

# REPORT ON BOILERS.

No. 1522.

Received at London Office

18 JAN 1933

Date of writing Report 14<sup>th</sup> Jan 1933 When handed in at Local Office

10- Port of BREMEN

No. in Survey held at VEGESACK  
Reg. Book.Date, First Survey 3<sup>rd</sup> May 1932 Last Survey 5<sup>th</sup> Jan. 1933

on the STEEL TWIN SC. VICTOR ROSS

(Number of Visits 20) Gross 12424  
Tons Net 7098

Master Built at VEGESACK By whom built BREMER VULKAN Yard No. 699 When built 1933

Engines made at VEGESACK. By whom made BREMER VULKAN 305/308  
Engine No. 309/312 When made 1933

Boilers made at VEGESACK. By whom made BREMER VULKAN Boiler No. 731/732 When made 1933

Nominal Horse Power 1566 Owners BALTISCH AMER. PETROL. IMPORT G.M.B.H. Port belonging to DANZIG

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

Manufacturers of Steel Friedrich Stahlwerke, Stahl- &amp; Walzwerke Thyssen, Mülheim - Ruhr (Letter for Record S)

Total Heating Surface of Boilers 2 x 233 m<sup>2</sup> Is forced draught fitted yes Coal or Oil fired oil firedNo. and Description of Boilers 2 cylindrical multitubular donkey boilers Working Pressure 200 lbs (14 kg/cm<sup>2</sup>)

Tested by hydraulic pressure to 350 Date of test 27.9.32 No. of Certificate 146 &amp; 147 Can each boiler be worked separately yes

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

Area of each set of valves per boiler { per Rule 11379 m<sup>2</sup> as fitted 12814 m<sup>2</sup> Pressure to which they are adjusted 200 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 main boilers

Smallest distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating situated in elevated boiler room Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 4300 mm Length 3690 mm Shell plates: Material S. M. Steel Tensile strength 47-53 kg/cm<sup>2</sup>

Thickness 31.5 mm Are the shell plates welded or flanged flanged Description of riveting: circ. seams { end 47 donkey inter. -

long. seams double butt strap Diameter of rivet holes in { circ. seams 32 mm long. seams 35 mm Pitch of rivets { 91.9 mm 214 mm

Percentage of strength of circ. end seams { plate 65% rivets 43% Percentage of strength of circ. intermediate seam { plate rivets

Percentage of strength of longitudinal joint { plate 83% rivets 100% combined 83% Working pressure of shell by Rules 14.2 kg/cm<sup>2</sup>

Thickness of butt straps { outer 28 mm inner 28 mm No. and Description of Furnaces in each Boiler 3 Morrison furnaces

Material S. M. Steel Tensile strength 41-47 kg/cm<sup>2</sup> Smallest outside diameter 1080 mm

Length of plain part { top 150 mm bottom 200 mm Thickness of plates { crown 15 mm bottom 15 mm Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 14.2 kg/cm<sup>2</sup>End plates in steam space: Material S. M. Steel Tensile strength 41-47 kg/cm<sup>2</sup> Thickness 28.5 mm Pitch of stays 425 x 425 mmHow are stays secured screwed through, nuts & washers inside & outside Working pressure by Rules 15.6 kg/cm<sup>2</sup>Tube plates: Material { front S. M. Steel back S. M. Steel Tensile strength { 41-47 kg/cm<sup>2</sup> Thickness { 27.5 mm 23.0 mmMean pitch of stay tubes in nests 198 x 196 mm Pitch across wide water spaces 350 x 196 mm Working pressure { front 16.5 kg/cm<sup>2</sup> back 35.1Girders to combustion chamber tops: Material S. M. Steel Tensile strength 41-47 kg/cm<sup>2</sup> Depth and thickness of girder

at centre 249 x 17 mm Length as per Rule 850 mm Distance apart 212 mm No. and pitch of stays

in each 3, pitch 200 mm Working pressure by Rules 14 kg/cm<sup>2</sup> Combustion chamber plates: Material S. M. SteelTensile strength 41-47 kg/cm<sup>2</sup> Thickness: Sides 17 mm Back 16 mm Top 17 mm Bottom 23 mm

Pitch of stays to ditto: Sides 210 x 180 mm Back 194 x 187 mm Top 200 x 212 mm Are stays fitted with nuts or riveted over fitted with nuts

