

## REPORT ON BOILERS.

No. 16830

Be. 12869

Received at London Office

Date of Report 2/5/40 When handed in at Local Office 2/5/40 Port of MIDDLESBROUGH

No. in Survey held at Stockton-on-Tees Date, First Survey 29/1/40 Last Survey 26/4/1940  
Reg. Book on the M.V. "PAMPAS" (Number of Visits 6) Gross 5415 Tons Net 3080Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 1027 When built 1941  
Engines made at Belfast By whom made Harland & Wolff Ltd. Engine No. 1027 When made 1941  
Boilers made at Stockton By whom made Stockton C. Eng. & Riley Bros. Ltd. Boiler No. 6412 When made 1940  
Owners Royal Mail Lines Ltd. Port belonging to London.THIMBLE TUBE  
VERTICAL, DONKEY BOILER.

Made at Stockton By whom made Stockton C. Eng. &amp; Riley Bros. Ltd. Boiler No. 6412 When made 1940 Where fixed Engine Room bottom platform.

Manufacturers of Steel Appleby-Frodingham Steel Co. Ltd.

Total Heating Surface of Boiler 258 sq. ft. Is forced draught fitted No Coal or Oil fired Oil

No. and Description of Boilers "Velvin" Thimble Tube Working pressure 100 lbs.

Tested by hydraulic pressure to 200 lbs. Date of test 26/4/40 No. of Certificate 6992

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 @ 1.5" dia

Area of each set of valves per boiler { per rule 2.818 sq. in. as fitted 3.53 sq. in. Pressure to which they are adjusted 100 lbs. Are they fitted with easing gear Yes

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

or woodwork Ample Is oil fuel carried in the double bottom under boiler No Smallest distance between base of boiler and tank top plating

4'6" Is the base of the boiler insulated Yes Largest internal dia. of boiler 5'-9 3/4" Height 13'-9"

Shell plates: Material Steel Tensile strength 28-32 tons Thickness 3/8"

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

Dia. of rivet holes in { circ. seams 13/16" INT 13/16" B 15/16" Pitch of rivets { T 2.007" INT 2.029" B 3.043" T 2.932" Percentage of strength of circ. seams { plate 59.6 69.5 rivets 56.6 99.4 of Longitudinal joint { plate 71.8 rivets 147.9 combined. ✓

Working pressure of shell by rules 105 lbs. Thickness of butt straps { outer 3/8" inner 3/8"

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

Tensile strength 26-30 tons Thickness 2 1/32 Radius 5'-0" Working pressure by rules 130 lbs.

Description of Furnace: Plain, spherical, or dished crown Plain Material Steel Tensile strength 26-30 tons

Thickness 3/4" External diameter { top 37 1/2" bottom 37 1/2" Length as per rule 5'-8 1/2" Working pressure by rules 101 lbs

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 2'-9" Working pressure by rule 106.5 lbs

Thickness of Ogee Ring ✓ Diameter as per rule { D a ✓ Working pressure by rule ✓

Combustion Chamber: Material Steel Tensile strength 26-30 tons Thickness of top plate 23/32

Radius if dished 5'-0" Working pressure by rule 113 lbs 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 *Thimble Tubes (S.D. Steel)* External diameter ☒ plain *3 1/4"* Thickness ☒ *8 SWG*  
 No. of threads per inch ☒ Pitch of tubes ☒ Working pressure by rules *230 lbs*  
**Manhole Compensation:** Size of opening in shell plate *12" x 16"* Section of compensating ring ☒ No. of rivets and diameter ☒  
 of rivet holes ☒ Outer row rivet pitch at ends ☒ Depth of flange if manhole flanged *2 7/8"*  
**Uptake:** External diameter *1'-9 1/4"* Thickness of uptake plate *5/8"*  
**Cross Tubes:** No. ☒ External diameters ☒ Thickness of plates ☒  
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *Yes*

The foregoing is a correct description,  
*H. J. Orley* Manufacturer.

Dates of Survey ☒ During progress of work in shops - *Jan 29<sup>th</sup>, Feb 16<sup>th</sup>, Mar 4<sup>th</sup>, 21<sup>st</sup>, Apr 17, 26<sup>th</sup>* Is the approved plan of boiler forwarded herewith *11-8-39.*  
 while building ☒ During erection on board vessel - *1940 Nov 4<sup>th</sup>, 1941 Jan 7<sup>th</sup>, 15<sup>th</sup>, 23<sup>rd</sup>* (If not state date of approval.)  
 Total No. of visits *10*

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

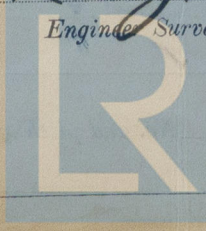
**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) *This boiler has been constructed under Special Survey, in accordance with the approved plan, & Rule Requirements. The material & workmanship are good, & on completion the boiler was tested by hydraulic pressure to 200 lbs/sq. in. The boiler has been forwarded to Belfast.*

*This boiler has now been satisfactorily fitted on board the vessel and examined under steam, the safety valves have been adjusted to 100 lbs/sq. in. and accumulation of pressure test carried out. The oil fuel burning installation has been examined under working conditions and found satisfactory.*

*R. Shaw*  
*30<sup>th</sup> January 1941*

Survey Fee ... £ *4 : 4 :* When applied for, *7-5-1940.*  
 Travelling Expenses (if any) £ : : When received, *24-7-1940* See Sec. C. 4.

Committee's Minute  
 Assigned *See Bel JE 12869*

*R. J. East*  
 Engineer Surveyor to Lloyd's Register of Shipping.  

 Lloyd's Register Foundation

TUE 11 FEB 1941