

REPORT ON BOILERS.

No. 116839.

Received at London Office

5 NOV 1941

Date of writing Report

10

When handed in at Local Office

20 OCT 1941

Port of

LIVERPOOL

No. in
Reg. Book.

Survey held at

Lytham Preston

Date, First Survey

9/5/40

Last Survey

13/10/1941

(Number of Visits

43

Gross

493

Tons

Net

214

on the

Steel Single Screw "Larchfield"

Master

✓

Built at

Lytham

By whom built

Lytham S.B. & E. Co. Ltd

Yard No.

865

When built

1941

Engines made at

Lytham

By whom made

do

Engine No.

546

When made

1941

Boilers made at

do

By whom made

do

Boiler No.

545

When made

1941

Nominal Horse Power

105

Owners

Zillah Shipping & Carrying Co. Ltd

Port belonging to

Liverpool.

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

Manufacturers of Steel

Colvilles Ltd. & Consett Iron Co. Ltd.

(Letter for Record (S))

Total Heating Surface of Boilers

1637 sq ft

Is forced draught fitted

Yes.

Coal or Oil fired

Coal.

No. and Description of Boilers

One single ended cylindrical multitubular

Working Pressure

200 lb/sq in

Tested by hydraulic pressure to

350 lb/sq in

Date of test

19/6/41

No. of Certificate

2540

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

37.7 sq ft

No. and Description of safety valves to each boiler

Two spring loaded. Each 2 1/2" dia.

Area of each set of valves per boiler

per Rule 9.53

Pressure to which they are adjusted

200 lb/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

2'-6"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

(Open flange)

Is the bottom of the boiler insulated

Yes.

Largest internal dia. of boilers

12'-7 3/16"

Length

11'-0"

Shell plates: Material

Steel.

Tensile strength

30/34 Tons

Thickness

1 3/32"

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 3/16"

long. seams 1 3/16"

Pitch of rivets

3 1/16"

8 1/8"

Percentage of strength of circ. end seams

plate 68

rivets 48.7

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.4

rivets 89.5

combined 88.4

Working pressure of shell by Rules

202 lb/sq in

Thickness of butt straps

outer 5 3/64"

inner 6 1/64"

No. and Description of Furnaces in each Boiler

Two. Bughton corrugated.

Material

Steel.

Tensile strength

26/30 Tons

Smallest outside diameter

45 1/16"

Length of plain part

top

bottom

Thickness of plates

crown 2 1/32"

bottom 2 1/32"

Description of longitudinal joint

Welded.

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

✓

Working pressure of furnace by Rules

213 lb/sq in

End plates in steam space: Material

Steel

Tensile strength

26/30 Tons

Thickness

1 3/32"

Pitch of stays

18 1/4" x 17 1/2"

How are stays secured

Double nuts & washers.

Working pressure by Rules

204 lb/sq in

Tube plates: Material

front Steel

back

Tensile strength

26/30 Tons

Thickness

7/8"

Mean pitch of stay tubes in nests

7 1/2" x 7 1/2"

Pitch across wide water spaces

13 1/2"

Working pressure

front 220 lb/sq in

back 245 lb/sq in

Girders to combustion chamber tops: Material

Steel.

Tensile strength

28/32 Tons

Depth and thickness of girder

No. and pitch of stays

at centre

7 3/4" x 27/32"

Length as per Rule

30"

Distance apart

9 1/2"

No. and pitch of stays

in each

Two @ 9 1/2"

Working pressure by Rules

203 lb/sq in

Combustion chamber plates: Material

Steel.

Tensile strength

26/30 Tons

Thickness: Sides

2 3/32"

Back

1/16"

Top

2 3/32"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

9 1/2" x 9"

Back

9" x 9"

Top

9 1/2" x 9 1/2"

Are stays fitted with nuts or riveted over

Nuts.

Working pressure by Rules

201 lb/sq in

Front plate at bottom: Material

Steel

Tensile strength

26/30 Tons

Thickness

7/8"

Lower back plate: Material

steel.

Tensile strength

26/30 Tons

Thickness

7/8"

Pitch of stays at wide water space

13 1/2" x 9"

Are stays fitted with nuts or riveted over

Nuts.

Working Pressure

237 lb/sq in

Main stays: Material

Steel.

Tensile strength

28/32 Tons

Diameter

At body of stay,

or

Over threads

No. of threads per inch

6

Area supported by each stay

319 sq ins

Working pressure by Rules

204 lb/sq in

Screw stays: Material

Steel

Tensile strength

26/30 Tons

Diameter

At turned off part,

or

Over threads

No. of threads per inch

9

Area supported by each stay

90 sq ins

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Working pressure by Rules 203 lb Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 7/8"
Over threads 1 7/8"
No. of threads per inch 9 Area supported by each stay 101 sq ins. Working pressure by Rules 211
Tubes: Material Lapwelded steel External diameter { Plain 2 1/2" Thickness { 9 LSG
Stay 2 1/2" 5/16" 3/8" 7/16" No. of threads per inch 9
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 214 lb Manhole compensation: Size of opening in
shell plate 20" x 16" Section of compensating ring 1 1/8 x 7 7/8" (flanged) No. of rivets and diameter of rivet holes 36 @ 1 3/16"
Outer row rivet pitch at ends 7 3/4" Depth of flange if manhole flanged 3" 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 Yes.

The foregoing is a correct description,
**THE LYTHAM SHIPBUILDING AND
ENGINEERING COMPANY, LIMITED** Manufacturer.

Dates of Survey { During progress of work in shops - - } See Melby report. Are the approved plans of boiler and superheater forwarded herewith Yes.
while building { During erection on board vessel - - } (If not state date of approval.)
Total No. of visits ✓

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. "Maplefield" Sir Rpt No 116254.

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

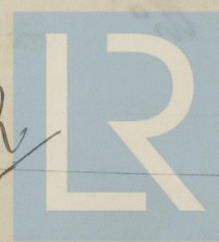
This boiler has been constructed under Special Survey in accordance with the Society's Rules and the approved plan. The material and workmanship are good. The boiler has been satisfactorily fitted on board, examined under steam and found tight, and the safety valves adjusted under steam to the approved working pressure. It is eligible in my opinion to be classed with the machinery in the Register Book with notation
+ LMC 10.41 T.S. 06 10.41 one single boiler 200 lb.

Survey Fee ... £ : : When applied for, 10
Travelling Expenses (if any) £ : : When received, 10

W. B. Edwards { for self and }
R. B. Frier
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 22 NOV 1941

Assigned See Minute on Machinery & E. Report.



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