

## REPORT ON BOILERS.

No. 80503.

Received at London Office

3 JUL 1926

Date of writing Report

192

When handed in at Local Office

July 5<sup>th</sup> 1926 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at  
Reg. Book.

Newcastle-on-Tyne

Date, First Survey

February 11<sup>th</sup>

Last Survey

June 15<sup>th</sup> 1926

(Number of Visits 22.)

Gross

1360

Tons

Net 1062

38923 on the

STEEL SC.

EWELL

Master

Built at Burntisland

By whom built Burntisland S.B. Co.

Yard No. 138

When built 1926

Engines made at

Newcastle

By whom made North Eastern Marine Eng. Co. Ltd.

Engine No. 2624

When made 1926

Boilers made at

Newcastle

By whom made North Eastern Marine Eng. Co. Ltd.

Boiler No. 2624

When made 1926

Nominal Horse Power

156

Owners The Wandsworth, Wimbledon &amp; Epsom District Gas Co.

Port belonging to London

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville &amp; Son Ltd.

(Letter for Record

5. ✓)

Total Heating Surface of Boilers

2758 sq ft ✓

Is forced draught fitted

No. ✓

Coal or Oil fired

Coal ✓

No. and Description of Boilers

One single-ended by cylindrical

Working Pressure

180 lbs ✓

Tested by hydraulic pressure to

320 lbs ✓

Date of test

20.4.26

No. of Certificate

9993 ✓

Can each boiler be worked separately

Yes ✓

Area of Firegrate in each Boiler

73 sq ft ✓

No. and Description of safety valves to each boiler

Two spring-loaded ✓

Area of each set of valves per boiler

per Rule 17.50" ✓

Pressure to which they are adjusted

180 lbs ✓

Are they fitted with easing gear

Yes ✓

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

Yes ✓

Smallest distance between boilers

on uptake and bunkers on woodwork

30" ✓

Is oil fuel carried in the double bottom under boilers

No. ✓

Smallest distance between shell of boiler and

Kelson tank top plating

22" ✓

Is the bottom of the boiler insulated

No. ✓

Largest internal dia. of boilers

16'0 3/8" ✓

Length

11'0" ✓

Shell plates: Material

Steel ✓

Tensile strength

28-30 tons ✓

Thickness

1 5/16" ✓

Are the shell plates welded or flanged

No. ✓

Description of riveting: circ. seams

end

Double ✓

long. seams

Double butt strap ✓

Diameter of rivet holes in

circ. seams 1 3/8" ✓

long. seams 1 3/8" ✓

Pitch of rivets

4" ✓

Percentage of strength of circ. end seams

plate

65.6

rivets

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.5

rivets

Working pressure of shell by Rules

180 lbs ✓

Thickness of butt straps

outer

1" ✓

inner

1 1/8" ✓

No. and Description of Furnaces in each Boiler

Four Deighton ✓

Material

Steel ✓

Tensile strength

26-30 tons ✓

Smallest outside diameter

38 1/2" ✓

Length of plain part

top

✓

bottom

✓

Thickness of plates

crown

1 1/2" ✓

bottom

✓

Description of longitudinal joint

welded ✓

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

✓

Working pressure of furnace by Rules

180 lbs ✓

End plates in steam space: Material

Steel ✓

Tensile strength

26-30 tons ✓

Thickness

1 7/8" ✓

Pitch of stays

2 1/2" x 22" ✓

How are stays secured

Double nuts ✓

Working pressure by Rules

180 lbs ✓

Tube plates: Material

front

Steel ✓

back

Steel ✓

Tensile strength

26-30 tons ✓

Thickness

3/4" ✓

Working pressure

front

184 lbs ✓

back

255 lbs ✓

Mean pitch of stay tubes in nests

8 7/8" ✓

Pitch across wide water spaces

14 1/2" ✓

Girders to combustion chamber tops: Material

Steel ✓

Tensile strength

28-32 tons ✓

Depth and thickness of girder

at centre

9" x 1 1/2" ✓

Length as per Rule

32" ✓

Distance apart

10 1/2" ✓

No. and pitch of stays

in each

Two 9 1/2" ✓

Working pressure by Rules

191 lbs ✓

Combustion chamber plates: Material

Steel ✓

Tensile strength

26-30 tons ✓

Thickness: Sides

23/32" ✓

Back

23/32" ✓

Top

23/32" ✓

Bottom

15" ✓

Pitch of stays to ditto: Sides

10 1/2" x 9 1/2" ✓

Back

10 1/2" x 9 1/2" ✓

Top

10 1/2" x 9 1/2" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working pressure by Rules

181 lbs ✓

Front plate at bottom: Material

Steel ✓

Tensile strength

26-30 tons ✓

Thickness

15/16" ✓

Lower back plate: Material

Steel ✓

Tensile strength

26-30 tons ✓

Thickness

7/8" ✓

Pitch of stays at wide water space

14 1/2" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

183 lbs ✓

Main stays: Material

Steel ✓

Tensile strength

28-32 tons ✓

Diameter

At body of stay,

3 1/2" ✓

Over threads

3 3/4" ✓

No. of threads per inch

Six ✓

Area supported by each stay

24 1/4" x 22" ✓

Working pressure by Rules

202 lbs ✓

Screw stays: Material

Steel ✓

Tensile strength

26-30 tons ✓

Diameter

At turned off part,

1 3/4" ✓

Over threads

✓

No. of threads per inch

Nine ✓

Area supported by each stay

99.75 sq in ✓

010246-010257-0143

Lloyd's Register  
Foundation



Working pressure by Rules *182 lb.* Are the stays drilled at the outer ends *No.* ✓ Margin stays: Diameter { At turned off part, or Over threads *2"* ✓  
No. of threads per inch *nine* ✓ Area supported by each stay *12 1/2" x 9 1/2"* Working pressure by Rules *208 lb.*  
Tubes: Material *Iron* ✓ External diameter { Plain *3 1/2"* ✓ Thickness { *No. 8 S.W.G.* ✓ No. of threads per inch *nine* ✓  
Pitch of tubes *4 1/2" x 4 3/8"* ✓ Working pressure by Rules *plain 230 lb. Stay 209 lb.* Manhole compensation: Size of opening in  
*End* 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 *4 1/4"* ✓ 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.

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

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO., LTD.

Manufacturer.

Dates of Survey { During progress of work in shops -- } *(See Machinery report)* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *Yes*  
while building { During erection on board vessel --- } Total No. of visits ✓

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

*This Boiler has been constructed under special survey. The materials and workmanship are sound and good. It has been tested by hydraulic pressure in accordance with the rules, efficiently installed and fastened on board the vessel and the safety valves have been adjusted under steam. It is eligible, in my opinion, for notation in the Society's Register Book 180 lbs. pressure*

Survey Fee ... .. £ *See Machinery Report* : When applied for, 192

Travelling Expenses (if any) £ *See Machinery Report* : When received, 192

*R. Lee Amess.*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 13 JUL 1925

Assigned

*See Report attached*



© 2021

Lloyd's Register  
Foundation