

Rpt. 5a.

REPORT ON BOILERS.

Sld. No. 33499

No. 17246

14 MAY 1942

Received at London Office

5-OCT 1942

Date of writing Report

8/5/1942

When handed in at Local Office

12/5/1942

Port of

No. in
Reg. Book.

Surrey held at

Stockton - 2-2-42

Date, First Survey

23rd Dec, 1941

Last Survey

29th April, 1942

(Number of Visits)

13

Gross

6699

Tons

Net 4833

on the

EMPIRE BANNER

Built at

Sunderland

By whom built

Bartram Sons, Ltd

Yard No. 292

When built 1942

Engines made at

Sunderland

By whom made

H. G. H. & Co. (1932) Ltd

Engine No. 4018

When made 1942

Boilers made at

Stockton

By whom made

Stockton Chemist Engineers & Riley Bolton Ltd

Boiler No. 6611

When made 1942

Nominal Horse Power

Owners

Admiralty 7 A/15/14227

Port belonging to

Sunderland

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR DONKEY.~~

Manufacturers of Steel

A. J. Leary - Huddersfield Steel Co. Ltd

(Letter for Record)

5.

Total Heating Surface of Boilers

1786 sq

Is forced draught fitted

yes

Coal or Oil fired

coal

No. and Description of Boilers

1. S.E. Marine

Working Pressure

220 lb/sq

Tested by hydraulic pressure to

380

Date of test

29/4/42

No. of Certificate

7045

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

45 sq

No. and Description of safety valves to each boiler

2 High Lift Direct Spring

Area of each set of valves per boiler

per Rule

9.5 sq

as fitted

6.28 sq

Pressure to which they are adjusted

220 lb

Are they fitted with easing gear

yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

L.H.

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

23"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

12.9 1/2"

Length

11' 6"

Shell plates: Material

Steel

Tensile strength

24/35

Thickness

1 1/4"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

DR.

long. seams

TR. 28.5

Diameter of rivet holes in

circ. seams

1 5/16"

long. seams

1 9/16"

Pitch of rivets

3.75"

9 1/8"

Percentage of strength of circ. end seams

plate

65.3%

rivets

45.2%

Percentage of strength of circ. intermediate seam

plate

85.6%

rivets

87.8%

Percentage of strength of longitudinal joint

plate

85.6%

rivets

87.8%

combined

87.2%

Thickness of butt straps

outer

1"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

3. Dignity

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3.1 1/4"

Length of plain part

top

-

bottom

-

Thickness of plates

crown

9/32"

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

17/32"

Pitch of stays

19 5/16"

How are stays secured

D. nuts & washers.

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26/30

Thickness

15/16"

25/32"

Mean pitch of stay tubes in nests

10 1/4"

Pitch across wide water spaces

14"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

8 1/2" - 20 5/8"

Length as per Rule

2' 7 7/8"

Distance apart

7"

No. and pitch of stays

in each

2 - 10"

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

11/16"

Back

11/16"

Top

11/16"

Bottom

3/4"

Pitch of stays to ditto: Sides

10" x 7"

Back

9 1/4" x 8"

Top

10" x 7"

Are stays fitted with nuts or riveted over

nuts.

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

27/32"

Pitch of stays at wide water space

14" x 8"

Are stays fitted with nuts or riveted over

nuts.

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay,

or

Over threads

3"

No. of threads per inch

6.

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part,

or

Over threads

2" - 17/8" - 1 3/4"

No. of threads per inch

9.

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Lloyd's Register
Foundation

W274-0148

PI
C
STH
S
Flat
Botto
Bilge
Side
Uppe
Uppe
Strak
Strak
Poop
Bridg
Forec
Total
COLLI
AFTEI
STE

Are the stays drilled at the outer ends ho. Margin stays: Diameter { At turned off part, or Over threads 17/8" ✓
No. of threads per inch 9.
Material Stainless Steel External diameter { Plain 3" ✓ Thickness 3/16" ✓ No. of threads per inch 9.
Pitch of tubes 4 1/8" x 4 1/4" ✓ Manhole compensation: Size of opening in shell plate 20 1/2" x 14 1/2" Section of compensating ring 9 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 40 - 1 5/16" ✓
Outer row rivet pitch at ends 9 1/8" 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 _____ 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 _____
Area of each safety valve _____ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____
Pressure to which the safety valves are adjusted _____ Are the safety valves fitted with easing gear _____
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 _____
For and on behalf of STOCKTON CHEMICAL ENGINEERS & RILEY BOILERS Ltd.
G. W. Riley The foregoing is a correct description, _____ Manufacturer.
DIRECTOR.

Dates of Survey { During progress of work in shops - - - 1941 Dec. 23. 30. 1942 Jan. 7. 19. 28. Are the approved plans of boiler and superheater forwarded herewith No. 21/10/41.
while building { During erection on board vessel - - - Feb. 6. 19. 27. March 3. 17. April 3. 14. 29. (If not state date of approval.)
Total No. of visits 13.

Is this Boiler a duplicate of a previous case _____ If so, state Vessel's name and Report No. _____

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 380 lbs/sq. in. & found satisfactory.
This boiler has been efficiently fitted on board and its safety valves adjusted under steam.
L. R. Horne.

Survey Fee ... £ 11 : 18 : _____ When applied for, 12/5/1942.
Travelling Expenses (if any) £ : : _____ When received, 19

S. Norman Smart
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute UE. 13 OCT 1942
Assigned See Std. J.C. 33499