

# REPORT ON BOILERS.

No. 51197

28 JAN 1931

Received at London Office

Date of writing Report

19

When handed in at Local Office

26. 1. 1931 Port of Glasgow

No. An Reg. Book. Survey held at

Glasgow

Date, First Survey

16. 9. 30

Last Survey

23-1-

1931

on the new steel **S/S "WALLACE ROSE"**

(Number of Visits 49)

Gross 632  
Net 277  
Tons

Master

Built at Hardinewald, Holland By whom built V/H Van Vliet & Co Yard No. 213 When built 1930

Engines made at

Glasgow

By whom made W & W Henderson & Co Ltd

Engine No. 18F

When made 1930

Boilers made at

Glasgow

By whom made W & W Henderson & Co Ltd

Boiler No. 18F

When made 1930

Nominal Horse Power

88

Owners R. Hughes & Co

Port belonging to

Liverpool

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel <sup>Stays, Birmingham JWS & Co Ltd.</sup> Vereinigte Stahlwerke A.G. Stahl- & Walzwerke Thyssen of Mulheim Ruhr (Letter for Record S)

Total Heating Surface of Boilers 1615 sq ft Is forced draught fitted no Coal or Oil fired coal

No. and Description of Boilers one single ended Working Pressure 180

Tested by hydraulic pressure to 320 Date of test 8-12-30 No. of Certificate 18888 Can each boiler be worked separately -

Area of Firegrate in each Boiler 54 sq ft No. and Description of safety valves to each boiler Two, Improved high lift

Area of each set of valves per boiler {per Rule 5.180" as fitted 6.280"} Pressure to which they are adjusted 185 Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler -

Smallest distance between boilers or uptakes and bunkers or woodwork 5'-0" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating open floors Is the bottom of the boiler insulated no

Largest internal dia. of boilers 13'-6" Length 10'-6" Shell plates: Material steel Tensile strength 28-32 tons

Thickness 1 1/8" Are the shell plates welded or flanged no Description of riveting: circ. seams {end WRS inter. TR}

long. seams WBS, TR Diameter of rivet holes in {circ. seams 1 3/16" long. seams 1 3/16"} Pitch of rivets {3.68" 8 3/8"}

Percentage of strength of circ. end seams {plate 67.75 rivets 43.8} Percentage of strength of circ. intermediate seam {plate 85.75 rivets 90}

Percentage of strength of longitudinal joint {plate 85.75 rivets 90 combined 89.8} Working pressure of shell by Rules 182

Thickness of butt straps {outer 7/8" inner 1"} No. and Description of Furnaces in each Boiler three Weighton 3C

Material steel Tensile strength 26-30 tons Smallest outside diameter 40"

Length of plain part {top bottom} Thickness of plates {crown 1/2" bottom 1/2"} Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 180

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 1/8" Pitch of stays 1 5/8" x 20"

How are stays secured WN Working pressure by Rules 181

Tube plates: Material {front steel back "} Tensile strength {26-30 tons " " Thickness {1 3/64" 13/16"}

Mean pitch of stay tubes in nests 10 1/4" Pitch across wide water spaces 14 1/4" Working pressure {front 193 back 224}

Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder

at centre 2 @ 7 1/2" x 9 1/8" Length as per Rule 28.59" Distance apart 8 1/4" No. and pitch of stays

in each 2 @ 9" Working pressure by Rules 180 Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 5/8" Back 19/32" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 9 x 8 1/4" Back 8 1/4 x 8 1/4" Top 9 x 8 1/4" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 182 Front plate at bottom: Material steel Tensile strength 26-30 tons

Thickness 1 3/64" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 25/32"

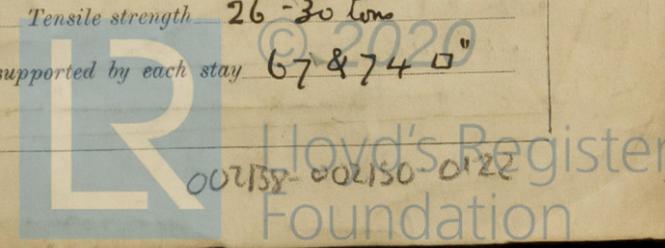
Pitch of stays at wide water space 14 1/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 182 Main stays: Material steel Tensile strength 28-32 tons

