

REPORT ON BOILERS.

No. 16407

Received at London Office

SEP 21 1938

Date of writing Report 9th September 1938 When handed in at Local Office 9th September 1938 Port of MiddlesbroughNo. in Survey held at Stockton Date, First Survey 23rd August 7 Last Survey 9th September 1938
Reg. Book. 4910 on the S.S. "TIBERTON" (Number of Visits 5) Tons { Gross 5225
Net 3190Master Richardson Duckfield Built at Stockton By whom built Richardson Duckfield Yard No. 1920
Engines made at Stockton By whom made Blair & Co. Ltd. Engine No. 1920 When made 1920
Boilers made at Stockton By whom made Stockton C. & Riley Boilermakers Boiler No. 16321 When made 1938
Nominal Horse Power 100 Owners R. Chapman & Son Port belonging to NewcastleMULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.Manufacturers of Steel Colvilles Ltd & Steel Company of Scotland (Letter for Record COAL)Total Heating Surface of Boilers 1370 Is forced draught fitted No. Coal or Oil fired COALNo. and Description of Boilers 1 D.B. Working Pressure 100Tested by hydraulic pressure to 200 lbs Date of test 9. 9. 38 No. of Certificate 2953 Can each boiler be worked separately ✓Area of Firegrate in each Boiler 39 No. and Description of safety valves to each boiler 2 SPRING LOADEDArea of each set of valves per boiler { per Rule 14.9.0"
as fitted 16.59.0" Pressure to which they are adjusted 100 lbs Are they fitted with easing gear YESIn case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No.Smallest distance between boilers or uptakes and bunkers on woodwork 10" Is oil fuel carried in the double bottom under boilers BOILER IN TW. DK.Smallest distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated YESLargest internal dia. of boilers 12'-0" Length 10'-0" Shell plates: Material Steel Tensile strength 29.23Thickness 19/32" Are the shell plates welded or flanged NO. Description of riveting: circ. seams { end DR
inter. ✓Long. seams DR. D.B. Diameter of rivet holes in { circ. seams 19/16"
long. seams 13/16" Pitch of rivets { 4 5/16"Percentage of strength of circ. end seams { plate 68.7
rivets 46.07 Percentage of strength of circ. intermediate seam { plate 81.1
rivets 90.3Percentage of strength of longitudinal joint { combined 72.5 Working pressure of shell by Rules 101 lbsThickness of butt straps { outer 1/2"
inner 5/8" No. and Description of Furnaces in each Boiler 2 1/2"Material Steel Tensile strength 26-30 Smallest outside diameter 3'-7 1/2"Length of plain part { top 6'-7 7/8"
bottom 6'-1" Thickness of plates { crown 2 1/32"
bottom 2 1/32" Description of longitudinal joint weldDimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 128.8 lbsEnd plates in steam space: Material Steel Tensile strength 26-30 Thickness 1/16" Pitch of stays 16" x 15 1/4"How are stays secured D.N. & W. Working pressure by Rules 102 lbsTube plates: Material { front Steel
back Steel Tensile strength { 26-30 Thickness { 1/16"
5/8"Lean pitch of stay tubes in nests 10 3/8" Pitch across wide water spaces 14 1/4" Working pressure { front 262
back 240Orders to combustion chamber tops: Material Steel Tensile strength 28-32 Depth and thickness of girderAt centre 6" x 1 1/4" Length as per Rule 28" Distance apart 8 1/2" No. and pitch of staysEach 2 x 8" Working pressure by Rules 112 lbs Combustion chamber plates: Material SteelTensile strength 26-30 Thickness: Sides 2 1/32" Back 9/16" Top 2 1/32" Bottom 2 1/32"Pitch of stays to ditto: Sides 10" x 8" Back 9 3/4" x 10 1/2" Top 8" x 8 1/2" Are stays fitted with nuts or riveted over nutsWorking pressure by Rules 106 Front plate at bottom: Material Steel Tensile strength 26-30Thickness 1/16" Lower back plate: Material Steel Tensile strength 26-30 Thickness 1/16"Pitch of stays at wide water space 14 1/4" x 9 3/4" Are stays fitted with nuts or riveted over nutsWorking Pressure 127 Main stays: Material Steel Tensile strength 28-32Diameter { At body of stay, 2"
or
Over threads 2" No. of threads per inch 6 Area supported by each stay 282 A"Working pressure by Rules 127 lbs Screw stays: Material Steel Tensile strength 26-30Diameter { At turned off part, 1 3/8"
or
Over threads 1 3/8" No. of threads per inch 9 Area supported by each stay 102 lbs

Working pressure by Rules 100 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads. 1 1/2"

No. of threads per inch 9 Area supported by each stay 108 0" Working pressure by Rules 116

Tubes: Material lap weld iron External diameter { Plain 3 1/4" Stay 3" Thickness { 9/16" 5/16" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 3/4" Working pressure by Rules 172 lbs Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 7" x 3/4" No. of rivets and diameter of rivet holes 40 @ 7/16"

Outer row rivet pitch at ends 6 3/4" Depth of flange if manhole flanged _____ Steam Dome: Material _____

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 _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter of stays _____

Inner radius of crown _____ Working pressure by Rules _____

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 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 _____ 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 _____

For and on behalf of
The FORSTON & CO. ENGINEERS & STEEL BUILDERS LTD.
Robert Riley Manufacturer

Dates of Survey { During progress of work in shops - - - Aug. 23. 30. Sept. 2. 7. 9. 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 5

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. SS. "Peterson" M/S. 16310

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been made under special survey in accordance with the approved plan and the requirements of the Rules & was found sound & tight under hydraulic pressure of 200 lbs. The materials & workmanship are good. The boiler is to be forwarded to River Tyne to be fitted on board.

This boiler has now been satisfactorily fitted on board the above vessel, its safety valves adjusted to 100 lbs & an accumulation test carried on as per Rule & found in order.

The machinery of this vessel, in my opinion, is eligible to remain classed with the notation of + N.D.B. 9.38 in the Register Book.

G. Dixon
20/9/38.

Survey Fee ... £ 9 : 3 : 0 When applied for, 9th Sept. 1938

Travelling Expenses (if any) £ _____ When received, 23rd " 1938

B. Moffatt
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUE. 11 OCT 1938

Assigned See Nmc 96713



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Foundation