

# REPORT ON BOILERS.

0 MAR 1947

Received at London Office 18 MAR 1947

Date of writing Report 24 Feb. 1947. When handed in at Local Office 15<sup>th</sup> March 1947 Port of Birmingham.

No. in Reg. Book 87577 Survey held at Cradley Heath. Date, First Survey 12 December '46 Last Survey 17 February 1947

on the Donkey Boiler for motorship "JUANITA BEAZLEY." (Number of Visits 8) Tons Gross 1100. Net

Built at Warrenpoint, N. Ireland. By whom built Warrenpoint Shipyard Ltd. Yard No. T102. When built 1946.

Engines made at Colchester. By whom made Davy Paxman & Co (Colchester) Ltd. Engine No. When made 1946.

Boiler made at Cradley Heath. By whom made Cradley Boilers Co Ltd. Boiler No. 33292 When made 1947.

Owners Anglo-Ecuadorian Oilfields Ltd. Port belonging to

## VERTICAL DONKEY BOILER.

Made at Cradley Heath By whom made Cradley Boilers Co Ltd. Boiler No. 33292. When made 1947. Where fixed

Manufacturers of Steel Patent Shaft and Axletree Co Ltd. Wednesbury. Staffs.

Total Heating Surface of Boiler 112 square feet. Is forced draught fitted. Coal or Oil fired Coal or Oil.

No. and Description of Boilers One - mild steel vertical cross tube boiler. Working pressure 100 lbs/sq

Tested by hydraulic pressure to 200 lbs/sq. Date of test 11 February 1947. No. of Certificate 93.

Area of Firegrate in each Boiler 12.5 sq ft. No. and Description of safety valves to each boiler One: 2" Double Spring Loaded.

Area of each set of valves per boiler per rule. Approved. as fitted 6.28 sq ins Pressure to which they are adjusted. Are they fitted with easing gear Yes.

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 4'-6". Height 12'-6" from base.

Shell plates: Material mild steel. Tensile strength 28/32 tons/sq. Thickness 3/8".

Are the shell plates welded or flanged. Description of riveting: circ. seams S.R. lap. long. seams D.R. lap.

Dia. of rivet holes in circ. seams 13/16. Pitch of rivets 2". Percentage of strength of circ. seams plate 59.3. rivets 48.3. of Longitudinal joint plate 67.5. rivets 77.5. combined.

Working pressure of shell by rules Approved 100 lbs/sq. Thickness of butt straps outer inner.

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished, partial, spherical. Material mild steel.

Tensile strength 26/30 tons/sq. Thickness 9/16". Radius 4'-6" external. Working pressure by rules Approved 100 lbs/sq.

Description of Furnace: Plain, spherical, or dished crown Dished. Material mild steel. Tensile strength 26/30 tons/sq.

Thickness 9/16" top. External diameter top 3'-6 1/4". Length as per rule 3'-9". Working pressure by rules Approved 100 lbs/sq.

Pitch of support stays circumferentially 7" (max) and vertically 22" from furnace. Are stays fitted with nuts or riveted over Riveted over.

Diameter of stays over thread 1 1/8". Radius of spherical or dished furnace crown 3'-6" ext. Working pressure by rule Approved 100 lbs/sq.

Thickness of flanged bottom 1/2". Diameter as per rule D 4'-6". a 4'-1". Working pressure by rule Approved 100 lbs/sq.

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. Tensile strength. Thickness. Mean pitch of stay tubes in nests.

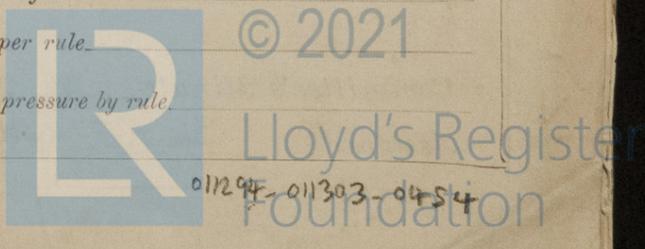
If comprising shell, Dia. as per rule. Pitch in outer vertical rows. Dia. of tube holes FRONT BACK.

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 plate  $16" \times 12"$  Section of compensating ring  $2" - 5\frac{1}{2}" \times \frac{1}{2}"$  No. of rivets and diameter of rivet holes  $32 = \frac{13}{16}$  DIA.  Outer row rivet pitch at ends *Equal Pitch*  Depth of flange if manhole flanged *not flanged*   
**Uptake:** External diameter  $1" - 2"$   Thickness of uptake plate  $\frac{9}{16}"$    
**Cross Tubes:** No.  $5$   External diameters  $9"$   Thickness of plates  $\frac{3}{8}$   *Thick tubes*

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *Yes, as far as applicable.*

The foregoing is a correct description,  
OR ON BEHALF OF  
**CRADLEY BOILER CO. LTD.**  
*H. Hudson* Manufacturer.

Dates of Survey  During progress of work in shops - -  $12/11/46; 3/1/47; 27/1/47; 11/2/47$   
 During erection on board vessel - -  $19/11/46; 17/1/47; 3/2/47; 17/2/47$   
 Is the approved plan of boiler forwarded herewith  $29/12/46$   
 (If not state date of approval.)  
 Total No. of visits  $8$

Is this Boiler a duplicate of a previous case *Yes*  If so, state Vessel's name and Report No. *Motor Ship 'PETRONAVE I' 15th Mar 47*  
*except for one portion of seam & inspector pads.*  
**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)

*This boiler has been built under special survey in accordance with the Society's Rules and approved plans. The materials and workmanship are good. The boiler has been despatched to Warrenpoint Shipyard, Northern Ireland, for installation in the "M.V. Juanita Beagley."*

*This boiler has been efficiently installed on board the vessel and safety valves adjusted under steam. Port ring  $1\frac{5}{32}$  INS. STAR'S ring.  $9/32$  INS.  
 R.I. Murchison Belfast. 3-5-47.*

Survey Fee ... £  $6 : 0 :$  : } When applied for, *17th March 1947*  
 Travelling Expenses (if any) £  $1 : 4 :$  : } When received, 19

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

Committee's Minute **FRI. 27 JUN 1947**  
 Assigned *See F.E. meby. sph*

