

## REPORT ON BOILERS.

No. 90,844

Received at London Office

12 AUG 1927

Date of writing Report 13 DEC 1926

When handed in at Local Office

Port of London

No. in Survey held at  
Reg. Book.

Hitchin

Date, First Survey 19<sup>th</sup> NovemberLast Survey 10<sup>th</sup> December 1926on the Spencer, Runcorn back Heat Boiler No. 5827  
for Messrs. J. & W. Hunter & Co. Ltd. Richmond No. 1222

(Number of Visits 2)

Gross  
Tons  
Net

Built at Warrington By whom built J. &amp; W. Hunter &amp; Co. Ltd. Yard No. 1222 When built 1926

Engines made at By whom made Engine No. When made

Boilers made at By whom made Boiler No. When made

Owners Port belonging to

## VERTICAL DONKEY BOILER.

Made at Hitchin By whom made Spencer, Runcorn Boiler No. 5827 When made 1926 Where fixed Engine Room

Manufacturers of Steel Henschel &amp; Sohn, Hattingsen &amp; Rahr

Total Heating Surface of Boiler 282 sq. ft. Is forced draught fitted No Coal or Oil fired back Heat

No. and Description of Boilers One Spencer, Runcorn, Kirk's Patent Working pressure 100 lbs. per sq. in.

Tested by hydraulic pressure to 200 lbs. per sq. in. Date of test 10-12-26 No. of Certificate 1302

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 Cockburn's

Area of each set of valves per boiler { per rule 3.5 sq. ft. as fitted 3.5 sq. ft. Pressure to which they are adjusted 100 lbs. Are they fitted with easing gear YES.

State whether steam from main boilers can enter the donkey boiler ✓ Smallest distance between boiler or uptake and bunkers

or woodwork ✓ Is oil fuel carried in the double bottom under boiler Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated Largest internal dia. of boiler 3 ft. Height 9 ft. ✓

Shell plates: Material Steel Tensile strength 28-32 Thickness 3/8

Are the shell plates welded or flanged no Description of riveting: circ. seams { end S.A. inter. long. seams 5/8 in.

Dia. of rivet holes in { circ. seams 13/16 Pitch of rivets { 1 1/8 2.66 Percentage of strength of circ. seams { plate 59.3 rivets 56.7 of Longitudinal joint { plate 69.4 rivets 67. combined

Working pressure of shell by rules 152. Thickness of butt straps { outer inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Material

Tensile strength Thickness Radius Working pressure by rules

Description of Furnace: Plain, spherical, or dished crown Material Tensile strength

Thickness External diameter { top bottom Length as per rule Working pressure by rules

Pitch of support stays circumferentially and vertically Are stays fitted with nuts or riveted over

Diameter of stays over thread Radius of spherical or dished furnace crown Working pressure by rule

Thickness of Ogee Ring Diameter as per rule { D d Working pressure by rule

Combustion Chamber: Material Tensile strength Thickness of top plate

Radius if dished Working pressure by rule Thickness of back plate Diameter if circular

Length as per rule Pitch of stays Are stays fitted with nuts or riveted over

Diameter of stays over thread Working pressure of back plate by rules

Tube Plates: Material { front back Steel Tensile strength Thickness 9/16 Mean pitch of stay tubes in nests

If comprising shell, Dia. as per rule { front back Pitch in outer vertical rows { Dia. of tube holes FRONT { stay 2" plain BACK { stay 2" plain

Is each alternate tube in outer vertical rows a stay tube Working pressure by rules { front back

Girders to combustion chamber tops: Material Tensile strength

Depth and thickness of girder at centre Length as per rule

Distance apart No. and pitch of stays in each Working pressure by rule

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Lloyd's Register

W 137-0170



**Crown stays:** Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at body of stay, \_\_\_\_\_ or \_\_\_\_\_ over threads \_\_\_\_\_  
 No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_  
**Screw stays:** Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at turned off part, \_\_\_\_\_ or \_\_\_\_\_ over threads \_\_\_\_\_ No. of threads per inch \_\_\_\_\_  
 Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_  
**Tubes:** Material *Steel* External diameter { plain *2" nominal 4 2/3"* stay \_\_\_\_\_ Thickness { *11/16"* \_\_\_\_\_  
 No. of threads per inch \_\_\_\_\_ Pitch of tubes \_\_\_\_\_ Working pressure by rules \_\_\_\_\_  
**Manhole Compensation:** Size of opening in shell plate *14 x 11* Section of compensating ring *2 1/4 x 1' 9" x 9/16* No. of rivets and diameter \_\_\_\_\_  
 of rivet holes *24 - 13/16* Outer row rivet pitch at ends *5 1/2"* Depth of flange if manhole flanged *2 1/4"*  
**Uptake:** External diameter \_\_\_\_\_ Thickness of uptake plate \_\_\_\_\_  
**Cross Tubes:** No. \_\_\_\_\_ External diameters { \_\_\_\_\_ Thickness of plates \_\_\_\_\_  
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with *Yes*

The foregoing is a correct description.

For *SPENCER-BONEGUTH LTD* Manufacturer.  
*Bradley* Works Manager.

Dates of Survey { During progress of work in shops - *1926 Nov 19 Dec 10*  
 while building { During erection on board vessel - -

Is the approved plan of boiler forwarded herewith (If not state date of approval.) *Yes*  
 Total No. of visits *2*

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

This boiler has been built under Special Survey in accordance with the plan and the Society's Rules, the steel used in its construction has been tested according to the Rules.

The workmanship is good.

Upon completion the boiler was tested by hydraulic pressure to 200 lbs per sq. in. and showed no sign of weakness or defect.

The boiler satisfactorily fitted up on board the vessel and its Safety Valves adjusted under steam - 100 lbs wp.

*L. J. Shalleron*  
*July 1927*

Survey Fee ... £ *4 : 4* :  
 Travelling Expenses (if any) £ : *11 - 4* :

When applied for, \_\_\_\_\_  
 When received, *as per letter 10A*  
*LOR/NWC. 3/3/27*

*St. J. Cornish*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 16 AUG 1927

Assigned

*See NWC. J. 6 rpt. No 81653 attached*



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 Foundation