

REPORT ON BOILERS.

No. 85970

Received at London Office 17 JUL 1930

Date of writing Report

19

When handed in at Local Office

15/11/30 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Wallsend-on-Tyne.

Date, First Survey 13 Feb

Last Survey 8 July 1930

on the

New Steel S.S. Pendopo

(Number of Visits)

Gross
Tons
Net

Master

Built at

Yssel.

By whom built

Van der Giesen & Zonn

Yard No. 609

When built 1930

Engines made at

Wallsend

By whom made

North Eastern Har & Co Ltd.

Engine No. 2433

When made 1930

Boilers made at

Wallsend

By whom made

North Eastern Har & Co Ltd.

Boiler No. 2433

When made 1930

Nominal Horse Power

548

Owners

Port belonging to

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

Manufacturers of Steel

Steel Company of Scotland Ltd.

(Letter for Record S.)

Total Heating Surface of Boilers

388 sq. ft.

Is forced draught fitted

yes

Coal or Oil fired

oil

No. and Description of Boilers

Three single ended.

3SB.

Working Pressure

225 lbs.

Tested by hydraulic pressure to

388 lbs.

Date of test

29-5-30

No. of Certificate

468.

Can each boiler be worked separately

yes.

Area of Firegrate in each Boiler

oil fuel

No. and Description of safety valves to each boiler

Two spring loaded.

Area of each set of valves per boiler

per Rule

as fitted

16 sq. ft.

Pressure to which they are adjusted

225 lbs.

Are they fitted with easing gear

yes

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

✓

Smallest distance between boilers or uptakes and bunkers or woodwork

8'-0"

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

yes

Largest internal dia. of boilers

14'-2 7/8"

Length

12'-0"

Shell plates: Material

Steel

Tensile strength

29 to 33 tons

Thickness

1 1/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.P.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

long. seams

1 5/8"

Pitch of rivets

4 1/2"

10 1/16"

Percentage of strength of circ. end seams

plate

rivets

64

Percentage of strength of circ. intermediate seam

plate

rivets

✓

Percentage of strength of longitudinal joint

plate

rivets

84

Working pressure of shell by Rules

251 lbs.

Thickness of butt straps

outer

inner

1 1/4"

No. and Description of Furnaces in each Boiler

Three corrugated, Deighton

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

3'-0 15/16"

Length of plain part

top

bottom

✓

Thickness of plates

crown

bottom

19 3/8"

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

235 lbs.

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/32"

Pitch of stays

1'-8" x 1'-8"

How are stays secured

D. nuts

Working pressure by Rules

246.5 lbs.

Tube plates: Material

front

back

Steel

Tensile strength

26 to 30 tons

Thickness

25 3/32"

front

back

410 lbs.

249 lbs.

Mean pitch of stay tubes in nests

9 3/8"

Pitch across wide water spaces

14 1/2" x 7 1/2"

Working pressure

front

back

410 lbs.

249 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

29 to 33 tons

Depth and thickness of girder

at centre

2 @ 9 x 7 1/8"

Length as per Rule

2'-9"

Distance apart

8 3/4"

No. and pitch of stays

in each

2 @ 9"

Working pressure by Rules

238 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

25 3/32"

Back

25 3/32"

Top

25 3/32"

Bottom

1 1/8"

Pitch of stays to ditto: Sides

10 1/4" x 8 3/4"

Back

9" x 8 3/4"

Top

10 1/4" x 8 3/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

238 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

25 3/32"

Thickness

1 3/16"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

25 3/32"

Pitch of stays at wide water space

14 1/2" x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

266 lbs.

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter

At body of stay,

or

Over threads

3 3/8"

No. of threads per inch

6

Area supported by each stay

400 sq. in.

Working pressure by Rules

291 lbs.

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Thickness

25 3/32"

Diameter

At turned off part,

or

Over threads

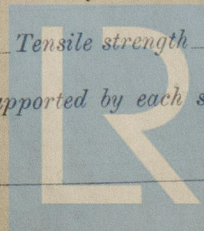
1 3/4"

No. of threads per inch

9

Area supported by each stay

48 3/4"



Working pressure by Rules 230 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" Over threads }
No. of threads per inch 9 Area supported by each stay 104.6" Working pressure by Rules 236 lbs
Tubes: Material Steel External diameter { Plain 8 1/8" Stay 8 1/8" Thickness 3/8 + 1/16" No. of threads per inch 9
Pitch of tubes 32 1/4" x 3 3/4" Working pressure by Rules WWS 953 lbs Manhole compensation: Size of opening in shell plate 1-9 1/8" x 1-5 1/8" Section of compensating ring 13 1/2" x 1 9/16" No. of rivets and diameter of rivet holes 32 @ 1 3/8"
Outer row rivet pitch at ends 11 1/4" Depth of flange if manhole flanged 4 1/2" 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 none 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 22 inclusive for boilers been complied with

THE NORTH EASTERN MARINE ENGINEERING CO., LTD.

The foregoing is a correct description,

SECRETARY

Manufacturer.

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

See Index Report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes

Total No. of visits

Is this Boiler a duplicate of a previous case

If so, state Vessel's name and Report No.

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 have been efficiently installed & fired in the vessel, examined under steam & safety valves adjusted.

Survey Fee ... £

Travelling Expenses (if any) £

When applied for,

19

When received,

19

William Butler

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 22 JUL 1930

Assigned

See Rot. F.E. 19474



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