Diameter {At body of stay, or Over threads} 2 5/8" No. of threads per inch 6 Area supported by each stay 334 sq"

Working pressure by Rules 217 Screw stays: Material steel Tensile strength 26-30 tons

Diameter {At turned off part, or Over threads} 1 1/2" & 1 1/8" No. of threads per inch 9 Area supported by each stay 67 & 74 sq"



Working pressure by Rules 187 & 206 Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part</sup> 13" <sup>of</sup> 13/4" <sup>Over threads</sup>

No. of threads per inch 9 Area supported by each stay 92 0" Working pressure by Rules 187

Tubes: Material steel External diameter <sup>Plain</sup> 3 1/4" <sup>Stay</sup> 3 1/4" Thickness 8 L.S.G. 1/2" 3/8" 1/16" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 230 Manhole compensation: Size of opening in shell plate 20 1/2" x 16 1/2" Section of compensating ring 10" x 1 1/8" No. of rivets and diameter of rivet holes 44 @ 1 3/16"

Outer row rivet pitch at ends 8 3/8" Depth of flange if manhole flanged 3 1/16" Steam Dome: Material none

Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_

Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint <sup>Plate</sup> \_\_\_\_\_ <sup>Rivets</sup> \_\_\_\_\_

Internal diameter \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Thickness of crown \_\_\_\_\_ No. and diameter of stays \_\_\_\_\_

Inner radius of crown \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_

How connected to shell \_\_\_\_\_ Size of doubling plate under dome \_\_\_\_\_ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell \_\_\_\_\_

Type of Superheater none Manufacturers of <sup>Tubes</sup> \_\_\_\_\_ <sup>Steel castings</sup> \_\_\_\_\_

Number of elements \_\_\_\_\_ Material of tubes \_\_\_\_\_ Internal diameter and thickness of tubes \_\_\_\_\_

Material of headers \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_ Can the superheater be shut off and the boiler be worked separately \_\_\_\_\_

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler \_\_\_\_\_

Area of each safety valve \_\_\_\_\_ Are the safety valves fitted with easing gear \_\_\_\_\_ Working pressure as per Rules \_\_\_\_\_

Pressure to which the safety valves are adjusted \_\_\_\_\_ Hydraulic test pressure: tubes \_\_\_\_\_ castings \_\_\_\_\_ and after assembly in place \_\_\_\_\_ Are drain cocks or valves fitted to free the superheater from water where necessary \_\_\_\_\_

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

The foregoing is a correct description,  
FOR DAVID & W. HENDERSON & CO., LTD.

J. P. Paterson Manufacturer. DIRECTOR

Dates of Survey <sup>During progress of work in shops</sup> \_\_\_\_\_ while <sup>During erection on board vessel</sup> \_\_\_\_\_ building \_\_\_\_\_

SEE ACCOMPANYING MACHINERY REPORT

Are the approved plans of boiler and superheater forwarded herewith yes (If not state date of approval.)

Total No. of visits 49

Is this Boiler a duplicate of a previous case no If so, state Vessel's name and Report No. \_\_\_\_\_

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

The materials and workmanship are good.  
The boiler has been constructed under special survey in accordance with the Rules, satisfactorily fitted in the vessel and its safety valves adjusted under steam.

ALB  
26/1/31

Survey Fee ... .. £ : \_\_\_\_\_ When applied for, 19 \_\_\_\_\_  
Travelling Expenses (if any) £ : \_\_\_\_\_ When received, 19 \_\_\_\_\_

S. Davis  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 27 JAN 1931 JAH

Assigned SEE ACCOMPANYING MACHINERY REPORT

FRI. 30 JAN 1931

See Rob. 26. 19950



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