

Rpt. 5a.

# REPORT ON BOILERS.

No. 25139

SAT. FEB. 3-1912

Received at London Office

Date of writing Report 1912 When handed in at Local Office 2.1.1912 Port of **SUNDERLAND.**

No. in Survey held at **SUNDERLAND.** Date, First Survey 30 Nov. Last Survey 12<sup>th</sup> Mar. 1912

Reg. Book. on the **S.S. "ELVET"** (Number of Visits) Gross 1289 Tons Net 678

Master Built at **Newcastle** By whom built **W. Dobson & Coy (S.S. 1474)** When built 1912

Engines made at **Newcastle** By whom made **North Eastern Mar Eng Co Ltd** when made 1912

Boilers made at **Sunderland** By whom made **North Eastern Mar Eng Co Ltd (2058)** when made 1912

Registered Horse Power Owners **Sharp & Co.** Port belonging to **North Shields**

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

(Letter for record (5)) Total Heating Surface of Boilers **3524 sq. ft.** Is forced draft fitted **No.** No. and Description of Boilers **Two single ended** Working Pressure **180 lbs.** Tested by hydraulic pressure to **360.** Date of test **23-1-12**

No. of Certificate **2990.** Can each boiler be worked separately **Yes** Area of fire grate in each boiler **42 sq. ft.** No. and Description of safety valves to each boiler **2 direct spring** Area of each valve **5.9 sq. in.** 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 **Yes**

Smallest distance between boilers or uptakes and bunkers or woodwork **2'-7"** Mean dia. of boilers **13'-9 1/16"** Length **10'-6"**

Material of shell plates **Steel** Thickness **1 3/32"** Range of tensile strength **28-32 tons** Are the shell plates welded or flanged **No**

Descrip. of riveting: cir. seams **D.R.** long. seams **T.R.D.P.S.** Diameter of rivet holes in long. seams **1 3/16"** Pitch of rivets **8 1/16"**

Lap of plates or width of butt straps **18"** Per centages of strength of longitudinal joint rivets **85.4** plate **86.5** Working pressure of shell by rules **180 lbs.** Size of manhole in shell **16 x 17"** Size of compensating ring **9 1/2 x 1 3/32"** No. and Description of Furnaces in each boiler **Three Plain** Material **Steel** Outside diameter **38 3/4"** Length of plain part top **4 3/4"** Thickness of plates crown **2 3/8"** bottom **3/8"**

Description of longitudinal joint **Weld** No. of strengthening rings **Yes** Working pressure of furnace by the rules **182 lbs.** Combustion chamber plates: Material **Steel** Thickness: Sides **2 3/8"** Back **1 1/8"** Top **2 3/8"** Bottom **2 3/8"** Pitch of stays to ditto: Sides **8 1/4 x 10 3/4"** Back **9 1/2 x 9"**

Top **8 1/4 x 10 3/4"** If stays are fitted with nuts or riveted heads **Nuts** Working pressure by rules **181 lbs.** Material of stays **Steel** Diameter at smallest part **1.51"** Area supported by each stay **89.4 sq. in.** Working pressure by rules **180 lbs.** End plates in steam space: Material **Steel** Thickness **1 7/16"**

Pitch of stays **2 1/4 x 1 3/8"** How are stays secured **D.N. Wash.** Working pressure by rules **186 lbs.** Material of stays **Steel** Diameter at smallest part **3.03"**

Area supported by each stay **416 sq. in.** Working pressure by rules **180.5 lbs.** Material of Front plates at bottom **Steel** Thickness **3/4"** Material of Lower back plate **Steel** Thickness **3/8"** Greatest pitch of stays **11 1/4 x 9"** Working pressure of plate by rules **186 lbs.** Diameter of tubes **3 1/4"**

Pitch of tubes **4 1/16 x 4 3/4"** Material of tube plates **Steel** Thickness: Front **3/4"** Back **3/4"** Mean pitch of stays **10.6"** Pitch across wide water spaces **14 1/2"** Working pressures by rules **185 lbs.** Girders to Chamber tops: Material **Steel** Depth and thickness of girder at centre **9 x 1 1/2"** Length as per rule **30"** Distance apart **10 3/4"** Number and pitch of Stays in each **2 @ 8 1/4"**

Working pressure by rules **184 lbs.** Superheater or Steam chest: how connected to boiler **None** Can the superheater be shut off and the boiler worked separately **Yes** Diameter **Yes** Length **Yes** Thickness of shell plates **Yes** Material **Yes** Description of longitudinal joint **Yes** Diam. of rivet holes **Yes** Pitch of rivets **Yes** Working pressure of shell by rules **Yes** Diameter of flue **Yes** Material of flue plates **Yes** Thickness **Yes**

If stiffened with rings **Yes** Distance between rings **Yes** Working pressure by rules **Yes** End plates: Thickness **Yes** How stayed **Yes**

Working pressure of end plates **Yes** Area of safety valves to superheater **Yes** Are they fitted with easing gear **Yes**

The foregoing is a correct description,  
**NORTH EASTERN MARINE ENGINEERING CO LTD**  
 Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1911 Nov. 30 Dec 9 12 20 29 Jan 5. 10. 17. 22. 23 Is the approved plan of boiler forwarded herewith **Yes.**

During erection on board vessel -- See Newcastle Report 62072 Total No. of visits **10**

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) **These boilers have been built under special survey, the materials and workmanship are of good quality and the hydraulic test proved satisfactory. They have been shipped to the Tyne to be fitted on board the above vessel.**

Survey Fee **£ 10 : 0 : 0** When applied for **21. 1912**

Travelling Expenses (if any) **£ :** When received **APR 4 1912**

**William D. Butler, Cooper**  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute **TUE. APR 16. 1912**

Assigned **see minute on nwe. 7. E. Rpt 62072**

**Lloyd's Register Foundation**  
 W218-0076