

Stock Boiler
REPORT ON BOILERS.

No. 74285
 MON. 18 APR. 1921

Received at London Office

Writing Report 10 When handed in at Local Office 19 Port of **NEWCASTLE ON TYNE**
 in Survey held at Date, First Survey **20 July 1920** Last Survey **7 April 1921**
 Book. on the **Main Boiler 993** (Number of Visits **8**)
 Built at By whom built When built
 Made at **Hebburn** By whom made **Palmer & J. Coy Ltd 993** When made **1921-4**
 Horse Power Owners Port belonging to

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

Serial for record **S** Total Heating Surface of Boilers **1120 sq ft** Is forced draft fitted **No** No. and Description of Boilers **One S.E. Cyl' multitubular** Working Pressure **130 lb** Tested by hydraulic pressure to **260 lb** Date of test **13-4-21**
 Certificate **9553** Can each boiler be worked separately Area of fire grate in each boiler **?** No. and Description of valves to each boiler Area of each valve Pressure to which they are adjusted

they fitted with easing gear In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler
 Closest distance between boilers or uptakes and bunkers or woodwork Internal dia. Mean dia. of boilers **12'-0"** Length **10'-0"**
 Material of shell plates **Steel** Thickness **13/16"** Range of tensile strength **28/32 tons sq in** Are the shell plates welded or flanged **No**

Direction of riveting: cir. seams **DR Lap** long. seams **TR DB-Stop** Diameter of rivet holes in long. seams **1"** Pitch of rivets **5 1/4"**
 Width of butt straps **15 1/2"** Per centages of strength of longitudinal joint rivets **82.5%** Working pressure of shell by plate **80.95%**

Size of manhole in shell **16 x 12"** Size of compensating ring **7 x 13/16"** No. and Description of Furnaces in each **two plain** Material **Steel** Outside diameter **3'-7 3/8"** Length of plain part top **5'-10"** Thickness of plates crown **3/4"** bottom **6'-7"**
 Description of longitudinal joint **weld** No. of strengthening rings **none** Working pressure of furnace by the rules **167 lb** Combustion chamber Material **Steel** Thickness: Sides **1 1/2"** Back **9/16"** Top **1 1/2"** Bottom **1 3/4"** Pitch of stays to ditto: Sides **9 1/2 x 8 1/2"** Back **9 x 9"**

If stays are fitted with nuts or riveted heads **nuts** Working pressure by rules **135 lb** Material of stays **Steel** Area at least part **1.45 sq ft** Area supported by each stay **81 sq in** Working pressure by rules **143 lb** End plates in steam space: Material **Steel** Thickness **7/8"**
 How are stays secured **dr riv** Working pressure by rules **33 lb** Material of stays **Steel** Area at smallest part **4.11 sq ft**
 supported by each stay **272 sq in** Working pressure by rules **56 lb** Material of Front plates at bottom **Steel** Thickness **2 1/2"** Material of back plate **Steel** Thickness **3/2"** Greatest pitch of stays **13 x 9"** Working pressure of plate by rules **30 lb** Diameter of tubes **3 1/2"**

of tubes **4 7/8 x 4 3/4"** Material of tube plates **Steel** Thickness: Front **2 1/2"** Back **3/4"** Mean pitch of stays **45 1/8 x 9 1/2"** Pitch across wide spaces **14"** Working pressures by rules **130 lb** Girders to Chamber tops: Material **Steel** Depth and thickness of at centre **8 1/2 x 13 1/8"** Length as per rule **30.5"** Distance apart **9 1/2"** Number and pitch of Stays in each **2 of 8 1/2" pitch**

Working pressure by rules **65 lb** Steam dome: description of joint to shell **none** % of strength of joint
 Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
 Working pressure of shell by rules Crown plates Thickness How stayed

REHEATER. Type **none** Date of Approval of Plan Tested by Hydraulic Pressure to
 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
 Pressure to which each is adjusted Is Easing Gear fitted

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

During progress of work in shops - - - **1920 July 20 - Sep 16 - 20. G.E. 11. Nov. 1. 1921 Mar. 10. 17. Apr. 7.** Is the approved plan of boiler forwarded herewith **Yes**
 During erection on board vessel - - - Total No. of visits **8**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 Boilers built under special survey the material and workmanship found good and efficient.
 Boilers was tested under 260 lb hydraulic pressure (ex mountings) at the makers works and found sound and satisfactory.

Survey Fee ... £ **7 : 10 : -** When applied for, **16 APR 1921**
 Travelling Expenses (if any) £ : : When received, **26.5**

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