

REPORT ON BOILERS.

Slid. No. 32584

Slid. No. 16499

MAR -4 1939

Received at London Office

Date of writing Report 13th December 38 When handed in at Local Office 30th December 1938 Port of Middlesbrough

No. in Reg. Book. Survey held at Stockton Date, First Survey October 3rd Last Survey December 21 1938

on the M/V "BRITISH LIBERTY" (Number of Visits 17) Gross Tons Net

Master Built at Harston Hill By whom built Furness S.B. Co. L^{td} Yard No. 284 When built 1939

Engines made at Sunderland By whom made W. Donford Sons L^{td} Engine No. 209 When made 1939

Boilers made at Stockton By whom made Stockton C.P. & Nibley Boilers L^{td} Boiler No. 6296 When made 1938

Nominal Horse Power 684 Owners British Lander Co. L^{td} Port belonging to London

Composite

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland L^{td} (Letter for Record)

Total Heating Surface of Boilers 1355 Is forced draught fitted Yes Coal or Oil fired oil

No. and Description of Boilers 1. D.B. S.B. Working Pressure 150

Tested by hydraulic pressure to 275 Date of test 21.12.38 No. of Certificate 6962 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 16.3 No. and Description of safety valves to each boiler 2 Lever Spring

Area of each set of valves per boiler 19.2 Pressure to which they are adjusted 150 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 Yes

Smallest distance between shell of boiler and tank top plating (Rhs in upper room) Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 13'-4" Length 11'-6" Shell plates: Material S Tensile strength 30-34

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

long. seams TR. D.B.S. Diameter of rivet holes in circ. seams 1 5/16" Pitch of rivets 3 1/4"

Percentage of strength of circ. end seams plate 69.2 rivets 42.4 Percentage of strength of circ. intermediate seam plate 85.8 rivets 85.5

Percentage of strength of longitudinal joint plate 85.8 rivets 85.5 Working pressure of shell by Rules 151.8

Thickness of butt straps outer 2 1/32" inner 25/32" No. and Description of Furnaces in each Boiler 2 Cf. (Centre C.C. exhaust heated)

Material S Tensile strength 26-30 Smallest outside diameter 38 1/4"

Length of plain part top 13 1/32" bottom 13 1/32" Thickness of plates crown 13 1/32" bottom 13 1/32" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 150.6

End plates in steam space: Material S Tensile strength 26-30 Thickness 1 1/32" Pitch of stays 18" x 18"

How are stays secured D.N. & washers 6" x 1/4" Working pressure by Rules 152

Tube plates: Material front S back S Tensile strength 26-30 Thickness 7/8"

Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/4" Working pressure front 163 back 156

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

at centre 7 7/8" x 1 1/4" Length as per Rule 2'-3 1/16" Distance apart 8 3/4" No. and pitch of stays

in each 2 @ 7 1/2" Working pressure by Rules 176 Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 7/8" Back 3/8" Top 7/8" Bottom 5/8"

Pitch of stays to ditto: Sides 9" x 9 3/8" Back 7 1/8" x 9 3/8" Top 8 3/4" x 7 1/2" Are stays fitted with nuts or riveted over in nests

Working pressure by Rules 160 Front plate at bottom: Material S Tensile strength 26-30

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

Pitch of stays at wide water space F 13 1/4" B. 13 7/8" x 9" Are stays fitted with nuts or riveted over nuts

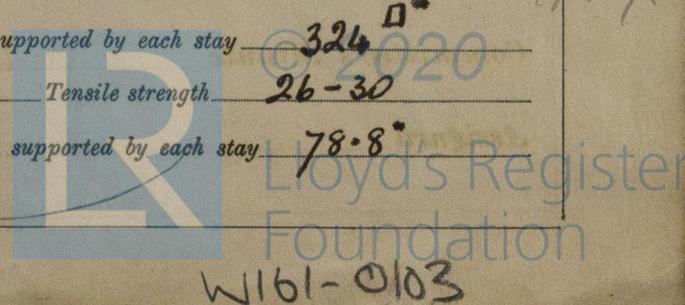
Working Pressure 160 Main stays: Material S Tensile strength 28-32

Diameter At body of stay 2 7/8" No. of threads per inch 6 Area supported by each stay 324

Working pressure by Rules 153 Screw stays: Material S Tensile strength 26-30

Diameter At turned off part 1 1/2" No. of threads per inch 9 Area supported by each stay 78.8

If not, state whether, and when, it is a Report on the Boilers of the Ship



W161-0103

REPORT ON BOILERS

Working pressure by Rules 160 Are the stays drilled at the outer ends no Margin stays: Diameter 1 7/8" At turned off part, or Over threads

No. of threads per inch 9 Area supported by each stay 110 0" Working pressure by Rules 151

Tubes: Material lap welded iron External diameter W 2 1/2" C 2" Thickness W 5/16" C 3/8" No. of threads per inch

Pitch of tubes W 5 3/4" x 3 3/4" C 3" x 3" Working pressure by Rules 175 Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 9 1/2" No. of rivets and diameter of rivet holes 32 @ 1 1/4"

Outer row rivet pitch at ends 8 3/4" Depth of flange if manhole flanged 2 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 _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter of stays _____

How connected to shell _____ Inner radius of crown _____ Working pressure by Rules _____

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 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 _____, 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

For and on behalf of
The foregoing is a correct description,
[Signature] Manufacturer.

Dates of Survey During progress of work in shops - - - Oct. 2, 19, 25 Nov. 2, 10, 21, 24, 25, 28, 30 Dec. 14, 21 Are the approved plans of boiler and superheater forwarded herewith 17/6/37 (If not state date of approval.)

During erection on board vessel - - - _____ Total No. of visits _____

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Boiler 6396 Childs Rpt. No 16467

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been made under special survey in accordance with the approved plan & requirements of the Rules.

The materials & workmanship are good & a satisfactory hydraulic test has been carried out.

The boiler is to be forwarded to Sunderland for fitting on board.

This boiler has been securely fitted on board the vessel examined under steam & safety valves adjusted in accordance with rule requirements.

In recommendation please see memo, Rpt. [Signature]

Survey Fee £ 14 : 8 : 0 When applied for, 21/12/36 1936

Travelling Expenses (if any) £ : : When received, 23/2/37 1937

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 7 MAR 1937

Assigned See P.E. memo, rpt.

