

REPORT ON BOILERS.

No. 98381

Received at London Office

PR - S 1940

Date of writing Report

19

When handed in at Local Office

1/4/1940

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Wallsend on Tyne

Date, First Survey 28 July

Last Survey 29 March 1940

(Number of Visits)

Gross
Tons
Net

3861 on the

SS 'CONFIELD'

Master

Built at Sunderland

By whom built

J. L. Thompson & Sons Ltd

Yard No. 597

When built

Engines made at

Wallsend on Tyne

By whom made

H.E. Marine Eng Co (1938) Ltd

Engine No. 2956

When made 1940

Boilers made at

By whom made

Boiler No. 2956

When made 1940

Nominal Horse Power

Owners

'Confield' S.S. Co Ltd

Port belonging to

Newcastle

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvilles Ltd.

(Letter for Record S ✓)

Total Heating Surface of Boilers

4260 sq ft ✓

Is forced draught fitted

yes ✓

Coal or Oil fired

coal ✓

No. and Description of Boilers

2 S.B. ✓

Working Pressure 220 ✓

Tested by hydraulic pressure to

380

Date of test 30.11.39

No. of Certificate 833

Can each boiler be worked separately

yes ✓

Area of Firegrate in each Boiler

42 sq ft ✓

No. and Description of safety valves to each boiler

1 Double ✓

Area of each set of valves per boiler

{per Rule 10.2 sq ft
as fitted 11.88 sq ft

Pressure to which they are adjusted

225

Are they fitted with easing gear

yes ✓

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

Smallest distance between boilers or uptakes and bunkers or woodwork

1'-10" ✓

Is oil fuel carried in the double bottom under boilers

no ✓

Smallest distance between shell of boiler and tank top plating

2'-8" ✓

Is the bottom of the boiler insulated

yes ✓

Largest internal dia. of boilers

14'-0 7/32" ✓

Length

12'-4 1/2" ✓

Shell plates: Material

S ✓

Tensile strength

29-33 ✓

Thickness

1 23/64" ✓

Are the shell plates welded or flanged

no ✓

Description of riveting: circ. seams

{end
inter.

D.R. ✓

long. seams

T.R. D.B.S. (5 rivets)

Diameter of rivet holes in

{circ. seams 1 7/16"
long. seams 1 3/8"

Pitch of rivets

{4"
9 7/16"

Percentage of strength of circ. end seams

{plate 64
rivets 47.5

Percentage of strength of circ. intermediate seam

{plate
rivets

Percentage of strength of longitudinal joint

{plate 85.4
rivets 86.1
combined 88

Working pressure of shell by Rules

222 ✓

Thickness of butt straps

{outer 1 1/16"
inner 1 3/16"

No. and Description of Furnaces in each Boiler

3 cf ✓

Material

S ✓

Tensile strength

26-30 ✓

Smallest outside diameter

3'-4" ✓

Length of plain part

{top
bottom

✓

Thickness of plates

{crown 9/8"
bottom 9/8"

Description of longitudinal joint

weld ✓

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

Working pressure of furnace by Rules

228 lbs ✓

End plates in steam space: Material

S ✓

Tensile strength

26-30 ✓

Thickness

1 7/32" ✓

Pitch of stays

25 x 19" ✓

How are stays secured

D.N. & thin washers ✓

Working pressure by Rules

224 ✓

Tube plates: Material

{front
back

S ✓

Tensile strength

26-30 ✓

Thickness

{27/32"
227

Mean pitch of stay tubes in nests

9.4" ✓

Pitch across wide water spaces

14 1/2" x 7 1/2" ✓

Working pressure

{front 227
back 292

Girders to combustion chamber tops: Material

S ✓

Tensile strength

29-33 ✓

Depth and thickness of girder

at centre 11 1/2" x 1" (double)

Length as per Rule

3'-10 1/2" ✓

Distance apart

8 1/2" ✓

No. and pitch of stays

in each

3 @ 10 3/4" ✓

Working pressure by Rules

230 ✓

Combustion chamber plates: Material

S ✓

Tensile strength

26-30 ✓

Thickness: Sides

27/32" ✓

Back

3/4" ✓

Top

27/32" ✓

Bottom

27/32" ✓

Pitch of stays to ditto: Sides

10 3/4" x 8 7/16" ✓

Back

9 7/8" x 9" ✓

Top

10 3/4" x 8 1/2" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working pressure by Rules

221 ✓

Front plate at bottom: Material

S ✓

Tensile strength

26-30 ✓

Thickness

17/16" ✓

Lower back plate: Material

S ✓

Tensile strength

26-30 ✓

Thickness

17/16" ✓

Pitch of stays at wide water space

14 1/2" x 9 7/8" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

238 ✓

Main stays: Material

S ✓

Tensile strength

28-32 ✓

Diameter

{At body of stay,
or
Over threads

3 1/2" ✓

No. of threads per inch

6 ✓

Area supported by each stay

475 sq in ✓

Working pressure by Rules

227 ✓

Screw stays: Material

S ✓

Tensile strength

26-30 ✓

Diameter

{At turned off part,
or
Over threads

1 7/8" & 2" ✓

No. of threads per inch

9 ✓

Area supported by each stay

79 & 96.1 sq in ✓

W373-0214

Working pressure by Rules **259** Are the stays drilled at the outer ends **no** Margin stays: Diameter { At turned off part, or Over threads **2 1/2"** ✓
No. of threads per inch **9** Area supported by each stay **109.5** Working pressure by Rules **260** ✓
Tubes: Material **S.D. Steel** External diameter { Plain **2 1/2"** ✓ Thickness { **8 W.G.** ✓ No. of threads per inch **9** ✓
Pitch of tubes **3 3/8" x 3 3/4"** Working pressure by Rules **246** 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 **4 3/8" + 3 1/2"** ✓ 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
of rivets in outer row in dome connection to shell Size of doubling plate under dome Diameter of rivet holes and pitch

Type of Superheater **N.E. MARINE, Combustion Chamber** Manufacturers of **Stewarts & Lloyds**
Tubes Headers Steel forgings Steel castings

Number of elements **26** Material of tubes **S.D. Steel** Internal diameter and thickness of tubes **1.023 x 7 W.G.**
Material of headers **S.D. Steel** Tensile strength **26-28** ✓ Thickness **1"** ✓ Can the superheater be shut off and the boiler be worked separately **no** 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 **3.14** ✓ Are the safety valves fitted with easing gear **yes** Working pressure as per Rules **220 lbs.** Pressure to which the safety valves are adjusted **225 lbs.** Hydraulic test pressure: tubes **1500 lbs.** headers forgings and castings **660 lbs.** and after assembly in place **440 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,
THE NORTH EASTERN MARINE ENGINEERING CO. (LONDON) LTD.
John Neill Manufacturer.

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

See techy report

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

Total No. of visits

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 main boilers & Superheater of this vessel have been made under special survey in accordance with the approved plans & the requirements of the Rules. The materials & workmanship are good. The installation proved satisfactory under hydraulic test & on examination under full working conditions**

Survey Fee ... £ **See Michy Rpt.** When applied for, 19
Travelling Expenses (if any) £ When received, 19

R. C. Moffett
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See Std. F.C. 32840



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