

## REPORT ON BOILERS.

No. 15679

Received at London Office 31 DEC 1927

Date of writing Report 30. 12. 27 When handed in at Local Office 30. 12. 27 Port of Grimsby.

No. in Reg. Book Survey held at Lincoln Date, First Survey 21. 6. 27 Last Survey 22. 12. 1927

on the M.V. COPTIC (Number of Visits 19) Tons { Gross 8281 Net 5111

Built at Wallsend on Tyne By whom built Swan Hunter & Wigham Richardson Cy Ltd Yard No. 1319 When built 1928

Engines made at By whom made Wallsend Shipway Works Engine No. 867 When made 1928

Boilers made at Lincoln By whom made Babcock & Wilcox Ltd Boiler No. 38/4509 When made 1927

Owners Shaw Saville & Albion Cy Ltd Port belonging to London

## VERTICAL DONKEY BOILER.

Made at Lincoln By whom made Babcock & Wilcox Boiler No. 38/4509 When made 1927 Where fixed Upper Room

Manufacturers of Steel Frodingham & Co. Ltd. Parkgate 7 S. Co.

Total Heating Surface of Boiler 200 sq. ft. Is forced draught fitted ✓ Coal or Oil fired Waste Heat

No. and Description of Boilers One, Clark's Patent Waste Heat Thimble Tube. Working pressure 100 lbs. sq. in.

Tested by hydraulic pressure to 200 lbs. sq. in. Date of test 8th Dec 1927 No. of Certificate 225

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler Two 1 1/2" Spring loaded 100 lbs.

Area of each set of valves per boiler { per rule 3.534 as fitted 3.534 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 No ✓ Smallest distance between boiler or uptake and bunkers or woodwork Upper deck in Upper Room 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 Yes Largest internal dia. of boiler 3'-9 3/4" Height 7'-4"

Shell plates: Material S. L. steel Tensile strength 28/32 T. Thickness 13/32

Are the shell plates welded or flanged Flanges at bottom Description of riveting: circ. seams { end Single Lap inter. long. seams H. R. D. Butt

Dia. of rivet holes in { circ. seams 13/16 Pitch of rivets 1 3/8" Percentage of strength of circ. seams { plate 56.8% rivets 53.5% Longitudinal joint { plate 72% rivets 136% combined 112%

Working pressure of shell by rules 164 lbs. sq. in. Thickness of butt straps { outer 3/8" inner 3/8"

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Flat Material S. L. steel

Tensile strength 26/30 T. Thickness 9/16" Radius ✓ Working pressure by rules 175 lbs. sq. in.

Description of Furnace: Plain, spherical, or dished crown Dished Material S. L. steel Tensile strength 26/30 T.

Thickness 5/8" External diameter { top 2'-10 1/4" bottom 2'-10 1/4" Length as per rule 4'-7 3/4" Working pressure by rules 104 lbs. sq. in.

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 2'-6" Working pressure by rule 169 lbs. sq. in.

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 Tensile strength { front back Thickness { front back Mean pitch of stay tubes in nests ✓

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



**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 *1/4" steel* External diameter { plain *2 3/4"* stay ☒ Thickness { *9 B.W.C.*

No. of threads per inch ☒ Pitch of tubes ☒ Working pressure by rules ☒

**Manhole Compensation:** Size of opening in shell plate ☒ Section of compensating ring ☒ No. of rivets and diameter of rivet holes ☒ Outer row rivet pitch at ends ☒ Depth of flange if manhole flanged ☒

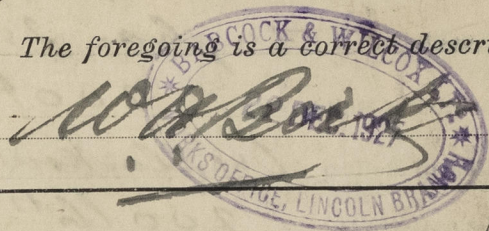
**Uptake:** External diameter *1'-5" dia.* Thickness of uptake plate *1/2"*

**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,

*Annual Boiler Report*



Manufacturer.

Dates of Survey { During progress of work in shops - *1927 Jan 21. 28 Jul 6. 15. 21. Aug 5. 18 Sep 14. 18 Oct 3. 20* Is the approved plan of boiler forwarded herewith No. *3/5/27*  
while building { During erection on board vessel - *28 Nov 17. 25 Dec 2. 6. 8. 14. 22* (If not state date of approval.)  
Total No. of visits *19*

# GENERAL REMARKS

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

*This Bunkie Boiler has been built under Special Survey and is accordance with the approved plans. The materials and workmanship are good. This boiler is eligible for notation with date when fitted in a classed vessel. This Boiler has been securely fixed in the vessel examined under steam & safety valves adjusted*

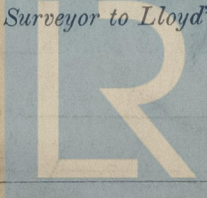
Survey Fee ... £ *4 : 4* : *7* When applied for, *22/12/1927*  
Travelling Expenses (if any) £ *3 : 3* : *10* When received, *27/3/28*

*William Butler*

*W. G. Kinley*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUES. 10 JUL 1928*

Assigned *See 6. yph attached*



Lloyd's Register Foundation