

# REPORT ON BOILERS.

No. 17446

MAY 1928

Received at London Office

Date of writing Report 4-5 1928 When handed in at Local Office

192

Port of Rotterdam

No. in Survey held at Rotterdam

Date, First Survey 24-8-27 Last Survey 24-4 1928

2375 on the two main boilers of the steel screw steamer, GAASTERLAND Tons {Gross 1091 Net 625

Boiler made at Rotterdam By whom built Deef & Co. Ryke & Co Yard No. When built 1915

Engines made at Rotterdam By whom made My. Fynewood Engine No. When made 1915

Boilers made at Rotterdam By whom made R'dam. Drydock Comp. Boiler No. 457/58 When made 1928

Minimum Horse Power Owners Scheepvaart & Steenkolen My. Port belonging to Rotterdam

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

Manufacturers of Steel Messrs. Viskovics Steel & Iron Works Corporation (Letter for Record S)

Total Heating Surface of Boilers 2 x 1446 sq feet Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers 2 multitubular marine boilers Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs Date of test 13-12-27 No. of Certificate 879 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 41 sq feet No. and Description of safety valves to each boiler 2 spring loaded

Area of each set of valves per boiler as fitted 10.6 sq feet Pressure to which they are adjusted 180 lbs 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 10 inches 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 12'-0" Length 10'-7" Shell plates: Material S.M. steel Tensile strength 20-32 tons

Thickness 1 1/32" Are the shell plates welded or flanged No Description of riveting: circ. seams 2 x riv. lap joint

Long. seams double butt 3 x riv Diameter of rivet holes in circ. seams 1 1/8" Pitch of rivets 3 1/2"

Percentage of strength of circ. end seams plate 68% rivets 51% Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 85% rivets 87.5% combined 87.5% Working pressure of shell by Rules 183 lbs

Thickness of butt straps outer 1 1/32" inner 1 1/32" No. and Description of Furnaces in each Boiler 2 Morrison's patent

Material S.M. steel Tensile strength 26-30 tons Smallest outside diameter 3' 9 3/16"

Length of plain part top bottom Thickness of plates crown 19/32" bottom 1/32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 190 lbs

Diagonal plates in steam space: Material S.M. steel Tensile strength 26-30 tons Thickness 7/8" Pitch of stays 16" x 17"

How are stays secured screwed in plates with nuts outside Working pressure by Rules 200 lbs

Wide plates: Material front S.M. steel back S.M. steel Tensile strength 26-30 tons Thickness 13/16" 15/16"

Span pitch of stay tubes in nests 13 1/2" x 8 1/2" Pitch across wide water spaces 13 3/4" Working pressure front 192 lbs back

Stays to combustion chamber tops: Material S.M. steel Tensile strength 20-32 tons Depth and thickness of girder

centre 8 1/4" x 2" x 7/8" Length as per Rule 2'-8" Distance apart 3' 8" No. and pitch of stays

each 8 x 8 Working pressure by Rules 210 lbs Combustion chamber plates: Material S.M. steel

Tensile strength 26-30 tons Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 1"

Pitch of stays to ditto: Sides 8" x 7 1/2" Back 7 1/2" x 7 1/2" Top 8" x 8" Are stays fitted with nuts or riveted over fitted with nuts

Working pressure by Rules 207 lbs 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 13 1/2" Are stays fitted with nuts or riveted over fitted with nuts

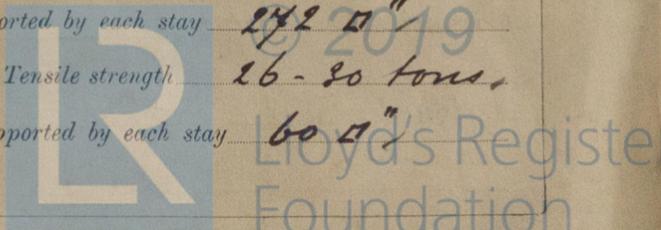
Working Pressure 190 lbs Main stays: Material S.M. steel Tensile strength 20-32 tons

Diameter At body of stay 2 1/2" No. of threads per inch 9 Area supported by each stay 242 sq in

Over threads 2 3/4" Working pressure by Rules 207 lbs Screw stays: Material S.M. steel Tensile strength 26-30 tons

Diameter At turned off part 1 1/2" No. of threads per inch 9 Area supported by each stay 60 sq in

Over threads 1 1/2"



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Working pressure by Rules *209 lbs* Are the stays drilled at the outer ends *No* Margin stays: Diameter <sup>At turned off part,</sup> *1 7/8"*  
 No. of threads per inch *9* Area supported by each stay *40.75 sq"* Working pressure by Rules *275 lbs*  
 Tubes: Material *Iron* External diameter <sup>Plain *3 1/4"*</sup> <sub>Stay *3 1/4"*</sub> Thickness <sup>*11: 9/16"*</sup> <sub>*14: 1 5/16"*</sub> No. of threads per inch *9*  
 Pitch of tubes *4 1/2" x 4 1/4"* Working pressure by Rules *100 lbs* Manhole compensation: Size of opening  
 shell plate *16 x 20"* Section of compensating ring *7/8" x 6 1/2"* No. of rivets and diameter of rivet holes *38 @ 1 5/16"*  
 Outer row rivet pitch at ends *8 1/4"* 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 <sup>Plate</sup>  <sub>Rivets</sub>   
 Internal diameter  Working pressure by Rules  Thickness of crown  No. and diameter  
 stays  Inner radius of crown  Working pressure by Rules   
 How connected to shell  Size of doubling plate under dome  Diameter of rivet holes and  
 of rivets in outer row in dome connection to shell

Type of Superheater  Manufacturers of <sup>Tubes</sup>  <sub>Steel castings</sub>   
 Number of elements  Material of tubes  Internal diameter and thickness of tubes   
 Material of headers  Tensile strength  Thickness  Can the superheater be shut off  
 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  
 Rules  Pressure to which the safety valves are adjusted  Hydraulic test press  
 tubes  castings  and after assembly in place  Are drain cocks or valves fit  
 to free the superheater from water where necessary

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with

The foregoing is a correct description,  
 ROTTERDAMSCHЕ PROBECK-MAATSMETRIJ  
 Manufacture

Dates of Survey <sup>During progress of work in shops - -</sup> *24/8 - 3-19/10 1-7-10-22/11 3-6-12/12-27* Are the approved plans of boiler and superheater forwarded herewith  Retained  
 while building <sup>During erection on board vessel - - -</sup> *17-24/4-10* Total No. of visits *12*  
 (If not state date of approval.) *5. 8. 27*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have been made under special survey, in accordance with the approved plan, Society's Rules and Secretary's letters, tested by hydraulic pressure and found sound and tight.*

*16/5/28*

Survey Fee ... .. £ *231.50* When applied for, *4/5* 1923  
 Travelling Expenses (if any) £ *7.50* When received, *30.5* 1923

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

Committee's Minute *FRI. 18 MAY 1928*

Assigned *+ A.B. 4:28*

