

# Palmer's Coy. Ltd. Hebburn - main Boiler 983 REPORT ON BOILERS.

NEWCASTLE-ON-TYNE No. 75011

No. 73822

FRI. NOV. 19 1920

Date of writing Report 10 When handed in at Local Office 10 Port of **NEWCASTLE-ON-TYNE**  
 Received at London Office  
 No. in Survey held at **Hebburn** Date, First Survey **20<sup>th</sup> June 1920** Last Survey **29<sup>th</sup> June 1920**  
 Reg. Book. on the **R.D. Hebburn** (Number of Visits **6**) Gross Tons **5** Net **5**  
 Master Built at By whom built **R.B. Harrison & Sons** When built  
 Engines made at **North Shields** By whom made **Shields Engineering & Dry Dock Ltd** When made  
 Boilers made at **Hebburn** By whom made **Palmer's S. & J. Coy. Ltd** **983** When made **1920**  
 Registered Horse Power Owners Port belonging to

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

(Letter for record **S**) Total Heating Surface of Boilers **1086<sup>sq</sup>ft** Is forced draft fitted

Boilers **one S. & J. Coy. Ltd Multitubular** Working Pressure **140lb** Tested by hydraulic pressure to **280lb** Date of test **29.9.20**

No. of Certificate **9469** Can each boiler be worked separately Area of fire grate in each boiler **34<sup>sq</sup>ft** No. and Description of safety valves to each boiler

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 **outside** Mean dia. of boilers **11'-6"** Length **10'-0"**

Material of shell plates **Steel** Thickness **3/4"** Range of tensile strength **29/33 tons<sup>sq</sup>in** Are the shell plates welded or flanged **No**

Descrip. of riveting: cir. seams **2R Lap** long. seams **T. Rivet** Diameter of rivet holes in long. seams **7/8"** Pitch of rivets **2 Rows 5 1/2"**

Per centages of strength of longitudinal joint rivets **86-7%** Working pressure of shell by rules **140-3lb** Size of manhole in shell **16x12** Size of compensating ring **7x3/4"** plate **84.1%**

No. and Description of Furnaces in each boiler **two plain** Material **Steel** Outside diameter **3'-6"** Length of plain part **top 6'-1"** Thickness of plates **crown 11/16"**

Description of longitudinal joint **weld** No. of strengthening rings Working pressure of furnace by the rules **150lb** Combustion chamber plates: Material **Steel** Thickness: Sides **19/32"** Back **19/32"** Top **19/32"** Bottom **13/16"** Pitch of stays to ditto: Sides **9 3/4 x 8 1/4"** Back **9 x 9"**

Top **10 1/2 x 8 1/4"** If stays are fitted with nuts or riveted heads **Nuts** Working pressure by rules **149lb** Material of stays **Steel** Area at smallest part **1.45<sup>sq</sup>in** Area supported by each stay **81<sup>sq</sup>in** Working pressure by rules **143lb** End plates in steam space: Material **Steel** Thickness **7/8"**

Pitch of stays **16x15"** How are stays secured **2 rows** Working pressure by rules **151lb** Material of stays **Steel** Area at smallest part **3.26<sup>sq</sup>in**

Area supported by each stay **240<sup>sq</sup>in** Working pressure by rules **141lb** Material of Front plates at bottom **Steel** Thickness **7/8"** Material of Lower back plate **Steel** Thickness **7/8"** Greatest pitch of stays **14" x 9"** Working pressure of plate by rules **140lb** Diameter of tubes **3 1/4"**

Pitch of tubes **4 1/2 x 4 1/2"** Material of tube plates **Steel** Thickness: Front **7/8"** Back **3/4"** Mean pitch of stays **13 1/2 x 9"** Pitch across wide water spaces **13 3/4"** Working pressures by rules **145lb** Girders to Chamber tops: Material **Steel** Depth and thickness of girder at centre **8 1/2 x 1 3/8"** Length as per rule **30"** Distance apart **10 1/2"** Number and pitch of Stays in each **2 of 8" pitch**

Working pressure by rules **150lb** 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 **None** 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

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

Dates of Survey } During progress of work in shops - - - } **Jul. 20-26 Aug. 6-27-29**  
while building } During erection on board vessel - - - }  
Total No. of visits **7** Duplicate **B**  
-981- No. 73821  
See Report

## 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 tested under 280lb hydraulic pressure at the makers works and found satisfactory

Survey Fee ... £ **3 : 12** When applied for, **19 NOV 1920**  
Travelling Expenses (if any) £ : : When received, **28 DEC 1920**

Committee's Minute **FRI. DEC. 9 1921** Engineer Surveyor to Lloyd's Register of Shipping.

Assigned  
Lloyd's Register Foundation  
002435-002441-0169