

REPORT ON BOILERS.

Shd No. 3+524

Hull No. 17982

Received at London Office

4 FEB 1946

Date of writing Report

19

When handed in at Local Office

31.1.1046

Port of

Middlesbrough

No. in Survey held at
Reg. Book.

Shepton. n. J. S.

Date, First Survey

13th July 1945

Last Survey

1st Jan 1946

(Number of Visits

18

Gross

8582

Net

4918

on the

BRITISH PRINCESS

Built at

Sunderland

By whom built

Sir James Clark & Co. L^{td}

Yard No.

468

When built

1946

Engines made at

Sunderland

By whom made

Wm Kayford & Sons L^{td}

Engine No.

252

When made

1946

Boilers made at

Shepton. n. J. S.

By whom made

Shepton P.E. & Riley Boilers L^{td}

Boiler No.

6925

When made

1946

Nominal Horse Power

new scale
RNC

Owners

British Tanker Co L^{td}

Port belonging to

London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appley & Hodgkinson Steel Co. L^{td}

(Letter for Record

5.

Total Heating Surface of Boilers

2020 sq

Is forced draught fitted

Yes

Enforced for

Oil fired

Yes.

No. and Description of Boilers

1. SE. Marine

Working Pressure

150 lb/sq

Tested by hydraulic pressure to

275 lb.

Date of test

11/1/46

No. of Certificate

7163

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two into high lift

Area of each set of valves per boiler

per Rule
as fitted

14.1 sq

Pressure to which they are adjusted

150

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.S.

Diameter of rivet holes in

circ. seams

1 1/16"

Pitch of rivets

3.187"

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. Deep. (Army) dished

Material

Steel

Tensile strength

26.30

Smallest outside diameter

3'-10"

Length of plain part

top

bottom

Thickness of plates

crown

1/2"

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"x17"

How are stays secured

Double nuts & washers, secured into both plates

Tube plates: Material

front

Steel

back

Tensile strength

26.30

Thickness

3/4"

Mean pitch of stay tubes in nests

9 3/8"

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"x9"

Back

9 1/2"x8 1/4"

Top

9"x9"

Are stays fitted with nuts or riveted over

h.w.

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

h.w.

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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5A 17982.

Are the stays drilled at the outer ends *Yes* Margin stays: Diameter ^{At turned off part} *1 3/4"* or ^{Over threads} *1 3/4"*

No. of threads per inch *9*

Tubes: Material *Standard Steel* External diameter ^{Plain} *2 1/2"* ^{Stay} *2 1/2"* Thickness ^{10 SWF} *7/16"* No. of threads per inch *9*

Pitch of tubes *3 3/4" x 3 3/4"* Manhole compensation: Size of opening *52 - 1 1/4"*

shell plate *21" x 17"* Section of compensating ring *8 1/4" x 1 1/4"* No. of rivets and diameter of rivet holes *52 - 1 1/4"*

Outer row rivet pitch at ends *7 1/16"* Depth of flange if manhole flanged *—* Steam Dome: Material *NONE*

Tensile strength *80,000* Thickness of shell *7/16"* Description of longitudinal joint *—*

Diameter of rivet holes *1 1/4"* Pitch of rivets *4"* Percentage of strength of joint ^{Plate} *100%* ^{Rivets} *100%*

Internal diameter *50"* Thickness of crown *—* No. and diameter of stays *—*

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,

A. G. Gortley

Manufacturer

Dates of Survey ^{During progress of work in shops - -} *1945 July: 13-26 Aug: 3-14-29 Sep: 7-13* Are the approved plans of boiler and superheater forwarded herewith *9/2/45* ^(If not state date of approval.)

^{while building} ^{During erection on board vessel - -} *Oct: 9-19-31 Nov: 14-23-29 Dec: 3-14-20-28*

Total No. of visits *18*

1946 Jan: 11

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *h'dbo report No. 17949*

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

This boiler has been constructed under Special Survey, & in accordance with the Rule Requirements & approved plan.

The Materials & workmanship are good, & on completion the boiler was hydraulically tested to 275 lbs/sq. & found satisfactory.

This boiler is being forwarded to Sunderland for Wm. Dorrison's Contract No. 735.

This boiler has been securely fixed on board the vessel & the Safety valves adjusted to working pressure as above

For recommendation please see Machinery Rpt. No. 34524

Survey Fee ... *£20 : 5 :* When applied for, *1 : 2 : 1946*

Travelling Expenses (if any) *£ : : :* When received, *19*

L. Norman Short

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 13 SEP 1946

Assigned for minute see Sels. F. E. Machinery Rpt. 34524



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