pt. 5b.

AIR RESERVOIR.

# REPORT ON ~~BOILERS~~.

No. 10,198

Received at London Office 4 JUL 1929

Date of writing Report ____ 19 ____ When handed in at Local Office 3rd July 1929 Port of Belfast

No. in Reg. Book ____ Survey held at ____ Date, First Survey 28th May Last Survey 27th June 19 29

(Number of Visits 3)

on the CARMEN AVELLANEDA Tons Gross 9234 Net 1344

Built at Glasgow By whom built A & J Inglis Ltd Yard No. 866 When built 1929

Engines made at Do By whom made Harland & Wolff Ltd Engine No. 866 When made 1929

Boilers made at None By whom made ____ Boiler No. ____ When made ____

Owners Entre Rios Railway Co Ltd Port belonging to Liverpool

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## ~~VERTICAL DONKEY BOILER~~. AIR RESERVOIR.

Made at Belfast By whom made Harland & Wolff. Ltd ~~Boiler~~ No. 866 P. When made 1929. Where fixed ____

Manufacturers of Steel David Colville & Sons Ltd.

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

**No. and Description ~~of Boilers~~** One dome-ended, Cylindrical **Working pressure** 356 lbs

Tested by hydraulic pressure to 585 lb. Date of test 27th June 1929. No. ~~of Certificate~~ 80

**~~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~~ 70 5/16" ~~LENGTH~~ Height 14'-3"

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

Are the shell plates welded or flanged No. Description of riveting: circ. seams { end double inter. ✓ } long. seams Treble d.l.s.

Dia. of rivet holes in { circ. seams 1 9/16" long. seams 1 1/8" } Pitch of rivets { 3.29" 7 7/16" } Percentage of strength of circ. seams { plate 60.1 rivets 67.5 } of Longitudinal joint { plate 85.4 rivets 93.7 combined 89.6 }

Working pressure of shell by rules 371 lbs. ✓ Thickness of butt straps { outer 25/32" inner 29/32" }

**Shell ~~Crown~~:** (ENOS) Whether complete hemisphere, dished partial spherical, or flat dished partial Spherical Material Steel

Tensile 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 ____ bottom ____ } 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 ____ 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 ____ 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 ____

**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*~~ END *plate* 16"×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.

J Eekelbeck *Manufacturer.*

*Dates of Survey while building* — *During progress of work in shops* - - { 1927 May 28 June 20, 27 } *Is the approved plan of boiler forwarded herewith* ____ (If not state date of approval.)

*During erection on board vessel* - - { ____ } *Total No. of visits* 3

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

This Air receiver has been constructed under Special Survey. The materials and workmanship are sound and good. It has been satisfactorily tested by working pressure. It is intended for a vessel building on the Clyde.

Survey Fee ... ... £ 4 : 4 : } When applied for, 3rd July 1929

Travelling Expenses (if any) £ : : } When received, 16/8/1929

R Lee Ameer.

*Engineer Surveyor to Lloyd's Register of Shipping.*

*Committee's Minute* ____

*Assigned* ____