

# REPORT ON BOILERS.

Air Reservoir

No. 9869

Received at London Office

5 DEC 1927

13 JUN 1928

Date of writing Report 19 When handed in at Local Office 2<sup>nd</sup> Dec 1927 Port of Belfast

No. in Survey held at Belfast Date, First Survey 2<sup>nd</sup> Nov. Last Survey 28<sup>th</sup> Nov. 1927  
Reg. Book.

on the Manoeuvring Air Reservoir No. 815 P. T.S. M.V. "Delphinia Antre" Number of Visits 2  
Gross Tons 2235  
Net Tons 1341

Built at Glasgow By whom built H.J. Inglis & Co. Yard No. F15 P When built 1928

made at " By whom made Harland & Wolff Ltd. Engine No. F15 P When made "

made at " By whom made " Boiler No. " When made "

Entre Rios Railway Co. Port belonging to Iticuy.

## Manoeuvring Air Reservoir TYPICAL DONKEY BOILER.

Belfast By whom made Harland & Wolff Ltd. Boiler No. 815 P When made 1927 Where fixed

Manufacturers of Steel D.A. Colville & Son Ltd.

Heating Surface of Boiler Capacity 350 sq ft Is forced draught fitted Coal or Oil fired

Description of Boilers One cylindrical - dome ended built Steel Working pressure 356 lbs/sq in

tested by hydraulic pressure to 585 lbs/sq in Date of test 28<sup>th</sup> November 1927 Lloyd's No. of Certificate 62

Firegrate in each Boiler No. and Description of safety valves to each boiler

of each set of valves per boiler } per rule as fitted Pressure to which they are adjusted Are they fitted with easing gear

Whether steam from main boilers can enter the donkey boiler Smallest distance between boiler or uptake and bunkers

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 70 5/16" Height 14'3"

Shell plates: Material Steel Tensile strength 28-32 Tons Thickness 1"

Are shell plates welded or flanged No. Description of riveting: circ. seams } end D.R. long. seams J.R. D.S. }  
inter. ✓

of rivet holes in { circ. seams 1 5/16" Pitch of rivets { 3.29" Percentage of strength of circ. seams { plate 60.1 of Longitudinal joint { plate 88.4 ✓  
long. seams 1 7/16" } 7 7/16" } rivets 67.5 } rivets 93.7 ✓  
combined 89.6

Working pressure of shell by rules 371 lbs. ✓ Thickness of butt straps { outer 25" inner 22 3/32"

Crown: Whether complete hemisphere, dished partial spherical, or flat dished partial spherical Material Steel

Shell strength 26-30 Tons Thickness 1 5/32" 1 9/32" Radius 48" Working pressure by rules 360 lbs ✓

Description of Furnace: Plain, spherical, or dished crown Material Tensile strength

Thickness External diameter { top Length as per rule Working pressure by rules

of support stays circumferentially and vertically Are stays fitted with nuts or riveted over

Radius of stays over thread Radius of spherical or dished furnace crown Working pressure by rule

Thickness of Ogee Ring Diameter as per rule { 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

Thickness as per rule Pitch of stays Are stays fitted with nuts or riveted over

Radius of stays over thread Working pressure of back plate by rules

Plates: Material { front Tensile strength Thickness Mean pitch of stay tubes in nests

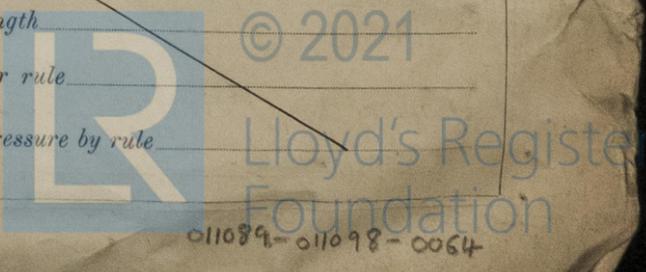
Comprising shell, Dia. as per rule { front Pitch in outer vertical rows { Dia. of tube holes FRONT { stay BACK { stay  
back plain plain

Does each alternate tube in outer vertical rows a stay tube Working pressure by rules { front back

Stays to combustion chamber tops: Material Tensile strength

Thickness 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 \_\_\_\_\_ External diameter { plain \_\_\_\_\_ stay \_\_\_\_\_ } Thickness { \_\_\_\_\_ }  
 No. of threads per inch \_\_\_\_\_ Pitch of tubes \_\_\_\_\_ Working pressure by rules \_\_\_\_\_  
**Manhole Compensation:** Size of opening in <sup>END</sup> ~~steel~~ plate 16" x 12" Section of compensating ring \_\_\_\_\_ No. of rivets and diameter of rivet holes \_\_\_\_\_ Outer row rivet pitch at ends \_\_\_\_\_ Depth of flange if manhole flanged 4"  
**Uptake:** External diameter \_\_\_\_\_ Thickness of uptake plate \_\_\_\_\_  
**Cross Tubes:** No. \_\_\_\_\_ External diameters { \_\_\_\_\_ } Thickness of plates \_\_\_\_\_  
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with \_\_\_\_\_

The foregoing is a correct description,  
 For HARLAND AND WOLFF, LIMITED.  
 Hebebeck Manufacturer.

Dates of Survey { During progress of work in shops - - } Nov. 2-28 - 2 Is the approved plan of boiler forwarded herewith (If not state date of approval.)  
 while building { During erection on board vessel - - } Total No. of visits \_\_\_\_\_

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

This reservoir has been constructed to approved design under special survey. The materials and workmanship are sound and good. It has been satisfactorily subjected to a hydraulic test and is eligible, in my opinion, for installation on a classed vessel.

The reservoir is being sent to Glasgow for installing.

This reservoir has been properly fitted in the vessel at Glasgow; fusible plugs are fitted in reservoir shell, and safety valves in the air lines adjusted at 356 lbs./sq. in. under working conditions.

J. D. Boyle  
 Glasgow, 9/6/28.

Glasgow Report No. 48080.

Survey Fee ... £ 4 : 4 : } When applied for, 2<sup>nd</sup> Dec. 1927.  
 Travelling Expenses (if any) £ : : } When received, 29<sup>th</sup> Dec. 1927 per Lou Str

R. Lee Amers.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 JUN 1928  
 Assigned See Gls. Rpt. No. 48080

