

REPORT ON BOILERS.

No. 86700

21 JAN 1931

Received at London Office

22 JAN 1931

Date of writing Report

19

When handed in at Local Office

19

Port of Newcastle-on-Tyne

No. in
Reg. Book

Survey held at

South Shields

Date, First Survey

July 14th

Last Survey

Jan 12th

1931

11336 on the

S.S. LORCA

(Number of Visits

8)

Gross

4814.5

Tons

Net 3007

Master

Built at S. Shields

By whom built

John Readhead & Sons Ltd

Card No.

504

When built

1931

Engines made at

S. Shields

By whom made

John Readhead & Sons Ltd

Engine No.

504

When made

1931

Boilers made at

S. Shields

By whom made

" " " "

Boiler No.

504

When made

1931

Nominal Horse Power

86

Owners

Gay Strick (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

1290 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

Single Ended Multitubular

Working Pressure

120 lbs sq in

Tested by hydraulic pressure to

230 lbs sq in

Date of test

4-9-30

No. of Certificate

497

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

34 sq ft

No. and Description of safety valves to each boiler

One double spring - Grants high lift

Area of each set of valves per boiler

per Rule 7.96 sq in

as fitted 7.96 sq in

Pressure to which they are adjusted

120 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

No

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

2'-6"

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

142.56"

Length

10'-6"

Shell plates: Material

S.M. Steel

Tensile strength

29-33 tons

Thickness

3/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R.

inter. 15"

Pitch of rivets

4 1/16"

long. seams

3"

long. seams

D.R.D.B.

Diameter of rivet holes in

circ. seams 15"

long. seams 15"

Percentage of strength of circ. end seams

plate 68.7%

rivets 50.8%

Percentage of strength of circ. intermediate seam

plate 81.2%

rivets 87.2%

Working pressure of shell by Rules

126 lbs sq in

Thickness of butt straps

outer 5/8"

inner 3/4"

No. and Description of Furnaces in each Boiler

2 Plain

Material

S.M. Steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-6 1/2"

Length of plain part

top 6'-8 3/4"

bottom 7'-3"

Thickness of plates

crown 21/32"

bottom 3/32"

Description of longitudinal joint

Weld

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

✓

Working pressure of furnace by Rules

123 lbs sq in

End plates in steam space: Material

S.M. Steel

Tensile strength

26-30 tons

Thickness

13/16"

Pitch of stays

17" x 15 1/2"

How are stays secured

Double nuts & thick washers

Working pressure by Rules

129 lbs sq in

Tube plates: Material

front S.M. Steel

back S.M. Steel

Tensile strength

26-30 tons

Thickness

3/4" + 3/16" doubling

Pitch of stays

17" x 15 1/2"

Mean pitch of stay tubes in nests

9 1/2"

Pitch across wide water spaces

14"

Working pressure

front 129 lbs sq in

back 152 lbs sq in

Girders to combustion chamber tops: Material

S.M. Steel

Tensile strength

29-33 tons

Depth and thickness of girder

at centre 6" x 20 13/16"

Length as per Rule

26"

Distance apart

11 1/2"

No. and pitch of stays

in each 208

Working pressure by Rules

130 lbs sq in

Combustion chamber plates: Material

S.M. Steel

Tensile strength

26-30 tons

Thickness: Sides

19/32"

Back

19/32"

Top

19/32"

Bottom

13/16"

Pitch of stays to ditto: Sides

10" x 9"

Back

10 1/4" x 9"

Top

11 1/2" x 9"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

123.5 lbs sq in

Front plate at bottom: Material

S.M. Steel

Tensile strength

26-30 tons

Thickness

3/4"

Lower back plate: Material

S.M. Steel

Tensile strength

26-30 tons

Thickness

21/32"

Pitch of stays at wide water space

14" x 9"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

124 lbs sq in

Main stays: Material

S.M. Steel

Tensile strength

28-32 tons

Diameter

At body of stay, 2 1/2"

Over threads, 2 1/2"

No. of threads per inch

6

Area supported by each stay

16" x 15 3/8"

Working pressure by Rules

119 lbs sq in

Screw stays: Material

Special W.S.

Tensile strength

21 1/2 tons

Diameter

At turned off part, 1 1/2"

Over threads, 1 1/2"

No. of threads per inch

9

Area supported by each stay

10 1/2" x 9"

Diameter

At turned off part, 1 1/2"

Over threads, 1 1/2"

No. of threads per inch

9

Area supported by each stay

10 1/2" x 9"

Working pressure by Rules 133 & 140 Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 3/4 or 1 3/4 Over threads }
No. of threads per inch 9 Area supported by each stay 12 x 10 1/2 Working pressure by Rules 148 & 149
Tubes: Material S.D. Steel External diameter { Plain 3 1/2 Stay 3 1/2 Thickness { 10 W.G. 5/16 No. of threads per inch 9
Pitch of tubes 4 3/4 x 4 3/4 Working pressure by Rules Plain 120 lbs Stay 142 lbs Manhole compensation: Size of opening in
shell plate 16 x 12 Section of compensating ring 23/32 No. of rivets and diameter of rivet holes 38 - 13/16
Outer row rivet pitch at ends 5 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 Manufacturers of { Tubes 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 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

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 - - - July 14-25 - Aug 6-20-26
while building { During erection on board vessel - - - Sep 7-17
Sep 26-05 3
Are the approved plans of boiler and superheater forwarded herewith Yes
(If not state date of approval.)
Total No. of visits 8

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.) This boiler has been built under special survey in accordance with rule requirements approved plan. Materials workmanship are good. It has been efficiently installed & fixed in vessel, examined under steam its safety valves adjusted.

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

for E. F. Knowles. *R. Shaw J. W. Matthews*
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Dec. 3 FEB 1931 TUE. 6 DEC 1932

Assigned See other J.C. Rpt