



# REPORT ON BOILERS.

No. 18585.

Received at London Office

14 SEP 1948

Date of writing Report 7th Sept. 48. When handed in at Local Office 10th Sept. 48. Port of MIDDLESBROUGH.

No. in Survey held at Stockton-on-Tees. Date, First Survey 20th Jan. Last Survey 7th Sept. 19 48.

## "BRITISH LIBERTY"

(Number of Visits 5.) (Gross 8589 Tons) (Net 4952)

Yard No. 465 When built 1949

Engines made at Sunderland. By whom made Wm. Doxford & Sons. Engine No. 765 When made 1949.

Boilers made at Stockton-on-Tees. By whom made Stockton C.E. & R.B. Ltd., Boiler No. 7052 When made 1946.

Owners British Tanker Co Ltd. Port belonging to London.

### MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Frodingham Steel Co, Ltd., (Letter for Record 3) Is forced draught fitted Yes Coal or Oil fired Oil & Ex. Gas.

Working Pressure 150 lbs. per sq. in.

Tested by hydraulic pressure to 275 lbs Date of test 7.9.48 No. of Certificate 7251 Can each boiler be worked separately Yes.

Pressure to which they are adjusted 150 Are they fitted with easing gear Yes.

Shell plates: Material steel Tensile strength 29.33

Pitch of rivets 7.1/16"

Percentage of strength of circ. end seams plate 66.6% rivets 48.7

Percentage of strength of longitudinal joint plate 84.9 rivets 103

No. and Description of Furnaces in each Boiler 2 Deighton corrugated.

Thickness of plates crown 1/2" Description of longitudinal joint welded.

Plates in steam space: Material steel Tensile strength 26.30 Thickness 1" Pitch of stays 18" x 17"

Plates: Material steel Tensile strength 26.30 Thickness 7/8"

Combustion chamber plates: Material steel Tensile strength 28.32

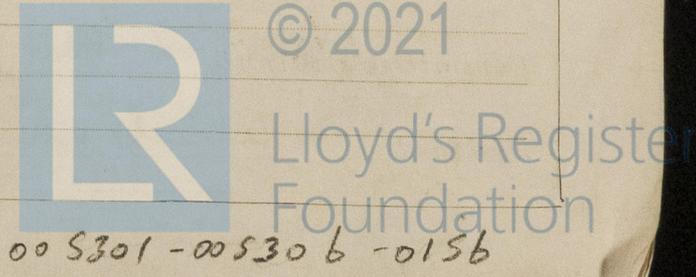
Thickness: Sides 21/32" Back 19/32" Top 21/32" Bottom 21/32"

Lower back plate: Material steel Tensile strength 26.30 Thickness 3/8"

Stays: Material steel Tensile strength 28.32

No. of threads per inch 6

No. of threads per inch 9



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Are the stays drilled at the outer ends No. Margin stays: Diameter  $\left\{ \begin{array}{l} \text{At turned off part} \\ \text{or} \\ \text{Over threads} \end{array} \right. 1\frac{1}{2}"$

No. of threads per inch 9

Tubes: Material Seamless Steel External diameter  $\left\{ \begin{array}{l} \text{Plain } 2\frac{1}{2}" \\ \text{Stay } 2\frac{1}{8}" \end{array} \right. \checkmark$  Thickness  $\left\{ \begin{array}{l} 10\text{S.W.G.} \\ 5/16" \end{array} \right. \checkmark$  No. of threads per inch 9

Pitch of tubes 3 $\frac{3}{4}$ " x 3 $\frac{3}{4}$ " Manhole compensation: Size of opening None

shell plate 21" x 17" Section of compensating ring 8 $\frac{3}{4}$ " x 1 $\frac{1}{8}$ " No. of rivets and diameter of rivet holes 52 - 1.1/16"

Outer row rivet pitch at ends 7.1/16" Depth of flange if manhole flanged None Steam Dome: Material None

Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_

Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint  $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right. \checkmark$

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 \_\_\_\_\_ Manufacturers of  $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel forgings} \\ \text{Steel castings} \end{array} \right. \checkmark$

Number of elements \_\_\_\_\_ Material of tubes \_\_\_\_\_ Internal diameter and thickness of tubes \_\_\_\_\_

Material of headers \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_ Can the superheater be shut off from the boiler \_\_\_\_\_

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 cocks 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, \_\_\_\_\_  
 Manufactured by \_\_\_\_\_

1948.  
 Dates of Survey  $\left\{ \begin{array}{l} \text{During progress of work in shops - -} \\ \text{while building} \end{array} \right. \left\{ \begin{array}{l} \text{Jan. 20} \\ \text{June 28} \\ \text{July 23} \\ \text{Aug. 31} \\ \text{Sept. 7} \end{array} \right. \checkmark$  Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 9.2.48

Total No. of visits 5

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 in accordance with the Rule Requirements and approved plan.

Special Survey and in accordance with the Rule Requirements and approved plan.

The materials and workmanship are good, and on completion the boiler was hydraulically tested to 275 lbs per sq. inch and found satisfactory.

This boiler is being forwarded to Sunderland for Wm. Doxford's Con. No. 765

*This boiler has been securely fixed on board the vessel & safety valves adjusted under steam to working pressure. In recommendation please see Machinery Rpt. J. H. Green.*

Survey Fee ... .. £ 33 : 12 : 0 When applied for, 13.9.19 48.

Travelling Expenses (if any) £ : : When received, \_\_\_\_\_

*L. Roman Stuart*  
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 3 JUN 1948

Assigned In unfile see J.S. Rpt

