

REPORT ON BOILERS.

No. 64105

Received at London Office

23 JUL 1941

Date of writing Report

19

When handed in at Local Office

19. 7. 41

Port of

Glasgow.

No. in Survey held at

Glasgow

Date, First Survey

1940 Oct. 25th

Last Survey

30. 6. 19 41

Reg. Book.

"EMPIRE WILLOW"

(Number of Visits 15)

Gross

Tons

Net

on the

Built at

Thorne

By whom built

R. Dunston

Yard No. 359. When built

Engines made at

Glasgow

By whom made

M'Kie & Baxter

Engine No. 1328. When made

Boilers made at

Glasgow

By whom made

John Thompson (Marine Bldg) Ltd

Boiler No. 5157. When made

Nominal Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Bolton & Co. Ltd

(Letter for Record

S.

Total Heating Surface of Boilers

1356

Is forced draught fitted

Yes

Coal or Oil fired

Coal

No. and Description of Boilers

1- Single ended.

Working Pressure

200

Tested by hydraulic pressure to

350

Date of test

30-6-41

No. of Certificate

20783

Can each boiler be worked separately

Area of Firegrate in each Boiler

36.5

No. and Description of safety valves to each boiler

2 1/2" Double Spring

Area of each set of valves per boiler

per Rule

7.9

as fitted

4.8

Pressure to which they are adjusted

200 lbs/sq. in.

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

2' 0"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

1' 0" 1/2"

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

11' 6"

Length

11'

Shell plates: Material

Steel

Tensile strength

29-33

Thickness

1 1/2"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

DR lat.

long. seams

TRDBS.

Diameter of rivet holes in

circ. seams

1 1/8"

long. seams

Pitch of rivets

7 3/4"

Percentage of strength of circ. end seams

plate

67.85

rivets

43.68

Percentage of strength of circ. intermediate seam

plate

Percentage of strength of longitudinal joint

plate

85.48

rivets

92.47

combined

89.45

Thickness of butt straps

outer

2 5/32"

inner

2 3/32"

No. and Description of Furnaces in each Boiler

2 Morison

Material

Steel

Tensile strength

26-30

Smallest outside diameter

3'-5 3/8"

Length of plain part

top

bottom

Thickness of plates

crown

1 1/2"

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

1 1/2"

Pitch of stays

14 x 13 1/2"

How are stays secured

Korblu nuts

Tube plates: Material

front

back

Steel

Tensile strength

26/30

Thickness

7/8"

3/4"

Mean pitch of stay tubes in nests

8.8"

Pitch across wide water spaces

13 1/4"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32

Depth and thickness of girder

at centre

2 @ 8 1/2" x 9/8"

Length as per Rule

2' 6"

Distance apart

8"

No. and pitch of stays

in each

3 - 7 1/2"

Combustion chamber plates: Material

Steel

Tensile strength

26-30

Thickness: Sides

1 1/8"

Back

1 1/8"

Top

1 1/8"

Bottom

1 1/8"

Pitch of stays to ditto: Sides

7 1/2" x 8"

Back

8 1/2" x 8 1/2"

Top

7 1/2" x 8"

Are stays fitted with nuts or riveted over

Yes

Front plate at bottom: Material

Steel

Tensile strength

26-30

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30

Thickness

1 1/8"

Pitch of stays at wide water space

13 1/4"

Are stays fitted with nuts or riveted over

Yes

Main stays: Material

Steel

Tensile strength

28-32

Diameter

At body of stay,

or

Over threads

2 1/2"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26-30

Diameter

At turned off part,

or

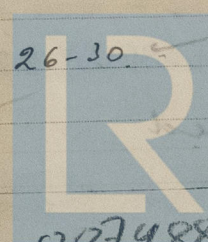
Over threads

1 5/8"

1 1/2"

No. of threads per inch

9



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Are the stays drilled at the outer ends

No.

Margin stays: Diameter { At turned off part, or Over threads

1 7/8"

No. of threads per inch 9

Tubes: Material SD Steel

External diameter { Plain Stay

2 3/4" 2 1/4"

Thickness {

8 w.g. 5/16" - 3/8"

No. of threads per inch 9

Pitch of tubes 4 x 3 3/4"

Manhole compensation: Size of opening in

shell plate 16 x 20

Section of compensating ring 1'5" x 1 1/2"

No. of rivets and diameter of rivet holes 44 @ 1 1/8"

Outer row rivet pitch at ends 8 1/2"

Depth of flange if manhole flanged 3 1/2"

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

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

JOHN THOMPSON (MARINE BOILERS) LTD.,

The foregoing is a correct description,

Per R. Lindleton

Manufacturer.

Dates of Survey

During progress of work in shops - -

while building

During erection on board vessel - -

1940 Oct: 25 Dec: 2 (1941) Jan 27

Feb: 13 26 Mar: 11 Apr: 17 May

8 15 22 26 June: 2 16 25 30

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits

15

Is this Boiler a duplicate of a previous case

Yes

If so, state Vessel's name and Report No.

JB Rep N° 63981

GENERAL REMARKS

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

This boiler has been constructed

under Special Survey in accordance with the approved plan and the Society's Rules.

The material and workmanship are good.

The boiler was made to the order of M. R. Baxter and intended for Messrs

R. Dunstan, Thorne. skp N° 359.

Rob

19/7/41

Survey Fee

Travelling Expenses (if any) £

When applied for,

When received,

22 JUL 1941

19

J.R. Dale

Engineer Surveyor to Lloyd's Register of Shipping.

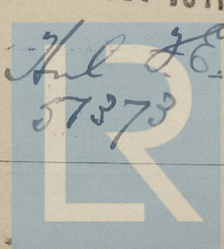
TUE. 28 OCT 1941

Committee's Minute GLASGOW 22 JUL 1941

Assigned

Superintendent

See



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