

# REPORT ON BOILERS.

Sl. No. 34597  
Hull No. 18080.

JUL 1946

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Date of writing Report 24<sup>th</sup> June 1946 When handed in at Local Office 27<sup>th</sup> June 1946 Port of Middlesbrough L.

No. in Surrey held at Stockton n. Seas. Date, First Survey 14<sup>th</sup> Nov. 1945. Last Survey 21<sup>st</sup> June 1946

on the **BRITISH HOLLY** (Number of Visits 21) (Gross 8582 Tons) (Net 4919 Tons)

Built at Sunderland By whom built J. & Lang & Sons L<sup>d</sup> Yard No. 440 When built 1946

Engines made at Sunderland. By whom made Wm. Doxford & Sons Engine No. 256. Contract 256. When made

Boilers made at Stockton n. Seas. By whom made Stockton CE & Riley Boilers L<sup>d</sup> Boiler No. 6935 When made 1946

Nominal Horse Power Owners British Tanker Corp<sup>d</sup> Port belonging to London

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

Manufacturers of Steel Appley & Roddigham Steel Co. L<sup>d</sup> (Letter for Record 5.)

Total Heating Surface of Boilers 2020 sq. Is forced draught fitted No. Coal or Oil fired Oil & 2/46 fuel.

No. and Description of Boilers 1. SE. Multitubular Working Pressure 150 lb/sq. in.

Tested by hydraulic pressure to 275 lb. Date of test 2/6/46 No. of Certificate 7179. Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 3" double high lift. Area of each set of valves per boiler {per Rule 10.2 for H.L. (2/3) as fitted 14.14 Pressure to which they are adjusted 150 lb/sq. in. Are they fitted with easing gear Yes.

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 No.

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated No.

Largest internal dia. of boilers 12'-10 3/16" Length 11'-6" Shell plates: Material steel Tensile strength 29-33.

Thickness 19/32" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end DR. 440. inter. 3-187. long. seams TR - DBS. Diameter of rivet holes in {circ. seams 1 1/16" Pitch of rivets {7/16" long. seams 1 1/16"

Percentage of strength of circ. end seams {plate 66.6% rivets 48.7 Percentage of strength of circ. intermediate seam {plate 84.9 rivets 103.

Percentage of strength of longitudinal joint {plate 84.9 rivets 103. combined

Thickness of butt straps {outer 23/32" inner 27/32" No. and Description of Furnaces in each Boiler 2. Dighton Crucible

Material steel Tensile strength 26-30 Smallest outside diameter 3'-10"

Length of plain part {top bottom Thickness of plates {crown 1/2" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom

End plates in steam space: Material steel Tensile strength 26-30 Thickness 1" Pitch of stays 18" x 17"

How are stays secured Double nuts & washers screwed into both plates

Tube plates: Material {front back steel Tensile strength {26-30 Thickness {7/8" 3/4"

Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2"

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

at centre 7'-2 5/8" Length as per Rule 2'-3 1/2" Distance apart 9" No. and pitch of stays

in each 2 29' Combustion chamber plates: Material steel Tensile strength 26-30 Thickness: Sides 2 1/32" Back 19/32" Top 2 1/32" Bottom 2 1/32"

Pitch of stays to ditto: Sides 10" x 9" Back 9 1/2" x 8 1/4" Top 9" x 9" Are stays fitted with nuts or riveted over nuts

Front plate at bottom: Material steel Tensile strength 26-30

Thickness 7/8" Lower back plate: Material steel Tensile strength 26-30 Thickness 3/4"

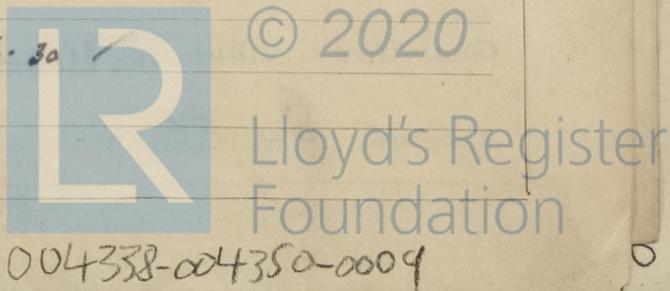
Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over nuts.

Main stays: Material steel Tensile strength 28-32

Diameter {At body of stay, or Over threads 2 3/4" No. of threads per inch 6

Screw stays: Material steel Tensile strength 26-30

Diameter {At turned off part, or Over threads 1 1/2" No. of threads per inch 9.



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Are the stays drilled at the outer ends No. Margin stays: Diameter  $\left\{ \begin{array}{l} \text{At turned off part.} \\ \text{or} \\ \text{Over threads} \end{array} \right. \frac{13}{16}$

No. of threads per inch 9.

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

Pitch of tubes  $3 \frac{3}{4} \times 3 \frac{3}{4}$  Manhole compensation: Size of opening in shell plate  $21 \times 17$  Section of compensating ring  $8 \frac{1}{4} \times 1 \frac{1}{8}$  No. of rivets and diameter of rivet holes 52 -  $1 \frac{1}{8}$

Outer row rivet pitch at ends  $7 \frac{1}{8}$  Depth of flange if manhole flanged ✓ 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  $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$

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 pitch of rivets in outer row in dome connection to shell \_\_\_\_\_

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

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 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 or 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,  
H. G. W. W. W. Manufacturer.

Dates of Survey  $\left\{ \begin{array}{l} \text{During progress of work in shops} \\ \text{while building} \end{array} \right. \left\{ \begin{array}{l} \text{1945 Nov. 14, 23, 29, Dec. 14, 20, 28, 1946 Jan. 11, 16, Feb. 7, 14, 28, Mar. 7, 29, Apr. 4, 26, May 10, 20, 30, June 4, 13, 21.} \end{array} \right.$

Are the approved plans of boiler and superheater forwarded herewith 9/2/45. (If not state date of approval.)

Total No. of visits 21.

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. M'doro Rpt N° 18052

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler has been constructed under Special Survey & in accordance with the Rule 17/5/42 Requirements & approved plan.

The materials & workmanship are good & on completion the boiler was hydraulically tested to 275 lb/sq. & found satisfactory.

This boiler is being dispatched to Sunderland for Wm. Duffell's Co. No. 738

This boiler has been securely fitted on board the vessel & safety valves adjusted to working pressure as above

In recommendation please see heading Rpt.

H. G. W. W. W.

Survey Fee ... £ 20 : 5 : 0 When applied for, 28/6/46

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

L. G. W. W. W.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 10 JAN 1947

Assigned See F.E. W. W. W. opt.

