

REPORT ON BOILERS.

Std. No. 34478
Form No. 18011

Received at London Office 20 MAR 1946

Date of writing Report 13th Mar. 1946. When handed in at Local Office 19th Mar. 1946. Port of Middlesbrough.

No. in Reg. Book. Surrey held at Stockton-on-Tees. Date, First Survey 7th September, 1945 Last Survey 7th March, 1946.

BRITISH MARQUIS

(Number of Visits 17) Gross 8563 Tons Net 4908

Built at Sunderland By whom built Wm. Beard & Sons L^{td} Yard No. 435 When built 1946.

Engines made at Sunderland By whom made Wm. Beard Engine No. 735 When made 1946.

Boilers made at Stockton By whom made Stockton C.E. & Riley Boilers L^{td} Boiler No. 6927 When made 1945.

Nominal Horse Power _____ Owners British Tanker Co L^{td} Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appley Frodingham Steel Co L^{td} (Letter for Record S.)

Total Heating Surface of Boilers 2020 sq ft Is forced draught fitted Yes Exhaust Yes Oil fired No

No. and Description of Boilers 1. S.E. Marine. Working Pressure 150 lb

Tested by hydraulic pressure to 275 lbs. Date of test 7/3/46 No. of Certificate 7167 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler _____ No. and Description of safety valves to each boiler Two imp^g high lift

Area of each set of valves per boiler {per Rule 7.65 as fitted 14.1} 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 _____ 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 3/4" 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 DR. Laps inter. ✓}
long. seams TR.-D.135 Diameter of rivet holes in {circ. seams 1 1/16" Pitch of rivets {2.187" long. seams 1 1/16" 7/16"}

Percentage of strength of circ. end seams {plate 66.6% rivets 48.7% combined 84.9%} Percentage of strength of circ. intermediate seam {plate - rivets - combined -}

Percentage of strength of longitudinal joint {plate - rivets 103 combined -}

Thickness of butt straps {outer 23/32" inner 27/32"} No. and Description of Furnaces in each Boiler 2 Dighton 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 both plates.

Tube plates: Material {front Steel 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 @ 5/8" 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 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 23-30 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 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

3-187
25.3.46

Are the stays drilled at the outer ends no. ✓ Margin stays: Diameter { At turned off part, or Over threads 1 3/4" ✓

No. of threads per inch 9.

Tubes: Material Seamless Steel External diameter { Plain 2 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 1/16" ✓ 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 _____

The foregoing is a correct description, H. G. Orley Manufacturer.

Dates of Survey { During progress of work in shops - - - } 1945. Sept. 7. 13. 6 Oct. 19. 31. Nov. 14. 23. 29. Dec. 14. 20. 28. 1946. Jan. 4. 11. 16. Feb. 7. 14. 28. Mar. 7. Are the approved plans of boiler and superheater forwarded herewith 9/2/45. (If not state date of approval.)

{ During erection on board vessel - - - } Total No. of visits 17.

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.) 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. Dwyer's contract No. 735.

This boiler has been securely fixed on board the vessel fitted to burn oil fuel (F.P. about 150°F). Safety valves adjusted to working pressure as above.

In recommendation please see Machinery Dept.

H. G. Orley

Survey Fee ... £ 20 : 5 : 0 When applied for, 19/3/1946.

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

C. W. Orley
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 14 JUN 1946

Assigned See F.E. Machy. rpt.

