

## REPORT ON BOILERS.

No. 24042.

Received at London Office 23 MAR 1950

Date of writing Report 13<sup>th</sup> MARCH 1950. When handed in at Local Office 17<sup>th</sup> MARCH 1950. Port of GREENOCKSurvey held at GREENOCK Date, First Survey 25<sup>th</sup> JANUARY 1949 Last Survey 28<sup>th</sup> FEBRUARY 1950on the BRITISH PATRIOT (Number of Visits.....) Tons { Gross 5661.19  
Net 4975.19Built at PORT GLASGOW By whom built LITHGOWS L<sup>d</sup> Yard No. 1042 When built 1950Engines made at GREENOCK By whom made JOHN G. KINCAID & CO L<sup>d</sup> Engine No. 4205 When made 1950

Boilers made at do By whom made do Boiler No. 4205 When made 1950

Nominal Horse Power 625 Owners BRITISH TANKER CO L<sup>d</sup> Port belonging to LONDON

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel COLVILLE L<sup>d</sup> (Letter for Record S)

Total Heating Surface of Boilers 4138 (Two Bles) Of Superheaters

Total for Register Book 4138 Is forced draught fitted 4m Oil fired or Exh. Gas

Name and Description of Boilers Two SE cylindrical 2570 Working Pressure 150 lbs

Tested by hydraulic pressure to 275 lbs Date of test 27-12-49 No. of Certificate 2571 Can each boiler be worked separately 4m

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler One Double spring 14L

Area of each set of valves per boiler { per Rule 7.84  
as fitted 7.94 Pressure to which they are adjusted 153 lbs Are they fitted with easing gear 4m

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

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

Smallest distance between shell of boiler and tank top plating Boilers on Green Dk Is the bottom of the boiler insulated 4m

Largest internal dia. of boilers 13'-0" Length 11'-6" Shell plates: Material S Tensile strength 29/33 tons

Fusion welded, state name of welding Firm Have all the requirements of the Rules for Class I vessels

Complied with Thickness 29/32 Are the shell plates welded or flanged No Description of riveting: circ. seams { end DR  
interSeams TRAPS Diameter of rivet holes in { circ. seams 1"  
long. seams 1 1/2" Pitch of rivets { 3.158"  
6.375"Percentage of strength of circ. end seams { plate 65.3  
rivets 43.8 Percentage of strength of circ. intermediate seam { plate  
rivetsPercentage of strength of longitudinal joint { plate 85.29  
rivets 85.7 153.6 lbs combined 85.3Thickness of butt straps { outer 11/16  
inner 13/16 No. and Description of Furnaces in each Boiler Three Dighton corrugated

Material S Tensile strength 26/30 tons Smallest outside diameter 3'-7 1/2"

Length of plain part { top  
bottom Thickness of plates 15/32 Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom None

Shell plates in steam space: Material S Tensile strength 26/30 tons Thickness 1 1/32 Pitch of stays 18 1/2 x 14 1/2"

Are stays secured DN

End plates: Material { front S  
back Tensile strength { 26/30 tons Thickness { 7/8"  
1 1/4"

Pitch of stay tubes in nests 9.375" Pitch across wide water spaces 13.5"

Access to combustion chamber tops: Material S Tensile strength 29/33 tons Depth and thickness of girder

Centre 8 3/4 x 1 1/2" Length as per Rule 2'-10 2/32 Distance apart 9 1/2" No. and pitch of stays

Each 3 @ 8 1/4" Combustion chamber plates: Material S

Tensile strength 26/30 tons Thickness: Sides 2 1/32 Back 2 1/32 Top 2 1/32 Bottom 2 1/32

Height of stays to ditto: Sides 8 x 8 1/4" Back 8 x 8 1/4" Top 9 1/2 x 8 1/4" Are stays fitted with nuts or riveted over Sides &amp; back 1. nuts outside, riveted inside

Bottom plate at bottom: Material S Tensile strength 26/30 tons

Thickness 7/8" Lower back plate: Material S Tensile strength 26/30 tons Thickness 3 3/32

Height of stays at wide water space 14 1/2 x 8 1/4" Are stays fitted with nuts or riveted over Nuts both ends

Main stays: Material S Tensile strength 25/32 tons

Meter { At body of stay 2 3/8"  
Over threads No. of threads per inch 6

New stays: Material S Tensile strength 26/30 tons

Meter { At turned off part 1 3/8 x 1 1/2"  
Over threads No. of threads per inch 9

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Are the stays drilled at the outer ends..... *No* Margin stays: Diameter { At turned off part..... *1 5/8"* or Over threads..... *1 5/8"*

No. of threads per inch..... *9*

Tubes: Material..... *S* External diameter { Plain..... *2 1/2"* Stay..... *2 1/2"* Thickness { *10 wgs*..... *1/4" : 3/16"* No. of threads per inch..... *9*

Pitch of tubes..... *3 3/4" x 3 3/4"* Manhole compensation: Size of open shell plate..... *16 1/2" x 20 1/2"* Section of compensating ring..... *2' 9 1/2" x 2' 5 1/2" x 1 1/16"* No. of rivets and diameter of rivet holes..... *44 - 1 1/2"*

Outer row rivet pitch at ends..... *7 1/2"* Depth of flange if manhole flanged..... *McNeil type door 3 3/8"* Steam Dome: Material.....

Tensile strength..... Thickness of shell..... Description of longitudinal joint.....

Diameter of rivet holes..... Pitch of rivets..... Percentage of strength of joint { Plate..... Rivets.....

Internal diameter..... Thickness of crown..... No. and diameter of stays..... Inner radius of crown.....

How connected to shell..... Size of doubling plate under dome..... Diameter of rivet holes and of rivets in outer row in dome connection to shell.....

Type of Superheater..... *None* Manufacturers of { Tubes..... Steel forgings..... Steel castings.....

Number of elements..... Material of tubes..... Internal diameter and thickness of tubes.....

Material of headers..... Tensile strength..... Thickness..... Can the superheater be shut 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 easing gear.....

Pressure to which the safety valves are adjusted..... Hydraulic test pressure.....

tubes..... forgings and castings..... and after assembly in place..... Are drain valves fitted to free the superheater from water where necessary.....

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with.....

The foregoing is a correct description,  
For JOHN G. KINCAID & CO., LTD.  
*John G. Kincaid*  
Chief Draughtsman.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building { During erection on board vessel - - } Total No. of visits.....

*SEE MACHINERY REPORT*

Is this Boiler a duplicate of a previous case..... *Yes* If so, state Vessel's name and Report No..... *"BRITISH COUNSELLOR" GPR FEN 23*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)..... *These boilers have been constructed in accordance with the Rules & approved plans. The materials & workmanship are sound & good. The safety valves have been adjusted under steam for a working pressure of 150 lbs/sq. in.*

*For recommendations please see machinery report.*

Survey Fee ... .. £ : When applied for..... 19.....

Travelling Expenses (if any) £ : When received..... 19.....

*See machinery report*

*Charles J. Hunkin*  
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute..... *GLASGOW 22 MAR 1920*

Assigned..... *SEE ACCOMPANYING MACHINERY REPORT*



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