

# REPORT ON BOILERS.

No. 4500

24 APR 1930

Received at London Office

Date of writing 17 April 1930 When handed in at Local Office 4-4-1930

Port of **YOKOHAMA**

No. in Survey held at Reg. Book.

**YOKOHAMA**

Date, First Survey 23/4/28 Last Survey 24 March 1930

(Number of Visits) Gross 14499.61 Tons Net 10,286

on the **Steel T. Se. M. V "CHICHIBU MARU"**

Master Built at Yokohama By whom built Yokohama Dock Co. Ltd Yard No. 170 When built 1930  
 Engines made at Copenhagen By whom made Burmeister & Wain Ltd Engine No. 170 When made 1930  
 Boilers made at Yokohama By whom made Yokohama Dock Co. Ltd Boiler No. 170 When made 1930  
 Nominal Horse Power 3380 Owners Nippon Yusen Kabushiki Kaisha Port belonging to Yokio

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

Manufacturers of Steel Gutehoffnungshutte Oberhausen Aktiengesellschaft. (Letter for Record S)  
 Total Heating Surface of Boilers 2 at 1015 sq ft = 2030 sq ft Is forced draught fitted no Coal or Oil fired Oil fired

No. and Description of Boilers 2 Cylindrical Single Ended Working Pressure 120 lbs.

Tested by hydraulic pressure to 230 lbs Date of test 5-10-28 No. of Certificate 19-20 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.  
 Area of each set of valves per boiler {per Rule 11.280" as fitted 14.120" Pressure to which they are adjusted 120 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 3'-3" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 11'-3" Length 8'-6" Shell plates: Material Mild steel Tensile strength 28-32

Thickness 3/4" Are the shell plates welded or flanged flanged Description of riveting: circ. seams {end D.R. Lap. inter. ✓  
 long. seams D.R. D.B.S. Diameter of rivet holes in {circ. seams 1 1/16" Pitch of rivets { 3 1/2" long. seams 29/32" 5"

Percentage of strength of circ. end seams {plate 69.6% rivets 55.5% Percentage of strength of circ. intermediate seam {plate 80.92% rivets 83.66% combined 89.73% Working pressure of shell by Rules 134 lbs/sq ft

Percentage of strength of longitudinal joint {plate 80.92% rivets 83.66% combined 89.73% Working pressure of shell by Rules 134 lbs/sq ft  
 Thickness of butt straps {outer 5/8" inner 3/4" No. and Description of Furnaces in each Boiler 2 Deighton Corrugated Furnaces.

Material steel Tensile strength 26-30 tons Smallest outside diameter 3'-2 7/8"  
 Length of plain part {top ✓ bottom ✓ Thickness of plates {crown 7/16" bottom 7/16" Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.e. bottom ✓ Working pressure of furnace by Rules 160 lbs.  
 End plates in steam space: Material Steel Tensile strength 26-30 Thickness 13/16" Pitch of stays 16" x 14"

How are stays secured Nuts on both sides also washers. Working pressure by Rules 132 lbs.  
 Tube plates: Material {front steel back steel Tensile strength { 26/30 tons/sq ft Thickness { 3/4" 5/8"

Mean pitch of stay tubes in nests 9.6875 Pitch across wide water spaces 13.75" Working pressure {front 164 lbs. back 146 lbs.  
 Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder

at centre 2 @ 6" x 1/2" Length as per Rule 23 3/4" Distance apart 8 1/2" No. and pitch of stays  
 in each 2 @ 8" Working pressure by Rules 165 lbs. Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"  
 Pitch of stays to ditto: Sides 8" x 10" Back 9 1/2" x 8 1/2" Top 8" x 8 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 165 lbs. Front plate at bottom: Material steel Tensile strength 26-30 tons/sq ft  
 Thickness 3/4" Lower back plate: Material steel Tensile strength 26-30 tons/sq ft Thickness 3/4"

Pitch of stays at wide water space 13 3/4" Are stays fitted with nuts or riveted over nuts  
 Working Pressure 174 lbs. Main stays: Material steel Tensile strength 28-32 tons

Diameter {At body of stay, 3" No. of threads per inch 6 Area supported by each stay 2240"  
 or Over threads 2 1/4"

Working pressure by Rules 149 lbs. Screw stays: Material steel Tensile strength 26-30 tons/sq ft  
 Diameter {At turned off part, 1 1/2" No. of threads per inch 9 Area supported by each stay 80750"  
 or Over threads

Working pressure by Rules 155.5 lb Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part</sup> 1 5/8"  
 No. of threads per inch 9 Area supported by each stay 1190" Working pressure by Rules 152 lb  
 Tubes: Material steel External diameter <sup>Plain</sup> 3" Thickness <sup>Stay</sup> 3" <sup>9 LSG.</sup> 3/8" x 5/16" No. of threads per inch 9  
 Pitch of tubes 4 1/4" x 4 1/8" Working pressure by Rules 190 lbs. Manhole compensation: Size of opening in  
 shell plate 16" x 12" Section of compensating ring 7/8" x 6 1/2" No. of rivets and diameter of rivet holes 52 x 1 1/16"  
 Outer row rivet pitch at ends 4" x 3 1/4" Depth of flange if manhole flanged 3" 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> \_\_\_\_\_  
 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 <sup>Tubes</sup> \_\_\_\_\_  
 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.

The foregoing is a correct description,  
J. Jenebija Manufacturer.

Dates of Survey <sup>During progress of</sup> 23/4, 4/6, 23/8, 24/8, 5/9, 22/9, 25/9, 27/9 Are the approved plans of boiler and superheater forwarded herewith yes 23/11/29  
<sup>work in shops - -</sup> 2/10, 5/10, 9/10, 7/12, 29/1, 1930 (If not state date of approval.)  
<sup>while building</sup> <sup>During erection on</sup> \_\_\_\_\_ Total No. of visits 13  
<sup>board vessel - -</sup> \_\_\_\_\_

Is this Boiler a duplicate of a previous case \_\_\_\_\_ If so, state Vessel's name and Report No. \_\_\_\_\_

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)

These boilers have been built under special survey in accordance with the Rules & approved plan. Materials and workmanship good. These boilers have now been securely fitted & chocked onboard. Both boilers have been examined under steam and their safety valves adjusted under steam to 120 lbs/sq". Accumulation test carried out on safety valves with satisfactory results.

Survey Fee ... YEN 302.00 When applied for, 4-27-1930  
 Travelling Expenses (if any) £ \_\_\_\_\_ When received, 24/4/30

For J.B. Smith & self. J. Micholas  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 6 MAY 1930

Assigned See Yka. Rpt. 4500

