

# REPORT ON BOILERS.

No. 73820

Received at London Office

1919 1920

Date of writing Report 1920 When handed in at Local Office 1920 Port of Newcastle on Tyne

No. in Survey held at Hebburn on Tyne Date, First Survey 2<sup>nd</sup> Mar 1920 Last Survey 22 July 1920

Reg. Book. on the Main Boilers for s/s (Number of Visits 1) Gross Tons 658 Net Tons 362

Master South Shields Built at South Shields By whom built Hepples (1919) Ltd When built 1920

Engines made at North Shields By whom made Shields Engineering Coy Ltd When made 1920

Boilers made at Hebburn By whom made Palmer's S & J Coy Ltd When made 1920

Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Spencers & Sons Ltd

(Letter for record S) Total Heating Surface of Boilers 1120<sup>sq</sup> Is forced draft fitted \_\_\_\_\_ No. and Description of Boilers One S. E. Cyl. multitubular Working Pressure 130<sup>lb</sup> Tested by hydraulic pressure to 260<sup>lb</sup> Date of test 22-7-20

No. of Certificate 9438 Can each boiler be worked separately ✓ Area of fire grate in each boiler 35<sup>sq</sup> No. and Description of safety valves to each boiler two direct Spring Area of each valve 6<sup>sq</sup> Pressure to which they are adjusted \_\_\_\_\_

Are they fitted with easing gear \_\_\_\_\_ In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler \_\_\_\_\_

Smallest distance between boilers or uptakes and bunkers or woodwork \_\_\_\_\_ Mean dia. of boilers 12'-0" Length 10'-0"

Material of shell plates Steel Thickness 13/16" Range of tensile strength 28/32 Are the shell plates welded or flanged NO

Descrip. of riveting: cir. seams J R Lap long. seams T. R. S B Skt Diameter of rivet holes in long. seams 1" Pitch of rivets 5 1/4"

Lap of plates or width of butt straps 1'-3 1/2" Per centages of strength of longitudinal joint \_\_\_\_\_ rivets 82.5% Working pressure of shell by rules 136<sup>lb</sup> Size of manhole in shell 16 x 12 Size of compensating ring 7 x 13/16 No. and Description of Furnaces in each boiler two plain Material Steel Outside diameter 3'-7 3/8" Length of plain part \_\_\_\_\_ top 6'-0" Thickness of plates 3/4" bottom 6-7 bottom \_\_\_\_\_

Description of longitudinal joint weld No. of strengthening rings \_\_\_\_\_ Working pressure of furnace by the rules 167<sup>lb</sup> Combustion chamber plates: Material Steel Thickness: Sides 19/32 Back 9/16 Top 19/32 Bottom 13/16 Pitch of stays to ditto: Sides 9 1/2 x 8 1/2 Back 9 x 9

Top 9 1/2 x 8 1/2 stays are fitted with nuts or riveted heads Nuts Working pressure by rules 135<sup>lb</sup> Material of stays Steel Area at smallest part 1-45<sup>sq</sup> Area supported by each stay 81<sup>sq</sup> Working pressure by rules 143<sup>lb</sup> End plates in steam space: Material Steel Thickness 7/8" Pitch of stays 1/2 x 16 1/2 How are stays secured by nuts Working pressure by rules 132<sup>lb</sup> Material of stays Steel Area at smallest part 4.11

Area supported by each stay 272.25<sup>sq</sup> Working pressure by rules 156<sup>lb</sup> Material of Front plates at bottom Steel Thickness 27/32 Material of Lower back plate Steel Thickness 19/32 Greatest pitch of stays 3 x 9 Working pressure of plate by rules 130<sup>lb</sup> Diameter of tubes 3 1/2"

Pitch of tubes 4 7/8 x 4 3/4 Material of tube plates Steel Thickness: Front 27/32 Back 3/4 Mean pitch of stays 4 7/8 x 9 1/2 Pitch across wide water spaces 14" Working pressures by rules 131<sup>lb</sup> Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/2 x 13 1/8 Length as per rule 2'-7" Distance apart 9 1/2" Number and pitch of Stays in each two x 8 1/2 pitch

Working pressure by rules 165<sup>lb</sup> Steam dome: description of joint to shell none % of strength of joint \_\_\_\_\_

Diameter \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_

Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Crown plates \_\_\_\_\_ Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

**SUPERHEATER.** Type \_\_\_\_\_ Date of Approval of Plan \_\_\_\_\_ Tested by Hydraulic Pressure to \_\_\_\_\_

Date of Test \_\_\_\_\_ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler \_\_\_\_\_

Diameter of Safety Valve \_\_\_\_\_ Pressure to which each is adjusted \_\_\_\_\_ Is Easing Gear fitted \_\_\_\_\_

For The foregoing is a correct description,  
Palmer's Shipbuilding & Iron Co., Ltd.  
A. Cameron Manufacturer.  
 Boiler Shop Dept.

Dates of Survey 1920 During progress of work in shops Mar 2, Apr 17, May 10, 31, June 9, 20, 22 Is the approved plan of boiler forwarded herewith Yes  
 while building During erection on board vessel retained for duplicate Boiler No - 980  
 Total No. of visits 7

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

The Boilers built under Special Survey the material and workmanship found good and efficient

The Boilers was tested under 260<sup>lb</sup> hydraulic pressure at the makers works & found satisfactory

Boiler fee only \_\_\_\_\_

Survey Fee ... £ 3 : 15 : When applied for, 16 AUG 1920

Travelling Expenses (if any) £ : : When received, 27 Sept 1920 HPA

Committee's Minute \_\_\_\_\_ TUE. 4 APR. 1921

Assigned \_\_\_\_\_

Leonard Sheller  
 Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register of Shipping  
 W1070-0266  
 W1070-0267