

## REPORT ON BOILERS.

No. 25678

Received at London Office JUN 14 1937

Date of writing Report 24-3-1937 When handed in at Local Office

192

Port of Rotterdam

No. in Survey held at Rotterdam  
Reg. Book.

Date, First Survey 18.9.36 Last Survey 23-1-1937

(Number of Visits 10)

Tons { Gross  
Net

on the Donkey boiler MV, NEDERLAND

Master Built at Schiedam By whom built Wilton, Tienwoord Yard No. 660 When built 1937

Engines made at Schiedam By whom made Wilton, Tienwoord Engine No. When made 1937

Boilers made at Rotterdam By whom made Hott. Droogd. My Boiler No. 540 When made 1937

Nominal Horse Power Owners Port belonging to

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

Manufacturers of Steel Britannia Works (Letter for Record S)

Total Heating Surface of Boilers 3500 sq ft Is forced draught fitted Coal or Oil fired Oil

No. and Description of Boilers One horizontal multitubular marine Working Pressure 14.06 kg/cm<sup>2</sup>

Tested by hydraulic pressure to 350 lb Date of test 23.1.37 No. of Certificate 988 Can each boiler be worked separately

Area of Firegrate in each Boiler L No. and Description of safety valves to each boiler 2 Spring loaded { P. 15.5 mm

Area of each set of valves per boiler { per Rule as fitted 80 mm diam Pressure to which they are adjusted 200 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 main boilers (motor vessel)

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 12 mm Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 4800 mm Length 3680 mm Shell plates: Material S.M. Steel Tensile strength 46-52 kg/cm<sup>2</sup>

Thickness 38 mm Are the shell plates welded or flanged No Description of riveting: circ. seams { end lap 2 x riveted

long. seams Double butt strap 3 x riveted Diameter of rivet holes in { circ. seams 38.5 mm Pitch of rivets { 110 mm

Percentage of strength of circ. end seams { plate 65% rivets 43.6% Percentage of strength of circ. intermediate seam { plate L rivets L

Percentage of strength of longitudinal joint { plate 85.2% rivets 86.4% combined 87.8% Working pressure of shell by Rules 15.2 kg/cm<sup>2</sup>

Thickness of butt straps { outer 30 mm inner 33 mm No. and Description of Furnaces in each Boiler Three Monson's patent

Material S.M. Steel Tensile strength 41-47 kg/cm<sup>2</sup> Smallest outside diameter 1183 mm

Length of plain part { top Thickness of plates { crown 165 mm Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 14.3 kg/cm<sup>2</sup>End plates in steam space: Material S.M. Steel Tensile strength 41-47 kg/cm<sup>2</sup> Thickness 31 mm Pitch of stays 460 mm

How are stays secured Screwed in plates with nuts outside Working pressure by Rules

Tube plates: Material { front S.M. Steel Tensile strength { 41-47 kg/cm<sup>2</sup> Thickness { 23 mmMean pitch of stay tubes in nests 291 x 186 Pitch across wide water spaces 370 mm Working pressure { front 14.8 kg/cm<sup>2</sup> back LGirders to combustion chamber tops: Material S.M. Steel Tensile strength 44-50 kg/cm<sup>2</sup> Depth and thickness of girder

at centre 240 x 20 x 2 mm Length as per Rule 840 mm Distance apart 200 mm No. and pitch of stays

in each 3 @ 200 mm Working pressure by Rules 17.8 kg/cm<sup>2</sup> Combustion chamber plates: Material S.M. SteelTensile strength 41-47 kg/cm<sup>2</sup> Thickness: Sides 18 mm Back 19 mm Top 18 mm Bottom 25 mm

Pitch of stays to ditto: Sides 185 x 200 Back 185 x 210 Top 200 x 240 Are stays fitted with nuts or riveted over Riveted over

Working pressure by Rules 14.6 kg/cm<sup>2</sup> Front plate at bottom: Material S.M. Steel Tensile strength 41-47 kg/cm<sup>2</sup>Thickness 23 mm Lower back plate: Material S.M. Steel Tensile strength 41-47 kg/cm<sup>2</sup> Thickness 22 mm

Pitch of stays at wide water space 386 x 185 mm Are stays fitted with nuts or riveted over Fitted with nuts

Working Pressure 15.4 kg/cm<sup>2</sup> Main stays: Material S.M. Steel Tensile strength 44-50 kg/cm<sup>2</sup>Diameter { At body of stay, 80 mm No. of threads per inch 6 Area supported by each stay 202000 mm<sup>2</sup>Working pressure by Rules 15.4 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, 1 1/2" No. of threads per inch 9 Area supported by each stay 38850



Working pressure by Rules *15.42* Are the stays drilled at the outer ends *no* Margin stays: Diameter { At turned off part, *1 7/8 - 1 5/8*  
 No. of threads per inch *9* Area supported by each stay *41410* Working pressure by Rules *15.42*  
 Tubes: Material *Steel* External diameter { Plain *2 3/4* Thickness *3.658* No. of threads per inch *9*  
 Stay *2 3/4* *7/16 - 3/8*  
 Pitch of tubes *98 x 99 mm* Working pressure by Rules *15.42* Manhole compensation: Size of opening in  
 shell plate *425 x 525 mm* Section of compensating ring *920 x 800 x 34* No. of rivets and diameter of rivet holes *36 à 38 1/2*  
 Outer row rivet pitch at ends *260* Depth of flange if manhole flanged *104 mm* 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

ROTTERDAMSCHЕ BOOBBROEK MAATSCHAPPEL  
 The foregoing is a correct description,  
*J. C. Ouders* Manufacturer.

Dates of Survey { During progress of work in shops - *28/10-13-19-20/11* 1936  
 while building { During erection on board vessel - *20/11-14-20/12* 1937  
 At the approved plans of boiler and superheater forwarded herewith Retained  
 (If not state date of approval.) *8.6.36*  
 Total No. of visits *10*

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

Survey Fee ... *280.00* When applied for, *14.30* 192  
 Travelling Expenses (if any) *1.00* When received, *30.4* 1937

Committee's Minute

FRI 18 JUN 1937

Assigned

*See J. E. M. R. W.*

*J. J. Ouders*  
 Engineer Surveyor to Lloyd's Register of Shipping.



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 Foundation