

REPORT ON BOILERS.

No. 32490

OCT -3 1938

of writing Report

192

When handed in at Local Office

1 OCT. 1938

Received at London Office

Port of

SUNDERLAND

in Survey held at

SUNDERLAND

Date, First Survey

Sep. 7

Last Survey

NWC 21/10/38
Sep. 29 1938

on the

SPEY

(Number of Visits 4)

Gross 178
Tons Net 99

Built at

Newcastle

By whom built

Wood & Sons & Co. Ltd.

Yard No.

When built 1923

es made at

By whom made

W. J. Smith & Co. Ltd.

Engine No.

When made 1923

s made at

By whom made

Samuel Hodge & Co

Boiler No.

When made

al Horse Power

Owners

Murray S. S. Co. Ltd.

Port belonging to

Newcastle

LTITUBULAR BOILERS MAIN, ~~AUXILIARY~~, OR ~~DONKEY~~.

facturers of Steel

(Letter for Record)

Heating Surface of Boilers

540 ft

Is forced draught fitted

no

Coal or Oil fired

coal

nd Description of Boilers

one cylindrical multitubular

Working Pressure 140 lbs.

l by hydraulic pressure to

210 lbs

Date of test 29/9/38

No. of Certificate

Can each boiler be worked separately

of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 spring loaded

of each set of valves per boiler

per Rule

as fitted

6.28

Pressure to which they are adjusted

140 lbs

Are they fitted with easing gear

yes

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

est distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

est distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

st internal dia. of boilers

8'-6"

Length

8'-6"

Shell plates: Material

steel

Tensile strength

ness

11/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R.L.

seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

15/16"

long. seams

3/8"

Pitch of rivets

3 1/2"

4 7/8"

ntage of strength of circ. end seams

plate

73

rivets

say 43.5

Percentage of strength of circ. intermediate seam

plate

—

ntage of strength of longitudinal joint

plate

82

rivets

say 102

combined

say 89

Working pressure of shell by Rules

159 lbs

ness of butt straps

outer 11/16"

inner 11/16"

No. and Description of Furnaces in each Boiler

2 plain

ial

steel

Tensile strength

Smallest outside diameter

2'-9"

h of plain part

top 5'-6"

bottom 5'-11 1/2"

Thickness of plates

crown

19/32"

bottom

21/32"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

160 lbs

plates in steam space: Material

steel

Tensile strength

Thickness

25/32"

Pitch of stays

1'-2"

are stays secured

double nuts with washers 6 1/4" x 5/8"

Working pressure by Rules

160 lbs

plates: Material

front steel

back steel

Tensile strength

Thickness

25/32"

39/64"

pitch of stay tubes in nests

9.06"

Pitch across wide water spaces

13"

Working pressure

front

185 lbs

back

206 lbs

rs to combustion chamber tops: Material

steel

Tensile strength

Depth and thickness of girder

tre 5/8"

5/8 x 2

Length as per Rule

21.42"

Distance apart

7"

No. and pitch of stays

ch 2 x 7"

Working pressure by Rules

163 lbs

Combustion chamber plates: Material

steel

le strength

Thickness: Sides

1/2"

Back

15/32"

Top

1/2"

Bottom

11/16"

of stays to ditto: Sides

7 5/8 x 7"

Back

7" x 7"

Top

7" x 7"

Are stays fitted with nuts or riveted over

nuts fitted

ing pressure by Rules

145 lbs

Front plate at bottom: Material

steel

Tensile strength

ness 25/32"

Lower back plate: Material

steel

Tensile strength

Thickness

25/32"

of stays at wide water space

12"

Are stays fitted with nuts or riveted over

nuts fitted

ing Pressure

250 lbs

Main stays: Material

steel

Tensile strength

ter At body of stay

or

Over threads

2 1/2"

No. of threads per inch

4

Area supported by each stay

14" x 14"

ing pressure by Rules

195 lbs

Screw stays: Material

steel

Tensile strength

ter At turned off part

or

Over threads

1 1/4"

No. of threads per inch

9

Area supported by each stay

7 5/8 x 7"

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Working pressure by Rules 150 lbs Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part.} 1 1/2" or Over threads

No. of threads per inch 9 Area supported by each stay 7" x 9 1/2" Working pressure by Rules 220 lbs.

Tubes: Material — External diameter ^{Plain} 3" Thickness 0.125 in No. of threads per inch —
^{Stay} 3"

Pitch of tubes 4 1/4" x 4" Working pressure by Rules 135 lbs. Manhole compensation: Size of opening —

shell plate 12" x 16" Section of compensating ring 11" x 1 1/16" No. of rivets and diameter of rivet holes 67, 13/16"

Outer row rivet pitch at ends — Depth of flange if manhole flanged — Steam Dome: Material Steel

Tensile strength — Thickness of shell 15/32" Description of longitudinal joint S. R. L.

Diameter of rivet holes 13/16" Pitch of rivets 2" Percentage of strength of joint ^{Plate} 59.4
^{Rivets} 49

Internal diameter 2'-0" Working pressure by Rules 209 lbs Thickness of crown — No. and diameter of stays —

Inner radius of crown — Working pressure by Rules —

How connected to shell D. R. Size of doubling plate under dome 11" x 1 1/16" Diameter of rivet holes and of rivets in outer row in dome connection to shell 13/16", 3"

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 pressure —

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 22 inclusive for boilers been complied with —

The foregoing is a correct description, —

Dates of Survey ^{During progress of work in shops - -} 30/ Sep. 7. 8. 9. 29
^{while building} ^{During erection on board vessel - -} Oct

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

Total No. of visits 4

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

This boiler has been examined internally and externally and found in good order except that the plain tubes are somewhat thin. Workmanship and materials are, so far as can be seen, good. The boiler has been hydraulically tested to 210 lbs and found sound and tight.

The boiler is being sent to Newcastle to be fitted on board.

To complete the survey the additional stay tubes indicated on the approved plan require to be fitted and the mountings to be added the plain tubes to be removed (or re-examined) and the safety valves require adjustment under steam. The boiler will, then, in my opinion be eligible for classification.

Survey Fee £ 44 : : When applied for, OCT. 1938

Travelling Expenses (if any) £ — : : When received, 11/12 1938

J. A. E. Murray
L. J. East
 Engineer Surveyor to Lloyd's Register of Ships

Committee's Minute TUE. 15 NOV 1938

Assigned See minute on mve. 96839

