

# REPORT ON BOILERS.

No. 79675

-9 OCT 1925

Received at London Office

Date of writing Report 1925 When handed in at Local Office 26/9/1925 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. Survey held at Walker on Tyne Date, First Survey Sept 11<sup>th</sup> 1924 Last Survey 22 Sept 1925

on the Motor Ship "British Petrol" (Number of Visits ---) Gross 639.2 Tons Net 411.3

Master: *James Hunter and* Built at Walker on Tyne By whom built *Wm Richardson & Co. Ld.* Yard No. 1196 When built 1925  
Engines made at Walker on Tyne By whom made *Neptune Yard* Engine No. 1196 When made 1925  
Boilers made at *do* By whom made *do* Boiler No. 1196 When made 1925  
Nominal Horse Power *do* Owners *British Tanker Co* Port belonging to *London*

**RETAIN**

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Leighton's Patent Tube & Tube Co - James Colville & Sons Ltd* (Letter for Record *5*)

Total Heating Surface of Boilers *1430 sq ft* Is forced draught fitted *Yes* Coal or Oil fired *Oil*

No. and Description of Boilers *One single ended multitubular* Working Pressure *150*

Tested by hydraulic pressure to *275* Date of test *4.3.25* No. of Certificate *9902* Can each boiler be worked separately *Yes*

Area of Firegrate in each Boiler *None* No. and Description of safety valves to each boiler *2 direct spring*

Area of each set of valves per boiler {per Rule *6.59* as fitted *7.07* Pressure to which they are adjusted *155* Are they fitted with easing gear *Yes*

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *No main boiler*

Smallest distance between boilers or uptakes and bunkers or woodwork *18"* Is oil fuel carried in the double bottom under boilers *Yes*

Smallest distance between shell of boiler and tank top plating *18"* Is the bottom of the boiler insulated *Yes*

Largest internal dia. of boilers *11-4 1/2"* Length *11-6"* Shell plates: Material *steel* Tensile strength *30-34*

Thickness *3/4"* Are the shell plates welded or flanged *No* Description of riveting: circ. seams {end *double exp* inter. *none*

long. seams *double butt straps* Diameter of rivet holes in {circ. seams *7/8"* long. seams *13/16"* Pitch of rivets {plate *none* rivets *"*

Percentage of strength of circ. end seams {plate *69.79* rivets *42.43* Percentage of strength of circ. intermediate seam {plate *85.86* rivets *86.41*

Percentage of strength of longitudinal joint {plate *85.86* rivets *86.41* combined *89.52* Working pressure of shell by Rules *150 lbs*

Thickness of butt straps {outer *9/16"* inner *7/16"* No. and Description of Furnaces in each Boiler *2 Leighton's*

Material *Steel* Tensile strength *26-30* Smallest outside diameter *3-1 1/8"*

Length of plain part {top *do* bottom *do* Thickness of plates {crown *13/32"* bottom *3/32"* Description of longitudinal joint *Welded*

Dimensions of stiffening rings on furnace or c.c. bottom *None* Working pressure of furnace by Rules *155*

End plates in steam space: Material *steel* Tensile strength *26-30* Thickness *7/8"* Pitch of stays *16 1/2" x 14"*

How are stays secured *Double nuts* Working pressure by Rules *152*

Tube plates: Material {front *steel* back *do* Tensile strength {front *26-30* back *26-30* Thickness {front *7/8"* back *7/8"*

Mean pitch of stay tubes in nests *9.375"* Pitch across wide water spaces *13 1/2" x 7 1/2"* Working pressure {front *159 lbs* back *156 "*

Girders to combustion chamber tops: Material *Steel* Tensile strength *28-32* Depth and thickness of girder

at centre *7 3/4" x 1 1/4"* Length as per Rule *29 3/32"* Distance apart *9 1/2"* No. and pitch of stays

in each *2-9"* Working pressure by Rules *152* Combustion chamber plates: Material *steel*

Tensile strength *26-30* Thickness: Sides *5/8"* Back *3/32"* Top *5/8"* Bottom *5/8"*

Pitch of stays to ditto: Sides *9 1/2" x 9 1/2"* Back *9" x 8"* Top *9 1/2" x 9"* Are stays fitted with nuts or riveted over *outside, nutted ends*

Working pressure by Rules *150 lbs* Front plate at bottom: Material *steel* Tensile strength *26-30*

Thickness *7/8"* Lower back plate: Material *steel* Tensile strength *26-30* Thickness *7/8"*

Pitch of stays at wide water space *13 1/2" x 9"* Are stays fitted with nuts or riveted over *None*

