

## REPORT ON BOILERS.

No. 34057

Date of writing Report 4.4.1917 When handed in at Local Office 1917 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 8th March 1916 Last Survey 11th April 1917  
 Reg. Book. 515 "Broompark" (Number of Visits 34) Gross Tons Net  
 Master Built at Mangumouth By whom built Cunliffe Mangumouth & Co. Ltd. When built 1917  
 Engines made at Glasgow By whom made Dunsmuir & Jackson Ltd (462) When made  
 Boilers made at Glasgow By whom made Dunsmuir & Jackson Ltd (1368) When made 1917  
 Registered Horse Power Owners Port belonging to

**MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.**—Manufacturers of Steel Edrill, 465 St. Paul's, Glasgow  
 (Letter for record R) Total Heating Surface of Boilers 3734 # Is forced draft fitted No No. and Description of  
 Boilers 2 Single Ended Working Pressure 180 Tested by hydraulic pressure to 300 Date of test 4-4-17  
 No. of Certificate 13750 Can each boiler be worked separately Yes Area of fire grate in each boiler 563/4 # No. and Description of  
 safety valves to each boiler 2 Spring valves Area of each valve 7.07 # Pressure to which they are adjusted 185 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 10" Mean dia. of boilers 14.7 1/16" Length 10-6"  
 Material of shell plates S Thickness 1 1/16" Range of tensile strength 28-32 Are the shell plates welded or flanged  
 Descrip. of riveting: cir. seams DR long. seams TRIDBS Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/2"  
 Lap of plates or width of butt straps 1-6 3/4" Per centages of strength of longitudinal joint rivets 91.4 # Working pressure of shell by  
 rules 181 Size of manhole in shell 16x12" Size of compensating ring 63/4x13 1/16" plate 85.29 #  
 boiler 3 Corrugated Material S Outside diameter 3-9 Length of plain part top Thickness of plates crown 14 1/32  
 bottom 14 1/32 Description of longitudinal joint weld No. of strengthening rings Working pressure of furnace by the rules 182 Combustion chamber  
 plates: Material S Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 13/16" Pitch of stays to ditto: Sides 47/8x8 1/2" Back 83/4x8"  
 Top 47/8x8 1/2" If stays are fitted with nuts or riveted heads DN Working pressure by rules 194 Material of stays Iron Area at  
 smallest part 199 2/3 # Area supported by each stay 40 # Working pressure by rules 210 End plates in steam space: Material S Thickness 1 1/32  
 Pitch of stays 193 1/8x18 How are stays secured DN Working pressure by rules 186 Material of stays S Area at smallest part 5.78 #  
 Area supported by each stay 335 # Working pressure by rules 181 Material of Front plates at bottom S Thickness 1 1/32 Material of  
 Lower back plate S Thickness 29/32 Greatest pitch of stays 15x83/4 Working pressure of plate by rules 188 Diameter of tubes 3 1/2"  
 Pitch of tubes 47/8x5" Material of tube plates S Thickness: Front 1 1/32 Back 29/32 Mean pitch of stays 12 5/16" Pitch across wide  
 water spaces 14 1/2" Working pressures by rules 181 Girders to Chamber tops: Material Iron Depth and thickness of  
 girder at centre 8x1 (2) Length as per rule 2-6 3/32 Distance apart 83/4" Number and pitch of Stays in each 32-47/8"  
 Working pressure by rules 184 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

DUNSMUIR &amp; JACKSON, Limited.

The foregoing is a correct description,

James H. H. Director Manufacturer.

Dates of Survey During progress of work in shops 1916 March 8th, April 6th, 14th, 18th, May 2nd, 7th, 16th, 23rd, June 2nd, 16th, July 6th Is the approved plan of boiler forwarded herewith Yes  
 while building During erection on board vessel 1917 Jan. 25th, Aug. 3rd, 15th, 16th, 15th, 26th, Oct. 21st, Dec. 8th, 14th, 19th, Jan. 8th, 18th, 31st. Total No. of visits 34  
 Feb. 2nd, 1917, 5th, 22nd, 26th, 1917.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) These boilers have been built under special survey in accordance with the approved plan & the workmanship & material are of good quality. These boilers are duplicate of No. 465. L.S. Rpt. No. 35846. This Report accompanies trial of the Machinery.

Survey Fee ... When applied for, 1917  
 Travelling Expenses ... When received, 1917

Charged on Machinery

W. Gordon Muclian 2021

Committee's Minute GLASGOW. 31 JUL 1917. TUE. 18 SEP. 1917

Assigned See accompanying machinery report.