

REPORT ON BOILERS.

No. 80909

Received at London Office

20 JAN 1921

Date of writing Report

192

When handed in at Local Office

24/1/1927

Port of Newcastle-on-Tyne

No. in Survey held at

Wallsend

Date, First Survey

6 March 1923

Last Survey

18 Jan

1927

Reg. Book.

on the

New Steel S.S. "Kenton"

(Number of Visits)

Gross

Tons

Net

Master

Built at Newcastle

By whom built Tyne Iron S.B. Co. Ltd.

Yard No. 226

When built 1924

Engines made at Newcastle

By whom made Rankine & Sons Eng. Co. Ltd.

Engine No. 2546

When made 1924

Boilers made at Newcastle

By whom made Rankine & Sons Eng. Co. Ltd.

Boiler No. 2546

When made 1924

Nominal Horse Power

357

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

J. Spencers Sons Newburn

(Letter for Record

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Total Heating Surface of Boilers

5780 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

Two Single Ended Cylindrical

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

14.12.24

No. of Certificate

9881

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 18.5 sq ft

as fitted 19.24 sq ft

Pressure to which they are adjusted

185

Are they fitted with easing gear

Yes

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

No

Smallest distance between boilers or uptakes and bunkers or woodwork

1'-10 1/2"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2'-0"

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

198 3/8"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

28 3/4 to 32 3/4

Thickness

1 5/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end Double

Long. seams

Table Rivet

D.B.D.

Diameter of rivet holes in

circ. seams 1 1/2"

long. seams 1 3/8"

Pitch of rivets

3 3/4"

Percentage of strength of circ. end seams

plate 60

rivets 43

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.5

rivets 89.4

combined 88.9

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 40cf. Single

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

41 5/16"

Length of plain part

top

bottom

Thickness of plates

crown 17/32"

bottom 17/32"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

185 lbs

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

17/16"

Pitch of stays 22"x26 1/2"

How are stays secured

Double Nuts and Washers

Working pressure by Rules

183 lbs

Tube plates: Material

front Steel

back Steel

Tensile strength

26-30 tons

Thickness

31/32"

3/4"

Lean pitch of stay tubes in nests

8 7/8"

Pitch across wide water spaces

14 1/4"

Working pressure

front 200 lbs

back 212 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

At centre

9"-1 1/2"

Length as per Rule

32"

Distance apart

10 1/4"

No. and pitch of stays

At each

Two 9 3/4"

Working pressure by Rules

183 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

15/16"

Pitch of stays to ditto: Sides

9 1/2" x 9 3/4"

Back

10 1/16" x 9"

Top

10 1/4" x 9 3/4"

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

31/32"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

15/16"

Pitch of stays at wide water space

14 1/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

196 lbs

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay, 3 1/2"

Over threads

No. of threads per inch

Six

Area supported by each stay

583 sq in

Working pressure by Rules

185 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

984 sq in

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Working pressure by Rules 182 1/2 Are the stays drilled at the outer ends ho Margin stays: Diameter { At turned off part, or Over threads 2" ✓
No. of threads per inch nine ✓ Area supported by each stay 128.25 sq Working pressure by Rules 193 1/2
Tubes: Material Iron ✓ External diameter { Plain 3 1/4" ✓ Thickness { No. 3 L.S. 4 ✓ No. of threads per inch nine ✓
Pitch of tubes 4 1/2" x 4 3/8" ✓ Working pressure by Rules plain 230 lbs; stay 207 1/2 Manhole compensation: Size of opening in
shell plate 16" x 12" ✓ Section of compensating ring hmc ✓ No. of rivets and diameter of rivet holes ✓
Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 3 1/4" ✓ Steam Dome: Material hmc ✓
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 North Eastern Marine (Schmidt) Manufacturers of Tubes Tubes Std
Number of elements Total 108 Material of tubes Mild Steel Steel castings Leyland Motors Std
Material of headers S. Steel Tensile strength 26-30 tons Thickness 1 1/8" 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 2.1416 sq ✓ Are the safety valves fitted with easing gear yes ✓ Working pressure as per
Rules ✓ Pressure to which the safety valves are adjusted 185 lbs ✓ Hydraulic test pressure:
tubes 1500 lbs sq, castings 540 lbs sq and after assembly in place 450 lbs sq Are drain cocks or valves fitted
to free the superheater from water where necessary yes ✓

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LTD.

The foregoing is a correct description,

Manufacturer.

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

See main Report

Commercial Manager.

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 & Superheaters have been built under Special Survey. Materials & Workmanship good. Hydraulic tests satisfactory.

Survey Fee ... £ See: main report: When applied for, 192
Travelling Expenses (if any) £ When received, 192

Committee's Minute FRI. 4 FEB 1927

Assigned See Rpt attached

Engineer Surveyor to Lloyd's Register of Shipping



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