

REPORT ON BOILERS.

No. 11318

11 JAN 1943

1 JUL 1943

Date of writing Report 31-12-1942 When handed in at Local Office

8/11

1943

Port of

Received at London Office

Manchester

No. in Survey held at Reg. Book.

Hyde - Manchester

Date, First Survey

14-4-42

Last Survey

22-12-1942

on the

M.V. BRITISH PATIENCE

(Number of Visits 21)

Tons { Gross
Net

Master

Built at

Glasgow.

By whom built

Harland & Wolff Ltd.

Hull No.

1166

When built 1943.

Engines made at

Glasgow.

By whom made

Harland & Wolff Ltd

Engine No.

1166

When made 1943.

Boilers made at

Hyde.

By whom made

Joseph Adamson & Co. Ltd.

Boiler No.

103

When made 1942

Nominal Horse Power

Owners

(PORT. BOILER. No. 2586) G.A.M.
Port belonging to

PORT BOILER

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

COLVILLES L^{TD}. GLASGOW

(Letter for Record (S))

Total Heating Surface of Boilers

1918 SQ. FT.

Is forced draught fitted

YES

Coal or Oil fired OIL.

No. and Description of Boilers

ONE S.E. MULTITUBULAR CYLINDRICAL DONKEY BOILER

Working Pressure

150 $\frac{1}{2}$ lb./sq. in.

Tested by hydraulic pressure to

275 $\frac{1}{2}$ lb./sq. in.

Date of test

12-10-42

No. of Certificate

103

Can each boiler be worked separately

YES.

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 $\frac{1}{4}$ " DIA. DOUBLE IMPROVED. HIGH LIFT
NOT FITTED BY J. ADAMSON & CO.

Area of each set of valves per boiler

per Rule 3.63 sq. in.

as fitted 3.98 " " " "

Pressure to which they are adjusted 150 $\frac{1}{2}$ lb.

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

well clear

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

✓

Is the bottom of the boiler insulated

YES

Largest internal dia. of boilers

12'-6"

Length

11'-0"

Shell plates: Material

O.H. STEEL

Tensile strength

29/33 TONS/SQ. IN.

Thickness

 $\frac{7}{8}$ "

Are the shell plates welded or flanged

NO

Description of riveting: circ. seams { end

DOUBLE RIVETED L.J.

long. seams D.B. STRAPS, 5 RIVETS/PITCH

Diameter of rivet holes in {

circ. seams 1 $\frac{3}{32}$ "long. seams 1 $\frac{1}{32}$ "

Pitch of rivets {

3.038

Percentage of strength of circ. end seams {

plate 64.0

rivets 56.0

Percentage of strength of circ. intermediate seam {

plate 84.57

rivets 106.7

Percentage of strength of longitudinal joint {

plate 84.57

rivets 106.7

combined 90.5

Working pressure of shell by Rules

154.6 $\frac{1}{2}$ lb./sq. in.

Thickness of butt straps {

outer 1 $\frac{1}{16}$ "inner 1 $\frac{3}{16}$ "

No. and Description of Furnaces in each Boiler

TWO DEIGHTON CORRUGATED FURNACES

Material

O.H. STEEL.

Tensile strength

26/30 TONS/SQ. IN.

Smallest outside diameter

3'-6"

Length of plain part {

top

bottom

Thickness of plates {

crown

bottom

1 $\frac{1}{2}$ "

Description of longitudinal joint

WELDED.

Dimensions of stiffening rings on furnace or e.c. bottom

✓

Working pressure of furnace by Rules

171 $\frac{1}{2}$ lb./sq. in.

End plates in steam space: Material

O.H. STEEL

Tensile strength

26/30 TONS/SQ. IN.

Thickness

1 $\frac{5}{16}$ "Pitch of stays 15" x 16 $\frac{3}{4}$ "

How are stays secured

NUTS INSIDE & OUTSIDE

Working pressure by Rules

159.7 $\frac{1}{2}$ lb./sq. in.

Tube plates: Material {

front

O.H. STEEL

Tensile strength {

back

26/30 TONS/SQ. IN.

Thickness {

front

1 $\frac{3}{16}$ "

back

161.4 $\frac{1}{2}$ lb./sq. in.

Mean pitch of stay tubes in nests

9.53"

Pitch across wide water spaces

13 $\frac{1}{2}$ " x 7 $\frac{1}{4}$ "

Working pressure {

front

261.6 $\frac{1}{2}$ lb./sq. in.

Girders to combustion chamber tops: Material

O.H. STEEL

Tensile strength

28/32 TONS/SQ. IN.