Working pressure by Rules 17 kg/cm<sup>2</sup> Front plate at bottom: Material S. M. Steel Tensile strength 41-47 kg/cm<sup>2</sup>Thickness 27.5 mm Lower back plate: Material S. M. Steel Tensile strength 41-47 kg/cm<sup>2</sup> Thickness 26 mm

Pitch of stays at wide water space 350 x 187 Are stays fitted with nuts or riveted over fitted with nuts

Working Pressure 23 kg/cm<sup>2</sup> Main stays: Material S. M. Steel Tensile strength 41-50 kg/cm<sup>2</sup>

Diameter { At body of stay, 68 mm &amp; 72 mm No. of threads per inch 6 Area supported by each stay 425 x 425 mm

Working pressure by Rules 14.4 kg/cm<sup>2</sup> Screw stays: Material S. M. Steel Tensile strength 41-50 kg/cm<sup>2</sup>

Diameter { At turned off part, 35 mm No. of threads per inch 9 Area supported by each stay 194 x 187

Working pressure by Rules  $16 \text{ kg/cm}^2$  Are the stays drilled at the outer ends no Margin stays: Diameter  $\left\{ \begin{array}{l} \text{At turned off part, } 50 \text{ x } 41 \text{ mm} \\ \text{Over threads } - \end{array} \right.$   
No. of threads per inch 9 Area supported by each stay  $187 \times 262$  Working pressure by Rules  $17.1 \text{ kg/cm}^2$   
Tubes: Material 1. M. Steel External diameter  $\left\{ \begin{array}{l} \text{Plain } 70 \text{ mm} \\ \text{Stay } 70 \text{ mm} \end{array} \right.$  Thickness  $\left\{ \begin{array}{l} 4 \text{ mm} \\ 7 \text{ mm} \end{array} \right.$  No. of threads per inch 9  
Pitch of tubes  $98 \times 99 \text{ mm}$  Working pressure by Rules  $19.5 \text{ kg/cm}^2$  Manhole compensation: Size of opening in  
shell plate  $460 \times 560 \text{ mm}$  Section of compensating ring  $31.5 \times 940 \times 1040$  No. of rivets and diameter of rivet holes 48 rivets of 35 mm  
Outer row rivet pitch at ends 300 mm Depth of flange if manhole flanged 98 mm Steam Dome: Material no dome  
Tensile strength — Thickness of shell — Description of longitudinal joint —  
Diameter of rivet holes — Pitch of rivets — Percentage of strength of joint  $\left\{ \begin{array}{l} \text{Plate } - \\ \text{Rivets } - \end{array} \right.$   
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 no superheater Manufacturers of  $\left\{ \begin{array}{l} \text{Tubes } - \\ \text{Steel castings } - \end{array} \right.$   
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 22 inclusive for boilers been complied with yes

**Bremer Vulkan** The foregoing is a correct description,  
**Schiffbau und Maschinenfabrik** i/r. Wobbe Manufacturer  
**Vogelsang**

Dates of Survey  $\left\{ \begin{array}{l} \text{During progress of work in shops } - - \end{array} \right.$  3/5 10/5 26/5 1/6 7/6 17/7 27/7 1/8 11/8 18/8 24/8 29/8 2/9 27/9 Are the approved plans of boiler and superheater forwarded herewith 24.12.30  
while building  $\left\{ \begin{array}{l} \text{During erection on board vessel } - - \end{array} \right.$  3/11 19/11 8/12 14/12 20/12 31. 5/1.1933 (If not state date of approval.) Total No. of visits 20

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. F.J. WOLFE, Ann Rpt 46/149

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed under special survey in accordance with the approved plans, the Secretary's letters and otherwise in conformity with the requirements of the Rules. The material used in the construction are made at works recognized by the Committee and tested by the Soc. Inspectors. Material & workmanship are of good quality. There is a "TODD" semi-automatic high-low flame control-system installed in accordance with the approved plan and was found under working condition to be in order.

Marks on boilers:

No 146 & 147  
LLOYD'S TEST  
350 LBS  
WP 200 LBS  
AC. 27. 9. 32

Height of adjusting washers

Port Boiler: Port 6 mm Starb. 4 mm

Starb. - " - " - 4 mm - " - 4.5 mm

These boilers are eligible in my opinion to be noted in the Soc. Reg. Book with:

2 DB pressure 200 lbs.

Survey Fee ... 29: 5: 0 When applied for, 19  
Travelling Expenses (if any) £ — When received, 19

Committee's Minute

Assigned

See F. G. Rpt.

A. Carstensen  
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation