

REPORT ON BOILERS.

Received at London Office -2 MAY 1931

Date of writing Report 18.4.31 19 When handed in at Local Office 19 Port of

No. in Reg. Book. Survey held at Hartlepool Date, First Survey Last Survey 19

Supp 89708 on the M.V. "BRITISH STRENGTH" (Number of Visits) Tons {Gross Net

Master Built at Newcastle By whom built Palmers S B & J Co Ltd Yard No. 1005 When built 1931

Engines made at Hartlepool By whom made Richardsons Westgarth & Co Ltd Engine No 2676 When made 1931

Boilers made at ditto By whom made ditto Boiler No 2676 When made 1931

Nominal Horse Power 127. Owners British Tanker Co Ltd Port belonging to London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland (Letter for Record S)

Total Heating Surface of Boilers 1094 ft² oil burning Is forced draught fitted yes Coal or Oil fired oil & exhaust gas

No. and Description of Boilers One single ended Working Pressure 150 lbs

Tested by hydraulic pressure to 275 lb Date of test 28.11.30 No. of Certificate 3789 Can each boiler be worked separately yes

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 direct spring enclosed.

Area of each set of valves per boiler per Rule 17.3 1/2 as fitted 16.58 1/2 Pressure to which they are adjusted 155 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

Largest internal dia. of boilers 12'-4 3/16" Length 11'-6" Shell plates: Material Steel Tensile strength 28/32

Thickness 29/32 Are the shell plates welded or flanged no Description of riveting: circ. seams end D.R. Lab. inter. 3/4

long. seams D.R. D.B.S. Diameter of rivet holes in circ. seams 1 1/32 long. seams 1 1/16 Pitch of rivets 5 9/16" rows 2 25/32" rows

Percentage of strength of circ. end seams plate 68.3 rivets 46.6 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 80.9 rivets 81.5 combined 89.3 Working pressure of shell by Rules 150 lbs

Thickness of butt straps outer 3/4 inner 7/8 No. and Description of Furnaces in each Boiler 2 Dightons

Material Steel Tensile strength 26/30 Smallest outside diameter 32 1/4"

Length of plain part top bottom Thickness of plates crown 3/8 bottom 3/8 Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 163 lbs

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1" Pitch of stays 16 1/4" x 18"

How are stays secured Double nuts Working pressure by Rules 157 lbs

Tube plates: Material front Steel back Steel Tensile strength 26/30 Thickness 27/32 11/16"

Mean pitch of stay tubes in nests 10 5/16" x 9" Pitch across wide water spaces 13 7/8" x 8 3/4" Working pressure front 160 lbs back 159 x 173 lbs.

Girders to combustion chamber tops: Material Steel Tensile strength 26/30 Depth and thickness of girder

at centre 7 1/4" x 1 5/8" Length as per Rule 29 13/32" Distance apart 9 1/4" No. and pitch of stays

in each 3 7" Working pressure by Rules 154 lbs Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 9/16" Back 19/32" Top 9/16" Bottom 9/16"

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

Working pressure by Rules 153 lbs Front plate at bottom: Material Steel Tensile strength 26/30

Thickness 27/32 Lower back plate: Material Steel Tensile strength 26/30 Thickness 3/4"

Pitch of stays at wide water space 13 1/2" x 8 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 179 lbs Main stays: Material Steel Tensile strength 28/32

Diameter At body of stay 2 1/2" or 2 3/8" No. of threads per inch 6 Area supported by each stay 16 1/4" x 18" + 15 3/8" x 18"

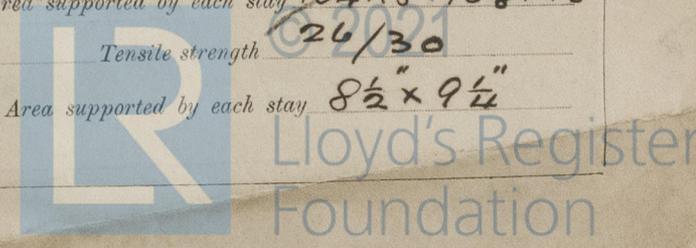
Working pressure by Rules 151 lbs Screw stays: Material Steel Tensile strength 26/30

Diameter At turned off part 1 1/2" No. of threads per inch 9 Area supported by each stay 8 1/2" x 9 1/4"

Is a Report also sent on the Heat of the Ship?

[2m. 12. 28. - Copyable Ink.]

1700-21M



Working pressure by Rules 159 lb Are the stays drilled at the outer ends no Margin stays: Diameter 1 1/2" ^{At turned off part, ✓}
 No. of threads per inch 9 Area supported by each stay 8 1/2" x 11 3/8" Working pressure by Rules 157 lb ^{Over threads ✓}
 Tubes: Material Iron External diameter 2 1/2" wings / 3 1/2" centre ^{Plain} Working pressure by Rules 10 W.G. W.P.W.G.C. ^{Stay} 2 1/2" - 3 1/2" Thickness 1/4" - 5/16" - 7/16" wings No. of threads per inch 9
 Pitch of tubes 3 3/4" x 3 3/4" W. 4 3/8" x 4 1/2" C. Working pressure by Rules 175 P. 151 S. ^{5/16" centre} Manhole compensation: Size of opening in shell plate 16 1/4" x 20 1/4" Section of compensating ring 19" x 1" No. of rivets and diameter of rivet holes 36 1 1/16"
 Outer row rivet pitch at ends 5 9/16" 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} _____
 Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ Rivets _____ 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 none Manufacturers of _____ Tubes _____
 Number of elements _____ Material of tubes _____ Steel castings _____ 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.

The foregoing is a correct description.
 For RICHARDSONS, WESTGARTH & Co. LIMITED.
 W. P. D. Surveyor, Manufacturer.
 LOCAL DIRECTOR.

Dates of Survey ^{During progress of work in shops - -} See Machinery rpt Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 while building ^{During erection on board vessel - - -} _____ Total No. of visits _____

Is this Boiler a duplicate of a previous case no If so, state Vessel's name and Report No. ✓

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

Survey Fee £ 12.14.0 When applied for, 19
 Travelling Expenses (if any) £ See Machinery rpt When received, 19

R. D. Shilston
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 8 MAY 1931

Assigned See F.C. Rpt.

