

## REPORT ON BOILERS.

No. 17050

Received at London Office 10 OCT 1928

Writing Report 3 Oct: 1928 When handed in at Local Office 192 Port of Rotterdam

in Rotterdam Date, First Survey 6 Dec: 27 Last Survey 10 Sept: 1928

on the S/S "Nieuwkerk" (Number of Visits 35) Tons {Gross 6279.73  
Net 3722.56

Built at Rotterdam By whom built P. Smit Jr. Yard No. 418 When built 1920

Engines made at Hoogelo By whom made Stork Engine No. 420 When made 1920

Boilers made at Rotterdam By whom made P. Smit Jr. Boiler No. 527/530 When made 1920

Indicated Horse Power 825 Owners Ver: Nederl. Schipv. Mij Port belonging to Gravenhage

11190

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

Manufacturers of Steel Mannesmannröhren Werke Abt. Schuler Krauss (Letter for Record 2)

Heating Surface of Boilers 10400 sq. ft. Is forced draught fitted Yes Coal or Oil fired Coal

Description of Boilers 4 Single Ended Marine Boilers Working Pressure 15.82 kg.

Tested by hydraulic pressure to 340 kg. Date of test 2-5-28 No. of Certificate 883 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 5.8 sq. m. No. and Description of safety valves to each boiler 2 Spring loaded, high lifted

Pressure of each set of valves per boiler 3830 mm. Pressure to which they are adjusted 225 kg. Are they fitted with easing gear Yes

Use of donkey boilers, state whether steam from main boilers can enter the donkey boiler Yes

Smallest distance between boilers or uptakes and bunkers or woodwork over 2 feet Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 1' 8" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 4600 mm. Length 3785 mm. Shell plates: Material S.M. steel Tensile strength 44-50 kg.

Thickness 39 mm. Are the shell plates welded or flanged Yes Description of riveting: circ. seams lap 1 x riv.

Seams Double butt 3x riv. Diameter of rivet holes in {circ. seams 40 mm.  
long. seams 40 mm. Pitch of rivets 110 mm.

Percentage of strength of circ. end seams {plate 66.1 %  
rivets 43.7 % Percentage of strength of circ. intermediate seam {plate 85.4 %  
rivets 88.1 %

Percentage of strength of longitudinal joint {plate 88.1 %  
combined 88.4 % Working pressure of shell by Rules 16.4 kg.

Thickness of butt straps {outer 30 mm.  
inner 33 mm. No. and Description of Furnaces in each Boiler 3 Morrison

Material S.M. steel Tensile strength 41-47 kg. Smallest outside diameter 1184 mm.

Length of plain part {top 10.5 mm.  
bottom 10.5 mm. Thickness of plates {crown 10.5 mm.  
bottom 10.5 mm. Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom 16.9 kg. Working pressure of furnace by Rules 16.9 kg.

Stays and plates in steam space: Material S.M. steel Tensile strength 41-47 kg. Thickness 33.5 mm. Pitch of stays 440x510 mm.

How are stays secured Thread in plates nuts inside washers & nuts outside Working pressure by Rules 16.7 kg.

Stays: Material {front S.M. steel  
back S.M. steel Tensile strength {41-47 kg.  
41-47 kg. Thickness {22.5 mm.  
22 mm.

Pitch of stay tubes in nests 210 mm. Pitch across wide water spaces 356 mm. Working pressure {front 18.1 kg.  
back 18.1 kg.

Stays to combustion chamber tops: Material S.M. steel Tensile strength 44-50 kg. Depth and thickness of girder

centre 2x18x260 mm. Length as per Rule 840 mm. Distance apart 215 mm. No. and pitch of stays

each 3x195 mm. Working pressure by Rules 17.3 kg. Combustion chamber plates: Material S.M. steel

Tensile strength 41-47 kg. Thickness: Sides 17 mm. Back 17.5 mm. Top 17 mm. Bottom 25.5 mm.

Pitch of stays to ditto: Sides 195x220 mm. Back 215x220 mm. Top 195x215 mm. Are stays fitted with nuts or riveted over all other stays

Working pressure by Rules 17.3 kg. Front plate at bottom: Material S.M. steel Tensile strength 41-47 kg.

Thickness 22.5 mm. Lower back plate: Material S.M. steel Tensile strength 41-47 kg. Thickness 22 mm.

Pitch of stays at wide water space 396 mm. Are stays fitted with nuts or riveted over fitted with nuts

Working Pressure 17.1 kg. Main stays: Material S.M. steel Tensile strength 44-50 kg.

Diameter {At body of stay, 72-78 mm.  
Over threads 76-82.5 mm. No. of threads per inch 9 Area supported by each stay 224400 mm.<sup>2</sup>

Working pressure by Rules 34-38 kg. Screw stays: Material iron Tensile strength 34-38 kg.

Diameter {At turned off part, 44.4-41.3 mm.  
Over threads 44.4-41.3 mm. No. of threads per inch 9 Area supported by each stay 47300 mm.<sup>2</sup>



Working pressure by Rules 17.3 kg. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 50.8 mm.  
No. of threads per inch 9 Area supported by each stay 64.210 mm<sup>2</sup> Working pressure by Rules 16.7 kg.  
Tubes: Material iron External diameter { Plain 76 mm. Thickness 4.06 mm. No. of threads per inch 9  
Pitch of tubes 105 mm. Working pressure by Rules 17.5 kg. Manhole compensation: Size of opening in  
shell plate 420 x 520 mm Section of compensating ring 810 x 910 mm x 39 mm No. of rivets and diameter of rivet holes 34 x 40 mm.  
Outer row rivet pitch at ends 274 mm. Depth of flange if manhole flanged 105 mm. Steam Dome: Material —  
Tensile strength — Thickness of shell — Description of longitudinal joint —  
Diameter of rivet holes — Pitch of rivets — Percentage of strength of joint { Plate —  
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 Schmidt Manufacturers of { Tubes Schmidt Heissdampf Gesellschaft  
Steel castings S  
Number of elements 4 x 05 Material of tubes steel Internal diameter and thickness of tubes 16 mm - 1.5 mm.  
Material of headers Cast Steel Tensile strength 44 kg. Thickness 35-15 mm Can the superheater be shut off and  
the boiler be worked separately Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes  
Area of each safety valve 2376 mm<sup>2</sup> Are the safety valves fitted with easing gear Yes Working pressure as per  
Rules — Pressure to which the safety valves are adjusted 22.5 kg. Hydraulic test pressure:  
tubes 50 atm., castings 50 atm. and after assembly in place 50 atm. Are drain cocks or valves fitted  
to free the superheater from water where necessary Yes  
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,  
MACHINE ASSEMBLY  
van P. SMIT, Jr.

Manufacturer

Dates of Survey { During progress of work in shops - - - Dec 6-7-14-20-28 Jan 2-3  
while building { During erection on board vessel - - - 10-11-24-31 Feb 6-14-29  
March 6-12-16-19-23-29 April Total No. of visits 35  
13-16-23-25 May 1-2-9-16-19-29  
June 1-26 Sept. 13-17-18  
Are the approved plans of boiler and superheater forwarded herewith 3-0-27  
(If not state date of approval.)

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers have been made  
under Special Survey in accordance with the approved plans.  
Society's rules and Secretary's letter. Material tested as  
required and workmanship good.

Survey Fee ... On machinery When applied for, 192  
Travelling Expenses (if any) £ report When received, 192

Committee's Minute

Assigned

TUE. 23 OCT 1928

See Report attached

Mr. M. M. M.  
Engineer Surveyor to Lloyd's Register of Shipping.



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Lloyd's Register  
Foundation