

# REPORT ON BOILERS.

No. 31511

WED. JUN. 5 - 1912

Received at London Office

Date of writing Report 1/6/12 When handed in at Local Office 1/6/12 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 6<sup>th</sup> October 1911 Last Survey 23<sup>rd</sup> May 1912  
 Reg. Book. on the % Benefactor (Number of Visits 34) Gross 5511 Tons Net 3499  
 Master J. R. Atkinson Built at Glasgow By whom built B & W Henderson & Co Ltd When built 1912  
 Engines made at Glasgow By whom made do when made 1912  
 Boilers made at do By whom made do when made 1912  
 Registered Horse Power 536 Owners J & J Harrison Port belonging to Liverpool

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

(Letter for record 5) Total Heating Surface of Boilers 1388  $\text{sq ft}$  Is forced draft fitted no No. and Description of Boilers one single ended Working Pressure 215  $\text{lbs}$  Tested by hydraulic pressure to 430  $\text{lbs}$  Date of test 18.3.12  
 No. of Certificate 11487 Can each boiler be worked separately yes Area of fire grate in each boiler 51  $\text{sq ft}$  No. and Description of safety valves to each boiler 2 spring loaded Area of each valve 4.9  $\text{sq in}$  Pressure to which they are adjusted 215  $\text{lbs}$   
 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 15  $\text{in}$  Mean dia. of boilers 13-0  $\text{in}$  Length 10-11  $\text{in}$   
 Material of shell plates steel Thickness 1 7/16 Range of tensile strength 28/32 tons Are the shell plates welded or flanged no  
 Descrip. of riveting: cir. seams lap long. seams BS. TR Diameter of rivet holes in long. seams 1 7/16 Pitch of rivets 9 7/8  
 Lap of plates or width of butt straps 2 1/2  $\text{in}$  Per centages of strength of longitudinal joint rivets 85 Working pressure of shell by rules 251 plate 85.4 Size of manhole in shell 20 x 16 Size of compensating ring 31 x 27 x 1 7/16 No. and Description of Furnaces in each boiler 3 Morrison bulb Material steel Outside diameter 41 7/16 Length of plain part top — Thickness of plates crown 1 1/2 bottom 3/2  
 Description of longitudinal joint welded No. of strengthening rings — Working pressure of furnace by the rules 218 Combustion chamber plates: Material steel Thickness: Sides 1 1/16 Back 1 1/16 Top 1 1/16 Bottom 1 Pitch of stays to ditto: Sides 8 1/2 x 8 1/2 Back 8 1/2 x 8 1/2 Top 9 x 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 215 Material of stays steel area Diameter at smallest part 1.99 Area supported by each stay 76.5 Working pressure by rules 234 End plates in steam space: Material steel Thickness 1 3/8 Pitch of stays 20 1/2 x 18 1/2 How are stays secured DN Working pressure by rules 222 Material of stays steel area Diameter at smallest part 9.42 Area supported by each stay 381 Working pressure by rules 256 Material of Front plates at bottom steel Thickness 1 1/4 Material of Lower back plate steel Thickness 1 5/16 Greatest pitch of stays 14 1/2 Working pressure of plate by rules 220 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates steel Thickness: Front 1 1/4 Back 2 1/32 Mean pitch of stays 9 Pitch across wide water spaces 14 1/4 Working pressures by rules 222 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 plates 8 7/8 x 1 Length as per rule 32 1/2 Distance apart 9 Number and pitch of Stays in each 3 of 8 1/2  
 Working pressure by rules 239 Superheater or Steam chest; how connected to boiler none 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 —  
 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 —

The foregoing is a correct description,  
 FOR DAVID & WILLIAM HENDERSON & CO., LIMITED. Manufacturer.

Is the approved plan of boiler forwarded herewith yes

Total No. of visits 34

Dates of Survey } During progress of work in shops - - }  
 while building } During erection on board vessel - - }

See accompanying report.

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

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

Harry Clarke  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

GLASGOW 4 - JUN. 1912

Assigned See minute on accompanying machinery report



Lloyd's Register Foundation