

REPORT ON BOILERS.

No. 84941

12 NOV 1929

Received at London Office

NEWCASTLE-ON-TYNE

19. Date of writing Report

102

When handed in at Local Office

11.11.1929 Port of

No. in Survey held at

Date, First Survey

8 May

Last Survey

6 Nov 1929

Book.

on the

Wallsend-on-Tyne
New Steel S.S. "Synemouth"

(Number of Visits

Gross

4409

Net

2723

ester

Built at

By whom built

Northumberland SBC Ltd

Yard No.

When built

1929

Engines made at

Wallsend

By whom made

North Eastern Marine & Cy Ltd

Engine No.

When made

1929

Boilers made at

Wallsend

By whom made

North Eastern Marine & Cy Ltd

Boiler No.

When made

1929

nominal Horse Power

35 HP

Owners

Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appleby Iron Works & Steel Company of Scotland

(Letter for Record

3

Total Heating Surface of Boilers

4968 sq ft

Is forced draught fitted

No

Coal or Oil fired

coal

No. and Description of Boilers

Two single ended

Working Pressure

225 lbs

Tested by hydraulic pressure to

388 lbs

Date of test

11.8.29

No. of Certificate

374

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

54.5 sq ft

No. and Description of safety valves to each boiler

Two spring loaded

Area of each set of valves per boiler

per Rule 12.94

as fitted 11.13

Pressure to which they are adjusted

230 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

4'-0"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

2'-4"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

15'-5 1/2" 16"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

29 to 33 tons

Thickness

1 1/2"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

DR

Long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 9/16"

Pitch of rivets

4 1/4"

10 5/8"

Percentage of strength of circ. end seams

plate 63.7

rivets 46.4

Percentage of strength of circ. intermediate seam

plate

85.7

Percentage of strength of longitudinal joint

plate 85.7

rivets 84.6

Working pressure of shell by Rules

22 1/2 lbs

Thickness of butt straps

outer 1 3/16"

inner 1 5/16"

No. and Description of Furnaces in each Boiler

Three corrugated (brighton)

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

3'-9 3/4"

Length of plain part

top 1 3/8"

bottom 1 3/8"

Thickness of plates

crow 1 3/8"

bottom 1 3/8"

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 1/2"

Pitch of stays

1'-10 1/2" x 1'-9 3/4"

How are stays secured

to nuts

Working pressure by Rules

226 lbs

Tube plates: Material

front Steel

back Steel

Tensile strength

26 to 30 tons

Thickness

2 1/2"

1 1/2"

Mean pitch of stay tubes in nests

10 1/8"

Pitch across wide water spaces

10 3/8"

Working pressure

front 231 lbs

back 238.5 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

29 to 33 tons

Depth and thickness of girder

at centre

2 @ 11" x 1 1/8"

Length as per Rule

3'-0"

Distance apart

11'8"

No. and pitch of stays

in each

3 @ 8 1/8"

Working pressure by Rules

233 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

9 5/8"

Back

25 3/8"

Top

25 3/8"

Bottom

1"

Pitch of stays to ditto: Sides

8 1/8" x 11"

Back

9" x 10 1/8"

Top

8 1/8" x 11 1/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

226 lbs

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/2"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

1 5/16"

Pitch of stays at wide water space

14 1/2" x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

248 lbs

Main stays: Material

Steel

Tensile strength

29 to 33 tons

Diameter

At body of stay, or Over threads

3 1/2"

No. of threads per inch

6

Area supported by each stay

489 sq in

Working pressure by Rules

229 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

94.5 sq in

Working pressure by Rules 226 lbs Are the stays drilled at the outer ends no Margin stays: Diameter 2 1/8"
 No. of threads per inch 9 Area supported by each stay 112.5 sq" Working pressure by Rules 253 lbs
Tubes: Material S.D. Steel External diameter 3 1/4" Thickness 1/16 1/2" No. of threads per inch 9
 Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 253 lbs Manhole compensation: Size of opening in Reg
 shell plate 1-9 x 1-5 Section of compensating ring 12 1/2 x 1 1/2 No. of rivets and diameter of rivet holes 36 @ 7/16"
 Outer row rivet pitch at ends 10 3/4" Depth of flange if manhole flanged 4 1/2" **Steam Dome:** Material none
 Tensile strength 48,000 Thickness of shell 1/16" Description of longitudinal joint
 Diameter of rivet holes 7/16" Pitch of rivets 4" Percentage of strength of joint 100%
 Internal diameter 24" Working pressure by Rules 253 lbs Thickness of crown 1/16" No. and diameter of
 stays 12 Inner radius of crown 12" Working pressure by Rules 253 lbs
 How connected to shell by stays Size of doubling plate under dome 12" x 12" Diameter of rivet holes and pitch
 of rivets in outer row in dome connection to shell 7/16" @ 4"

Type of Superheater North Eastern Schmitz Type Manufacturers of Tubes Yates & Co
 Number of elements 90 Material of tubes S.D. Steel Steel castings Yardingham Steel Coy.
 Material of headers W.P. Steel Tensile strength 96 to 30 tons 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 3.1416 Are the safety valves fitted with easing gear yes Working pressure as per
 Rules 225 lbs Pressure to which the safety valves are adjusted 230 lbs Hydraulic test pressure:
 tubes 1500 lbs. castings & forgings 645 lbs. and after assembly in place 500 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 NORTH EASTERN MARINE ENGINEERING CO., LTD.
 The foregoing is a correct description,
 per J.P. SECRETARY, Manufacturer.
 Dates of Survey { During progress of work in shops - - }
 while building { During erection on board vessel - - }
 Are the approved plans of boiler and superheater forwarded herewith yes
 (If not state date of approval.)
 Total No. of visits 1

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. Bates.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 15 NOV 1929
 Assigned See 6 up attached
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