

-6 MAY 1931

Rpt. 5b.

# REPORT ON BOILERS.

No. 17158

Received at London Office 25 OCT 1930

Date of writing Report 24. 10. 1930 When handed in at Local Office 24. 10. 1930 Port of Grimsby

No. in Survey held at Lincoln Date, First Survey 13-6-30 Last Survey 16-10-1930

Reg. Book on the M.V. "Opawa" (Number of Visits 24) Tons Gross Net

Built at Glasgow By whom built Alexander, Stephen & Co. Ltd. Yard No. 532 When built 1931

Engines made at Glasgow By whom made Ditto Engine No. 532 When made 1931

Boilers made at Lincoln By whom made Babcock & Wilcox, Ltd. Boiler No. 734611-12 When made 1930

Owners Port belonging to

## VERTICAL DONKEY BOILER.

Made at Lincoln By whom made Babcock & Wilcox, Ltd. Boiler No. 734611-12 When made 1930 Where fixed -

Manufacturers of Steel Parkgate Works & Coopers & Lysons Ltd., Lanchester Steel Co.

Total Heating Surface of Boiler 570 sq. ft. Is forced draught fitted - Coal or Oil fired Lignite

No. and Description of Boilers Two, Clark's waste heat. Working pressure 100 lb.

Tested by hydraulic pressure to 200 lb. Date of test 3-10-30 & 8-10-30 No. of Certificates 304 & 305

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler One, double, spring loaded

Area of each set of valves per boiler per rule 7.425 as fitted 9.81 Pressure to which they are adjusted not adjusted they fitted with easing gear -

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 5'-9" Height 13'-0"

Shell plates: Material S. K. steel Tensile strength 28/32 T. Thickness 7/16"

Are the shell plates welded or flanged - Description of riveting: circ. seams end S. R. Lap inter. D. R. Lap long. seams D. R. Lap

Dia. of rivet holes in circ. seams 15/16 & 1/2" Pitch of rivets 2.49 & 2.62 Percentage of strength of circ. seams plate 62 & 69 rivets 52 & 74 of Longitudinal joint plate 68 rivets 75 combined.

Working pressure of shell by rules 114 lb. Thickness of butt straps outer inner

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

Tensile strength 26/30 T. Thickness 5/8" Radius 5'-0" Working pressure by rules 123 lb.

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

Thickness 1" External diameter top 4'-11" bottom 4'-11" Length as per rule 8'-2" Working pressure by rules 106 lb.

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 4'-6" Working pressure by rule 166

Thickness of Ogee Ring - Diameter as per rule a b 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 Thickness 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 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 -



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If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?

Im. 12, 28 - Copyable Ink.



**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 S.D. mild steel External diameter                      { plain 3 1/4 stay 5 2 1/4 Thickness 6 B.W.G.

No. of threads per inch                      Pitch of tubes 7" Vert. 6.62 Circ. 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                     

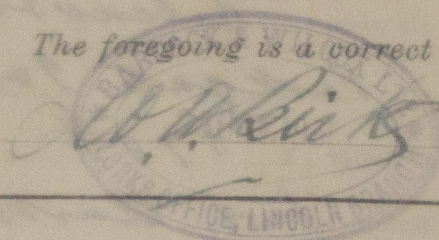
**Uptake:** External diameter                      Thickness of uptake plate                     

**Cross Tubes:** No.                      External diameters                      Thickness of plates                     

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,

Annual Boiler Request:



Manufacturer.

Dates of Survey                      { During progress of work in shops - 1930 Jun 13-20, 24-27, July 3, 7, 11, 14, 16, 18, 22, Aug 6 Is the approved plan of boiler forwarded herewith Yes  
while building                      { During erection on board vessel - Aug. 18-26, 29, Sep 5-16, 19, 29 Oct 3, 7, 8-10-16 (If not state date of approval.)  
Total No. of visits 24

410 this Boilers a duplicate of a previous case Yes If so, state Vessel's name and Report No. G. Stephen & Son, Ford No 531  
Glas. Rpt. No. 19159

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) These boilers have been built under special survey and in accordance with the Rules and approved plans as per Seat's letters dated 12/4/30 & 6/9/30. The materials and workmanship are good.

73/4611 - 4-4-0 } £ 8 : 8 0  
Survey Fees 73/4612 - 4-4-0 }  
Travelling Expenses (if any) £ 6 : 2 9  
73/4611 - 2-15-0 }  
73/4612 - 3 7 9 }

73/4611 - 8. 10. 30 }  
When applied for, 73/4612 - 11-10-30 }  
When received, 2-1-1931 }  
Length - 110 ft.

Committee's Minute **GLASGOW** 5 MAY 1931  
Assigned See Glasgow Report 51471

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

