

Rpt. 54  
7 APR 1945  
IN D.O.

# REPORT ON BOILERS.

No. 13944

Received at London Office.

6 APR 1945

Date of writing Report 19... When handed in at Local Office A/4/1945 Port of Belfast  
No. in Reg. Book. 11966 M.V. "BRITISH MIGHT" (Number of Visits 44) Tons { Gross... Net...  
on the...  
Master... Built at Glasgow By whom built Harland & Wolff Ltd Yard No. 1196 When built 1945  
Engines made at Glasgow By whom made Harland & Wolff Ltd Engine No. 60.9506 When made 1945  
Boilers made at Belfast By whom made Messrs Harland & Wolff Ltd Boiler No. 11969 When made 1945  
Nominal Horse Power 490. Owners British Tanker Co. Ltd Port belonging to London.

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd (Letter for Record S.)  
Total Heating Surface of Boilers 3836 sq ft Is forced draught fitted yes Coal or Oil fired & Blast gas  
No. and Description of Boilers Two cylindrical multitubular Working Pressure 150 lb/sq in  
Tested by hydraulic pressure to 275 lb/sq in Dates of test 12/15/12/44 No. of Certificates 1281/2 Can each boiler be worked separately yes  
Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 1/4" dia double Spring Improved High Lift.  
Area of each set of valves per boiler per Rule 3.63 sq in as fitted 3.98 sq in Pressure to which they are adjusted 150 lb/sq in 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 well clear Is oil fuel carried in the double bottom under boilers.  
Smallest distance between shell of boiler and tank top plating 30" Is the bottom of the boiler insulated yes.  
Largest internal dia. of boilers 12'-6" Length 11'-0" Shell plates: Material Steel Tensile strength 29/33 tons/sq in  
Thickness 7/8" Are the shell plates welded or flanged no Description of riveting: circ. seams { end... D.R. inter...  
long. seams T.R. D.B.S. Diameter of rivet holes in { circ. seams 1 3/32" long. seams 1 1/32" Pitch of rivets { 3.038" 6 1/16"  
Percentage of strength of circ. end seams { plate 64.1 rivets 56.0 Percentage of strength of circ. intermediate seam { plate 84.6 rivets 106.0  
Percentage of strength of longitudinal joint { plate 84.6 rivets 106.0 combined 90.4 Working pressure of shell by Rules 154.6 lb/sq in  
Thickness of butt straps { outer 1 1/16" inner 13/16" No. and Description of Furnaces in each Boiler Two corrugated "Dayton" section  
Material Steel Tensile strength 26/30 tons Smallest outside diameter 42"  
Length of plain part { top bottom Thickness of plates { crown 1/2 bottom 1/2 Description of longitudinal joint Fire weld  
Dimensions of stiffening rings on furnace or c.e. bottom Working pressure of furnace by Rules as approved  
End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 15/16" Pitch of stays various  
How are stays secured Nuts & washers inside & outside Working pressure by Rules as approved  
Tube plates: Material { front Steel Tensile strength 26/30 tons Thickness { 7/8" 13/16"  
back " " " " Working pressure { front as approved back as approved  
Mean pitch of stay tubes in nests 9 1/4" Pitch across wide water spaces 13 1/2" Depth and thickness of girder  
Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons Distance apart 7 1/2" No. and pitch of stays welded  
at centre 8 1/4" x 1" Length as per Rule 29 15/16" Combustion chamber plates: Material Steel  
attachments 2 @ 10" centres Working pressure by Rules as approved Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"  
Tensile strength 26/30 tons Pitch of stays to ditto: Sides 9 3/4" x 8 1/4" Back 9 1/4" x 8" Top 10" x 7 1/2" Are stays fitted with nuts or riveted over margin stays fitted with nuts inside chamber. Others riveted over.  
Working pressure by Rules as approved Front plate at bottom: Material Steel Tensile strength 26/30 tons Thickness 5/16"  
Thickness 7/8" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 5/16"  
Pitch of stays at wide water space 13" x 9 1/4" Are stays fitted with nuts or riveted over Nuts in chambers riveted at back.  
Working pressure as approved Main stays: Material Steel Tensile strength 28/32 tons  
Diameter { At body of stay 2 1/2" No. of threads per inch 6 Area supported by each stay  
Over threads 2 1/2" Screw stays: Material Steel Tensile strength 26/30 tons  
Working pressure by Rules as approved Diameter { At turned off part 1 1/2" No. of threads per inch 9 Area supported by each stay  
Over threads 1 1/2"