Working Pressure *210* Main stays: Material *steel* Tensile strength *28-32*

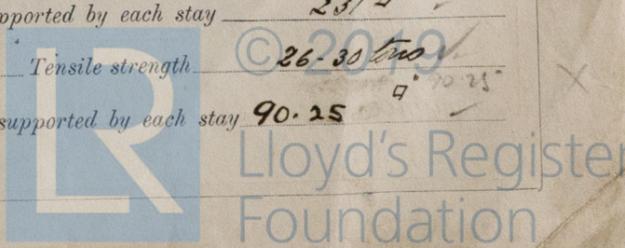
Diameter {At body of stay, *3 1/2"* or Over threads *3 1/2"* No. of threads per inch *6* Area supported by each stay *231 sq in*

Working pressure by Rules *150 lbs* Screw stays: Material *steel* Tensile strength *26-30*

Diameter {At turned off part, *1 7/8" x 1 1/2"* or Over threads *1 7/8" x 1 1/2"* No. of threads per inch *9* Area supported by each stay *90.25*

Is a Report also sent on the Hull of the Ship?

W351-0017



Working pressure by Rules <sup>20</sup> 167.8 ✓ Are the stays drilled at the outer ends <sup>20</sup> 20 ✓ Margin stays: Diameter <sup>At turned off part or Over threads</sup> 15/8 ✓  
 No. of threads per inch <sup>9</sup> 9 ✓ Area supported by each stay <sup>940"</sup> 940" ✓ Working pressure by Rules 154 <sup>lbs</sup> ✓  
 Tubes: Material <sup>Iron</sup> Iron ✓ External diameter <sup>Plain 2 1/2" Stay 2 1/2"</sup> { 2 1/2" ✓ Thickness <sup>10 W.G. 3/8" x 3/16"</sup> { 3/8" x 3/16" ✓ No. of threads per inch 9 ✓  
 Pitch of tubes <sup>3 1/4" x 3 1/4"</sup> 3 1/4" x 3 1/4" ✓ Working pressure by Rules 229 <sup>lbs</sup> ✓ Manhole compensation: Size of opening in shell plate <sup>20" x 16"</sup> 20" x 16" ✓ Section of compensating ring <sup>7 3/8" x 3/4" Flanged</sup> 7 3/8" x 3/4" Flanged ✓ No. of rivets and diameter of rivet holes 32 - 1 1/8" ✓  
 Outer row rivet pitch at ends 8" ✓ Depth of flange if <sup>ring</sup> manhole flanged 2 1/2" ✓ Steam Dome: Material <sup>None fitted</sup> None fitted ✓  
 Tensile strength - Thickness of shell - Description of longitudinal joint -  
 Diameter of rivet holes - Pitch of rivets - Percentage of strength of joint <sup>Plate Rivets</sup> -  
 Internal diameter - Working pressure by Rules - Thickness of crown - No. and diameter of stays -  
 How connected to shell - Inner radius of crown - Working pressure by Rules -  
 Size of doubling plate under dome - Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell -  
 Type of Superheater <sup>None fitted</sup> None fitted ✓ Manufacturers of <sup>Tubes Steel castings</sup> -  
 Number of elements - Material of tubes - Internal diameter and thickness of tubes -  
 Material of headers - Tensile strength - Thickness - Can the superheater be shut off and the boiler be worked separately - Is a safety valve fitted to every part of the superheater which can be shut off from the boiler -  
 Area of each safety valve - Are the safety valves fitted with casing gear - Working pressure as per Rules - Pressure to which the safety valves are adjusted - Hydraulic test pressure: tubes - castings - and after assembly in place - Are drain cocks or valves fitted to free the superheater from water where necessary -  
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with -

The foregoing is a correct description,  
 SWAN, HUNTER & WIGHAM RICHMOND, MANUFACTURERS.  
 G. F. Stuedy Manufacturer.

Dates of Survey <sup>During progress of work in shops - - -</sup> <sup>During erection on board vessel - - -</sup> <sup>see Mach report.</sup> Are the approved plans of boiler and superheater forwarded herewith <sup>Director</sup> <sup>Yes</sup> ✓  
 (If not state date of approval.)  
 Total No. of visits

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)  
 This Boiler built under Special Survey, the material and workmanship found good and efficient.  
 The Boiler was tested at the makers works under 275 lbs hydraulic pressure and found satisfactory.  
 The Boiler fitted up on board the Vessel in boiler house forward of Engine Room, leading air to Engine Room at top platform - Boiler on top of Oil Fuel Bunker.  
 The Boiler is fitted for burning oil fuel. (9.25) flash point above 150° F, under forced draught.  
 The safety valves adjusted under steam 155 lbs - FVR 3/8" A & R 3/8" Casing gear fitted.  
 In our opinion this Vessel is now eligible for notation of +LMC. 9.25.

Survey Fee ... .. £ 11 : 8 : 0 } When applied for, 7/10/1925  
 Travelling Expenses (if any) £ : : } When received, 12/10/1925  
 L. G. Skellern - Mamie Pitson  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUES. 13 OCT 1925**  
 Assigned *See other report*

