

Rpt. 5a.

REPORT ON BOILERS.

No. 130218

1 FEB 1950

Received at London Office.

Date of writing Report 19..... When handed in at Local Office 19..... Port of Liverpool

No. in Reg. Book. Survey held at Birkenhead Date, First Survey 1/9/48 Last Survey 22/12/1949

on the BRITISH TRIUMPH (Number of Visits.....) Gross 8450 Tons Net 4934

Master ✓ Built at Birkenhead By whom built Cammell, Laird & Co. Ltd. Ward No. 1199 When built 1949

Engines made at Glasgow By whom made Harland & Wolff Engine No. When made 1949

Boilers made at Birkenhead By whom made Cammell, Laird & Co. Ltd. Boiler No. 1199 When made 1949

MN Nominal Horse Power 337.5 Owners British Tanker Co. Ltd. Port belonging to London

MULTITUBULAR BOILERS ~~MAIN~~, ~~AUXILIARY~~, OR DONKEY.

Manufacturers of Steel Appley - Frodin plan (Letter for Record S)

Total Heating Surface of Boilers 4050 $\text{sq ft} = 2 \text{ boilers}$ Is forced draught fitted yes Coal or Oil fired oil

No. and Description of Boilers Two Single Ended Cylindrical Return Tube Working Pressure 150 lb/sq in

Tested by hydraulic pressure to 275 lb Date of test 3-6-49 No. of Certificate 2748 Can each boiler be worked separately yes

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler one 2 1/2" Double Improved High Lift

Area of each set of valves per boiler per Rule 7.66 sq in 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 none seen 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 yes

Largest internal dia. of boilers 13'-0" Length 11'-6" Shell plates: Material Steel Tensile strength 29/33 T/sq in

Thickness 7/8" Are the shell plates welded or flanged no Description of riveting: circ. seams DR lap end DR lap inter DR lap

long. seams T.R. Double Butt Strap Diameter of rivet holes in 15/16" Pitch of rivets 2-567" 6 1/2"

Percentage of strength of circ. end seams plate 63 rivets 48 Percentage of strength of circ. intermediate seam plate 85.57 rivets 90

Percentage of strength of longitudinal joint combined 89 Working pressure of shell by Rules 156 lb/sq in

Thickness of butt straps outer 1 1/16" inner 13/16" No. and Description of Furnaces in each Boiler Two Dugton

Material Steel Tensile strength 26/30 T/sq in Smallest outside diameter 47"

Length of plain part top 17/32" Thickness of plates bottom 17/32" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 163 lb/sq in

End plates in steam space: Material Steel Tensile strength 26/30 T/sq in Thickness 1" Pitch of stays 18 1/4" x 15 3/4"

How are stays secured Double nuts, small washers Working pressure by Rules 158 lb/sq in

Tube plates: Material front Steel back Steel Tensile strength 26/30 T/sq in Thickness 25/32"

Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2" Working pressure front 190 lb/sq in back 248 lb/sq in

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 T/sq in Depth and thickness of girder 12 x 18"

at centre 12 x 18" Length as per Rule 34.53" Distance apart 9 5/8" No. and pitch of stays 3 @ 8" WELDED

Tensile strength 26/30 T/sq in Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 7/8"

Pitch of stays to ditto: Sides 9 x 8" Back 8 1/2 x 7 1/8" Top Welded girders Are stays fitted with nuts or riveted over riveted

Working pressure by Rules 152 lb/sq in Front plate at bottom: Material Steel Tensile strength 26/30 T/sq in

Thickness 13/16" Lower back plate: Material Steel Tensile strength 26/30 T/sq in Thickness 13/16"

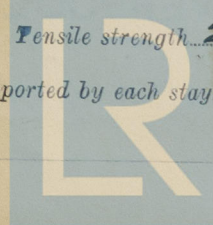
Pitch of stays at wide water space 14 1/2" x 8 1/2" Are stays fitted with nuts or riveted over margin rivets

Working pressure 190 lb/sq in Main stays: Material Steel Tensile strength 28/32 T/sq in

Diameter At body of stay 2 1/2" Over threads 2 1/2" No. of threads per inch 6 Area supported by each stay 287 sq in

Working pressure by Rules 154 lb/sq in Screw stays: Material Steel Tensile strength 26/30 T/sq in

Diameter At turned off part 1 1/2" Over threads 1 1/2" No. of threads per inch 9 Area supported by each stay 72 sq in



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Working pressure by Rules 174 lb Are the stays drilled at the outer ends ✓ Margin stays: Diameter 1 5/8" At turned off part ✓
 No. of threads per inch 9 Area supported by each stay 94.3 sq" Working pressure by Rules 161 lb/sq" Over threads ✓
 Tubes: Material Steel External diameter 2 1/2" Thickness 5/16" No. of threads per inch 9 Stay 2 1/2"
 Pitch of tubes 3 3/4" x 3 1/16" Working pressure by Rules 175 lb/sq" Manhole compensation: Size of opening in shell plate 21" x 17" Section of compensating ring 20" x 1" No. of rivets and diameter of rivet holes 54 15/16"
 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 ✓
 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 ✓
 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 ✓ 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 yes

DAMMELL LAIRD AND COMPANY LIMITED
 The foregoing is a correct description,

E. Stewart

Manufacturer.

ENGINEERING MANAGER

Dates of Survey while building During progress of work in shops - - See Mch report.
During erection on board vessel - -

Are the approved plans of boiler and superheater forwarded herewith 9-7-48
 (If not state date of approval.)

Total No. of visits ✓

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.) These boilers have been built under Special Survey in accordance with L. Approved Plans, the Society's Rules & the Secretary's letters. The materials and workmanship are good. They have been properly installed in the vessel and tried under working conditions with satisfactory results.

Survey Fee see Rpt 4b. £ : : When applied for 19
 Travelling Expenses (if any) ✓ £ : : When received 19

G. R. Stewart
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 31 JAN 1950

Assigned See Minute in L. Mch. Rpt.