

## REPORT ON BOILERS.

No 28153.

Received at London Office 27 OCT 1909

Date of writing Report 25.8.1909 When handed in at Local Office 2/10/09 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 13<sup>th</sup> May 1909 Last Survey 13<sup>th</sup> Aug 1909  
 Reg. Book. 5/5 Laverock (Number of Visits) Gross 1199.39  
 17 Feb on the Tons Net 263.77  
 Master J.H. Ferris Built at Troon By whom built Ailsa S.B. & Co. Ltd When built 1909  
 Engines made at Troon By whom made Ailsa S.B. & Co. Ltd when made 1909  
 Boilers made at Glasgow By whom made Dunsen & Jackson L<sup>d</sup> (352) when made 1909  
 Registered Horse Power Owners General Steam Nav. Co. Ltd Port belonging to London  
 Builders of Steel Bobville & Son

MULTITUBULAR BOILERS—MAIN, ~~MANUFACTURERS OF STEEL~~

(Letter for record (S) Total Heating Surface of Boilers 4180<sup>ft</sup> Is forced draft fitted No No. and Description of  
 Boilers 2 Single Ended Working Pressure 170 Tested by hydraulic pressure to 340 Date of test 9-8-09

No. of Certificate 10072 Can each boiler be worked separately Area of fire grate in each boiler 58<sup>4</sup><sup>ft</sup> No. and Description of  
 safety valves to each boiler Area of each valve Pressure to which they are adjusted

Are they fitted with easing gear 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 Mean dia. of boilers 14<sup>7</sup>/<sub>8</sub>" Length 11-6"

Material of shell plates S Thickness 1<sup>1</sup>/<sub>8</sub>" Range of tensile strength 28/32 Are the shell plates welded or flanged

Descrip. of riveting: cir. seams DR long. seams TR. DBS Diameter of rivet holes in long. seams 13/16" Pitch of rivets 8<sup>7</sup>/<sub>8</sub>"

width of butt straps 1-5<sup>7</sup>/<sub>8</sub>" Per centages of strength of longitudinal joint rivets 88-5-6 Working pressure of shell by  
 rules 172 Size of manhole in shell 16 x 12" Size of compensating ring 80<sup>th</sup> Reils No. and Description of Furnaces in each

boiler 3 Corrugated Material S Outside diameter 3-10" Length of plain part top Thickness of plates crown 1<sup>1</sup>/<sub>2</sub>"  
 bottom 1<sup>1</sup>/<sub>2</sub>"

Description of longitudinal joint weld No. of strengthening rings Working pressure of furnace by the rules 175 Combustion chamber

plates: Material S Thickness: Sides 19/32 Back 5/8 Top 19/32 Bottom 7/8 Pitch of stays to ditto: Sides 8<sup>5</sup>/<sub>8</sub> Back 8<sup>3</sup>/<sub>4</sub> 8<sup>3</sup>/<sub>4</sub> 8<sup>3</sup>/<sub>4</sub>

Top 8<sup>5</sup>/<sub>8</sub> If stays are fitted with nuts or riveted heads 8<sup>5</sup>/<sub>8</sub> Working pressure by rules 176 Material of stays S Diameter at  
 smallest part 198<sup>2</sup>/<sub>16</sub>" Area supported by each stay 76-5 Working pressure by rules 184 End plates in steam space: Material S Thickness 13/32

Pitch of stays 14<sup>1</sup>/<sub>8</sub>" How are stays secured DN Working pressure by rules 179 Material of stays S Diameter at smallest part 5-26

Area supported by each stay 315 Working pressure by rules 183 Material of Front plates at bottom S Thickness 1<sup>1</sup>/<sub>2</sub>" Material of

Lower back plate S Thickness 7/8 Greatest pitch of stays 25 Working pressure of plate by rules 179 Diameter of tubes 33/4

Pitch of tubes 4<sup>1</sup>/<sub>16</sub> x 5" Material of tube plates S Thickness: Front 1<sup>1</sup>/<sub>2</sub>" Back 7/8 Mean pitch of stays 12<sup>1</sup>/<sub>2</sub>" Pitch across wide

water spaces 14 3/4 Working pressures by rules 186 Girders to Chamber tops: Material Iron Depth and thickness of

girder at centre 9 x 1<sup>1</sup>/<sub>2</sub> Length as per rule 36 34<sup>1</sup>/<sub>2</sub> Distance apart 8<sup>1</sup>/<sub>2</sub>" Number and pitch of Stays in each 3 at 8<sup>5</sup>/<sub>8</sub>

Working pressure by rules 191 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

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

Survey request form

No 205 attached

The foregoing is a correct description,  
 for DUNSMUIR & JACKSON, Limited Manufacturer.  
 James Hetherington

Dates of Survey During progress of 1909. May 13. 19. 26. June 2. 4. 10. 21. 24. Is the approved plan of boiler forwarded herewith for  
 while work in shops -- 30. July 5. 9. 30. Aug 3. 6. 9. 13  
 building During erection on board vessel -- Total No. of visits 16.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under Special Survey in accordance with the approved plan & the workmanship & material are of good quality. These boilers have been shipped to Troon at which Port they are to be fitted on board.

Survey Fee ... £ Fee charged When applied for. 19  
 Travelling Expenses (if any) £ on Mackay & Co. When received. 19

W. Gordon Murchie

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

Committee's Minute GLASGOW 5 OCT. 1909

Assigned

See minute re accompanying machinery report.



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Foundation