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Working pressure by Rules as approved Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part... 1 5/8" x 2"  
Over threads... 1 5/8" x 2"  
No. of threads per inch 9 Area supported by each stay ✓ Working pressure by Rules as approved  
Tubes: Material Steel External diameter { Plain 2 1/2" Thickness { 10 L 90  
Stay 2 1/2" 1 1/2" 5/16" 1 3/8" No. of threads per inch 9  
Pitch of tubes 3 3/4" x 3 5/8" Working pressure by Rules as approved Manhole compensation: Size of opening in  
shell plate 16 1/2" x 12 1/2" Section of compensating ring 19 3/4" x 3 1/2" No. of rivets and diameter of rivet holes 28 x 1 3/32"  
Outer row rivet pitch at ends 9" Depth of flange if manhole flanged 3 3/8" bottom manhole Steam Dome: Material ✓  
Tensile strength ✓ Thickness of shell ✓ Description of longitudinal joint { Plate ✓  
Rivets ✓ Percentage of strength of joint { ✓  
Diameter of rivet holes ✓ Pitch of rivets ✓ Thickness of crown ✓ No. and diameter of  
Internal diameter ✓ Working pressure by Rules ✓ Working pressure by Rules ✓ Diameter of rivet holes and pitch  
stays ✓ Inner radius of crown ✓ Working pressure by Rules ✓ Diameter of rivet holes and pitch  
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 ✓ Size of doubling plate under dome ✓ Diameter of rivet holes and pitch  
Type of Superheater ✓ Manufacturers of { Tubes ✓  
Steel forgings ✓  
Steel castings ✓ Internal diameter and thickness of tubes ✓ Can the superheater be shut off and  
Number of elements ✓ Material of tubes ✓ Thickness ✓ Can the superheater be shut off and  
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 ✓ Working pressure as per  
Area of each safety valve ✓ Are the safety valves fitted with easing gear ✓ Hydraulic test pressure: ✓  
Rules ✓ Pressure to which the safety valves are adjusted ✓ Are drain cocks or  
tubes ✓ forgings and castings ✓ and after assembly in place ✓ Are drain cocks or  
valves fitted to free the superheater from water where necessary ✓ and after assembly in place ✓ 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 ✓  
18.11.43

Dates of Survey while building { During progress of work in shops - - - 1944 June 20 July 5, 10, 16 Aug 21, 29, 30 Sept 1, 6, 8, 15, 18, 19, 23, 25, 28, 29 Oct 2, 5, 4, 10, 12, 15, 16, 17, 18, 23, 25, 30 Nov 6, 14, 16, 22, 11, 12, 14, 15, 16, 17, 18, 23, 25, 30 Dec 2, 5, 8, 10, 26, 27, 28, 29, 30  
During erection on board vessel - - - 1945 Jan 2, 5, 8, 10, 26, 27, 28, 29, 30  
Total No. of visits 44

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.) These boilers have been constructed in accordance with the Society's Rules & the approved plan. The materials & workmanship are good.  
The boilers have been despatched to the Clyde for installation on board Harland & Wolff's Yard No 1196G. F.D.P.  
These boilers have been properly fitted on board, tried under full working conditions and found satisfactory. The safety valves have been adjusted under steam to 150 lbs per sq. inch and found satisfactory.  
Safety valve compression washer sizes  
Port Boiler Starboard Boiler  
P. 3/8" 5 7/16" P. 3/8" 5 7/16" S. J. Murdoch  
Glasgow. 11/6/45

Survey Fee ... £ 25 : 11 : 0 } When applied for, 4/4/45  
Travelling Expenses (if any) £ : ✓ : } When received 19  
F.D. Philston  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 JUN 1945  
Assigned SEE ACCOMPANYING MACHINERY REPORT.

