

Rpt. 5a.

# REPORT ON BOILERS.

No. 26019

Received at London Office MON. MAR. 2--1914

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No. in Survey held at **SUNDERLAND** Date, First Survey **23 Dec. 13** Last Survey **191**  
 Reg. Book. on the **New Steel S.S. Gullman** (Number of Visits) Gross Tons }  
 Master **South Shields** By whom built **Hepple & Co** 626½ When built **1914** Net Tons }  
 Engines made at **L. Shies** By whom made **Hepple & Co** When made **1914**  
 Boilers made at **Sunderland** By whom made **North Eastern Marine Eng Co Ltd** When made **1914**  
 Registered Horse Power Owners **Gray & Co** Port belonging to **Gull**

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

(Letter for record **(8)**) Total Heating Surface of Boilers **14745** Is forced draft fitted  No. and Description of Boilers **One single ended.** Working Pressure **145 lbs** Tested by hydraulic pressure to **350** Date of test **1-2-14**  
 No. of Certificate **3191** Can each boiler be worked separately  Area of fire grate in each boiler **44** No. and Description of safety valves to each boiler  Area of each valve  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  Inside Mean dia. of boilers **13'-6"** Length **10'-8½"**  
 Material of shell plates **Steel** Thickness **1½"** Range of tensile strength **28 & 32 tons** Are the shell plates welded or flanged **No.**  
 Descrip. of riveting: cir. seams **D.R.** long. seams **T.R.D.P.S.** Diameter of rivet holes in long. seams **1½"** Pitch of rivets **1"**  
 Lap of plates or width of butt straps **18½"** Per centages of strength of longitudinal joint rivets **89** Working pressure of shell by rules **145.5 lbs** Size of manhole in shell **16" x 12"** Size of compensating ring **9½" x 1½"** No. and Description of Furnaces in each boiler **Three plain** Material **Steel** Outside diameter **3'-2¾"** Length of plain part **44"** Thickness of plates crown **½"** bottom **6/8"**  
 Description of longitudinal joint **Weld.** No. of strengthening rings **None** Working pressure of furnace by the rules **145 lbs** Combustion chamber plates: Material **Steel** Thickness: Sides **25"** Back **21"** Top **25"** Bottom **27"** Pitch of stays to ditto: Sides **8½" x 12¾"** Back **9½" x 10¾"**  
 Top **8½" x 12¾"** If stays are fitted with nuts or riveted heads **Nuts** Working pressure by rules **145 lbs** Material of stays **Steel** Area at smallest part **2.1** Area supported by each stay **10¾" x 10¾" = 106.25** Working pressure by rules **145 lbs** End plates in steam space: Material **Steel** Thickness **1½"**  
 Pitch of stays **22½" x 14½"** How are stays secured **Welded** Working pressure by rules **146 lbs** Material of stays **Steel** Diameter at smallest part **6.5**  
 Area supported by each stay **385** Working pressure by rules **145 lbs** Material of Front plates at bottom **Steel** Thickness **3/8"** Material of Lower back plate **Steel** Thickness **29"** Greatest pitch of stays **14" x 10¾"** Working pressure of plate by rules **146 lbs** Diameter of tubes **3½"**  
 Pitch of tubes **4¾" x 4½"** Material of tube plates **Steel** Thickness: Front **3/8"** Back **3/8"** Mean pitch of stays **10.6"** Pitch across wide water spaces **14½"** Working pressures by rules **145 lbs** Girders to Chamber tops: Material **Steel** Depth and thickness of girder at centre **2 @ 16" x 8¾"** Length as per rule **2'-4½"** Distance apart **12¾"** Number and pitch of Stays in each **2 @ 8½"**  
 Working pressure by rules **145 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

The foregoing is a correct description,  
**NORTH EASTERN MARINE ENGINEERING CO. LTD**  
**S. T. Harrison** Manufacturer.

Dates of Survey: During progress of work in shops -- **1913 Dec 23. 31. Jan 6. 9. 16. 23 Feb. 4. 11. 17** Is the approved plan of boiler forwarded herewith **Yes F.C.**  
 while building: During erection on board vessel --- **See Newcastle Report No 66128** Total No. of visits **9 +**

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) **This Boiler has been built under special survey, the materials and workmanship are of good quality & the hydraulic test proved satisfactory. The Boiler will be fitted on Board at Shields.**

Survey Fee ... .. £ 5 : 10 : 0 } When applied for, **28. 2. 1914**  
 Travelling Expenses (if any) £ : : } When received, **19. 6. 1914**

**William Dutton**  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute **TUE. MAY. 26. 1914**  
 assigned **All minute on A.S. attached**

