

REPORT ON BOILERS.

Be. 12869
No. 16830

Received at London Office

MAY - 8 1940

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) Tons Gross 5415 Net 3080

Built 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. Engin & 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. Engin & 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 T B

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" 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 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 Working pressure by rule Combustion Chamber: Material Steel Tensile strength 26-30 tons Thickness of top plate Bottom 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

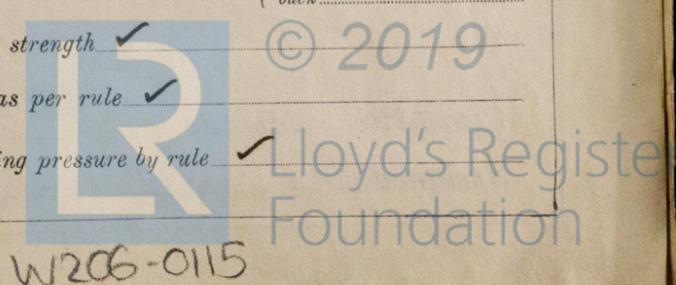
Diameter of stays over thread Working pressure of back plate by rules Tube Plates: Material front back Tensile strength Thickness Mean pitch of stay tubes in nests

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 Length as per rule

Depth and thickness of girder at centre 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 29th, Feb 16th, Mar 4th, 21st, Apr 17, 26th* Is the approved plan of boiler forwarded herewith *11-8-39*
 while building During erection on board vessel - *1940 Nov 4th, 1941 Jan 7th, 15th, 23rd* (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. 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 and accumulation of pressure test carried out. The oil fuel burning installation has been examined under working conditions and found satisfactory.

R. Shaw
30th 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*

TUE 11 FEB 1941

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

 Lloyd's Register Foundation