

REPORT ON BOILERS.

No. 64228
WED. MAY 21, 1913

Received at London Office

Date of writing Report 1913 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. 97m Ship on the S.S. *Frederick* (Number of Visits) Gross 4260
 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 mfrs) Port belonging to St. Ives

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

(Letter for record *r*) Total Heating Surface of Boilers 899 sq ft 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 ft No. and Description of safety valves to each boiler *two spring-loaded* Area of each valve 7.07 sq in 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 3/2 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 1/16" 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% plate 72% Working pressure of shell by rules 97 lbs Size of manhole in shell 16" x 12" Size of compensating ring 8" x 3/8"
 No. and Description of Furnaces in each boiler *two plain* Material *steel* Outside diameter 36" Length of plain part top 6'-0" bottom 8'-9" 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 7/16" Back 9/16" Top 7/16" 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 *steel* Diameter 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 7/16"
 Pitch of stays 18" x 19" How are stays secured *on standard* Working pressure by rules 113 lbs Material of stays *steel* Diameter at smallest part 4 7/8"
 Area supported by each stay 3420" Working pressure by rules 125 lbs Material of Front plates at bottom *steel* Thickness 7/16" Material of Lower back plate *steel* Thickness 7/16" 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 7/16" Back 7/16" Mean pitch of stays 13 1/2" Pitch across wide water spaces 13 1/4" 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

The foregoing is a correct description,

John Headhead & Sons, Limited
John Headhead Manufacturer.

Dates of Survey During progress of work in shops - - - See Weekly Report
 while building During erection on board vessel - - -

Is the approved plan of boiler forwarded herewith

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

Committee's Minute

FRI. MAY 23, 1913

Assigned

See Minute on Rev. Rpt 64228 attached

R. Lee James & Co. Ltd. Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

010219-010228-0250

Lloyd's Register
Foundation