

REPORT ON BOILERS.

No. 80705

11 NOV. 1926

of writing Report

192

When handed in at Local Office

2nd Nov 1926 Port of

Received at London Office

NEWCASTLE-ON-TYNE.

in Survey held at

South Shields

Date, First Survey

28th Sept. 1925

Last Survey

2nd Nov 1926

1926

on the

S.S. "Southgate" ex "Arabistan"

(Number of Visits

Gross 4853

Tons Net 2970

Built at South Shields

By whom built John Readhead & Sons Ltd

Yard No. 482

When built 1926

nes made at

South Shields

By whom made

John Readhead & Sons Ltd.

Engine No. 482

When made 1926

ers made at

South Shields

By whom made

John Readhead & Sons Ltd.

Boiler No. 482

When made 1926

inal Horse Power

456.

Owners

Turnbull Scott & Co

Port belonging to

London

TITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland Ltd

(Letter for Record

21

Heating Surface of Boilers

7824 sq. ft.

Is forced draught fitted

no

Coal or Oil fired

Coal

and Description of Boilers

3. Cylindrical-Multitubular (3 SB)

Working Pressure

180 lbs per sq. in.

ed by hydraulic pressure to

320 lbs

Date of test

21. 1. 26

No. of Certificate

9964

Can each boiler be worked separately

yes

of Firegrate in each Boiler

63.3 sq. ft.

No. and Description of safety valves to each boiler

Two. 3 1/2" Spring-loaded

of each set of valves per boiler

per Rule

16.73 sq. in.

Pressure to which they are adjusted

180 lbs

Are they fitted with easing gear

yes

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

Least distance between boilers or uptakes and bunkers or woodwork

5' 0"

Is oil fuel carried in the double bottom under boilers

no

Least distance between shell of boiler and tank top plating

2' 9"

Is the bottom of the boiler insulated

no

Least internal dia. of boilers

15' 9 3/8"

Length

12' 0"

Shell plates: Material

Steel

Tensile strength

28/32 Tons

Thickness

1 5/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.R. Lap

seams

T.R.: D.B.S.

Diameter of rivet holes in

circ. seams

1 5/16"

long. seams

1 5/16"

Pitch of rivets

3 3/4"

Percentage of strength of circ. end seams

plate

65%

rivets

45.2%

Percentage of strength of circ. intermediate seam

plate

85.7%

rivets

86.4%

Percentage of strength of longitudinal joint

plate

85.7%

rivets

86.4%

combined

88.68%

Working pressure of shell by Rules

184 lbs.

Thickness of butt straps

outer

1"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

3. Deighton Corrugated.

Material

Steel

Tensile strength

26-30 Tons

Smallest outside diameter

47 3/16"

Thickness of plain part

top

19"

bottom

32

Thickness of plates

crown

19"

bottom

32

Description of longitudinal joint

Weld

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

plates in steam space: Material

Steel

Tensile strength

26-30 Tons

Thickness

1 5/16"

Pitch of stays

20 1/2" x 21 3/4"

Are stays secured

Double Nuts and Washers

Working pressure by Rules

205.3 lbs

plates: Material

front

steel

back

-do-

Tensile strength

26-30 Tons

Thickness

3/4"

Pitch of stays

20 1/2" x 21 3/4"

pitch of stay tubes in nests

9"

Pitch across wide water spaces

14"

Working pressure

front

186.8 lbs

back

248 lbs

ers to combustion chamber tops: Material

Steel

Tensile strength

28-32 Tons

Depth and thickness of girder

Centre

9" x 1 3/4"

Length as per Rule

33"

Distance apart

10 1/4"

No. and pitch of stays

ch

Two @ 9 3/4"

Working pressure by Rules

214 lbs

Combustion chamber plates: Material

Steel

le strength

26-30 Tons

Thickness: Sides

23"

Back

11"

Top

23"

Bottom

7"

of stays to ditto: Sides

9 1/4" x 10 1/2"

Back

10" x 9"

Top

10 1/4" x 9 3/4"

Are stays fitted with nuts or riveted over

nuts

ing pressure by Rules

Back

182.8 lbs

Front plate at bottom: Material

Steel

Tensile strength

26-30 Tons

ness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30 Tons

Thickness

7/8"

of stays at wide water space

14" x 9"

Are stays fitted with nuts or riveted over

nuts

ing Pressure

226 lbs.

Main stays: Material

Steel

Tensile strength

28-32 Tons

eter

At body of stay,

3 1/2"

Over threads

No. of threads per inch

6

Area supported by each stay

20 1/2" x 21 3/4"

ing pressure by Rules

212.5 lbs

Screw stays: Material

Iron

Tensile strength

21 1/2 Tons

eter

At turned off part,

1 7/8"

Over threads

No. of threads per inch

9

Area supported by each stay

10 1/4" x 9 3/4"

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Foundation

Working pressure by Rules 213 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" ✓
or Over threads
No. of threads per inch 9 ✓ Area supported by each stay 12" x 9" Working pressure by Rules 230 lbs
Tubes: Material Iron ✓ External diameter { Plain 3 1/4" ✓ Thickness { 9 I.W.G. ✓ No. of threads per inch 9 ✓
Stay 3 1/4" ✓ 5" x 3/8" ✓
Pitch of tubes 4 1/2" x 4 1/2" ✓ Working pressure by Rules plain 180 lbs - Stay 337 lbs Manhole compensation: Size of open
shell plate 16" x 12" Section of compensating ring 8" x 1 5/16" ✓ No. of rivets and diameter of rivet holes 28 - 1 5/16" ✓
Outer row rivet pitch at ends 8 3/4" ✓ 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 diam
stays ✓ Inner radius of crown ✓ Working pressure by Rules ✓
How connected to shell ✓ Size of doubling plate under dome ✓ Diameter of rivet holes an
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
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
Rules ✓ Pressure to which the safety valves are adjusted ✓ Hydraulic test pr
tubes ✓, castings ✓ and after assembly in place ✓ Are drain cocks or valves
to free the superheater from water where necessary ✓

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with yes ✓

The foregoing is a correct description,

W. P. Henry

FOR JOHN READHEAD & SONS, LIMITED

Manuf

Dates of Survey { During progress of
work in shops - - }
while building { During erection on
board vessel - - }

See Inquiry Report

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

Total No. of visits

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

These boilers have been constructed under the usual conditions of
survey & testing & found satisfactory.

18/- Entry on machinery
Survey Fee £

When applied for, 192

Travelling Expenses (if any) £

When received, 192

W. P. Henry & W. Morrison

Engineer Surveyors to Lloyd's Register of Ships, R

Committee's Minute

TUES. 16 NOV 1926

Assigned

See Report attached



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