

Rpt. 5a.

REPORT ON BOILERS.

No. 1359T

Received at London Office

2 OCT 1943

13 JAN 1944

Date of writing Report

19

When handed in at Local Office

30/9/1943

Port of

Belfast.

No. in
Reg. Book.

on the

M.V. "San Vito"

Date, First Survey

9th May 1943

Last Survey

31st Aug 1943

(Number of Visits

10

Gross

Tons

Net

Built at

Glasgow.

By whom built

Harland & Wolff Ltd.

Yard No.

1183 G

When built

1943.

Engines made at

Glasgow.

By whom made

Harland & Wolff Ltd

Engine No.

1183 G. When made

1943

Boilers made at

Belfast.

By whom made

Harland & Wolff Ltd

Boiler No.

1183 G. When made

1943

Nominal Horse Power

502.

Owners

Port belonging to

MULTITUBULAR BOILERS ~~M.A. or M.B. or M.C.~~ OR DONKEY.

Manufacturers of Steel

Colvilles Ltd.

Total Heating Surface of Boilers

3888 sq ft

Is forced draught fitted

yes

(Letter for Record

5

No. and Description of Boilers

Two single ended multitubular

Working Pressure

180/1650

Tested by hydraulic pressure to

320 lbs/sq in

Date of test

31.8.43

No. of Certificate

1250

Can each boiler be worked separately

yes.

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

2 1/4" dia double spring Improved High Lift.

Area of each set of valves per boiler

(per Rule

3.11.5 sq in x 2 = 6.23 for 1 1/2"

as fitted

3.98 " " x 2 = 7.96

Pressure to which they are adjusted

180 lbs.

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

will clear.

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

will clear.

Is the bottom of the boiler insulated

yes.

Largest internal dia. of boilers

12'-6"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29-33 tons

Thickness

1 1/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

DR.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 7/32"

long. seams

1 5/32"

Pitch of rivets

3.205"

7 5/8"

Percentage of strength of circ. end seams

plate

62

rivets

55.7

Percentage of strength of circ. intermediate seam

plate

✓

Percentage of strength of longitudinal joint

plate

84.6

rivets

101

combined

89.3

Working Pressure of shell by rules. 182.5/1650

Thickness of butt straps

outer

13/16"

inner

15/16"

No. and Description of Furnaces in each Boiler

Two corrugated 'Heighton' Section.

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

42 1/8"

Length of plain part

top

✓

bottom

✓

Thickness of plates

crown

9/16"

bottom

✓

Description of longitudinal joint

Fire weld.

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

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/16"

Pitch of stays

various

How are stays secured

nuts and washers inside and outside.

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26-30 tons

Thickness

1 5/16"

7/8"

Mean pitch of stay tubes in nests

9.5"

Pitch across wide water spaces

13 1/2"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

8 3/4 x 2 x 13/16"

Length as per Rule

30"

Distance apart

11"

No. and pitch of stays

in each

3 @ 7 1/4"

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

3/4"

Back

5/8"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

9 3/4 x 8 1/2"

Back

8 1/4 x 8 1/2"

Top

11 x 7 1/4"

Are stays fitted with nuts or riveted over other nuts.

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

1 5/16"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

7/8"

Pitch of stays at wide water space

13"

Are stays fitted with nuts or riveted over

nuts.

Main stays: Material

Steel

Tensile strength

28-32 tons

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 tons

Diameter

At turned off part,

or

Over threads

1 5/8, 1 3/4, 2"

No. of threads per inch

9

© 2020

Lloyd's Register
Foundation

005436-005442-0148

Are the stays drilled at the outer ends ho Margin stays: Diameter $\begin{cases} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{cases}$ 2" 13/4"

No. of threads per inch 9

Tubes: Material Steel External diameter $\begin{cases} \text{Plain} \\ \text{Stay} \end{cases}$ $\begin{cases} 2 1/2" \\ 2 1/2" \end{cases}$ Thickness $\begin{cases} 9/16" \\ 1/2" \\ 5/16" \end{cases}$ No. of threads per inch 9

Pitch of tubes 3 1/4" x 3 5/8" Manhole compensation: Size of opening 22

shell plate 16 1/2" x 12 1/2" Section of compensating ring 2 [10 x 5/16 + (1 x 1)] No. of rivets and diameter of rivet holes 28 @ 1 1/32"

Outer row rivet pitch at ends 9 1/2" Depth of flange if manhole flanged 3 3/8" in front and plate Steam Dome: Material _____

Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____

Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint $\begin{cases} \text{Plate} \\ \text{Rivets} \end{cases}$ _____

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 $\begin{cases} \text{Tubes} \\ \text{Steel forgings} \\ \text{Steel castings} \end{cases}$ _____

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 _____ Hydraulic test pressure: _____

valves fitted to free the superheater from water where necessary _____ Are drain cocks or _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with _____

F. HADLAND AND WOLFF, LIMITED.

The foregoing is a correct description,

J. H. Marshall Secretary Manufacturer.

Dates of Survey $\begin{cases} \text{During progress of} \\ \text{work in shops} \end{cases}$ 1945 May 9 June 3, 28 July 5 Aug 5, 13, 16 Are the approved plans of boiler and superheater forwarded herewith yes.
(If not state date of approval.)
 $\begin{cases} \text{while} \\ \text{building} \end{cases}$ $\begin{cases} \text{During erection on} \\ \text{board vessel} \end{cases}$ 26. 30. 31 Total No. of visits 10

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.) These boilers have been constructed under Special Survey in accordance with the Society's Rules and approved plans. The materials and workmanship are good.

The boilers are being despatched to Glasgow for fitting on board the vessel.

These boilers have been satisfactorily fitted on board. Safety valves adjusted under steam to 180 lbs per sq inch and found satisfactory.
Safety valves, compression washers Sizes. Starboard Boiler, No. 1 valve 7/16" No. 2 Valve 7/16"
Port Boiler No. 3 valve 3/8" No. 4 valve 25/64" G. E. Murdoch.

Survey Fee ... £ 25 : 9 : -
Travelling Expenses (if any) £ : : _____

When applied for, 30/7/1945
When received, 19

L. Shaw

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned



© 2020

Lloyd's Register Foundation