

## REPORT ON BOILERS.

No. 78282.

Received at London Office

13 SEP 1924

Date of writing Report

192

When handed in at Local Office

13/8/1924

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at  
Reg. Book.

Newcastle-on-Tyne

Date, First Survey 30/4/24

Last Survey 13/8/1924

89606 on the

Steel Co.

LETCWORTH

(Number of Visits —)

Gross 1325

Net 717

Master

Built at Newcastle

By whom built Wood Skinner &amp; Co. Ltd.

Yard No. 235

When built 1924

Engines made at

Newcastle

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

Engine No. 2576

When made 1924

Boilers made at

Newcastle

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

Boiler No. 2576

When made 1924

Nominal Horse Power

179

Owners

Port belonging to

Newcastle

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

Manufacturers of Steel The Steel Company of Scotland Ltd. David Colville &amp; Co. Ltd. (Letter for Record 5)

Total Heating Surface of Boilers

3150 sq ft

Is forced draught fitted

No.

Coal or Oil fired

Coal

No. and Description of Boilers

Two Single-Ended Cylindrical 258

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test 8-7-24

No. of Certificate 9836

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

40 sq ft

No. and Description of safety valves to each boiler

Two Spring-loaded

Area of each set of valves per boiler

per Rule 10.1 sq ft  
as fitted 11.88 sq ft

Pressure to which they are adjusted

182 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 or uptakes and bunkers or woodwork

7'-9"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

31"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

153 7/8"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

1 1/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end Double  
inter. Double

long. seams

Triple Riv. A.B.S.

Diameter of rivet holes in

circ. seams 1 1/8"  
long. seams 1 1/8"

Pitch of rivets

8"

Percentage of strength of circ. end seams

plate 59.2  
rivets 45.5

Percentage of strength of circ. intermediate seam

plate  
rivets

Percentage of strength of longitudinal joint

plate 85.9  
rivets 90.5  
combined 89.9

Working pressure of shell by Rules

182 lbs

Thickness of butt straps

outer 2 3/8"  
inner 1 5/16"

No. and Description of Furnaces in each Boiler

Two Mason

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

44 3/8"

Length of plain part

top  
bottom

Thickness of plates

crown 9 1/16"  
bottom 9 1/16"

Description of longitudinal joint

welded

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

Yes

Working pressure of furnace by Rules

184 lbs

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/8"

Pitch of stays

21" x 17"

How are stays secured

Double nuts &amp; washers

Working pressure by Rules

183 lbs

Tube plates: Material

front Steel  
back Steel

Tensile strength

26-30 tons

Thickness

3/4"

Working pressure

front 185 lbs  
back 210 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

8 1/2" - 1 1/2"

Length as per Rule

30"

Distance apart

10 3/4"

No. and pitch of stays

in each

Two 9"

Working pressure by Rules

190 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

2 3/32"

Back

2 3/32"

Top

2 3/32"

Bottom

7/8"

Pitch of stays to ditto: Sides

10 3/4" x 9"

Back

9 3/8" x 9 3/8"

Top

10 3/4" x 9"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

184 lbs

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

1 5/16"

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

187 lbs

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay, 2 3/4"  
Over threads

No. of threads per inch

Six

Area supported by each stay

3570"

Working pressure by Rules

183 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

96.750"

Lloyd's Register

W 410 7038



REPORT ON BOILERS

Working pressure by Rules 188 lb Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 186 lb

No. of threads per inch nine Area supported by each stay 114.750" Working pressure by Rules 186 lb

Tubes: Material lin External diameter { Plain 3 1/4" Thickness { no 8 S.W.G. No. of threads per inch nine Stay 3 1/4"

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 shell plate 20" x 16" Section of compensating ring 24 1/4" x 30 1/4" x 1 1/8" No. of rivets and diameter of rivet holes 36 - 1 5/16"

Outer row rivet pitch at ends 9 1/2" Depth of flange if manhole flanged 4" Steam Dome: Material none

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 - - } while building { During erection on board vessel - - }

See machinery 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 special survey. The workmanship and material are sound and good. They have been subjected to the hydraulic pressure test with satisfactory results, were efficiently installed and fastened on board the Steamer "LEITCHWORTH". In my opinion the vessel is eligible for notation -I-L.M.C. 8.24

Survey Fee ... .. £

Travelling Expenses (if any) £

When applied for, 192

When received, 192

R. Lee Amess.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 16 SEP 1924

Assigned



© 2019

Lloyd's Register Foundation