

REPORT ON BOILERS.

No. 22862

Received at London Office 28 APR 1934

Date of writing Report 18.4.1934 When handed in at Local Office 192 Port of Rotterdam

No. in Survey held at Rotterdam Date, First Survey 1.2.34 Last Survey 19.4.1934

Reg. Book. on the new boiler S.S. SINT ANNALAND (Number of Visits 21) Tons {Gross Net

Master Built at Schiedam By whom built A. T. Mulders Yard No. When built

Engines made at Schiedam By whom made A. T. Mulders Engine No. When made

Boilers made at Rotterdam By whom made Rott Drossel My Boiler No. 517-18 When made 1934

Nominal Horse Power Owners Scheep & Heenkolen My Port belonging to Rotterdam

MULTITUBULAR BOILERS—MAIN, ~~XXXXXXXXXX~~, ~~XXXXXXXXXX~~.

Manufacturers of Steel Mannesmann röhren Werke (Letter for Record S ✓)

Total Heating Surface of Boilers 3710 ft² Is forced draught fitted no! Coal or Oil fired Coal.

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

Tested by hydraulic pressure to 320 lbs Date of test 6.4.34 No. of Certificate 959 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 102 ft² No. and Description of safety valves to each boiler 2 spring loaded

Area of each set of valves per boiler {per Rule as fitted 140" 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

Smallest distance between boilers or uptakes and bunkers or woodwork Over 18" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 13'6" Length 11'0" Shell plates: Material S. M. Steel Tensile strength 28-32 tons

Thickness 1 1/8" Are the shell plates welded or flanged No Description of riveting: circ. seams {end lap. 2 x riv inter. 3 3/4" long. seams Double butt strap 3 x riv Diameter of rivet holes in {circ. seams 1 3/16" Pitch of rivets {8 1/4" long. seams 1 3/16"

Percentage of strength of circ. end seams {plate 67.2% rivets 44.6% Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 85.6% rivets 92.8% combined 89.7% Working pressure of shell by Rules 183 lbs

Thickness of butt straps {outer 7/8" inner 1" No. and Description of Furnaces in each Boiler 3 Monsoon patent 90%

Material S. M. Steel Tensile strength 26-30 tons Smallest outside diameter 3' 8 1/2" 3-0 3/16

Length of plain part {top bottom Thickness of plates {crown 1 1/4" bottom 1 3/2" Description of longitudinal joint Welded.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 185 lbs

End plates in steam space: Material S. M. Steel Tensile strength 26-30 tons Thickness 1 5/32" Pitch of stays 18 x 16 1/2

How are stays secured Screwed in plates with nuts outside Working pressure by Rules 192 lbs

Tube plates: Material {front S. M. Steel Tensile strength {26-30 tons Thickness {1 3/16" back S. M. Steel Tensile strength {26-30 tons Thickness {3/4" Working pressure {front 195 lb back

Mean pitch of stay tubes in nests 8 3/4 x 10 1/8 Pitch across wide water spaces 2' 3 1/2" Depth and thickness of girder

Girders to combustion chamber tops: Material S. M. Steel Tensile strength 28-32 tons

at centre 8 x 2 x 3/4" Length as per Rule 2' 5" Distance apart 8 1/2" No. and pitch of stays

in each 2 x 9" Working pressure by Rules 205 lbs Combustion chamber plates: Material S. M. Steel.

Tensile strength 26-30 tons Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 7/8"

Pitch of stays to ditto: Sides 9 x 1 1/8" Back 7 1/2 x 8 1/2" Top 9 x 8 1/2" Are stays fitted with nuts or riveted over Riveted over.

Working pressure by Rules 217 lbs Front plate at bottom: Material S. M. Steel Tensile strength 26 x 30 tons

Thickness 1 3/16" Lower back plate: Material S. M. Steel Tensile strength 26-30 tons Thickness 3/4"

Pitch of stays at wide water space 14 7/8" Are stays fitted with nuts or riveted over Fitted with nuts.

Working Pressure 354 lbs Main stays: Material S. M. Steel Tensile strength 28-32 tons

Diameter {At body of stay, 2 9/16" No. of threads per inch 9 Area supported by each stay 2880"

Working pressure by Rules 196 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 6480"

Back. 63 3/4" Area 6480"

Working pressure by Rules 196 lb Are the stays drilled at the outer ends No Margin stays: Diameter ^{At turned off part,} 7 3/4 or ^{Over threads} 7 1/4
 No. of threads per inch 9 Area supported by each stay 950" Working pressure by Rules 195 lb
 Tubes: Material Steel External diameter ^{Plain} 5 1/4 ^{Stay} 5 1/4 Thickness ^{2 1/4} 2 1/4 ^{1 1/2} 1 1/2 No. of threads per inch 9
 Pitch of tubes 4 7/8" x 4 7/16" Working pressure by Rules 180 lbs Manhole compensation: Size of opening in
 shell plate 16 3/4" x 20 3/4" Section of compensating ring machels 8 1/4" x 1 1/8" No. of rivets and diameter of rivet holes 42 @ 1 3/16"
 Outer row rivet pitch at ends 6 3/4" Depth of flange if manhole flanged 5 1/2" 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} - ^{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 Yes

The foregoing is a correct description,
 ROTTERDAMSCHЕ DROOGBOUW MAATSCHAPPIJ
 Director, W. Mape Manufacturer.

Dates of Survey ^{During progress of work in shops} 1/8/19, 14/2, 21/2, 27/2, 5/4, 12/4, 17/4, 24/4, 27/4 Are the approved plans of boiler and superheater forwarded herewith Retained
 while building ^{During erection on board vessel} 2/5, 5/5, 14/5, 14/5 (If not state date of approval.) 1-1-34
 Total No. of visits 21

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

Survey Fee 197.60 When applied for, 192
 Travelling Expenses (if any) 10.00 When received, 18.5 34
Wed.

G. J. Dehoo
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 8 MAY 1934

Assigned