

# REPORT ON BOILERS.

No. 118395.

Received at London Office 23 SEP 1942

Date of writing Report 15-8 1942 When handed in at Local Office

Port of Liverpool

No. in Reg. Book. Survey held at Birkenhead

Date, First Survey 14-1-41 Last Survey 30-8-1942

on the 2 Quay Boilers for M.V. British Tradition.

(Number of Visits 86) Tons { Gross 8443 Net

Master \_\_\_\_\_ Built at \_\_\_\_\_ By whom built \_\_\_\_\_ Yard No. \_\_\_\_\_ When built \_\_\_\_\_

Engines made at Belfant By whom made Harland & Wolff Ltd Engine No. \_\_\_\_\_ When made 1942

Boilers made at Birkenhead By whom made Hammell and Wals Boiler No. 1067 When made 1942

Nominal Horse Power 246 Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvett Ltd. (Letter for Record (S) ✓)

Total Heating Surface of Boilers 3700 sq ft total for two. Is forced draught fitted ✓ Coal or Oil fired Oil ✓

No. and Description of Boilers 2 Single Ended. Working Pressure 150 lb ✓

Tested by hydraulic pressure to 275 lb Date of test 22/7/41. No. of Certificate 2543. Can each boiler be worked separately yes ✓

Area of Firegrate in each Boiler \_\_\_\_\_ No. and Description of safety valves to each boiler 2 Spring loaded. I.H.L. 2 1/4" ✓

Area of each set of valves per boiler { per Rule 14.03 for ordinary valves as fitted 7.95 Pressure to which they are adjusted 150 lb 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 well clear. Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating on upper flat. Is the bottom of the boiler insulated yes ✓

Largest internal dia. of boilers 12'-6" Length 11'-6" Shell plates: Material Steel Tensile strength 29/33 Ton ✓

Thickness 27/32" Are the shell plates welded or flanged no. ✓ Description of riveting: circ. seams { end D.R inter. Pitch of rivets { 2.63" 6.5" ✓

long. seams T.R.-D.B.S. Diameter of rivet holes in { circ. seams 15/16 long. seams 64 ✓

Percentage of strength of circ. end seams { plate 64 rivets 49 Percentage of strength of circ. intermediate seam { plate 85.57 rivets 93.0 ✓

Percentage of strength of longitudinal joint { plate 93.0 rivets 89.0 Working pressure of shell by Rules 157 lb ✓

Thickness of butt straps { outer 11/16 inner 13/16 No. and Description of Furnaces in each Boiler 2 Morrison Section ✓

Material Steel Tensile strength 26-30 Ton. Smallest outside diameter 3'-8 1/2" ✓

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

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 162 lb ✓

End plates in steam space: Material Steel Tensile strength 26-30 Ton Thickness 3/32" Pitch of stays 17 1/2" x 15" ✓

How are stays secured D.N. Working pressure by Rules 162 lbs ✓

Tube plates: Material { front Steel back Steel Tensile strength 26-30 Ton Thickness { 27/32" 25/32" ✓

Mean pitch of stay tubes in nests 10 1/4" Pitch across wide water spaces 13 3/4" Working pressure { front 195 lbs back 208 lbs ✓

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 Ton Depth and thickness of girder at centre 9" x 23/32" dble Length as per Rule 34 1/2" Distance apart 9" No. and pitch of stays in each 3 @ 8" Working pressure by Rules 168 lbs ✓

Tensile strength 26-30 Ton Thickness: Sides 11/16 Back 23/32 Top 11/16 Bottom 7/8 ✓

Pitch of stays to ditto: Sides 9" x 8" Back 9 1/8" x 8 5/8" Top 9" x 8" Are stays fitted with nuts or riveted over nuts at back other riveted ✓

Working pressure by Rules 152 lb Front plate at bottom: Material Steel Tensile strength 26-30 Ton Thickness 27/32" Lower back plate: Material Steel Tensile strength 26-30 Ton Thickness 13/16" ✓

Pitch of stays at wide water space 14 3/4" Are stays fitted with nuts or riveted over nuts ✓

Working Pressure 178 lbs Main stays: Material Steel Tensile strength 28-32 Ton Diameter { At body of stay, or Over threads 2 1/2" No. of threads per inch 6. Area supported by each stay 17 1/2" x 15" ✓

Working pressure by Rules 168 lbs Screw stays: Material Steel Tensile strength 26-30 Ton Diameter { At turned off part, or Over threads 1 1/2" - 1 3/4" - 1 7/8" No. of threads per inch 9. Area supported by each stay 9 1/2" x 8 5/8" max ✓



Working pressure by Rules 159 lb Are the stays drilled at the outer ends no. Margin stays: Diameter 3/4" Cornu 1 1/8  
 No. of threads per inch 9 Area supported by each stay 106.64 Working pressure by Rules 170 lb  
 Tubes: Material Iron External diameter 2 3/4" Thickness 5/16 + 3/8" No. of threads per inch 9  
 Pitch of tubes 4" x 3 7/8" Working pressure by Rules 177 lb Manhole compensation: Size of opening in  
 shell plate 2 1/4" x 17/4" Section of compensating ring 2' 10" x 2' 4 1/2" No. of rivets and diameter of rivet holes 54 @ 1 5/16"  
 Outer row rivet pitch at ends 6 1/2" Depth of flange if manhole flanged 3 1/2" 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 \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Thickness of crown \_\_\_\_\_ No. and diameter of  
 stays \_\_\_\_\_ Inner radius of crown \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_  
 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 { 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 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 \_\_\_\_\_ Working pressure as per  
 Rules \_\_\_\_\_ Pressure to which the safety valves are adjusted \_\_\_\_\_ Hydraulic test pressure  
 tubes \_\_\_\_\_ forgings and castings \_\_\_\_\_ and after assembly in place \_\_\_\_\_ Are drain cocks of  
 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,  
W. H. McCrenewell Manufacturer

Dates of Survey { During progress of work in shops - - } 14/1/41 - 30/8/42 Are the approved plans of boiler and superheater forwarded herewith no.  
 while building { During erection on board vessel - - } \_\_\_\_\_ (If not state date of approval.) 23-7-40.  
 Total No. of visits 86

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. \_\_\_\_\_

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under special survey, to approved plan in accordance with the Society's Rules. Materials and workmanship are good. They have been fitted in the old British tradition, & the safety valves adjusted under steam to 150 lb.

Survey Fee £ 24 : 12 : 0 When applied for, 18 SEP 1942  
 Travelling Expenses (if any) £ : : When received, 19

A. Sutherland  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 22 SEP 1942

Assigned See Minute on attached F. E. Report on Machinery.

