

## REPORT ON BOILERS.

No. 20158

Received at London Office 14 MAR 1931

Date of writing Report 21-2-1931 When handed in at Local Office

192

Port of

Rotterdam

No. in Survey held at

Reg. Book.

Rotterdam

Date, First Survey 23-11-29

Last Survey 13-7-1930

on the

Donkey boiler shell screw M<sup>o</sup> MIJDRECHT

(Number of Visits 13)

Gross 7493  
Tons Net

Master

Built at

Rotterdam

By whom built

Rott Drooga Ma

Yard No. 172

When built 1931

Engines made at

Glasgow

By whom made

Holland &amp; Wolff

Engine No. 4265

When made 1930

Boilers made at

Rotterdam

By whom made

Rott Drooga Ma

Boiler No. 504

When made 1930

Nominal Horse Power

652

Owners

Stoom Ma<sup>o</sup> "De Maas"

Port belonging to

Rotterdam

MULTITUBULAR BOILERS ~~MADE, MANUFACTURED OR~~ DONKEY.Manufacturers of Steel Boilers ~~Verenigde Stahlwerke A.G. Stahlwerke Thyssen~~

(Letter for Record 5)

Total Heating Surface of Boilers

2052 sq

Is forced draught fitted

Coal or Oil fired

Oil

No. and Description of Boilers

One single ended multitubular marine

Working Pressure

142 lbs

Tested by hydraulic pressure to

263 lbs

Date of test

3-7-30

No. of Certificate

935

Can each boiler be worked separately

142 lbs

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2. Spring loaded

Area of each set of valves per boiler

per Rule

as fitted

19.24 sq

Pressure to which they are adjusted

142 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

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

2 in top of Motor room

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

13' 2"

Length

12' 3"

Shell plates: Material

S.M. Steel

Tensile strength

44-51 kg/cm<sup>2</sup>

Thickness

22.5 mm

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end lap &amp; rivets

long. seams

Double butt 3 x riv

Diameter of rivet holes in

circ. seams

25 mm

Pitch of rivets

80.2 mm

Percentage of strength of circ. end seams

plate

68.8%

rivets

55%

Percentage of strength of circ. intermediate seam

plate

-

rivets

-

Percentage of strength of longitudinal joint

plate

85.4%

rivets

97%

combined

89.4%

Working pressure of shell by Rules

10.4 kg/cm<sup>2</sup>

Thickness of butt straps

outer

17 mm

inner

20 mm

Material

S.M. Steel

No. and Description of Furnaces in each Boiler

two mounins patent

Tensile strength

41-47 kg/cm<sup>2</sup>

Smallest outside diameter

1092.4 mm

Length of plain part

top

-

bottom

-

Thickness of plates

crown

12.7 mm

bottom

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules

11.4 kg/cm<sup>2</sup>

End plates in steam space: Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

28 mm

Pitch of stays

508 x 430 mm

How are stays secured

Screwed in plates and nutted outside

Working pressure by Rules

10.3 kg/cm<sup>2</sup>

Tube plates: Material

front

S.M. Steel

back

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

17.5 mm

Mean pitch of stay tubes in nests

324 x 216 mm

Pitch across wide water spaces

380 mm

Working pressure

front

10 kg/cm<sup>2</sup>

back

-

Girders to combustion chamber tops: Material

S.M. Steel

Tensile strength

44-51 kg/cm<sup>2</sup>

Depth and thickness of girder

at centre

228 x 2 x 18 mm

Length as per Rule

914 mm

Distance apart

240 mm

No. and pitch of stays

in each

3 &amp; 2

220 mm

Working pressure by Rules

10.35 kg/cm<sup>2</sup>

Combustion chamber plates: Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness: Sides

16 mm

Back

18 mm

Top

16 mm

Bottom

18 mm

Pitch of stays to ditto: Sides

228 x 240

Back

240 x 219

Top

228 x 240

Are stays fitted with nuts or riveted over

Yes

Working pressure by Rules

10 kg/cm<sup>2</sup>

Front plate at bottom: Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

17.5 mm

Lower back plate: Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

17 mm

Pitch of stays at wide water space

380 mm

Are stays fitted with nuts or riveted over

Riveted over

fitted with nuts

made

Working Pressure

16.4 kg/cm<sup>2</sup>

Main stays: Material

S.M. Steel

Tensile strength

44-51 kg/cm<sup>2</sup>

Diameter

At body of stay,

63 mm

or

Over threads

40 mm

No. of threads per inch

9

Area supported by each stay

218440 mm<sup>2</sup>

Working pressure by Rules

11.5 kg/cm<sup>2</sup>

Screw stays: Material

S.M. Steel

Tensile strength

41-47 kg/cm<sup>2</sup>

Diameter

At turned off part,

35 mm

or

Over threads

38 mm

No. of threads per inch

9

Area supported by each stay

54312 mm<sup>2</sup>

Working pressure by Rules *10.4 1/2* Are the stays drilled at the outer ends *Yes* Margin stays: Diameter { At turned off part, *38 mill*  
Over threads *41.5 mill*

No. of threads per inch *9* Area supported by each stay *68766 mds* Working pressure by Rules *10 1/2*

Tubes: Material *Steel* External diameter { Plain *3"* Thickness *5/16" & 1/4"* No. of threads per inch *9*  
Stay *3"*

Pitch of tubes *108 mill* Working pressure by Rules *13 1/2* Manhole compensation: Size of opening in  
shell plate *304 x 406* Section of compensating ring *194.5 x 19 mill* No. of rivets and diameter of rivet holes *40 à 25 mill*

Outer row rivet pitch at ends *-* Depth of flange if manhole flanged *-* Steam Dome: Material *4. M. Steel*

Tensile strength *44-51 1/2* Thickness of shell *13 mill* Description of longitudinal joint *No joint*

Diameter of rivet holes *31 mill* Pitch of rivets *129 mill* Percentage of strength of joint { Plate *-*  
Rivets *-*

Internal diameter *420 mill* Working pressure by Rules *-* Thickness of crown *13 mill* No. and diameter of  
stays *None* Inner radius of crown *560* Working pressure by Rules *-*

How connected to shell *Riveted* Size of doubling plate under dome *194.5 x 19 mill* Diameter of rivet holes and pitch  
of rivets in outer row in dome connection to shell *21 mill 129 mill*

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,

Manufacturer.

Dates of Survey { During progress of *1929 23/11 28/11 1930 1/12 14/12 20/12* Are the approved plans of boiler and superheater forwarded herewith *Returned*  
work in shops - - -  
while { During erection on *15/12 15/12 15/12 15/12 15/12 15/12*  
building { board vessel - - -  
Total No. of visits *14*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been made in accordance to the approved plans, Secretary's letters and the Society's Rules. Material tested as required and workmanship good.*

Survey Fee ... *164.40* When applied for, *6/5 1931*  
Travelling Expenses (if any) £ *-* When received, *21/3/31 1931*

Committee's Minute

TUE. 24 MAR 1931

TUE. 6 OCT 1931

Assigned

*See F.E. Rpt.*

*Y. Y. Oetiva*  
Engineer-Surveyor to Lloyd's Register of Shipping.



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Foundation