

Rpt. 5a.

REPORT ON BOILERS.

No. 25178

Received at London Office TUE. MAR. 19. 1912

Date of writing Report 19-1-1912 When handed in at Local Office 14.3.1912 Port of **SUNDERLAND**
 No. in Survey held at **SUNDERLAND** Date, First Survey 13 June Last Survey 12 March 1912
 Reg. Book. on the **Donkey Boiler for S/S Kyvisbrook** (Number of Visits 12) Gross 3158 Tons Net 1964
 Master **McWilliams** Built at **Sunderland** By whom built **John Blumer & Co. 210** When built 1912
 Engines made at **Sunderland** By whom made **North Eastern Marine Engineering** when made 1912
 Boilers made at **Sunderland** By whom made **Maclell & Pollock Ltd (1912)** when made 1912
 Registered Horse Power Owners **Brook & Co. (Miller & Richards)** Port belonging to **Glasgow**

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel **John Spencer & Sons Ltd.**
 (Letter for record (S)) Total Heating Surface of Boilers **836** Is forced draft fitted **No** No. and Description of Boilers **one single ended main** Working Pressure **120** Tested by hydraulic pressure to **240** Date of test **19-1-12**
 No. of Certificate **2989** Can each boiler be worked separately **yes** Area of fire grate in each boiler **29** No. and Description of safety valves to each boiler **two spring loaded** Area of each valve **5.94** Pressure to which they are adjusted **120 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 **15"** Mean dia. of boilers **10'-0"** Length **10'-0"**
 Material of shell plates **steel** Thickness **3/4"** Range of tensile strength **28-32** Are the shell plates welded or flanged **No**
 Descrip. of riveting: cir. seams **D.R.** long. seams **T.R. lap** Diameter of rivet holes in long. seams **15/16"** Pitch of rivets **3 1/4"**
 Lap of plates or width of butt straps **6 1/4"** Per centages of strength of longitudinal joint rivets **72.2** Working pressure of shell by rules **123** plate **71.15**
 Size of manhole in shell **16" x 12"** Size of compensating ring **28" x 26" x 3/4"** No. and Description of Furnaces in each boiler **2 plain** Material **steel** Outside diameter **36"** Length of plain part top **74"** Thickness of plates crown **19"** bottom **32"**
 Description of longitudinal joint **welded** No. of strengthening rings **none** Working pressure of furnace by the rules **130** Combustion chamber plates: Material **steel** Thickness: Sides **9 1/16"** Back **9 1/16"** Top **9 1/16"** Bottom **13 1/16"** Pitch of stays to ditto: Sides **9 1/8" x 9 1/8"** Back **10 1/4" x 8 1/4"**
 Top **8 1/2" x 9 1/8"** If stays are fitted with nuts or riveted heads **none except** Working pressure by rules **122** Material of stays **steel** Diameter at smallest part **1.450"** Area supported by each stay **890"** Working pressure by rules **130** End plates in steam space: Material **steel** Thickness **3/4"**
 Pitch of stays **14 3/4" x 14 1/4"** How are stays secured **D.N.** Working pressure by rules **122** Material of stays **steel** Diameter at smallest part **2.50"**
 Area supported by each stay **266.50"** Working pressure by rules **126** Material of Front plates at bottom **steel** Thickness **3/4"** Material of Lower back plate **steel** Thickness **3/4"** Greatest pitch of stays **13" x 10 1/4"** Working pressure of plate by rules **142** Diameter of tubes **3 1/4"**
 Pitch of tubes **4 1/2" x 4 3/8"** Material of tube plates **steel** Thickness: Front **3/4"** Back **2 1/2"** Mean pitch of stays **11 1/8"** Pitch across wide water spaces **13 1/4"** Working pressures by rules **123** Girders to Chamber tops: Material **steel** Depth and thickness of girder at centre **20" x 6 3/4" x 3/4"** Length as per rule **28 1/2"** Distance apart **9 1/8"** Number and pitch of Stays in each **2 @ 8 1/2"**
 Working pressure by rules **123** 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,

Maclell & Pollock Ltd. Manufacturer. **yes**

Dates of Survey During progress of work in shops - - - 1911 June 13, 27, Jul 21, 26, Aug 1, Nov 22, 29 Dec 12 Is the approved plan of boiler forwarded herewith? **yes**
 while building During erection on board vessel - - - 1912 Jan 4, 19, Feb 23, Mar 5 Total No. of visits (12)

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

The materials and workmanship are good.
 The boiler has been made under special survey.
 It has been securely fitted on board in the main deck, mounted, & its safety valves have been adjusted under steam (see also machinery report).

Survey Fee ... £ 2 : 2 - : When applied for, 18.3.1912

Travelling Expenses (if any) £ : : When received, 16.4.1912

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

Committee's Minute

FRI. MAR. 22. 1912

Assigned



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