

Rpt. 5a.

REPORT ON BOILERS.

Received at London **FRI. JUN. -6. 1913**

Date of writing Report **101** When handed in at Local Office **5.6.1913** Port of **Sunderland**
 No. in Survey held at **Sunderland** Date, First Survey **29 Apr.** Last Survey **30 May 1913**
 Reg. Book. on the **Iron S.S. "Amida" renamed "Lyndiane"** (Number of Visits **7**) Gross **1542** Tons Net **941**
 Master **Louis Keyrat** Built at **Sunderland** By whom built **J. S. Thompson & Sons** When built **1883-10**
 Engines made at **Hartlepool** By whom made **J. Richardson & Sons** When made **1883**
 Boilers made at **Sunderland** By whom made **North Eastern Marine Eng. Co. Ltd.** When made **1913**
 Registered Horse Power **222** Owners **De Chanand & Co.** Port belonging to **Harve.**

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

(Letter for record **(8)**) Total Heating Surface of Boilers **2108** Is forced draft fitted **No.** No. and Description of Boilers **One single ended** Working Pressure **160 lbs** Tested by hydraulic pressure to **320 lbs** Date of test **30.5.13**
 No. of Certificate **3114** Can each boiler be worked separately **Yes** Area of fire grate in each boiler **50.6** No. and Description of safety valves to each boiler **2: direct spring.** Area of each valve **4.06** Pressure to which they are adjusted **161 lbs.**
 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 or uptakes and bunkers or woodwork **No side bunkers** Mean dia. of boilers **15'-0"** Length **10'-9"**
 Material of shell plates **Steel** Thickness **1 3/32"** Range of tensile strength **28 3/4 to 32** Are the shell plates welded or flanged **No**
 Descrip. of riveting: cir. seams **D.R.** long. seams **T.R.D.B.S.** Diameter of rivet holes in long. seams **1 1/4"** Pitch of rivets **9 1/8"**
 Lap of plates or width of butt straps **19 1/4"** Per centages of strength of longitudinal joint rivets **89.6** plate **84.3** Working pressure of shell by rules **160.6 lbs** Size of manhole in **end** **16" x 12"** Size of compensating ring **dished** No. and Description of Furnaces in each boiler **Three bar** Material **Steel** Outside diameter **3'-4 1/4"** Length of plain part **15'** Thickness of plates **15"** crown **32** bottom **32**
 Description of longitudinal joint **weld** No. of strengthening rings **Yes** Working pressure of furnace by the rules **160 lbs** Combustion chamber plates: Material **Steel** Thickness: Sides **3/4"** Back **25/32"** Top **3/4"** Bottom **3/4"** Pitch of stays to ditto: Sides **5/8" x 9"** Back **11" x 11 1/2"**
 Top **9" x 12"** If stays are fitted with nuts or riveted heads **Nuts** Working pressure by rules **160 lbs** Material of stays **Steel** Area at smallest part **2.1** Area supported by each stay **113.6** Working pressure by rules **166 lbs** End plates in steam space: Material **Steel** Thickness **1 3/8"**
 Pitch of stays **2 1/4" x 19 1/4"** How are stays secured **D.N. Wash** Working pressure by rules **160 lbs** Material of stays **Steel** Area at smallest part **8.29**
 Area supported by each stay **533.4** Working pressure by rules **161.6 lbs** Material of Front plates at bottom **Steel** Thickness **3/4"** Material of Lower back plate **Steel** Thickness **29/32"** Greatest pitch of stays **11 1/2" x 11 1/2"** Working pressure of plate by rules **161 lbs** Diameter of tubes **3 1/4"**
 Pitch of tubes **4 5/8" x 4 3/4"** Material of tube plates **Steel** Thickness: Front **3/4"** Back **3/4"** Mean pitch of stays **10 9/16"** Pitch across wide water spaces **14 1/2"** Working pressures by rules **165 lbs** Girders to Chamber tops: Material **Steel** Depth and thickness of girder at centre **2 @ 9" x 3 1/4"** Length as per rule **2'-6 1/2"** Distance apart **12"** Number and pitch of Stays in each **2 @ 9"**
 Working pressure by rules **164 lbs** Superheater or Steam chest: how connected to boiler **how** Can the superheater be shut off and the boiler worked separately **Yes** Diameter **Yes** Length **Yes** Thickness of shell plates **Yes** Material **Yes** Description of longitudinal joint **Yes** Diam. of rivet holes **Yes** Pitch of rivets **Yes** Working pressure of shell by rules **Yes** Diameter of flue **Yes** Material of flue plates **Yes** Thickness **Yes**
 If stiffened with rings **Yes** Distance between rings **Yes** Working pressure by rules **Yes** End plates: Thickness **Yes** How stayed **Yes**
 Working pressure of end plates **Yes** Area of safety valves to superheater **Yes** Are they fitted with easing gear **Yes**

The foregoing is a correct description of the boiler
NORTH EASTERN MARINE ENGINEERING CO LTD
J. T. Harrison Manufacturer.

Dates of Survey: During progress of work in shops **1913 Apr. 29 May 2 7 9 15 20 30** Is the approved plan of boiler forwarded herewith **Yes**
 while building: During erection on board vessel **Yes** Total No. of visits **(7)**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This boiler has been built under special survey, the materials & workmanship are good & the hydraulic test proved satisfactory. It has been shipped to Aberdeen to be fitted on board by Messrs Hall Russell & Co. Ltd.**

This boiler has now been fitted on board the above named vessel, for recommendation of Class
 Survey Fee **£ 4 : 0 : 0** When applied for **5.6.1913** See Aberdeen report No 11268.
 Travelling Expenses (if any) **£ :** When received **24.6.1913** **R. J. Jowell.**
William Butler
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute **FRI. SEP. 12. 1913**
 Assigned
 Rht. Abr 10.6.13
 Lloyd's Register Foundation
 ABN 52-0160