

Rpt. 5a.

REPORT ON BOILERS.

No. 86700

Date of writing Report

19

When handed in at Local Office

21 JAN 1931

Received at London Office

22 JAN 1931

Port of Newcastle-on-Tyne

No. in
Reg. Book.

Survey held at

South Shields

Date, First Survey

May 15

Last Survey

Jan 12

1931

91336 on the

S. S. LORCA

(Number of Visits 13)

Gross 4874.5

Tons
Net 3007

Master

Built at S. Shields

By whom built

John Readhead & Co

Yard No.

504

When built 1931

Engines made at

S. Shields

By whom made

John Readhead & Co

Engine No.

504

When made 1931

Boilers made at

S. Shields

By whom made

"

Boiler No.

504

When made 1931

Nominal Horse Power

427

Owners

Cory Smith (Steamers) Ltd

Port belonging to

London

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

Manufacturers of Steel

Messrs The Steel Co of Scotland Ltd

(Letter for Record

r)

Total Heating Surface of Boilers

5754 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Coal

No. and Description of Boilers

Two Single Ended Multitubular

Working Pressure

200 lbs

Tested by hydraulic pressure to

350 lbs

Date of test

4-9-30

No. of Certificate

436

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

63.3 sq ft

No. and Description of safety valves to each boiler

One double spring - Yeates high lift

Area of each set of valves per boiler

(per Rule 11.16 sq ft)

as fitted 11.80 sq ft

Pressure to which they are adjusted

200 lbs

Are they fitted with easing gear

Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

No

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-3"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

15'-9 3/16"

Length

12'-0"

Shell plates: Material

S.M. Steel

Tensile strength

23-33

Thickness

1 3/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

(end D.R.)

long. seams

T.R.D.B.

Diameter of rivet holes in

(circ. seams 1 7/16")

(long. seams 1 7/16")

Pitch of rivets

4 1/4"

Percentage of strength of circ. end seams

(plate 66.2%)

Percentage of strength of circ. intermediate seam

(plate 42.2%)

Percentage of strength of longitudinal joint

(plate 85.6%)

Working pressure of shell by Rules

205.2 lbs

Thickness of butt straps

(outer 1 1/16")

(inner 1 3/16")

No. and Description of Furnaces in each Boiler

3 Brighton

Material

S.M. Steel

Tensile strength

26-30

Smallest outside diameter

37 11 3/8"

Length of plain part

(top)

(bottom)

Thickness of plates

(crown 1 1/16")

(bottom 1 1/16")

Description of longitudinal joint

Weld

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

Yes

Working pressure of furnace by Rules

213 lbs

End plates in steam space: Material

S.M. Steel

Tensile strength

26-30

Thickness

1 1/16" Water

Pitch of stays

21 1/2" x 21"

How are stays secured

Double nut thick washers

Working pressure by Rules

204 lbs

Tube plates: Material

(front S.M. Steel)

(back S.M. Steel)

Tensile strength

26-30

Thickness

1/8" - 5/8" of walling

Working pressure

(front 206 lbs)

Mean pitch of stay tubes in nests

8 3/4"

Pitch across wide water spaces

13 1/2"

Working pressure

(back 262 lbs)

Girders to combustion chamber tops: Material

S.M. Steel

Tensile strength

29-33

Depth and thickness of girder

at centre 8 3/4" x 20 7/8"

Length as per Rule

30"

Distance apart

10 1/4"

No. and pitch of stays

in each

2-9 1/2"

Working pressure by Rules

207 lbs

Combustion chamber plates: Material

S.M. Steel

Tensile strength

26-30

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

7/8"

Pitch of stays to ditto: Sides

10 1/4" x 9 1/2"

Back

10 1/2" x 9"

Top

10 1/4" x 9 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

203 lbs

Front plate at bottom: Material

S.M. Steel

Tensile strength

26-30

Thickness

1/8"

Pitch of stays at wide water space

13 1/2" x 9"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

237 lbs

Main stays: Material

Steel

Tensile strength

28-32

Diameter

(At body of stay, 3 1/2")

(Over threads, 3 1/2")

No. of threads per inch

6

Area supported by each stay

21 1/2" x 21 1/2"

Working pressure by Rules

205 lbs

Screw stays: Material

Spiral W.I.

Tensile strength

21 1/2

Diameter

(At turned off part, 1 1/8")

Pitch of stays at wide water space

13 1/2" x 9"

No. of threads per inch

9

Area supported by each stay

10 1/4" x 9 1/2"

00465-00273-0498

Lloyd's Register
Foundation

Working pressure by Rules 219 lbs. Are the stays drilled at the outer ends No Margin stays: Diameter 2" At turned off part, 2" Over threads 2" No. of threads per inch 9 Area supported by each stay 10 1/2 x 11 3/4 Working pressure by Rules 200 lbs Tubes: Material Sph welded W.C. External diameter Plain 2 1/2 Stay 2 1/2 Thickness 3/4 - 3/8 No. of threads per inch 9 Pitch of tubes 3 3/4 Working pressure by Rules Plain 230 lbs Stay 205 lbs Manhole compensation: Size of opening in shell plate Section of compensating ring No. of rivets and diameter of rivet holes Outer row rivet pitch at ends Depth of flange if manhole flanged 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 Number of elements Material of tubes Manufacturers of Tubes Steel castings 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

For JOHN READHEAD & SONS, LTD.

J. H. Readhead
The foregoing is a correct description,
CHAIRMAN & MANAGING DIRECTOR

Dates of Survey: During progress of work in shops - May 15, June 4, 20, July 14, 18, 25; During erection on board vessel - Aug 6, 12, 20, 26, Sept 4, 11, 18, 25
Are the approved plans of boiler and superheater forwarded herewith Yes
Total No. of visits 13

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boilers have been built under special survey in accordance with rule requirements approved plans. Materials & workmanship are good. They have been efficiently installed & fixed in vessel, examined under steam & their safety valves adjusted.

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

J. E. Knowles *T. Shaw* *J. W. Matthews*
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 3 FEB 1931

TUE. 6 DEC 1932

Assigned See other J.E. Rpt