

# REPORT ON BOILERS.

No. 22634

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Port of **HAMBURG**

No. in Survey held at **Kiel**

Date, First Survey 14.6.37

Last Survey 8.1.38 19

on the **Steel A. Twin S.S. "China"**

(Number of Visits **ii**) Gross **10781** Tons Net **6845**

Master Built at **Kiel**

By whom built **Fr. Krupp Germania-Werft** Yard No. **569** When built **1938**

Engines made at **Kiel**

By whom made **Frick. Krupp Germania-Werft A.G.** Engine No. **5629-24** When made **1938**

Boilers made at **Kiel**

By whom made **Frick. Krupp Germania-Werft A.G.** Boiler No. **3986-7** When made **1938**

Nominal Horse Power **1165**

Owners **Balboa Transport Corporation** Port belonging to **Panama R.P.**

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

Manufacturers of Steel **Deutsche Röhrenwerke, Werk Thyssen, Mülheim. Krupp, Essen** (Letter for Record **5**)

Total Heating Surface of Boilers **510 m<sup>2</sup>** Is forced draught fitted **yes** Coal or Oil fired **oil**

No. and Description of Boilers **2 mult. Scotch Marine Donkey Boilers** Working Pressure **200 lb**

Tested by hydraulic pressure to **350 lb** Date of test **6.10.37** No. of Certificate **676-7** Can each boiler be worked separately **yes**

Area of Firegrate in each Boiler **✓** No. and Description of safety valves to each boiler **1, 2 springs loaded**

Area of each set of valves per boiler { per Rule **10,050 mm<sup>2</sup>** as fitted **15,708 mm<sup>2</sup>** Pressure to which they are adjusted **200 lb** Are they fitted with easing gear **yes**

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler **no**

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 **480 mm** Is the bottom of the boiler insulated **yes, asbestos mats**

Largest internal dia. of boilers **4400 mm** Length **3690 mm** Shell plates: Material **O.H. Steel** Tensile strength **44 ÷ 50 kg/mm<sup>2</sup>**

Thickness **34 mm** Are the shell plates welded or flanged **flanged** Description of riveting: circ. seams { end **D.R.** inter. **✓**

long. seams **Double Butt straps** Diameter of rivet holes in { circ. seams **35 mm** long. seams **35 mm** Pitch of rivets { **105.5 mm** **230 mm**

Percentage of strength of circ. end seams { plate **66.7** rivets **44.4** Percentage of strength of circ. intermediate seam { plate **✓** rivets **✓**

Percentage of strength of longitudinal joint { plate **84.7** rivets **89.1** combined **87.3** Working pressure of shell by Rules **14.3 kg/cm<sup>2</sup>**

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

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

Length of plain part { top **255 mm** bottom **✓** Thickness of plates { crown **15 mm** bottom **✓** 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 **O.H. Steel** Tensile strength **41-47 kg/cm<sup>2</sup>** Thickness **32 mm** Pitch of stays **480 x 420 mm**

How are stays secured **screws, nuts outside** Working pressure by Rules **19.6 kg/cm<sup>2</sup>**

Tube plates: Material { front **O.H. Steel** back **O.H. Steel** Tensile strength { **41-47 kg/cm<sup>2</sup>** Thickness { **23 mm** **23 mm**

Mean pitch of stay tubes in nests **220 x 220 mm** Pitch across wide water spaces **367 mm** Working pressure { front **15.5 kg/cm<sup>2</sup>** back **26.1 kg/cm<sup>2</sup>**

Girders to combustion chamber tops: Material **O.H. Steel** Tensile strength **44 ÷ 50 kg/cm<sup>2</sup>** Depth and thickness of girder

at centre **250 mm, 2 x 182 mm** Length as per Rule **875 mm** Distance apart **220 mm** No. and pitch of stays

in each **3, 205 mm** Working pressure by Rules **14.5 kg/cm<sup>2</sup>** Combustion chamber plates: Material **O.H. Steel**

Tensile strength **41-47 kg/cm<sup>2</sup>** Thickness: Sides **19 mm** Back **19 mm** Top **19 mm** Bottom **23 mm riveted**

Pitch of stays to ditto: Sides **205 x 185 mm** Back **192.5 x 190 mm** Top **205 x 220 mm** Are stays fitted with nuts or riveted over **with nuts (margin)**

Working pressure by Rules **15.65 16.3 18.2 kg/cm<sup>2</sup>** Front plate at bottom: Material **O.H. Steel** Tensile strength **41-47 kg/cm<sup>2</sup>**

Thickness **23 mm** Lower back plate: Material **O.H. Steel** Tensile strength **41-47 kg/cm<sup>2</sup>** Thickness **22 mm**

Pitch of stays at wide water space **d = 500 mm** Are stays fitted with nuts or riveted over **with nuts**

Working Pressure **16.9 kg/cm<sup>2</sup>** Main stays: Material **O.H. Steel** Tensile strength **44 ÷ 50 kg/cm<sup>2</sup>**

Diameter { At body of stay, **76 mm** or Over threads **82.47 mm** No. of threads per inch **6** Area supported by each stay **115,200 mm<sup>2</sup>**

Working pressure by Rules **33.5 kg/cm<sup>2</sup>** Screw stays: Material **O.H. Steel** Tensile strength **41-47 kg/cm<sup>2</sup>**

Diameter { At turned off part, **85 mm** or Over threads **89 mm** No. of threads per inch **9** Area supported by each stay **37,925 mm<sup>2</sup>**



