

REPORT ON BOILERS.

No. 64228
WED. MAY 21, 1913

Received at London Office

Date of writing Report 191 **When handed in at Local Office** **MAY 20 1913** Port of **Newcastle-on-Tyne**
 No. in Survey held at **South Shields** Date, First Survey **2nd Dec. 1912** Last Survey **9th May 1913**
 Reg. Book. **97^m Imp on the S.S. *Frederic*** (Number of Visits) Gross **4260** Tons Net **2723**
 Master Built at **South Shields** By whom built **John Headhead & Sons Ltd.** When built **1913**
 Engines made at **South Shields** By whom made **John Headhead & Sons Ltd.** When made **1913**
 Boilers made at **South Shields** By whom made **John Headhead & Sons Ltd.** When made **1913**
 Registered Horse Power Owners **Hain S.S. Co. Ltd. (E. Hain & Son mps)** Port belonging to **St. Joes**

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

(Letter for record **R**) Total Heating Surface of Boilers **8999** Is forced draft fitted **No.** No. and Description of Boilers **one single-ended multitubular** Working Pressure **90 lbs** Tested by hydraulic pressure to **180 lbs** Date of test **3-4-13**
 No. of Certificate **8472** Can each boiler be worked separately Area of fire grate in each boiler **30 sq** No. and Description of safety valves to each boiler **two spring-loaded** Area of each valve **7.07 sq** Pressure to which they are adjusted **90 lbs**
 Are they fitted with easing gear **Yes** In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler **No.**
 Smallest distance between boilers or uptakes and bunkers or woodwork **1'-6"** Mean dia. of boilers **10'-0 7/8"** Length **10'-1"**
 Material of shell plates **Steel** Thickness **7/8"** Range of tensile strength **24/32 lbs** Are the shell plates welded or flanged **No.**
 Descrip. of riveting: cir. seams **DR. lap** Long. seams **DR. lap** Diameter of rivet holes in long. seams **1 7/16"** Pitch of rivets **4 1/4"**
 Lap of plates or width of butt straps **5 1/2"** Per centages of strength of longitudinal joint rivets **70.8%** Working pressure of shell by rules **97 lbs** Size of manhole in shell **16" x 12"** Size of compensating ring **8" x 3 1/8"** No. and Description of Furnaces in each boiler **two plain** Material **Steel** Outside diameter **36"** Length of plain part top **6'-0"** Thickness of plates crown **1/2"** bottom **7/8"**
 Description of longitudinal joint **S.R. lap** No. of strengthening rings **-** Working pressure of furnace by the rules **90 lbs** Combustion chamber plates: Material **Steel** Thickness: Sides **7/32"** Back **9/16"** Top **7/32"** Bottom **7/8"** Pitch of stays to ditto: Sides **11" x 10"** Back **11" x 11"**
 Top **10" x 10"** If stays are fitted with nuts or riveted heads **nuts** Working pressure by rules **90 lbs** Material of stays **Iron** Area at smallest part **1.999** Area supported by each stay **1210** Working pressure by rules **123 lbs** End plates in steam space: Material **Steel** Thickness **7/8"**
 Pitch of stays **18" x 19"** How are stays secured **on standard** Working pressure by rules **113 lbs** Material of stays **Steel** Area at smallest part **4.770**
 Area supported by each stay **3420** Working pressure by rules **125 lbs** Material of Front plates at bottom **Steel** Thickness **1/16"** Material of Lower back plate **Steel** Thickness **1/16"** Greatest pitch of stays **12" x 11"** Working pressure of plate by rules **118 lbs** Diameter of tubes **3 1/2"**
 Pitch of tubes **4 1/2"** Material of tube plates **Steel** Thickness: Front **1/16"** Back **1/16"** Mean pitch of stays **13 1/2"** Pitch across wide water spaces **13 3/4"** Working pressures by rules **90 lbs** Girders to Chamber tops: Material **Steel** Depth and thickness of girder at centre **6 3/4" x 1 1/2"** Length as per rule **26"** Distance apart **16"** Number and pitch of Stays in each **2-10"**
 Working pressure by rules **117 lbs** Superheater or Steam chest: how connected to boiler **none** Can the superheater be shut off and the boiler worked separately 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

JOHN HEADHEAD & SONS, LIMITED
 The foregoing is a correct description,
John Headhead Manufacturer.

Dates of Survey **See Weekly Report** Is the approved plan of boiler forwarded herewith
 During progress of work in shops **- - -**
 while building **- - -** During erection on board vessel **- - -**
 Total No. of visits **-**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been constructed under special survey. The materials & workmanship are sound & good. It has been tested by hydraulic pressure with satisfactory results & the safety valves were adjusted under steam to their safe working pressure.*

Survey Fee £ **See Weekly Report** When applied for, 191
 Travelling Expenses (if any) £ **See Weekly Report** When received, 191
 R. J. H.
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute **FRI. MAY 23, 1913**
 Assigned **See Minute on Enc. Rpt 64228 attached**
 Lloyd's Register Foundation
 010219-010228-0250