

Rpt. 5a.

REPORT ON BOILERS.

No. 69076

TUE. 22 AUG. 1916

Date of writing Report 191 When handed in at Local Office **AUG 21 1916** Port of **NEWCASTLE ON TYNE**

No. in Survey held at **Newcastle on Tyne** Date, First Survey **29th May 16** Last Survey **27th Feb 1917**

Reg. Book. on the **S.S. "SOUTHWICK"** Messrs **Luan Hunter Wigham Richardson & Co. Ltd.** Gross **443** Tons Net **218**

Master **Butler** Built at **Sunderland** By whom built **Luan Hunter Wigham Richardson & Co. Ltd.** When built **1916**

Engines made at **Southampton** By whom made **Day Summers & Co. Ltd.** When made **1907**

Boilers made at **Hellum-on-Tyne** By whom made **Palmer's S.S. & Co. Ltd.** When made **1916**

Registered Horse Power Owners **Anglo American Oil Co. Ltd.** Port belonging to **Sunderland**

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel **J. Spencer & Sons Ltd.**

(Letter for record **S.**) Total Heating Surface of Boilers **1135 sq. ft.** Is forced draft fitted **No.** No. and Description of Boilers **One Cylindrical Single** Working Pressure **180 lb.** Tested by hydraulic pressure to **360 lb.** Date of test **14/8/16**

No. of Certificate **8886** Can each boiler be worked separately **No.** Area of fire grate in each boiler **33 sq. ft.** No. and Description of safety valves to each boiler **Two direct spring** Area of each valve **4.910"** Pressure to which they are adjusted **170**

Are they fitted with easing gear **No.** 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 **11.6"** Length **10.3"**

Material of shell plates **Steel** Thickness **1"** Range of tensile strength **28 to 32 tons** Are the shell plates welded or flanged **No.**

Descrip. of riveting: cir. seams **Lap** long. seams **Butt** Diameter of rivet holes in long. seams **1 1/16"** Pitch of rivets **7 1/2"**

Lap of plates or width of butt straps **16"** Per centages of strength of longitudinal joint **88** Working pressure of shell by rules **191 lb.** Size of manhole in shell **16" x 12"** Size of compensating ring **4" x 1"** No. and Description of Furnaces in each boiler **2: Plain** Material **Steel** Outside diameter **41 1/2"** Length of plain part **43"** Thickness of plates **3 1/4"**

Description of longitudinal joint **Weld** No. of strengthening rings **None** Working pressure of furnace by the rules **183 lb.** Combustion chamber plates: Material **Steel** Thickness: Sides **5/8"** Back **1/2"** Top **5/8"** Bottom **5/8"** Pitch of stays to ditto: Sides **8 1/2" x 8 1/2"** Back **9 1/2" x 9 1/2"**

Top **8 1/2" x 8 1/2"** If stays are fitted with nuts or riveted heads **Nuts** Working pressure by rules **181 lb.** Material of stays **Steel** Diameter at smallest part **1 1/8"** Area supported by each stay **1/45"** Working pressure by rules **186 lb.** End plates in steam space: Material **Steel** Thickness **1"**

Pitch of stays **16" x 16"** How are stays secured **Nuts** Working pressure by rules **185 lb.** Material of stays **Steel** Diameter at smallest part **5/8"**

Area supported by each stay **256"** Working pressure by rules **206 lb.** Material of Front plates at bottom **Steel** Thickness **1"** Material of Lower back plate **Steel** Thickness **1"** Greatest pitch of stays **14"** Working pressure of plate by rules **243 lb.** Diameter of tubes **3 1/2"**

Pitch of tubes **4 1/4" x 4 1/4"** Material of tube plates **Steel** Thickness: Front **1"** Back **3/4"** Mean pitch of stays **9 1/2"** Pitch across wide water spaces **14"** Working pressures by rules **183 lb.** Girders to Chamber tops: Material **Steel** Depth and thickness of girder at centre **8 1/2" x 1 1/8"** Length as per rule **31"** Distance apart **8"** Number and pitch of Stays in each **2: 8 1/2"**

Working pressure by rules **224 lb.** Superheater or Steam chest: **None** Can the superheater be shut off and the boiler worked separately **No.**

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 **No.** Distance between rings **No.** Working pressure by rules **No.** End plates: Thickness **No.** How stayed **No.**

Working pressure of end plates **No.** Area of safety valves to superheater **No.** Are they fitted with easing gear **No.**

The foregoing is a correct description, **Palmer's Shipbuilding & Iron Works Ltd.** Manufacturer.

Dates of Survey: During progress of work in shops **May 29, Jun 9, 15, 21, 24, Jul 4, 10, 17, 23, 31, Aug 9, 14** Is the approved plan of boiler forwarded herewith **Yes**

while building: During erection on board vessel **Nov 23, Dec 22, Jan 9, Feb 19, 24, 26, 27** Total No. of visits **12/19**

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

This main Boiler was built under special survey and the materials and workmanship are good. When completed the Boiler was tested as required by the Rules and found tight and sound. Satisfactorily fitted in the vessel at Sunderland.

Survey Fee ... £ 3 : 10 : - When applied for, **AUG 21 1916**

Travelling Expenses (if any) £ : : When received, **26/9/16**

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

Committee's Minute

Assigned

FRI. 9-MAR. 1917