

# REPORT ON BOILERS.

No. 28970<sup>e</sup>

17 SEP 1945

Received at London Office

Date of writing Report 11-12-1940 When handed in at Local Office

Port of Rotterdam

Survey held at

Rotterdam

Date, First Survey

Last Survey

1940

on the

MV. "PAPENDRECHT"

(Number of Visits)

Tons  
Gross  
Net

Built at

Rotterdam

By whom built

Rott. Droogd. Maatsch. Yard No. C220

When built 1939-40

Lines made at

Stengels

By whom made

Gebr. Stok

Engine No. 4377

When made 1940

Boilers made at

Rotterdam

By whom made

Rott. Droogd. Maatsch.

R.D.M. No. 578

Boiler No. 1027

When made 1940

Indicated Horse Power

633

Owners

Stoom. Maatsch. de Haas

Port belonging to

Rotterdam

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

Manufacturers of Steel

Total Heating Surface of Boilers

294,05 m<sup>2</sup> = 3170 ft<sup>2</sup>

Is forced draught fitted

Yes

(Letter for Record

S

Coal or Oil fired

oil / exhaust gasses

Description of Boilers

one, one furnace cylindrical boiler

Working Pressure

12,65 kg/cm<sup>2</sup>

Tested by hydraulic pressure to

22,5 kg/cm<sup>2</sup>

Date of test

No. of Certificate

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

Lockburn High lifting

See here 108484

Area of each set of valves per boiler

per Rule 6570 in 14L

Pressure to which they are adjusted

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

✓

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

3960 mm

Length

3100 mm

Shell plates: Material

S.H. steel

Tensile strength

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

Thickness

20 mm

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

inter.

double riv

Circ. seams

double riv

Diameter of rivet holes in

circ. seams

20 mm

long. seams

20 mm

Pitch of rivets

052

174

Percentage of strength of circ. end seams

plate 67,1

rivets 42,3

Percentage of strength of circ. intermediate seam

plate ✓

rivets ✓

Percentage of strength of longitudinal joint

plate 83,9

rivets 96,90

combined 87,2

Working pressure of shell by Rules

12,01 kg/cm<sup>2</sup>

Thickness of butt straps

outer 22 mm

inner 25 mm

No. and Description of Furnaces in each Boiler

One Morrison

Material

S.H. steel

Tensile strength

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

Smallest outside diameter

930

Length of plain part

top ✓

bottom ✓

Thickness of plates

crowns

12 mm

bottom

Description of longitudinal joint

Welded

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

✓

Working pressure of furnace by Rules

12,9 kg/cm<sup>2</sup>

Shell plates in steam space: Material

S.H. steel

Tensile strength

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

Thickness

20,5 mm

Pitch of stays

475 x 575 mm

How are stays secured

with nuts

Working pressure by Rules

12,90 kg/cm<sup>2</sup>

Shell plates: Material

front S.H. steel

back " " "

Tensile strength

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

Thickness

26 mm

21 1/2 - 26 mm

Minimum pitch of stay tubes in nests

104 x 279 mm

Pitch across wide water spaces

304 mm

Working pressure

front 21,3 kg/cm<sup>2</sup>

back 15,5 "

Dimensions of girders to combustion chamber tops: Material

✓

Tensile strength

✓

Depth and thickness of girder

Centre

✓

Length as per Rule

✓

Distance apart

✓

No. and pitch of stays

Each

✓

Working pressure by Rules

✓

Combustion chamber plates: Material

S.H. steel

Tensile strength

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

Thickness: Sides

25,5 mm

Back

10,5 mm

Top

25,5 mm

Bottom

25,5 mm

Pitch of stays to ditto: Sides

✓

Back

200 x 220 mm

Top

✓

Are stays fitted with nuts or riveted over

both

Working pressure by Rules

20,5-12,7 kg/cm<sup>2</sup>

Front plate at bottom: Material

S.H. steel

Tensile strength

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

Thickness

26 mm

Lower back plate: Material

S.H. steel

Tensile strength

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

Thickness

26 mm

Pitch of stays at wide water space

425 mm

Are stays fitted with nuts or riveted over

nuts

Working Pressure

20,7 kg/cm<sup>2</sup>

Main stays: Material

S.H. steel

Tensile strength

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

At body of stay, or

Over threads

3"

No. of threads per inch

9

Area supported by each stay

510 x 475 mm

Working pressure by Rules

12,65 kg/cm<sup>2</sup>

Screw stays: Material

S.H. steel

Tensile strength

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

At turned off part, or

Over threads

1 1/2"

No. of threads per inch

9

Area supported by each stay

200 x 220 mm

Working pressure by Rules *11,9 kg/cm<sup>2</sup>* Are the stays drilled at the outer ends *no* Margin stays: Diameter *17/16"*  
 No. of threads per inch *9* Area supported by each stay *312 x 220 mm<sup>2</sup>* Working pressure by Rules *14 kg/cm<sup>2</sup>*  
 Tubes: Material External diameter *30-64 mm* Thickness *2,94-3,6 mm* No. of threads per inch *9*  
 Pitch of tubes *92 x 92 mm* Working pressure by Rules *16 kg/cm<sup>2</sup>* Manhole compensation: Size of opening *410 x 520 mm*  
 shell plate Section of compensating ring *740 x 840 x 20 mm* No. of rivets and diameter of rivet holes *46 x 20 mm*  
 Outer row rivet pitch at ends *174 mm* Depth of flange if manhole flanged *✓* Steam Dome: Material *✓*  
 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 of stays *✓*  
 How connected to shell *✓* Inner radius of crown *✓* Working pressure by Rules *✓*  
 Size of doubling plate under dome *✓* Diameter of rivet holes in dome connection to shell *✓*

Type of Superheater *✓* Manufacturers of *✓*  
 Number of elements *✓* Material of tubes *✓* Internal diameter and thickness of tubes *✓*  
 Material of headers *✓* Tensile strength *✓* Thickness *✓* Can the superheater 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 *✓* forgings and castings *✓* and after assembly in place *✓* Are drain 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 foregoing is a correct description,  
*[Signature]* Manufacturer

Dates of Survey *Various dates* Are the approved plans of boiler and superheater forwarded herewith *✓*  
 while building *during 1939 and 1940* Total No. of visits *✓*

Is this Boiler a duplicate of a previous case *no* If so, state Vessel's name and Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been made under special survey as per Society's Rules, approved plans and Secretary's letters, materials tested as required and workmanship found good.*

Survey Fee ... *2.52.00* When applied for, *19.12 1940*  
 Travelling Expenses (if any) *10.00* When received, *19*

Committee's Minute *FRI. 18 JAN 1946*  
 Assigned *See Note 15048p*