Depth and thickness of girder

at centre

8 $\frac{1}{4}$ " Two 3 $\frac{1}{4}$ " THICK

Length as per Rule

29 $\frac{5}{16}$ "

Distance apart

11"

No. and pitch of stays

in each

3 AT 7 $\frac{1}{4}$ "

Working pressure by Rules

162.3 $\frac{1}{2}$ lb./sq. in.

Combustion chamber plates: Material

O.H. STEEL

Tensile strength

26/30 TONS/SQ. IN.

Thickness: Sides

3 $\frac{1}{4}$ "

Back

3 $\frac{1}{4}$ "

Top

3 $\frac{1}{4}$ "

Bottom

3 $\frac{1}{4}$ "

Pitch of stays to ditto: Sides

9 $\frac{3}{4}$ " x 8 $\frac{1}{4}$ "

Back

8" x 9 $\frac{1}{4}$ "

Top

7 $\frac{1}{4}$ " x 11"

Are stays fitted with nuts or riveted over

OTHERS RIVETED OVER

Working pressure by Rules

162.5 $\frac{1}{2}$ lb./sq. in.

Front plate at bottom: Material

O.H. STEEL

Tensile strength

26/30 TONS/SQ. IN.

Thickness

 $\frac{7}{8}$ "

Lower back plate: Material

O.H. STEEL

Tensile strength

26/30 TONS/SQ. IN.

Thickness

1 $\frac{5}{16}$ "

Pitch of stays at wide water space

13" x 9 $\frac{1}{4}$ "

Are stays fitted with nuts or riveted over

RIVETED OVER

Working Pressure

188.3 $\frac{1}{2}$ lb./sq. in.

Main stays: Material

O.H. STEEL

Tensile strength

28/32 TONS/SQ. IN.

Diameter {

At body of stay,

or

Over threads

2 $\frac{1}{2}$ "

No. of threads per inch

6

Area supported by each stay

255.4 SQ. INS.

Working pressure by Rules

173.4 $\frac{1}{2}$ lb./sq. in.

Screw stays: Material

O.H. STEEL

Tensile strength

26/30 TONS/SQ. IN.

Diameter {

At turned off part,

or

Over threads

1 $\frac{1}{2}$ "

No. of threads per inch

11

Area supported by each stay

80.44 SQ. INS.

Working pressure by Rules 155.94 lb/sq. ins. Are the stays drilled at the outer ends NO Margin stays: Diameter 1 5/8" & 2" AT CORNERS
No. of threads per inch 11 Area supported by each stay 97.12 sq. ins. Working pressure by Rules 156.7 lb/sq. ins.
Tubes: Material O.H. STEEL External diameter 2 1/2" Thickness 10 L.S.G. 1/4", 5/16" & 3/8" No. of threads per inch 9
Pitch of tubes 3 3/4" x 3 5/8" Working pressure by Rules 150 lb/sq. ins. Manhole compensation: Size of opening in
shell plate 12 1/2" x 16 1/2" Section of compensating ring 9 3/4" x 3 1/4" No. of rivets and diameter of rivet holes 28 - 1 7/32" DIA
Outer row rivet pitch at ends 9" Depth of flange if manhole flanged 3 3/8" LOWER Steam Dome: Material
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes Pitch of rivets Percentage of strength of joint
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
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. YES, WHERE APPLICABLE

The foregoing is a correct description,
JOSEPH ADAMSON & CO. LIMITED. Manufacturer.

Dates of Survey while building
During progress of work in shops - - -
During erection on board vessel - - -
APRIL 14, MAY 6 & 14, JUNE 10, JULY 3 & 7, 18, 31, AUG 4, 11, 19, 25, SEPT 4, 24, OCT 12, 20, 28, NOV 5, 13, 25, DEC 22, 1942.
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits

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, of tested materials and in accordance with the Secretary's letters, the approved plans and the requirements of the Rules. The materials and workmanship are of good quality and the boiler when tested in the shops under an hydraulic pressure of two hundred and seventy five pounds per square inch was found sound and tight.

This boiler is, in opinion, suitable to be fitted on board a vessel classed with this Society and for the purpose intended. The boiler shell plate at the front end and left hand side has been stamped

N° 103
LLOYDS TEST
275 lb/sq. ins.
WP 150 lb/sq. ins.
DRW 12-10-42.

This boiler has been properly fitted on board, & its safety valves adjusted under steam to 150 lb per sq. inch & found satisfactory. Port Boiler compression washers, P.S. 7/16"
G. E. Murdoch,

Survey Fee ... £ : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

Committee's Minute GLASGOW 29 JUN 1943

Assigned



© 2020

Lloyd's Register
Foundation