

## REPORT ON BOILERS.

No. 70512

Date of writing Report 21st July 1917 When handed in at Local Office 21st July 1917 Port of Newcastle on Tyne  
 No. in Survey held at Farrow Date, First Survey 23rd July 1917 Last Survey 27th Nov. 1917  
 Reg. Book. H.M. Ferry Steamer "T.F. 2" (Number of Visits) Gross 2678 Tons Net 1105  
 on the H.M. Ferry Steamer Built at Newcastle By whom built Lieut. Armstrong Whitworth & Co. Ltd. When built 1917  
 Engines made at Newcastle By whom made Halls and Shipway & Co. Ltd. When made 1917  
 Boilers made at Farrow By whom made Palmer Shipbuilding & Iron Co. Ltd. When made 1917  
 Registered Horse Power Owners British Government Port belonging to

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~.

(Letter for record S) Total Heating Surface of Boilers 6698 sq. ft. Is forced draft fitted Yes No. and Description of Boilers Four Single Ended Working Pressure 667 1/2 lb. Tested by hydraulic pressure to 360 lb. Date of test (2) 18/5/17 (2) 14/6/17  
 No. of Certificate (2) 89657 (2) 8971 Can each boiler be worked separately Yes Area of fire grate in each boiler bil fuel No. and Description of safety valves to each boiler Two direct spring Area of each valve 7.07 sq. in. Pressure to which they are adjusted 185 lb.  
 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 on uptakes and bunkers for woodwork 9' 6" Inside dia. of boilers 12' 4" Length 11' 9"  
 Material of shell plates Steel Thickness 1" Range of tensile strength 29/33 tons Are the shell plates welded or flanged No  
 Descrip. of riveting: cir. seams DR Lap long. seams 5R Butt Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 7 1/4"  
 Lap of plates 15 3/8" width of butt straps 15 3/8" Per centages of strength of longitudinal joint 85.8 Working pressure of shell by rules 183 lb. Size of manhole in shell 16" x 12" Size of compensating ring McNeil's No. and Description of Furnaces in each boiler Two, Annular Material Steel Outside diameter 47 7/8" Length of plain part top 1' 1/2" bottom 1' 1/2" Thickness of plates 9/16"  
 Description of longitudinal joint Welded No. of strengthening rings 1 Working pressure of furnace by the rules 183 lb. Combustion chamber plates: Material Steel Thickness: Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 1" Pitch of stays to ditto: Sides 9 1/2" x 8 1/8" Back 9 1/8" x 8 1/8"  
 Top 9 1/4" x 7 1/8" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 184 Material of stays Steel Diameter at smallest part 2.03" Area supported by each stay 102 sq. in. Working pressure by rules 206 End plates in steam space: Material Steel Thickness 1 1/8"  
 Pitch of stay 18 3/4" How are stays secured nut & washer Working pressure by rules 182 Material of stay Steel Diameter at smallest part 5.56"  
 Area supported by each stay 312 sq. in. Working pressure by rules 185 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 261 Diameter of tubes 2 1/2"  
 Pitch of tubes 3 1/4" x 3 7/8" Material of tube plate Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 7 1/8" Pitch across wide water spaces 13 1/4" Working pressures by rules 204 lb. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 1/2" x 1 1/2" Length as per rule 33 9/32" Distance apart 9 1/4" Number and pitch of Stays in each Three 7 7/8"  
 Working pressure by rules 183 lb. Superheater or Steam chest: how connected to boiler Yes 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,

Manufacturer.

Dates of Survey: During progress of work in shops - Feb. 23, Mar. 9, 12, 21, 23, April 5, 19, 30 May 16, 18 the approved plan of boiler forwarded herewith Yes With report  
 while building: During erection on board vessel - Jun. 8, 14, 21, Oct. 16 Total No. of visits 14

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

These 4 boilers have been constructed under special survey, the materials and workmanship are of good quality. They have been forwarded to Hallsend to be fitted on board.

To be paid by Engineer

Survey Fee £ : : When applied for, 191  
 Travelling Expenses (if any) £ : : When received, 191

Committee's Minute

Assigned

TUE. 18 DEC. 1917

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