

REPORT ON BOILERS.

No. 65101

13 MAY 1942

Received at London Office 19 FEB 1942

Date of writing Report

10

When handed in at Local Office

16. 2.

10. 4. 2

Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

7. 1. 42

Last Survey

30. 1.

19 42

on the

"EMPIRE AUSTEN"

(Number of Visits

6

Tons

Gross 7057.29

Net 4991.26

Master

Built at

PORT GLASGOW

By whom built

LITHGOWS LIMITED

Yard No.

969

When built

1942.

Engines made at

GREENOCK.

By whom made

JOHN G. KINCAID & CO. LTD.

Engine No.

432

When made

1942.

Boilers made at

Glasgow.

By whom made

John Thompson (Marine Boilers) Ltd

Boiler No.

5173

When made

1942.

Nominal Horse Power

Owners

MINISTER OF WAR TRANSPORT.

Port belonging to

GREENOCK.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Cotnam Ltd

(Letter for Record

5

Total Heating Surface of Boilers

1786.

Is forced draught fitted

Coal or Oil fired

No. and Description of Boilers

1- Single ended Multitubular.

Working Pressure

220.

Tested by hydraulic pressure to

380.

Date of test

30-1-42

No. of Certificate

20964

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

45 ft².

No. and Description of safety valves to each boiler

2" Hgt Lift Double Spring.

Area of each set of valves per boiler

per Rule

4.74

as fitted

6.28.

Pressure to which they are adjusted

Are they fitted with easing gear

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

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers

12' 9 1/2"

Length

11' 6"

Shell plates: Material

Steel

Tensile strength

29-33.

Thickness

1 1/4"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

DR Lp.

Long. seams

TR DB S.

Diameter of rivet holes in

circ. seams

1 5/16

long. seams

1 5/16

Pitch of rivets

3-79

inter.

98"

Percentage of strength of circ. end seams

plate

65.3.

rivets

45.2

Percentage of strength of circ. intermediate seam

plate

85.6

rivets

✓

Percentage of strength of longitudinal joint

plate

87.8.

rivets

89.7.

Working pressure of shell by Rules

221.

Thickness of butt straps

outer

1"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

3 Leighton.

Material

Steel.

Tensile strength

26-30.

Smallest outside diameter

3' 1 1/4"

Length of plain part

top

✓

Thickness of plates

crown

19/32.

bottom

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules

End plates in steam space: Material

Steel.

Tensile strength

26-30.

Thickness

1 3/32.

Pitch of stays

19 x 16"

How are stays secured

Double nut.

Working pressure by Rules

✓

Tube plates: Material

front

steel.

back

Tensile strength

26/30.

Thickness

1 5/16

25/32

Mean pitch of stay tubes in nests

9 1/4"

10 1/8

Pitch across wide water spaces

14"

Working pressure

front

✓

back

Girders to combustion chamber tops: Material

Steel.

Tensile strength

28-32.

Depth and thickness of girder

at centre

2 @ 8 1/2 x 5/8.

Length as per Rule

2' 7 1/2"

Distance apart

6" x 7"

No. and pitch of stays

in each

2-10"

Working pressure by Rules

Combustion chamber plates: Material

Steel.

Tensile strength

26-30.

Thickness: Sides

1 1/16.

Back

1 1/16.

Top

1 1/16.

Bottom

3/4.

Pitch of stays to ditto: Sides

7 x 10.

Back

8 x 9 1/4"

Top

10 x 7.

Are stays fitted with nuts or riveted over

Yes.

Working pressure by Rules

Front plate at bottom: Material

Steel.

Tensile strength

26-30.

Thickness

1 5/16.

Lower back plate: Material

Steel.

Tensile strength

26-30.

Thickness

27/32

Pitch of stays at wide water space

14"

Are stays fitted with nuts or riveted over

Yes.

Working Pressure

Main stays: Material

Steel.

Tensile strength

28-32.

Diameter

At body of stay,

2 7/8.

or

3 1/4.

No. of threads per inch

6

Area supported by each stay

Working pressure by Rules

Screw stays: Material

Steel.

Tensile strength

26-30.

Diameter

At turned off part,

1 1/4.

or

1 1/2.

No. of threads per inch

9

Area supported by each stay

002674-002681 0157

Working pressure by Rules ☒ Are the stays drilled at the outer ends ☒ Margin stays: Diameter { At turned off part, or Over threads 2" - 1 7/8" ☒
No. of threads per inch 9 ☒ Area supported by each stay ☒ Working pressure by Rules ☒
Tubes: Material SD Steel ☒ External diameter { Plain 3" ☒ Stay 3" ☒ Thickness { 8 wg. 3/8" - 5/16" ☒ No. of threads per inch 9 ☒
Pitch of tubes 4 1/2" - 4 7/8" ☒ Working pressure by Rules ☒ Manhole compensation: Size of opening in shell plate 16 1/2" x 20 1/2" ☒ Section of compensating ring (1 1/4" x 12) 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 3 7/8" ☒ 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 ☒ 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 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 casing gear ☒ Working pressure as per Rules ☒ 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,

R. McArthur for Messrs JOHN THOMPSON (MARINE BOILERS) LTD Manufacturer.

Dates of Survey { During progress of work in shops - - 1942 Jan: 7 9 13 23 27 30 ☒ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ☒
while building { During erection on board vessel - - - ☒ Total No. of visits 6 ☒

Is this Boiler a duplicate of a previous case ☒ If so, state Vessel's name and Report No. Empire Rhodes 64840.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under Special Survey in accordance with the Society's Rules. The approved plan and Specification. The material and workmanship are good. The boiler is intended for Messrs Lillman Ltd. 969. (Engines by J. G. Kinnaird.)

956
16/2/42

Survey Fee ... £ 11 : 18 : ☒ When applied for, 17 FEB 1942 10
Spec Travelling Expenses (if any) £ 2 : 19 : 6 ☒ When received, 10

W. Dale

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 17 FEB 1942

Assigned. Deferred



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