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Rpt. 5a.

JUL 1946

REPORT ON BOILERS.

Std. N° 34542

Mar. No. 18079

Received at London Office

29 JUN 1946 30 SEP 1946

Date of writing Report 24th June 1946 When handed in at Local Office 27th June 1946 Port of Middlesbrough.

No. in Sarey held at 26 Stockton-on-Tees. Date, First Survey 14th Nov. 1945. Last Survey 13th June 1946.

on the **BRITISH MARSHAL.**

(Number of Visits 19.) Gross 8582 Tons Net 4918

Built at Sunderland By whom built W. Hayford & Sons Ltd Yard No. 437 When built 1946

Engines made at Sunderland. By whom made Wm. Douglas & Sons. Engine No. 737 When made 1946

Boilers made at Stockton-on-Tees. By whom made Stockton C.E. & Riley Bros Ltd. Boiler No. 6932 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 & Woddyham Steel Co. Ltd. Total Heating Surface of Boilers 2020 sq. ft. Is forced draught fitted Yes (Letter for Record 5. Coal or Oil fired oil & 4% gas Working Pressure 150 lbs. per sq. in.)

No. and Description of Boilers 1. SE. Multitubular. Tested by hydraulic pressure to 275 lb. Date of test 13/6/46 No. of Certificate 7176 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 40 lbs. as fitted 14.14 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 DR. 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 84.9 rivets 103

Percentage of strength of longitudinal joint (plate 23/32" rivets 27/32" combined 100

Thickness of butt straps (outer 23/32" inner 27/32" No. and Description of Furnaces in each Boiler 2 Delphian 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 screwed into tank plate. Tube plates: Material (front back Steel Tensile strength 26-30 Thickness 7/8" 3/4"

Mean pitch of stay tubes in nests 9 1/8" Pitch across wide water spaces 13 1/2" Girders to combustion chamber tops: Material Steel Tensile strength 28-32

at centre 7'-2 1/8" Length as per Rule 2'-3 1/2" Distance apart 9" Depth and thickness of girder in each 2 x 9" No. and pitch of stays

Combustion chamber plates: Material Steel Tensile strength 26-30 Thickness: Sides 2 1/32" Back 1 9/32" 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 1/4" 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 20 Margin stays: Diameter 1 3/4 At turned off part, or Over threads 1 3/4

No. of threads per inch 9

Tubes: Material Seamless Steel External diameter 2 1/2 Thickness 10 SW. 9 No. of threads per inch 9

Pitch of tubes 3 1/4 x 3 1/4 Section of compensating ring 8 1/4 x 1 1/8 Manhole compensation: Size of opening in shell plate 2 1/2 x 1 7/8 No. of rivets and diameter of rivet holes 52 - 1/4

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 ✓

Internal diameter ✓ Thickness of crown ✓ No. and diameter of stays ✓

How connected to shell ✓ Inner radius of crown ✓

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 easing gear ✓

Pressure to which the safety valves are adjusted ✓

tubes ✓ forgings and castings ✓ and after assembly in place ✓ Hydraulic test pressure: ✓

valves fitted to free the superheater from water where necessary ✓ Are drain cocks or ✓

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with ✓

The foregoing is a correct description,

Dates of Survey 1945 Dec. 14, 23, 29, Dec. 14, 20, 28, 1946 Jan. 11, 16, Feb. 7, 14, 28, Apr. 7, 29, Apr. 26, May 10, 20, 30, June 11, 13. Manufacturer. H. J. Orley

During progress of work in shops - ✓ Are the approved plans of boiler and superheater forwarded herewith 9/2/45

During erection on board vessel - ✓ (If not state date of approval.)

Total No. of visits 19

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

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

This boiler has been constructed under Special Survey & is accordance with the Rule Requirements & approved plan. sent Hld

The materials & workmanship are good & on completion the boiler was hydrostatically tested to 175 lb/sq. in. & found satisfactory.

This boiler is being forwarded to Sunderland for Wm. Dox's Co. Ltd. N° 737.

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

P. J. Krasner

Survey Fee ... £ 20 : 5 : 0 When applied for, 28/6/1946

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

Committee's Minute

FIL 11 OCT 1946

Assigned See F.E. machy. rpt.

L. Gorman Smith
Engineer Surveyor to Lloyd's Register of Shipping.



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