

REPORT ON BOILERS

No. 79333
12-1920

Boiler No. 2014

Received at London Office

Writing Report

When handed in at Local Office

29 JUL 1919

Port of

LIVERPOOL

WED MAY. 27 1920

Survey held at *Birkenhead*

Date, First Survey *Decem 19/18* Last Survey *July 14 1919*

S.S. Dynamo

(Number of Visits *42*) Gross Tons }
Net

Built at *Wokington*

By whom built *R. Williamson & Co*

When built *1920*

made at *Glasgow*

By whom made *McKie Baylce*

When made *1920*

made at *Birkenhead*

By whom made *Cammell Laird & Co. Ld.*

When made *1919*

Indicated Horse Power

Owners *Ellerman Nelson Line*

Port belonging to *Hull*

TITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel *J. Hancock & Sons, Ltd., W. Beardmore & Co. Ld., J. Walsby & Sons*

for record *S* Total Heating Surface of Boilers *1809 sq. ft.* Is forced draft fitted No. and Description of

One - cylindrical Multitubular Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs* Date of test *11/7/19*

Certificate *2077* Can each boiler be worked separately Area of fire grate in each boiler *57.75 sq. ft.* No. and Description of

valves to each boiler Area of each valve Pressure to which they are adjusted

Is fitted with easing gear In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Distance between boilers or uptakes and bunkers or woodwork *Mean dia. of boilers 14'0" Mean Length 10'9"*

Material of shell plates *Steel* Thickness *1 1/2"* Range of tensile strength *28/32 tons* Are the shell plates welded or flanged *No.*

Material of riveting: cir. seams *DR - Lap* long. seams *TR - Double Straps* Diameter of rivet holes in long. seams *1 1/4"* Pitch of rivets *8 1/2"*

plates or width of butt straps *18 1/2"* Per centages of strength of longitudinal joint rivets *93.08* Working pressure of shell by plate *85.29*

Size of manhole in shell *16" x 12"* Size of compensating ring *14" keil* No. and Description of Furnaces in each

3 - Plain Material *Steel* Outside diameter *3'7 1/2"* Length of plain part *top 6'4 1/2" bottom 6'10"* Thickness of plates *crown 2 1/2" bottom 3 1/2"*

Material of longitudinal joint *Weld* No. of strengthening rings *One* Working pressure of furnace by the rules *185 lbs* Combustion chamber

Material *Steel* Thickness: Sides *1 1/2"* Back *2 1/2"* Top *1 1/2"* Bottom *1"* Pitch of stays to ditto: Sides *10 1/2" x 7 1/2"* Back *9" x 8 1/2"*

If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *180 lbs* Material of stays *Steel* Area at

part *Area supported by each stay *141.97 sq. in.* Working pressure by rules *141.97* End plates in steam space: Material *Steel* Thickness *1 1/2"**

How are stays secured *Nuts* Working pressure by rules *185 lbs* Material of stays *Steel* Area at smallest part *594 sq. in.*

Supported by each stay *342.25 sq. in.* Working pressure by rules *180 lbs* Material of Front plates at bottom *Steel* Thickness *3 1/2"* Material of

back plate *Steel* Thickness *1 1/2"* Greatest pitch of stays *13 1/4" x 8 1/2"* Working pressure of plate by rules *186 lbs* Diameter of tubes *3 1/2" ext.*

tubes *4 1/2" x 4 1/2"* Material of tube plates *Steel* Thickness: Front *3 1/2"* Back *2 7/32"* Mean pitch of stays *13 1/2" x 9"* Pitch across wide

spaces *14 1/2"* Working pressures by rules *189 lbs* Girders to Chamber tops: Material *Steel* Depth and thickness of

at centre *2 - 8 1/2" x 7 1/2"* Length as per rule *34 1/2"* Distance apart *8 1/2" x 8 3/4"* Number and pitch of Stays in each *2 - 10 1/2"*

Working pressure by rules *186 lbs* Steam dome: description of joint to shell % of strength of joint

Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Working pressure of shell by rules Crown plates Thickness How stayed

HEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Pressure to which each is adjusted Is Easing Gear fitted

The foregoing is a correct description,

CAMMELL LAIRD AND COMPANY LIMITED

J. W. L. Lamed Manufacturer

LOCAL SECRETARY

During progress of work in shops - - - *Dec 19, 24, Jan. 6, 10, 14, 15, 20, 24, 27, 31, Feb 4.* Is the approved plan of boiler forwarded herewith

During erection on board vessel - - - *12, 18, 26 Mar 4, 7, 10, 11, 13, 17, 20, 21, 26 Apr 1, 7, 10, 14* Total No. of visits *42*
27, 29, 30 May 5, 8, 26, 29, June 3, 5, 11, 12, 20, 25, July 5, 11, 14.

GENERAL REMARKS

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

This boiler has been constructed under Special Survey in accordance with the approved plan and the Secretary's Certificate (E) of November 7th 1918. The materials and workmanship are of good quality. Tested by water pressure to twice the working pressure it was found tight and satisfactory in every respect. This boiler has been securely fitted on board and tried under steam with satisfactory results.

Fee ... £ *6 : 0* : When applied for, *29 JUL 1919*

Shipping Expenses (if any) £ : : When received, *4th Sept 1919*

Committee's Minute

LIVERPOOL

29 JUL 1919

Transmit to London

B. G. Oxford *R. W. Coomber*
Engineer Surveyor to Lloyd's Register of Shipping.

GLASGOW

1 JUL 1920

See Glasgow Report

No. 39933

FRI MAY. 27 1920

Kell 31/7/19

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