

Rpt. 5a.

# REPORT ON BOILERS.

No. 24862

Received at London Office WED. 6 JUN 1911

Date of writing Report 19 When handed in at Local Office 26 10 11 Port of Sunderland  
 No. in Survey held at Sunderland Date, First Survey 11 March Last Survey 22 May 19 11  
 Reg. Book. S.S. Grangemoor (Messrs Blumer & Coys. 18205). Tons } Gross 3198  
 on the Griffith Built at Sunderland By whom built J. Blumer & Coys } Net 1974  
 Master Griffith when made 1911  
 Engines made at Sunderland By whom made J. Dickinson & Sons. Ltd. when made 1911  
 Boiler made at Sunderland By whom made Messrs Pollock Ltd (609) when made 1911  
 Registered Horse Power Owners W. Anciman & Co Port belonging to Newcastle

**MULTITUBULAR BOILERS** ~~MAIN AUXILIARY OR~~ **DONKEY.** — Manufacturers of Steel J. Blumer & Sons.  
 (Letter for record (8)) Total Heating Surface of Boilers 668 sq ft Is forced draft fitted No No. and Description of Boilers One single ended Working Pressure 100 Tested by hydraulic pressure to 200 Date of test 24-4-11  
 No. of Certificate 2909 Can each boiler be worked separately Yes Area of fire grate in each boiler 24 3/4 sq ft No. and Description of safety valves to each boiler Two spring loaded Area of each valve 8.29 sq in Pressure to which they are adjusted 102 lbs.  
 Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No  
 Smallest distance between boilers or uptakes and bunkers or woodwork 12" made diam. of boilers 9'-6" Length 9'-6"  
 Material of shell plates Steel Thickness 5/8" Range of tensile strength 28 1/2 - 37 Are the shell plates welded or flanged No  
 Descrip. of riveting: cir. seams S.R. long. seams T.R. lap. Diameter of rivet holes in long. seams 7/8" Pitch of rivets 3.14"  
 Lap of plates or width of butt straps 6" Per centages of strength of longitudinal joint, rivets 41.3 Working pressure of shell by rules 106 lbs. No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 3'-0" Length of plain part 4'-2" Thickness of plates 3/8"  
 Description of longitudinal joint weld No. of strengthening rings none Working pressure of furnace by the rules 106 lbs. Combustion chamber plates: Material Steel Thickness: Sides 17/32" Back 9/16" Top 17/32" Bottom 1/16" Pitch of stays to ditto: Sides 9 3/4" x 9 3/4" Back 9 3/4" x 10"  
 Top 1 1/2" x 10 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 104 lbs. Material of stays Steel Diameter at smallest part 1.45" Area supported by each stay 49 sq in Working pressure by rules 103 lbs. End plates in steam space: Material Steel Thickness 3/8"  
 Pitch of stays 16" x 19" How are stays secured D.N. double Working pressure by rules 100 lbs. Material of stays Steel Diameter at smallest part 4.11"  
 Area supported by each stay 288 sq in Working pressure by rules 148 lbs. Material of Front plates at bottom Steel Thickness 3/8" Material of Lower back plate Steel Thickness 3/8" Greatest pitch of stays 12 1/2" Working pressure of plate by rules 139 lbs. Diameter of tubes 3 1/4"  
 Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates Steel Thickness: Front 23/32" Back 5/8" Mean pitch of stays 11 1/8" Pitch across wide water spaces 13 1/2" Working pressures by rules 101.5 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 2 @ 5 1/8" x 13 1/16" Length as per rule 25 3/8" Distance apart 10 1/2" Number and pitch of Stays in each 2 @ 4 1/2"  
 Working pressure by rules 104 lbs. Superheater or Steam chest: how connected to boiler none Can the superheater be shut off and the boiler worked separately Yes  
 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,  
**MAC COLL & POLLOCK LTD.** Manufacturer.

Dates of Survey } During progress of work in shops -- } 1911 March 11, 27, Apr. 20, 24.  
 while building } During erection on board vessel -- } May 1, 22  
 Is the approved plan of boiler forwarded herewith Yes  
 Total No. of visits 6

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)  
 This boiler has been built under special survey the materials & workmanship are of good quality & the hydraulic test proved satisfactory it has been securely fitted on board & its safety valves adjusted under steam to the above pressure.

Survey Fee ... £ 2 : 2 : - } When applied for, 26 1911  
 Travelling Expenses (if any) £ : : } When received, 13/6/11  
 William P. Dutton  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute  
 Assigned sa minute on  
Std Rpt 24862  
 WED. 7 JUN 1911  
 Lloyd's Register Foundation