

REPORT ON BOILERS.

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 Middlesbrough

No. in Survey held at Stockton Date, First Survey 23rd August Last Survey 9th September 1938

Reg. Book. 4910 on the M.S.S. "TIBERTON" (Number of Visits 5) Tons { Gross 5225 Net 3190

Master Richardson Duckfield Built at Stockton By whom built Richardson Duckfield Yard No. 1920 When built 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 Boilermkrs Boiler No. 16321 When made 1938

Nominal Horse Power 100 Owners R. Chapman & Son Port belonging to Newcastle

RETAIN

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd & Steel Company of Scotland (Letter for Record)

Total Heating Surface of Boilers 1370 Is forced draught fitted No. Coal or Oil fired COAL

No. and Description of Boilers 1 D.B. Working Pressure 100

Tested 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 LOADED

Area 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 YES.

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No.

Smallest distance between boilers or uptakes and bunkers or 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 YES

Largest internal dia. of boilers 12'-0" Length 10'-0" Shell plates: Material Steel Tensile strength 29-33

Thickness 19/32" Are the shell plates welded or flanged NO. Description of riveting: circ. seams { end DR inter. ✓

Long. seams DR. D.B.S. Diameter of rivet holes in { circ. seams 15/16" long. seams 13/16" Pitch of rivets { 3" 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 90.3

Percentage of strength of longitudinal joint { plate 81.1 rivets 90.3 combined 72.5 Working pressure of shell by Rules 101 lbs

Thickness of butt straps { outer 1/2" inner 5/8" No. and Description of Furnaces in each Boiler 2 /cf.

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 weld

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 128.8 lbs

End plates in steam space: Material Steel Tensile strength 26-30 Thickness 1/16" Pitch of stays 16" x 15 3/4"

How are stays secured D.N. & W. Working pressure by Rules 102 lbs

Tube 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 240

Orders to combustion chamber tops: Material Steel Tensile strength 28-32 Depth and thickness of girder

At centre 6" x 1 1/4" Length as per Rule 28" Distance apart 8 1/2" No. and pitch of stays

Each 2 @ 8" Working pressure by Rules 112 lbs Combustion chamber plates: Material Steel

Tensile 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 nuts

Working pressure by Rules 106 Front plate at bottom: Material Steel Tensile strength 26-30

Thickness 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 nuts

Working Pressure 127 Main stays: Material Steel Tensile strength 28-32

Diameter { At body of stay 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 26-30

Diameter { At turned off part 1 3/8" No. of threads per inch 9 Area supported by each stay 102 lbs

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Working pressure by Rules 100 lbs Are the stays drilled at the outer ends no Margin stays: Diameter 1 1/2" At turned off part, or Over threads.
 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 3 3/4" Thickness 9/16" 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 on 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
 For and on behalf of The Foresters & Marine Engineers & Shipbuilders Ltd, W. B. 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 yes (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 no If so, state Vessel's name and Report No. SS. Peterston * M/S Oct 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. It 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.

W. B. Riley
 20/9/38.

Survey Fee £ 9 : 3 : 0 When applied for, 9th Sept. 1938
 Travelling Expenses (if any) £ _____ When received, 23rd " 1938

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

Committee's Minute TUE. 11 OCT 1938
 Assigned See Nmc 96713

