

## REPORT ON BOILERS.

SLN N° 34436

No. 17949

30 NOV 1945

Received at London Office

Date of writing Report 26-11-1945 When handed in at Local Office 29-11-1945 Port of Middlesbrough

No. in Survey held at

Stockton-on-Tees

Date, First Survey 13<sup>th</sup> July 1945 Last Survey 23<sup>rd</sup> Nov. 1945

By Book.

BRITISH MAJOR.

(Number of Visits 14.)

Gross 8564

Net 4908

on the

Built at Sunderland

By whom built

D. Haydn &amp; Sons Ltd

Yard No. 434

When built 1946

Engines made at

Sunderland

By whom made

Wm. Dwyer

Engine No. 734

When made 1946

Boilers made at

Stockton

By whom made

Stockton C.E. &amp; Riley Bkrs. Ltd.

Boiler No. 6923

When made 1946

Nominal Horse Power

Owners

British Tanker Co Ltd

Port belonging to

London

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

Manufacturers of Steel

Appley &amp; Nottingham Steel C.L.

Total Heating Surface of Boilers

2020 sq

Is forced draught fitted

Yes.

(Letter for Record 5.

Enhanced for Coal or Oil fired 1/2 H.

No. and Description of Boilers

1 S.E. Marine

Working Pressure

150 lb/sq

Tested by hydraulic pressure to

275

Date of test

23/11/45

No. of Certificate

7158

Can each boiler be worked separately

Yes.

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 Ins imp<sup>2</sup> high lift

Area of each set of valves per boiler

{per Rule

7.65 for 1 H.C.

Pressure to which they are adjusted

150 lb/sq

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 3/16"

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. Lap.

long. seams

TR. D.B.C.

Diameter of rivet holes in

{circ. seams 1 1/16"

{long. seams 1 1/16"

Pitch of rivets

{3.187"

{7.16"

Percentage of strength of circ. end seams

{plate 66.6%

{rivets 48.7

Percentage of strength of circ. intermediate seam

{plate

{rivets

Percentage of strength of longitudinal joint

{plate 84.9

{rivets 103

combined

Thickness of butt straps

{outer 23/32"

{inner 27/32"

No. and Description of Furnaces in each Boiler

2 Dimple Corrugated

Material

Steel

Tensile strength

26.30

Smallest outside diameter

3'-10"

Length of plain part

{top

{bottom

Thickness of plates

{crown 4 1/2"

{bottom

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 &amp; washers, screwed into both plates.

Tube plates: Material

{front Steel

{back

Tensile strength

26-30

Thickness

7/8"

3/4"

Mean pitch of stay tubes in nests

9 1/8" x 8 1/4"

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

No.

Front plate at bottom: Material

Steel

Tensile strength

26.30

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26.30

Thickness

3/4"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

No.

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:

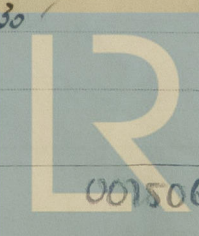
{At turned off part,

{or Over threads

1 1/2"

No. of threads per inch

9



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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 Stainless Steel External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 10 S.W. 9 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 1/4" 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,  
Steakton Chemical Engineers & Riley Boilers Ltd. Manufacturer.

Dates of Survey { During progress of work in shops - - 1945 July 13, 26, Aug. 3, 14, 29, Sept 7, 13, 27, Oct 2, 9, 19, 31, Nov 14, 23  
while building { During erection on board vessel - - -  
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 9/2/45  
Total No. of visits 14

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. H. dno Refine No.:-

#### GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler has been constructed under Special Survey & in accordance with the Rules Requirements & approved Plan.

The materials & workmanship are "Good" on completion the boiler was hydraulically tested to 275 lbs. p.s.i. & found satisfactory.

This boiler is being forwarded to Sunderland for Wm. Dwyer's contract N° 734

This boiler has been successfully fired on board the vessel. Fitted to burn oil fuel (F.P. above 150°F), Safety Valves adjusted to working pressure as above.

In recommendation please see Machinery Rpt.

Post. Fraser.

Survey Fee ... £ 20 : 5 : - When applied for, 29/11/1945.  
Travelling Expenses (if any) £ : : When received, 19

L. L. L. L.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 10 MAY 1946

Assigned

See machinery rpt.



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