

REPORT ON BOILERS.

No. 81050

Date of writing Report

192

When handed in at Local Office

2 MAR 1927

Received at London Office

31 MAR 1927

Port of

NEWCASTLE-ON-TYNE.

No. in Survey held at

g. Book.

on the

Wallsend
New Steel M. V. Marpessa

Date, First Survey

14 May 1925

Last Survey

17 March 1927

(Number of Visits)

Gross
Tons
Net

Master

Built at Rotterdam

By whom built

Rotterdamsche Droogdok

Yard No. 98

When built 1927

Engines made at

Newcastle-on-Tyne

By whom made

H. E. Mannie Engineering Co. Ltd.

Engine No. 2603

When made 1927

Boilers made at

Newcastle-on-Tyne

By whom made

H. E. Mannie Engineering Co. Ltd.

Boiler No. 2603

When made 1927

Nominal Horse Power

1204

Owners

Rotterdamsche Droogdok Maats.

Port belonging to

Gravenhage

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Dr. Colville & Sons Ltd.

(Letter for Record

S. 11)

Total Heating Surface of Boilers

2372 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

Two Single Ended Cylindrical

Working Pressure

180 lbs.

Tested by hydraulic pressure to

320 lbs.

Date of test

22.7.26

No. of Certificate

116

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

30 sq ft

No. and Description of safety valves to each boiler

Two Spring-loaded

Area of each set of valves per boiler

per Rule

9.02 sq ft

as fitted

14.14 sq ft

Pressure to which they are adjusted

180 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

On main Deck peers

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

2'-10"

Is the bottom of the boiler insulated

Yes

Smallest internal dia. of boilers

10'-6"

Length

10'-8"

Shell plates: Material

Steel

Tensile strength

28-32 Tons

Thickness

7/8"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

Double

seams

Double

Diameter of rivet holes in

circ. seams

1 1/16"

long. seams

3/32"

Pitch of rivets

3 1/2"

6 3/8"

Percentage of strength of circ. end seams

plate

69.6

rivets

47.5

Percentage of strength of circ. intermediate seam

plate

100

rivets

Percentage of strength of longitudinal joint

plate

85.9

rivets

94.3

combined

90.6

Working pressure of shell by Rules

180 lbs.

Thickness of butt straps

outer 1 1/16"

inner 1 1/16"

No. and Description of Furnaces in each Boiler

Two Deighton Morrison corrugated

Material

Steel

Tensile strength

26-30 Tons

Smallest outside diameter

33 5/8"

Length of plain part

top

bottom

Thickness of plates

crown

2"

bottom

1 1/16"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

185 lbs.

Plates in steam space: Material

Steel

Tensile strength

26-30 Tons

Thickness

1"

Pitch of stays

17 1/2" x 13 1/2"

Are stays secured

Double nuts

Working pressure by Rules

188 lbs.

Plates: Material

front

back

Steel

Steel

Tensile strength

26-30 Tons

26-30 Tons

Thickness

1 1/4"

1 1/4"

Pitch of stay tubes in nests

7 3/8"

Pitch across wide water spaces

14"

Working pressure

front 195 lbs

back 305 lbs

Dimensions to combustion chamber tops: Material

Steel

Tensile strength

28-32 Tons

Depth and thickness of girder

Centre

7"-1 1/8"

Length as per Rule

27"

Distance apart

8 3/4"

No. and pitch of stays

Each

Two

7 3/8"

Working pressure by Rules

193 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 Tons

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

8 3/4" x 7 3/8"

Back

8 3/4" x 8"

Top

8 3/4" x 7 3/8"

Are stays fitted with nuts or riveted over

Riveted over

Working pressure by Rules

190 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26-30 Tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26-30 Tons

Thickness

1"

Pitch of stays at wide water space

14"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

298 lbs.

Main stays: Material

Steel

Tensile strength

28-32 Tons

At body of stay

2 1/4"

No. of threads per inch

Six

Area supported by each stay

236.25 sq ft

Over threads

2 1/4"

Screw stays: Material

Steel

Tensile strength

26-30 Tons

Working pressure by Rules

181 lbs.

At turned off part

1 1/2"

No. of threads per inch

Nine

Area supported by each stay

68.9 sq ft

Over threads

1 1/2"

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Working pressure by Rules *182 lbs* Are the stays drilled at the outer ends *h.* Margin stays: Diameter *1 3/4"*
 No. of threads per inch *nine* Area supported by each stay *90 sq"* Working pressure by Rules *202 lbs.*
 Tubes: Material *Iron* External diameter *2 3/4"* Thickness *1/8"* No. of threads per inch *nine*
 Pitch of tubes *4" x 3 7/8"* Working pressure by Rules *plain 275 lbs stay 199 lbs.* Manhole compensation: Size of opening
 shell plate *20" x 16"* Section of compensating ring *32 1/2" x 28 1/2" x 1"* No. of rivets and diameter of rivet holes *32 - 1 3/16"*
 Outer row rivet pitch at ends *9"* Depth of flange if manhole flanged *3 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
 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
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure
 tubes, castings and after assembly in place Are drain cocks or valves
 to free the superheater from water where necessary

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,

Dates of Survey
 while building
 During progress of work in shops --
 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

Yes
Please to Newcastle for duplicate

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These Boilers have been built under Special Survey. Materials & Workman good. Hydraulic tests satisfactory. They have been efficiently installed & fired in the vessel & examined under steam & safety valves adjusted.

Survey Fee ... : When applied for, 192
 Travelling Expenses (if any) *See Machinery Report* : When received, 192

William Bates

Engineer Surveyor to Lloyd's Register of Ships

Committee's Minute **FRI 4 MAR 1927**

Assigned

*See other report
 Nwc 81050*



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