

## REPORT ON BOILERS.

No. 67617.

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Writing Report

191

When handed in at Local Office JUN 8 1915 191

Port of *Newcastle-on-Tyne*.Survey held at *Newcastle-on-Tyne*.

Date, First Survey

*March 16*

Last Survey

*June 3*

1916

Book. *"FELIXSTOWE"*  
on the *SCREW STEAMER "ST. NICHOLAS"*(Number of Visits *10*)

Gross

Tons

Net

Built at *Leith*

By whom built

*Hawthorn's Linn*When built *1915*.Boilers made at *Leith*.

By whom made

*Hawthorn's Linn*

When made

*1915*.Boilers made at *Newcastle-on-Tyne*

By whom made

*R. & W. Hawthorn, Leslie & Co. Linn*

When made

*1915*.

Registered Horse Power

Owners

Port belonging to

L TITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel *J. Spencer & Sons Linn*For record *S*.Total Heating Surface of Boilers *3620 sq. ft.*Is forced draft fitted *No.*

No. and Description of

Boilers *2: Cylindrical: Single*Working Pressure *140 lb*Tested by hydraulic pressure to *380 lb*Date of test *2/6/15*.Certificate *8788*.Can each boiler be worked separately ☒Area of fire grate in each boiler *53 1/2 sq. ft.*

No. and Description of

Valves to each boiler ☒Area of each valve ☒Pressure to which they are adjusted ☒Boilers fitted with easing gear ☒In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ☒Least distance between boilers or uptakes and bunkers or woodwork ☒

Mean dia. of boilers

*14' 0"*Length *11' 0"*Material of shell plates *Steel*Thickness *1 3/8"*Range of tensile strength *28 to 32 tons*Are the shell plates welded or flanged *No.*Pitch of riveting: cir. seams *Lap & Plug*long. seams *R.S.S. double*Diameter of rivet holes in long. seams *1 7/8"*Pitch of rivets *9 3/4"*Width of butt straps *20 1/2"*

Per centages of strength of longitudinal joint

rivets *91.8*

Working pressure of shell by

Size of manhole in shell *16" x 12"*Size of compensating ring *37 x 33 x 1 1/2"*

No. and Description of Furnaces in each

Material *Steel*Outside diameter *43 1/2"*

Length of plain part

top *6' 10 1/8"*

Thickness of plates

crown *9 1/8"*bottom *9 1/8"*Description of longitudinal joint *Weld.*No. of strengthening rings *None*Working pressure of furnace by the rules *203 lb*

Combustion chamber

Material *Steel*Thickness: Sides *3/4"*Back *3/4"*Top *3/4"*Bottom *5/8"*Pitch of stays to ditto: Sides *10 x 9 1/2"*Back *10 x 8 1/2"*If stays are fitted with nuts or riveted heads *Yes*Working pressure by rules *203 lb*Material of stays *Steel*

Diameter at

Smallest part *2 1/2"*Area supported by each stay *87.5 sq. in.*Working pressure by rules *209 lb*End plates in steam space: Material *Steel*Thickness *1 3/8"*How are stays secured *Welded*Working pressure by rules *197 lb*Material of stays *Steel*Diameter at smallest part *8' 4 1/8"*Supported by each stay *35.7*Working pressure by rules *247 lb*Material of Front plates at bottom *Steel*Thickness *1 1/8"*

Material of

Back plate *Steel*Thickness *1"*Greatest pitch of stays *16"*Working pressure of plate by rules *194 lb*Diameter of tubes *3 1/2"*Material of tube plates *Steel*Thickness: Front *1 1/8"*Back *7/8"*Mean pitch of stays *11 1/2"*

Pitch across wide

Spaces *15"*Working pressures by rules *193 lb**208 lb*Girders to Chamber tops: Material *Steel*

Depth and thickness of

At centre *9 1/2" x 1 1/8" x 2"*Length as per rule *37 3/8"*Distance apart *10"*Number and pitch of Stays in each *3: 9 3/8"*Working pressure by rules *196 lb*Superheater or Steam chest: *None*

Can the superheater be shut off and the boiler worked

*Yes*

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

Fitted 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

For

Are they fitted with easing gear

*R. & W. HAWTHORN, LESLIE & CO. LIMITED*

The foregoing is a correct description,

DIRECTOR,

Manufacturer.

During progress of work in shops - - - *Mar 16, 25, 30, Apr 8, 12, 26, May 10, 18, 31, Jun 3*Is the approved plan of boiler forwarded herewith *Yes*.

During erection on board vessel - - -

Total No. of visits *10*.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &amp;c.)

These main Boilers were built under special Survey and the materials and workmanship are good. On completion they were tested by hydraulic pressure as required by the Rules and found tight and sound.

The Boilers have been sent to Leith:

Survey Fee

When applied for

*JUN 4 1915*

Travelling Expenses (if any)

When received

*25th May 1915*

Committee's Minute

Signed

*See R.H. pp. 16 15581*

*Wm. Austin*  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.



003106-003115-0078