 Harrison's Material Steel Outside diameter 43 1/4" Length of plain part top 39" Thickness of plates bottom 64"  
 Description of longitudinal joint weld No. of strengthening rings 3 Working pressure of furnace by the rules 225 Combustion chamber? Yes  
 Material Steel Thickness: Sides 31" Back 43" Top 5" Bottom 13" Pitch of stays to ditto: Sides 8 1/2" x 7 1/2" Back 8 1/2" x 7 1/2"  
 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 206 Material of stays Steel Diameter at smallest part 2.06" Area supported by each stay 71.6 sq in Working pressure by rules 258 End plates in steam space: Material Steel Thickness 1 5/8"  
 Pitch of stays 19 1/2" x 15 1/4" How are stays secured D. N. work Working pressure by rules 201 Material of stays Steel Diameter at smallest part 6.66"  
 Area supported by each stay 307 sq in Working pressure by rules 225 Material of Front plates at bottom Steel Thickness 1" Material of lower back plate Steel Thickness 5 1/2" 15" Greatest pitch of stays 13 1/2" x 7 1/2" Working pressure of plate by rules 224 Diameter of tubes 2 1/2"  
 Pitch of tubes 3 5/8" x 3 3/4" Material of tube plates Steel Thickness: Front 63/64" Back 13/16" Mean pitch of stays 9 1/4" Pitch across wide water spaces 13 1/2" Working pressures by rules 204 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 1/2" x 2 @ 3/4" Length as per rule 33 1/16" Distance apart 8 1/4" Number and pitch of Stays in each 3 @ 7 3/4"  
 Working pressure by rules 202 Superheater or Steam chest: how connected to boiler  Can the superheater be shut off and the boiler worked separately  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  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

The foregoing is a correct description,  
 FOR WORKMAN, CLARK & CO., LIMITED  
W. H. Bell Manufacturer.

Dates of Survey  During progress of work in shops - - -  
 while building  During erection on board vessel - - -  
 Is the approved plan of boiler forwarded herewith   
 Total No. of visits

## GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

Please see Rpt 4.

Survey Fee ... £ : : } When applied for, ..... 19.....  
 Travelling Expenses (if any) £ : : } When received, ..... 19.....

Assigned see Minute on Bel. Rpt 7024 attached  
A. J. Thomas  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

FRI. DEC. 29. 1911



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