

REPORT ON BOILERS.

Std. No. 34542
Mar. No. 18074

30 SEP 1946

Date of writing Report 13th June 1946 When handed in at Local Office 17th June 1946 Port of Middlesbrough.

No. in Survey held at Stockton-on-Tees.

Date, First Survey 14th November, 1945 Last Survey 4th June 1946

on the BRITISH MARSHAL

(Number of Visits 18) Gross 8582 Tons Net 4918

Built at Sunderland By whom built Wm. Leyland & Sons Ltd.

Yard No. 434 When built 1946

Engines made at By whom made

Engine No. 434 When made 1946

Boilers made at Stockton-on-Tees

By whom made Stockton C.E. & Riley, Barrow-in-Waranda

Boiler No. 6931 When made 1946

Nominal Horse Power

Owners British Tanker Co. Ltd.

Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Farnham Steel Co. Ltd.

Total Heating Surface of Boilers 2020 sq. ft.

Is forced draught fitted Yes.

(Letter for Record S. Coal or Oil fired oil & gas.

No. and Description of Boilers 1 S.E. Multitubular Marine

Working Pressure 150 lb./sq. in.

Tested by hydraulic pressure to 275 lb. Date of test 4/6/46 No. of Certificate 7175

Can each boiler be worked separately Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two 3" imp. high lift

Area of each set of valves per boiler (per Rule as fitted)

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 No

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 12' 10 3/16" Length 11' 6"

Shell plates: Material Steel Tensile strength 29-33

Thickness 29/32" Are the shell plates welded or flanged No.

Description of riveting: circ. seams end D.R. Lap.

long. seams TR. D.B.S.

Diameter of rivet holes in (circ. seams 1 1/16" long. seams 1 1/16"

Pitch of rivets 3.187" 7/16"

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

Percentage of strength of circ. intermediate seam (plate rivets

Percentage of strength of longitudinal joint (plate 98.9 rivets 103 combined

Thickness of butt straps (outer 23/32" inner 27/32"

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

Material Steel

Tensile strength 26-30

Smallest outside diameter 3'-10"

Length of plain part (top bottom

Thickness of plates (crown 1/2" bottom 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 secured 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 1/8" Length as per Rule 2' 3 1/2"

Distance apart 9'

No. and pitch of stays

in each 2 @ 9"

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

Thickness 7/8"

Lower back plate: Material Steel

Tensile strength 26-30

Pitch of stays at wide water space 13 1/2"

Tensile strength 26-30

Thickness 3/4"

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"

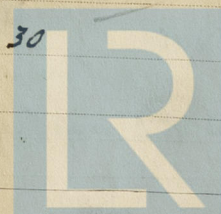
No. of threads per inch 6

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 ho. Margin stays: Diameter { At turned off part, 1 3/4" or Over threads 1 3/4" }
No. of threads per inch 9.
Tubes: Material Seamless Steel External diameter { Plain 1 1/2" Stay 2 1/2" } Thickness { 10 SW.G. 5/16" } No. of threads per inch 9.
Pitch of tubes 3 3/4" x 3 3/4" Manhole compensation: Size of opening in shell plate 21" x 17" Section of compensating ring 8 3/4" x 1 1/8" No. of rivets and diameter of rivet holes 52 - 1 1/16"
Outer row rivet pitch at ends 7 1/6" 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 { Plate Rivets }
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 { 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 _____
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 _____

For and on behalf of _____
The foregoing is a correct description, _____
Manufacturer. _____

Dates of Survey { During progress of work in shops - - - 1945 Nov. 14, 23, 29, Dec. 14, 20, 28, 1946 Jan. 1, 16, Feb. 7, 14, 28, March 7, 29, April 4, May 10, 20, 30, June 4. } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 9/2/45.
while building { During erection on board vessel - - - } Total No. of visits 18

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. M'dra Rpt. No. 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 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 forwarded to Sunderland for Wm. Tomlin's Contr. No. 737.

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

W. J. L. L. L.

Survey Fee ... £ 20 : 5 : - When applied for, 18/6/1946.
Travelling Expenses (if any) £ : : When received, 19

Chorman Stuart
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 11 OCT 1946

Assigned See F.E. mch. rpt.



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