

REPORT ON BOILERS.

No. 27088

MON. 12 NOV. 1917

Received at London Office

Date of writing Report **27-1-1917** When handed in at Local Office **- 9 NOV 1917** Port of **Sunderland**

No. in Survey held at **Sunderland** Date, First Survey **15 Sept 16** Last Survey **5 Nov. 1917**

Reg. Book. on the **donkey boiler for the S.S. Capelcastle** (Number of Visits **9**) Gross **3872** Tons Net **2352**

Master **Agnew** Built at **Sunderland** By whom built **R. Thompson & Sons Ltd (No 291)** When built **1917**

Engines made at **Sunderland** By whom made **North Eastern Marine Eng Co Ltd (No 2224)** When made **1917**

Donkey Boilers made at **Sunderland** By whom made **MacColl & Pollock Ltd No 658** When made **1917**

Registered Horse Power Owners **A. Capel & Co (South Wales) Ltd** Port belonging to **Newport, Mon.**

MULTITUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY. - Manufacturers of Steel **John Spence & Sons Ltd**

Letter for record **S** Total Heating Surface of Boilers **833** Is forced draft fitted **no** No. and Description of Boilers **One single ended marine** Working Pressure **100** Tested by hydraulic pressure to **200** Date of test **26-1-17**

No. of Certificate **3380** Can each boiler be worked separately **yes** Area of fire grate in each boiler **30** No. and Description of safety valves to each boiler **2 direct spring** Area of each valve **4.91** Pressure to which they are adjusted **100 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 **on deck** Mean dia. of Boilers **10'-0"** Length **10'-0"**

Material of shell plates **steel** Thickness **5/8"** Range of tensile strength **282-32** Are the shell plates welded or flanged **no**

Descrip. of riveting: cir. seams **SR** long. seams **lap T.R.** Diameter of rivet holes in long. seams **15/16"** Pitch of rivets **3 1/16"**

Gap of plates or width of butt straps **6 1/2"** Per centages of strength of longitudinal joint rivets **76.4** plate **74.5** Working pressure of shell by rules **103** Size of manhole in shell **16x12"** Size of compensating ring **6x4 1/2"** No. and Description of Furnaces in each boiler **2 plain** Material **steel** Outside diameter **3'-1"** Length of plain part top **75"** bottom **81 1/2"** Thickness of plates crown **9"** bottom **7 1/2"**

Description of longitudinal joint **welded** No. of strengthening rings **none** Working pressure of furnace by the rules **112** Combustion chamber plates: Material **steel** Thickness: Sides **1 1/2"** Back **9/16"** Top **1 1/32"** Bottom **7/4"** Pitch of stays to ditto: Sides **8 7/16 x 9 1/16"** Back **10 1/4 x 9 1/16"** Top **8 x 9 7/8"** If stays are fitted with nuts or riveted heads **none in use** Working pressure by rules **107** Material of stays **steel** Area at smallest part **102 sq in** Area supported by each stay **80 sq in** Working pressure by rules **101** End plates in steam space: Material **steel** Thickness **3/4"** Pitch of stays **17 1/2 x 17 1/2"** How are stays secured **DN & dishing** Working pressure by rules **103** Material of stays **steel** Area at smallest part **4.11** Area supported by each stay **306.2 sq in** Working pressure by rules **139** Material of Front plates at bottom **steel** Thickness **3/4"** Material of lower back plate **steel** Thickness **3/4"** Greatest pitch of stays **12 3/4 x 9"** Working pressure of plate by rules **160** 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 **5/8"** Mean pitch of stays **11 1/4"** Pitch across wide water spaces **13 1/2"** Working pressures by rules **110** Girders to Chamber tops: Material **steel** Depth and thickness of girder at centre **2 @ 6" x 3/4"** Length as per rule **27"** Distance apart **9 1/8"** Number and pitch of Stays in each **2 @ 8"** Working pressure by rules **105** 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 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

MAC COLL & POLLOCK LTD The foregoing is a correct description,

W. Richardson Manufacturer.

Dates During progress of work in shops: **1916 Sept 15, Nov 21, Dec 22, Jan 5, 9** Is the approved plan of boiler forwarded herewith **Yes**

While building: **1917 Oct 18, 19, Nov 5** Total No. of visits **9**

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

The workmanship and materials are good. The boiler has been made under special survey.

Survey Fee £ **2 : 2 :** When applied for **- 4 JUL 1917**

Travelling Expenses (if any) £ : : When received **- 4 JUL 1917**

W. Davis Charles Cooper
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute **TUE NOV 20 1917**

Signed



W409-0105