

# REPORT ON BOILERS.

No. 9827

GLASGOW REPORT No. 47434  
AIR RESERVOIRS 11 JAN 1928

Received at London Office 28 SEP 1927

Date of writing Report 19 When handed in at Local Office 28 Sept 1927 Port of Belfast  
 No. in Survey held at Belfast Date, First Survey 2<sup>nd</sup> August Last Survey 1<sup>st</sup> Sept 1927  
 Reg. Book on the Air Reservoir No. 7439  
 M. V. "PACHECO"  
 (Number of Visits 5) Gross Tons Net  
 Built at By whom built Yard No. When built  
 Engines made at By whom made Engine No. When made  
 Boilers made at By whom made Boiler No. When made  
 Owners Port belonging to

## AIR RESERVOIR

## VERTICAL DONKEY BOILER

Made at Belfast By whom made Harland & Wolff Ltd. No. 7439 When made 1927 Where fixed

Manufacturers of Steel D. Colville &amp; Son Ltd.

## CAPACITY OF RESERVOIR

Total Heating Surface of Boiler

610 sq ft

Is forced draught fitted

Coal or Oil fired

No. and Description of Boilers ONE DOME-ENDED CYLINDRICAL BUILT Working pressure 356 LBS.

Tested by hydraulic pressure to 585 LBS. Date of test 20. 9. 27 Lloyd's No. of Certificate 56

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

Area of each set of valves per boiler { per rule as fitted Pressure to which they are adjusted Are 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 76 3/16" LENGTH 21' 9" Height

Shell plates: Material STEEL Tensile strength 28-32 TONS Thickness 1 3/32"

Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. inter D.R. long. seams T.R. D.B.S.

Dia. of rivet holes in { circ. seams 1 5/16" Pitch of rivets 3.36" Percentage of strength of circ. seams { plate 60.9 of Longitudinal joint { plate 85.1 rivets 60.4 rivets 97.4 combined 89.7

Working pressure of shell by rules 378 LBS. Thickness of butt straps { outer 27/32" inner 31/32"

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat DISHED PARTIAL SPHERICAL Material STEEL

Tensile strength 26-30 TONS Thickness 1 3/32" 1 1/32" Radius 51" Working pressure by rules 358 LBS.

Description of Furnace: Plain, spherical, or dished crown

Material Tensile strength

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

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 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

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 Tensile strength Thickness Mean pitch of stay tubes in nests

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

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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Lloyd's Register  
Foundation

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**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 shell plate <sup>END</sup> 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.**  
*Delebeck* Manufacturer.

Dates of Survey { During progress of work in shops - - } Aug. 2. 10. 12. 23 Sept 1 = 5 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 under Special Survey. The materials & workmanship are sound & good. It has been satisfactorily tested by hydraulic pressure & is eligible, in my opinion, for installation on a classed vessel.

It is being forwarded to Glasgow.

This Reservoir has been properly fitted on board the vessel. Safety valves have been adjusted under air pressure & the working pressure of 356 lb./sq. in.

*J D Boyle*  
 Glasgow, 29/12/27.

Survey Fee ... .. £ 14 : 14 : - } When applied for, 27 Sept 1927

Travelling Expenses (if any) £ : : } When received, 17th Oct 1927

Committee's Minute **GLASGOW 10 JAN 1928**  
 Assigned See Gb. Rpt. No. 47434 *WMM*

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

