

REPORT ON BOILERS.

No. 84508

25 JUL 1929

Received at London Office

Date of writing Report

192

When handed in at Local Office

12.7.1929

Port of Newcastle-on-Tyne

No. in Survey held at

Kallsend

Date, First Survey 22 Feb

Last Survey 8 July 1929

g. Book.

on the New Steel S.S. Langleecrag

(Number of Visits)

Gross 4909
Tons Net 2997

aster

Built at

Jarrow

By whom built

Palmer & Co

Yard No.

991

When built

1929

Engines made at

Kallsend

By whom made

North Eastern Har & Co Ltd

Engine No.

2696

When made

1929

Boilers made at

Kallsend

By whom made

North Eastern Har & Co Ltd

Boiler No.

2696

When made

1929

Nominal Horse Power

481

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland.

(Letter for Record S)

Total Heating Surface of Boilers

6558

Is forced draught fitted

yes

Coal or Oil fired

Coal

No. and Description of Boilers

Three single ended

3 S.B.

Working Pressure

22.5 lbs

Tested by hydraulic pressure to

388

Date of test 10-5-29

No. of Certificate 348

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

44.33

No. and Description of safety valves to each boiler

Superspring loaded.

Area of each set of valves per boiler

11.4

Pressure to which they are adjusted

230

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 uptakes and bunkers

2'-6"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

13'-9"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

29 to 33 tons

Thickness

1 3/8"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R

Long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/16"

Pitch of rivets

4"

Percentage of strength of circ. end seams

plate

64.1

Percentage of strength of circ. intermediate seam

plate

85.25

Percentage of strength of longitudinal joint

plate

85.25

Working pressure of shell by Rules

22.5 lbs.

Thickness of butt straps

outer

1 1/8"

No. and Description of Furnaces in each Boiler

Three corrugated (Brighton)

3cf.

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

2'-11 1/4"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

9/16"

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

231 lbs.

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/8"

Pitch of stays

1-6 1/2 x 2-0 3/8

How are stays secured

D. nuts

Working pressure by Rules

226.5 lbs.

Tube plates: Material

front

back

Steel

Tensile strength

26 to 30 tons

Thickness

3/4"

Lean pitch of stay tubes in nests

9 3/8"

Pitch across wide water spaces

14" x 1 1/8"

Working pressure

front

back

240 lbs.

228.5 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

29 to 33 tons

Depth and thickness of girder

At centre

2 @ 9" x 1 1/8"

Length as per Rule

2'-9"

Distance apart

9 9/16"

No. and pitch of stays

At each

2 @ 9" x 1 1/8"

Working pressure by Rules

238 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

Back

Top

9 1/8" x 9 1/8"

Back

Top

Bottom

1"

Pitch of stays to ditto: Sides

9 1/8" x 9 1/8"

Back

10" x 9 1/8"

Top

9 1/8" x 9 1/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

224 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/8"

Pitch of stays at wide water space

14" x 10"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

231.5 lbs.

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter

At body of stay, or Over threads

3 1/8"

No. of threads per inch

6

Area supported by each stay

451 sq"

Working pressure by Rules

240 lbs.

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

At turned off part, or Over threads

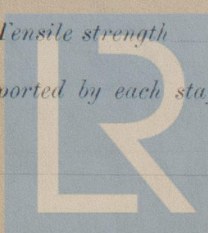
1 1/8"

No. of threads per inch

9

Area supported by each stay

94.4 sq"



Lloyd's Register Foundation

W993B-0145

Working pressure by Rules 226 lbs Are the stays drilled at the outer ends ho Margin stays: Diameter At turned off part, 1/8"
 No. of threads per inch 9 Area supported by each stay 120 sq" Working pressure by Rules 234.5 lbs
 Tubes: Material S.D. Steel External diameter Plain 9 1/2" Thickness 3 L.S.G. 1/16" + 3/8" No. of threads per inch 9
 Pitch of tubes 33 1/4" x 33 1/4" Working pressure by Rules W.C.B. 260 lbs Manhole compensation: Size of opening 16 x 18
 Section of compensating ring none No. of rivets and diameter of rivet holes ✓
 Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 4 3/8" 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
 stays Inner radius of crown Working pressure by Rules
 How connected to shell Size of doubling plate under dome Diameter of rivet holes and
 of rivets in outer row in dome connection to shell
 Type of Superheater none Manufacturers of Tubes
 Number of elements Material of tubes Internal diameter and thickness of tubes
 Material of headers Tensile strength Thickness Can the superheater be shut off
 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
 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 22 inclusive for boilers been complied with Yes

THE NORTH EASTERN MARINE ENGINEERING CO., LTD.

The foregoing is a correct description,

SECRETARY, Manufacture

Dates of Survey { During progress of work in shops -- } See Inch Report Are the approved plans of boiler and superheater forwarded herewith Yes
 while building { During erection on board vessel -- } (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 built under Special Survey. Materials & Workmanship good. Hydraulic tests satisfactory. They are securely fixed in the vessel & have been examined under steam & safety valves adjusted.

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

William P. Butler
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUE. 30 JUL 1929
 Assigned See Report attached