

# REPORT ON BOILERS.

No. 51010

12 NOV 1930

Received at London Office

Date of writing Report 10 When handed in at Local Office 8.11.1930 Port of Glasgow

No. An Reg. Book. Survey held at Glasgow Date, First Survey 14.7.30 Last Survey 7-11-1930

on the new steel S/DENNIS ROSE. (Number of Visits 34) Tons {Gross 1600 Net 946

Master Built at Glasgow By whom built D & W Henderson Ltd Yard No. 907 When built 1930

Engines made at Glasgow By whom made D & W Henderson & Co Ltd Engine No. 907 When made 1930

Boilers made at Glasgow By whom made D & W Henderson & Co Ltd Boiler No. 907 When made 1930

Nominal Horse Power 232 Owners R. Hughes & Co Port belonging to Liverpool

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

Manufacturers of Steel Gütchhoffnungshütte a. S. Oberhausen Vereinigte Stahlwerke a. S. A. Hütte Ruhrort. Maschinenbau David White & Son Ltd & James Dunlop & Co Ltd (Letter for Record S)

Total Heating Surface of Boilers 4366 sq ft Is forced draught fitted no Coal or Oil fired coal

No. and Description of Boilers two single ended 2SR. Working Pressure 180

Tested by hydraulic pressure to 320 Date of test 10-10-30. 7-10-30 No. of Certificate 15847 18833 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 660' No. and Description of safety valves to each boiler Two improved high lift

Area of each set of valves per boiler {per Rule 70" as fitted 7.940" 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 no tanks Is the bottom of the boiler insulated no

Largest internal dia. of boilers 14'-6" Length 10'-9" Shell plates: Material steel Tensile strength 28-32 tons

Thickness 1 1/32" Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR inter. /

long. seams WBS TR Diameter of rivet holes in {circ. seams 1 1/2" long. seams 1 1/4" Pitch of rivets {4 3/4" 8 7/8" /

Percentage of strength of circ. end seams {plate 68.5 rivets 50.1 / Percentage of strength of circ. intermediate seam {plate rivets /

Percentage of strength of longitudinal joint {plate 85.9 rivets 87.5 combined 93 Working pressure of shell by Rules 180

Thickness of butt straps {outer 1 5/16" inner 1 1/16" No. and Description of Furnaces in each Boiler Three Weighton 3cf

Material steel Tensile strength 26-30 tons Smallest outside diameter 45.125"

Length of plain part {top bottom / Thickness of plates {crown 3 9/16" bottom / 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 7/8" Pitch of stays 18" x 18"

How are stays secured DN Working pressure by Rules 181

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

Mean pitch of stay tubes in nests 11 1/2" Pitch across wide water spaces 14" Working pressure {front 180 back 180 /

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

at centre 2 @ 8 1/8" x 7/16" Length as per Rule 31.6" Distance apart 8 1/2" No. and pitch of stays

in each 3 @ 8" Working pressure by Rules 185 Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 1 1/16" Back 1 9/32" Top 1 1/16" Bottom 1 1/16" /

Pitch of stays to ditto: Sides 8" x 8 1/2" Back 8" x 8" Top 8" x 8 1/2" Are stays fitted with nuts or riveted over nuts in ces only

Working pressure by Rules 191 Front plate at bottom: Material steel Tensile strength 26-30 tons

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

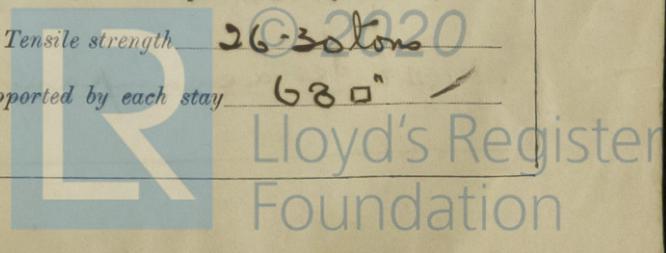
Pitch of stays at wide water space 14" Are stays fitted with nuts or riveted over nuts on marginal stay only

Working Pressure 190 Main stays: Material steel Tensile strength 28-32 tons

Diameter {At body of stay, 2 7/8" No. of threads per inch 6 Area supported by each stay 324 sq in /

Working pressure by Rules 188 Screw stays: Material steel Tensile strength 26-30 tons

Diameter {At turned off part, 1 1/2" No. of threads per inch 9 Area supported by each stay 680 sq in /



Working pressure by Rules 185 Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part,</sup> 1 3/4" <sub>or</sub> 1 3/4" <sub>Over threads</sub>

No. of threads per inch 9 Area supported by each stay 88 sq" Working pressure by Rules 206

Tubes: Material hot drawn steel External diameter <sup>Plain</sup> 3 3/4" <sub>Stay</sub> 3 3/4" Thickness 9 w.s. <sub>5 3/8 & 5 1/16</sub> No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 180 Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 7 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 32 @ 1 1/8"

Outer row rivet pitch at ends 8 1/2" Depth of flange if manhole flanged \_\_\_\_\_ 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> \_\_\_\_\_ <sub>Rivets</sub> \_\_\_\_\_

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> \_\_\_\_\_ <sub>Steel castings</sub> \_\_\_\_\_

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 & WILKINSON & CO., LTD.** Manufacturer. J. J. Patil DIRECTOR.

Dates of Survey <sup>During progress of work in shops - -</sup> See accompanying Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) \_\_\_\_\_ <sub>while building</sub> <sup>During erection on board vessel - - -</sup> machinery report Total No. of visits 34

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Donohy Rose, G.R. No. 49882 Maurice Rose, G.R. No. 50954

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

The materials and workmanship are good.

The boilers have been constructed under Special Survey in accordance with the Rules, satisfactorily fitted in the vessel and their safety valves adjusted under steam.

R.B.  
8/11/30.

Survey Fee ... £ See Machinery Rpt When applied for, 19

Travelling Expenses (if any) £ \_\_\_\_\_ When received, 19

J. C. Davis  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 11 NOV 1930

Assigned See accompanying machinery report

