

REPORT ON BOILERS.

No. 14415

Received at London Office

25 JUL 1925

Date of writing Report 20.7.1925 When handed in at Local Office

192

Port of Rotterdam

No. in Survey held at
Reg. Book.

Rotterdam

Date, First Survey 23.2.25

Last Survey 13.4.1925

(Number of Visits 13)

Gross
Tons
Net

on the Steel Twin Screw Steamer "MARTICA"

Master

Built at Rotterdam By whom built Rott Drogdoh My Yard No. 192 When built 1925

Engines made at

Rotterdam

By whom made

Rott Drogdoh My

Engine No. 110.111

When made 1925

Boilers made at

Rotterdam

By whom made

Rott Drogdoh My

Boiler No. 304.505

When made 1925

Nominal Horse Power

206

Owners

Curacaoische Scheep My

Port belonging to

Willemstad

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

Manufacturers of Steel

Messrs William Beardmore & Co Ltd

(Letter for Record 3)

Total Heating Surface of Boilers

4160 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

2 single ended multitubular Mannesmann

Working Pressure

180

Tested by hydraulic pressure to

320 lb

Date of test

23.4.25

No. of Certificate

819

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 high lifting spring loaded

Area of each set of valves per boiler

per Rule

as fitted 70 sq ft

Pressure to which they are adjusted

100 lb

Are they fitted with easing gear

Yes

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

No donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork

Over 5' 0"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

No tank

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

13' 0"

Length

12' 3"

Shell plates: Material

S. M. Steel

Tensile strength

20.32 tons

Thickness

1 1/2"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end lap 2 x 2 w

long. seams

Double butt 3 x 2 w

Diameter of rivet holes in

circ. seams 1 1/16"

long. seams 1 1/16"

Pitch of rivets

3 1/16"

3 13/16"

Percentage of strength of circ. end seams

plate 62.9%

rivets 52.5%

Percentage of strength of circ. intermediate seam

plate 65.4%

Percentage of strength of longitudinal joint

plate 80%

combined 80.2%

Working pressure of shell by Rules

195 lb

Thickness of butt straps

outer 7/8"

inner 1"

No. and Description of Furnaces in each Boiler

2 Morrisons patent

Material

S. M. Steel

Tensile strength

26.30 tons

Smallest outside diameter

3' 11 1/8"

Length of plain part

top 2'

bottom 2'

Thickness of plates

crown 3/4"

bottom 1 1/2"

Description of longitudinal joint

Welded

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

None

Working pressure of furnace by Rules

200 lb

End plates in steam space: Material

S. M. Steel

Tensile strength

26.30 tons

Thickness

1/8"

Pitch of stays

17 x 16"

How are stays secured

Secured in plates and nutted outside

Working pressure by Rules

210 lb

Tube plates: Material

front S. M. Steel

back S. M. Steel

Tensile strength

26.30 tons

Thickness

13/16"

Pitch of stays

17 x 16"

Mean pitch of stay tubes in nests

8" - 12"

Pitch across wide water spaces

14 1/4"

Working pressure

front 195 lb

back 185 lb

Girders to combustion chamber tops: Material

S. M. Steel

Tensile strength

20.32 tons

Depth and thickness of girder

at centre 8 1/2" x 2 x 3/4"

Length as per Rule

2' 7 1/2"

Distance apart

8 1/2"

No. and pitch of stays

in each

2 x 10"

Working pressure by Rules

290 lb

Combustion chamber plates: Material

S. M. Steel

Tensile strength

26.30 tons

Thickness: Sides

7/8"

Back

3/4"

Top

7/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

9 1/4" x 10"

Back

8" x 7 1/4"

Top

10" x 8 1/2"

Are stays fitted with nuts or riveted over

Riveted over

Working pressure by Rules

207 lb

Front plate at bottom: Material

S. M. Steel

Tensile strength

26.30 tons

Thickness

13/16"

Lower back plate: Material

S. M. Steel

Tensile strength

26.30 tons

Thickness

3/4"

Pitch of stays at wide water space

15 1/8"

Are stays fitted with nuts or riveted over

Fitted with nuts

Working Pressure

312 lb

Main stays: Material

S. M. Steel

Tensile strength

26.30 tons

Diameter

At body of stay, 2 1/2"

Over threads 2 3/4"

No. of threads per inch

9

Area supported by each stay

2 1/2 sq ft

Working pressure by Rules

203 lb

Screw stays: Material

S. M. Steel

Tensile strength

26.30 tons

Diameter

At turned off part, 1 1/8"

Over threads 1 1/2"

No. of threads per inch

9

Area supported by each stay

9 sq. ft. 62.8 sq ft

Working pressure by Rules ^{185 lbs} 202 lbs Are the stays drilled at the outer ends *No* Margin stays: Diameter { At turned off part ^{1 5/8"} Over threads ^{1 3/4"} No. of threads per inch ⁹ 9 Area supported by each stay ^{840"} Working pressure by Rules ^{207 lbs} 207 lbs Tubes: Material *Steel* External diameter { Plain ^{2 1/4"} Stay ^{2 1/4"} Thickness ^{1/8"} No. of threads per inch ⁹ 9 Pitch of tubes ^{4"} 4 Working pressure by Rules ^{207 lbs} 207 lbs Manhole compensation: Size of opening in shell plate ^{10 5/4" x 16 5/4"} Section of compensating ring ^{8 1/4" x 1 1/8"} No. of rivets and diameter of rivet holes ^{42 @ 1 3/16"} Outer row rivet pitch at ends ^{4"} Depth of flange if manhole flanged ^{3 1/2"} Steam Dome: Material *Steel* 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 *✓* 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 23 inclusive for boilers been complied with *Yes*

The foregoing is a correct description,

Dates of Survey { During progress of work in shops - - { ^{14/12 23/12 30/12 13/13 20/13 27/13 4/14 11/14 18/14} 14/12 23/12 30/12 13/13 20/13 27/13 4/14 11/14 18/14 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *✓* while building { During erection on board vessel - - - { ^{29/12 23/1} 29/12 23/1 Total No. of visits ¹³ 13

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have been built under Special Survey, material tested as required and workmanship good, tested by hydraulic pressure as required by the Rules and found sound and tight.*

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

Committee's Minute *TUES. 28 JUL 1925*

Assigned

Rpt. 13.

REF

Date of writing

No. in Survey Reg. Book.

on the

Built at

Owners *✓*

Electric Light

System of Dis

Pressure of sup

Direct or Alter

If alternating cu

Has the Automa

Generators, do

are they over com

Where more than

series with each sh

Are all terminals

or short circuited

Position of Gen

is the ventilation

if situated near

1 1/2 inch long

are their axis of

Earthing, are th

their respective ge

Main Switch B

a fuse on each ins

Switchboard, &

are they protected

woodwork or other

are they constructed

permanently high

insulated from the

frame effectively ea

Yes

bars *✓*

Main Switchgear

generator

Group

Instruments on

Earth Testing, s

Switches, Circuit

Section and Dist

J. J. Oetwa
Engineer Surveyor to Lloyd's Register of Shipping.



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