

# REPORT ON BOILERS.

No. 41758

Received at London Office WFD 1 MAR 1922

Date of writing Report 4. 1. 1921 When handed in at Local Office 4. 1. 1921 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 24<sup>th</sup> Feb '20 Last Survey 27<sup>th</sup> Dec 1920  
 Reg. Book. on the Boilers nos 982 to order of Messrs MacKie & Baxter (Number of Visits 32) } Gross Tons }  
 Master Built at By whom built When built  
 Engines made at Glasgow By whom made MacKie & Baxter, Ings nos 933. When made  
 Boilers made at Glasgow By whom made A. Stephen & Sons When made 1920  
 Registered Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel S. Co of Scotland, J. Colville & Sons, J. Spencer & Sons

(Letter for record S) Total Heating Surface of Boilers 7551 Is forced draft fitted  
 Boilers Three single ended multitubular Working Pressure 180 lbs Tested by hydraulic pressure to 320 lbs Date of test 27-12-20

No. of Certificate 15648 Can each boiler be worked separately  Area of fire grate in each boiler 67.0 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 INT dia. of boilers 15'-6 1/2" Length 11'-6"

Material of shell plates S Thickness 1 1/4" Range of tensile strength 28/32 tons Are the shell plates welded or flanged no  
 Descrip. of riveting: cir. seams L.D.R long. seams T.R. D.B. STAYS Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9"

Gap of plates or width of butt straps 19 1/8" Per centages of strength of longitudinal joint rivets 89.4 Working pressure of shell by plate 85.4  
 rules 181 Size of manhole in shell 16 x 12" Size of compensating ring in heads, 3 1/4 x 2 9/16 x 1 1/2" No. and Description of Furnaces in each boiler

boiler 3 Corrugated Material S Outside diameter 50 3/4" Length of plain part top  Thickness of plates crown } 19 1/32" bottom   
 Description of longitudinal joint weld No. of strengthening rings none Working pressure of furnace by the rules 185 Combustion chamber

plates: Material S Thickness: Sides 1 1/16" Back C = 1 1/16" Top 1 1/16" Bottom 3/4" Pitch of stays to ditto: Sides 10" x 9" Back C = 10 1/2" x 7 3/8"  
 Top 10" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 187 Material of stays S Area at smallest part 1.76 Area supported by each stay 94.5 Working pressure by rules 187 End plates in steam space: Material S Thickness 1 3/8"

Pitch of stays 21 x 20 How are stays secured S. nuts Working pressure by rules 200 Material of stays S Area at smallest part 8.45  
 Area supported by each stay 4.20 Working pressure by rules 208 Material of Front plates at bottom S Thickness 7/8" Material of Lower back plate S Thickness 29/32" Greatest pitch of stays 14 1/4" x 10 3/4" Working pressure of plate by rules 180 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates S Thickness: Front 7/8" Back 3/4" + 13/16" Mean pitch of stays 10 1/2" Pitch across wide water spaces 1 1/4" + doubling Working pressures by rules 181 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 5/16" x 1 3/4" Length as per rule 33 1/2" Distance apart 9" Number and pitch of Stays in each 2 @ 10"

Working pressure by rules 182 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   
 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

FOR ALEXANDER STEPHEN & SONS, LIMITED.  
 The foregoing is a correct description,  
Mrs. M. Sinclair Secretary

Dates of Survey } During progress of 1920 Feb 24 Mar 9. 16. 22. 29 Apr 16. 20. 29 May 6. 13. 19. 24. 27. 31 Is the approved plan of boiler forwarded herewith  
 while } work in shops - - } Jun 4. 9. 17. 21 July 7. 14 Sep 16 Oct 7. 15. 20 Nov 4. 11. 16. 22  
 building } During erection on } Dec 8. 17. 21. 27. board vessel - - - } Total No. of visits 32

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under Special Survey and in accordance with the Rules; the materials and workmanship are sound and good, on completion they were tested by water pressure to 320 lbs per square inch and found tight and satisfactory in all respects.

Survey Fee ... .. £ 15 : 1 : } When applied for, 27. 2. 1922.  
 Travelling Expenses (if any) £ : : } When received, 3/4/22

Committee's Minute  
 Assigned  
 GLASGOW 28 FEB 1922  
 TRANSMIT TO LONDON  
 J. Selles  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 FRI. 6 APR. 1922

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