

27 DEC 1961

-5. JUN. 1961

Rpt. 5a.

## REPORT ON BOILERS.

No. 24/23

Received at London Office.....

Date of writing Report 17-5-1961 When handed in at Local Office 17-5-1961 Port of Amsterdam

No. in Reg. Book Survey held at Amsterdam Date, First Survey 9-2-1961 Last Survey 9-5-1961

(Number of Visits 14) Tons Gross Net

on the

Built at Heusden By whom built Verolme United Shipyards Yard No. 650 When built

Engines made at By whom made Engine No. When made

Boilers made at Amsterdam By whom made Verschure &amp; Co's Mach.fabr. Boiler No. 413 When made 1961

Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~ OR ~~DONKEY~~

Manufacturers of Steel Mannesmann A.G. Hüttenwerk; Huchingen, Duisburg, Wannheim (Letter for Record)

Total Heating Surface of Boilers 74 m<sup>2</sup> Of Superheaters not fitted

Total for Register Book Is forced draught fitted Coal or Oil fired

No. and Description of Boilers one multitubular cylindrical marine boiler Working Pressure 140 lbs/sq.in.

Tested by hydraulic pressure to 260 lbs/sq.in. Date of test 9-5-1961 No. of Certificate 678 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler

Area of each set of valves per boiler per Rule as fitted Pressure to which they are adjusted Are they fitted with easing gear

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 kg/mm<sup>2</sup>

Largest internal dia. of boilers 2750 mm Length 3160 mm Shell plates: Material SM steel Tensile strength 48,7 - 49,5

If fusion welded, state name of welding Firm Have all the requirements of the Rules for Class I vessels

been complied with Thickness 18 mm Are the shell plates welded or flanged no Description of riveting: circ. seams end D.R. lap joints

long. seams T.R. butt joint Diameter of rivet holes in circ. seams 23 mm Pitch of rivets 79 mm

long. seams 23 mm Pitch of rivets 149 mm

Percentage of strength of circ. end seams plate 71 % rivets 42 % Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 84,5 % rivets 107,6 % combined 81,6 %

Thickness of butt straps outer 15 mm inner 18 mm No. and Description of Furnaces in each Boiler 2 corrugated

Material SM steel Tensile strength 46,8 - 47 kg/mm<sup>2</sup> Smallest outside diameter 820 mm

Length of plain part 242 mm Thickness of plates 10 mm Description of longitudinal joint welded

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

End plates in steam space: Material SM steel Tensile strength 45,2 - 46,2 kg/mm<sup>2</sup> forw: 22 mm all in one row

How are stays secured screwed in plates with nuts inside and out. Thickness aft: 19 mm Pitch of stays pitch; 450 mm

Tube plates: Material front SM steel Tensile strength 45,2 - 46,2 kg/mm<sup>2</sup> Thickness 22 mmback SM steel Tensile strength 44,5 - 45,5 kg/mm<sup>2</sup> Thickness 22 mm

Mean pitch of stay tubes in nests 202 x 202 mm Pitch across wide water spaces 101 x 380 mm

Girders to combustion chamber tops: Material SM steel Tensile strength 46,7 - 47 kg/mm<sup>2</sup> Depth and thickness of girder

at centre 200 mm, 18 mm Length as per Rule approved 690 mm Distance apart 210 mm No. and pitch of stays

in each welded construction Combustion chamber plates: Material SM steel

Tensile strength 43,5 - 45,4 kg/mm<sup>2</sup> Thickness: Sides 16 mm Back 16 mm Top 16 mm Bottom 22 mm

Pitch of stays to ditto: Sides 190 x 185 mm Back 190 x 185 mm Top welded constr. Are stays fitted with nuts or riveted over riveted over

Front plate at bottom: Material SM steel Tensile strength 45,2 - 46,2 kg/mm<sup>2</sup>Thickness 22 mm Lower back plate: Material SM steel Tensile strength 45,7 - 46,2 kg/mm<sup>2</sup> Thickness 19 mm

Pitch of stays at wide water space 185 x 320 mm Are stays fitted with nuts or riveted over fitted with nuts

Main stays: Material SM steel Tensile strength 45,6 - 50,3 kg/mm<sup>2</sup>

Diameter At body of stay top 70 mm bottom 60 mm No. of threads per inch 6

Screw stays: Material SM steel Tensile strength 41 - 47 kg/mm<sup>2</sup>

Diameter Over threads 1 1/4" No. of threads per inch 9



Are the stays drilled at the outer ends. no Margin stays: Diameter 1 1/2"  
No. of threads per inch 9  
Tubes: Material steel External diameter 76 mm Thickness 3,25 mm No. of threads per inch 9  
Pitch of tubes plain 101 x 101 mm, stay 202 x 202 mm Manhole compensation: Size of opening in  
shell plate 320 x 425 mm Section of compensating ring plate thickness 18 mm  
ø 990 mm, with opening 320x425 mm No. of rivets and diameter of rivet holes 80, 23 mm  
Outer row rivet pitch at ends 83 mm Depth of flange if manhole flanged 80 mm Steam Dome: Material SM steel  
Tensile strength shell : 48,6 - 49,1 kg/mm<sup>2</sup> Thickness of shell 13 mm Description of longitudinal joint welded (class I)  
crown : 45,8 - 46,3 kg/mm<sup>2</sup> Diameter of rivet holes - Pitch of rivets - Percentage of strength of joint Plate -  
Rivets -  
Internal diameter 662 mm Thickness of crown 19 mm No. and diameter of  
stays not fitted Inner radius of crown 60 mm 700 mm Inter Plan  
How connected to shell riveted Size of doubling plate under dome see compensating ring Diameter of rivet holes and pitch  
of rivets in outer row in dome connection to shell 23 mm, 83 mm

Type of Superheater not fitted Manufacturers of Tubes -  
Steel forgings -  
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 -  
Pressure to which the safety valves are adjusted - Hydraulic test pressure:  
tubes - forgings and 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 22 inclusive for boilers been complied with -

VERSCHURE & Co's  
Scheepswaerf en Machinefabriek N.V.  
The foregoing is a correct description,  
Manufacturer -

Dates of Survey while building - During progress of work in shops - - 1961 : 9/2; 22/3; 1/3; 2/3; 9/3; 20/3  
23/3; 30/3; 31/3; 4/4; 13/4 Are the approved plans of boiler and superheater forwarded herewith 27-5-1960  
19/4; 20/4; 9/5 (If not state date of approval.)  
Total No. of visits 14 DRS 440488

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 in accordance with the approved plans, Secretary's letters and Rule requirements. Materials used have been tested as required and the workmanship found good. On completion the boiler has been hydraulically tested to the required test pressure and found good.

The boiler merits in my opinion the favourable consideration of the Committee to be classed in the Register Book.

Survey Fee ... .. £ f. : 210,-  
Travelling Expenses (if any) £ : 15,-  
Turnover tax 9,38  
When applied for 25/5/1961  
When received 19

Engineer Surveyor to Lloyd's Register of Shipping.  
D. van Couwelaar.

Committee's Minute -

Assigned -



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Foundation