

REPORT ON BOILERS.

No. 32241

NOV 25 1937

Received at London Office

22.29.

Sep. 17

Date of writing Report

1937

When handed in at Local Office

24 NOV. 1937

Port of

SUNDERLAND.

20.

No. in Survey held at

SUNDERLAND.

Date, First Survey

Last Survey

Nov 20 1937.

(Number of Visits

Gross
Tons
Net

on the

CORFERRY

ster

Built at *Burntisland*

By whom built *Burntisland S.B. Co. Ltd* No. *215* When built *1937*

ines made at

Sunderland

By whom made *N.E. Marine Eng. Co. Ltd.*

Engine No. *2874* When made *1937*

lers made at

Sunderland

By whom made *N.E. Marine Eng. Co. Ltd.*

Boiler No. *2874* When made *1937*

inal Horse Power

176

Owners

Port belonging to

7
An Act

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

25.39

Manufacturers of Steel

The Steel Company of Scotland

(Letter for Record *S*)

29.10.37

3.11.37

Heating Surface of Boilers

2506 sq ft

Is forced draught fitted *yes*

Coal or Oil fired *coal*

Description of Boilers

Two cylindrical multitubular

Working Pressure *220 lbs.*

ed by hydraulic pressure to

380 lbs

Date of test *27/8/37*

No. of Certificate *4240/1*

Can each boiler be worked separately *yes*

of Firegrate in each Boiler

24 1/2 sq ft

No. and Description of safety valves to each boiler *2 Direct Spring*

of each set of valves per boiler

per Rule 6.780"

as fitted 7.80"

Pressure to which they are adjusted *220 lbs*

Are they fitted with easing gear *yes*

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

least distance between boilers or uptakes and bankers or woodwork

18"

Is oil fuel carried in the double bottom under boilers *no*

least distance between shell of boiler and tank top plating

3' 0"

Is the bottom of the boiler insulated *yes*

st internal dia. of boilers

11' 9 1/2"

Length

10' 6"

Shell plates: Material *Steel*

Tensile strength *29/33 tons/sq in*

ness

1 9/16"

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 1 3/16"

long. seams 1 3/16"

Pitch of rivets

2 1/2"

8 1/8"

ntage of strength of circ. end seams

plate 66%

rivets 43.8%

Percentage of strength of circ. intermediate seam

plate

rivets

ntage of strength of longitudinal joint

plate 85.82%

rivets 86.24%

combined 88.88%

Working pressure of shell by Rules

220.3 lbs.

ness of butt straps

outer 7/8"

inner 1"

No. and Description of Furnaces in each Boiler *3 corrugated, Alington's, Stephen James back.*

ial

Steel

Tensile strength *26/30 tons/sq in*

Smallest outside diameter *2' 8 1/2"*

h of plain part

top

bottom

Thickness of plates

corona 1 1/2"

bottom 1 1/2"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

222 lbs.

lates in steam space: Material

Steel

Tensile strength *26/30 tons/sq in*

Thickness

1/32"

Pitch of stays *15" x 14.875"*

are stays secured

double nuts

Working pressure by Rules

221 lbs.

plates: Material

front Steel

back Steel

Tensile strength

26/30 tons/sq in

Thickness

1/32"

13/16"

pitch of stay tubes in nests

10.31"

Pitch across wide water spaces *4.5 x 8.875"*

Working pressure

front 223 lbs

back 222 lbs

es to combustion chamber tops: Material

Steel

Tensile strength *28/32 tons/sq in*

Depth and thickness of girder

re *8" x 2"*

Length as per Rule

31.4"

Distance apart

10"

No. and pitch of stays

2 8 9 1/16"

Working pressure by Rules

222 lbs.

Combustion chamber plates: Material

Steel

strength *26/30 tons/sq in*

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

25/32"

f stays to ditto: Sides

10" x 9.69"

Back

10" x 9 1/2"

Top

10" x 9.69"

Are stays fitted with nuts or riveted over *nut & fitted*

g pressure by Rules

220 lbs.

Front plate at bottom: Material

Steel

Tensile strength *26/30 tons/sq in*

ss

1/32"

Lower back plate: Material

Steel

Tensile strength *26/30 tons/sq in*

Thickness

1/32"

f stays at wide water space

14 1/2" x 10"

Are stays fitted with nuts or riveted over *nut & fitted*

g Pressure

280 lbs

Main stays: Material

Steel

Tensile strength *28/32 tons/sq in*

ister of Shipping

At body of stay,

2 5/8"

Over threads

3"

No. of threads per inch

6

Area supported by each stay *15" x 14.875"*

pressure by Rules

264 lbs

Screw stays: Material

Steel

Tensile strength

26/30 tons/sq in

At turned off part,

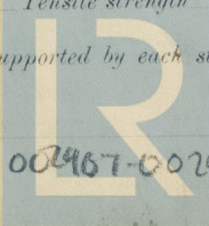
1 7/8"

Over threads

No. of threads per inch

9

Area supported by each stay *10" x 9.69"*



Lloyd's Register
Foundation

Working pressure by Rules 220 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 11 3/4" x 9 1/2" Working pressure by Rules 220 lbs.

Tubes: Material Standard Steel External diameter ^{Plain} 3 1/4" ^{Stay} 3 1/4" Thickness 8 W.G. No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 7/16" Working pressure by Rules 236 lbs. Manhole compensation: Size of opening in end shell plate 16" x 12" Section of compensating ring — No. of rivets and diameter of rivet holes —

Outer row rivet pitch at ends — Depth of flange if manhole flanged 3 5/8" 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 —

How connected to shell — Inner radius of crown — Working pressure by Rules —

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 Smoke Tube Manufacturers of ^{Tubes} Stewart & Lloyd. ^{Steel castings} Fordingham Steel Co.

Number of elements 58 Material of tubes S.D. Steel Internal diameter and thickness of tubes 1 5/16", 2 1/2 1/16"

Material of headers forged steel Tensile strength 26,300 lbs./sq. in. Thickness 1 1/8" Can the superheater be shut off and the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes

Area of each safety valve 3 1/4 sq. in. Are the safety valves fitted with easing gear yes Working pressure as per Rules 220 lbs. Pressure to which the safety valves are adjusted — Hydraulic test pressure: tubes 1500 lbs. castings 660 lbs. and after assembly in place 450 lbs. Are drain cocks or valves fitted to free the superheater from water where necessary yes

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes

The foregoing is a correct description, Archd. J. Dwyer Manufacturer.

Dates of Survey ^{During progress of work in shops - -} Please see Rpt. 4. ^{During erection on board vessel - - -} Are the approved plans of boiler and superheater forwarded herewith yes (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 and tested under special survey in accordance with the approved plans, Secretary's letters and the requirements of the Rules. Workmanship and materials are good.

In recommendation please see Rpt. 4.

Survey Fee ... £ : — When applied for, 192

Travelling Expenses (if any) £ : — When received, 192

L. R. Horne

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 30 NOV 1937

Assigned Su Dec 1944