

# REPORT ON BOILERS.

No. FE-3788

11 AUG 1956

Received at London Office

Date of writing Report 19... When handed in at Local Office **AUG - 4. 1956** 19... Port of **Kobe**

No. in Reg. Book. Survey held at **Mukaishima, Japan** Date, First Survey **5th Oct. 1955** Last Survey **7th March 1956**

on the **Steel Single Screw Steamer "KONDOR"** (Number of Visits **20**) Tons { Gross **197.21** Net ...

Built at **Mukaishima, Japan** By whom built **Hitachi S.B. & E. Co., Ltd., Mukaishima Shipyard** Yard No. **3756** When built **3Mo. 1956.**

Engines made at **Innoshima, Japan** By whom made **Hitachi S.B. & E. Co., Ltd., Innoshima Shipyard** Engine No. **1** When made **12Mo. 1955**

Boilers made at **Innoshima, Japan** By whom made **Hitachi S.B. & E. Co., Ltd., Innoshima Shipyard** Boiler No. **206** When made **11Mo. 1955**

MN as per Rule **91** Owners **v/o Sudoimport, Moscow, U.S.S.R.** Port belonging to **Petropavlovsk Kamchatka**

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

Manufacturers of Steel **Yawata Iron and Steel Manufacturing Co., Ltd.,**

Total Heating Surface of Boilers **151.05 m<sup>2</sup>** ~~1626 ft<sup>2</sup>~~ Of Superheaters **-**

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

No. and Description of Boilers **1. Howden Johnson Type Dry Combustion Scotch Boiler** Working Pressure **16 kgs/cm<sup>2</sup>**

Tested by hydraulic pressure to **27.5 kgs/cm<sup>2</sup>** Date of test **9-12-55** No. of Certificate **1-27616** Can each boiler be worked separately **-**

Area of Firegrate in each Boiler **3.6 m<sup>2</sup>** No. and Description of safety valves to each boiler **1, 2 Valves Improved High Lift Type**

Area of each set of valves per boiler { per Rule **As approved** as fitted **3170 mm<sup>2</sup>** Pressure to which they are adjusted **16 kgs/cm<sup>2</sup>** 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 ~~XXXXXX~~ and bunkers ~~XXXXXX~~ **440 m.m.** Is oil fuel carried in the double bottom under boilers **-**

Smallest distance between shell of boiler and ~~XXXXXX~~ plating **700 m.m.** Is the bottom of the boiler insulated **Yes**

Largest internal dia. of boilers **3,850 m.m.** Length **2,200 m.m.** Shell plates: Material **Boiler quality steel** Tensile strength **30 T/in<sup>2</sup>**

If fusion welded, state name of welding Firm **-** Have all the requirements of the Rules for Class I vessels been complied with **-** Thickness **35 m.m.** Are the shell plates welded or flanged **No** Description of riveting: circ. seams { end **D. Riv. Lap Joint** inter **-** long. seams **Double Butt Straps** Diameter of rivet holes in { circ. seams **35.5 m.m.** Pitch of rivets { **96.86 m.m.** long. seams **35.5 m.m.** **236 m.m.**

Percentage of strength of circ. end seams { plate **63.3** rivets **47.9** Percentage of strength of circ. intermediate seam { plate **-** rivets **-**

Percentage of strength of longitudinal joint { plate **85** rivets **92.2** combined **88.4**

Thickness of butt straps { outer **32 m.m.** inner **32 m.m.** No. and Description of Furnaces in each Boiler **2. Morrison corrugated**

Material **Boiler quality steel** Tensile strength **30 T/in<sup>2</sup>** Smallest outside diameter **1,086 m.m.**

Length of plain part { top **-** bottom **-** Thickness of plates **18 m.m.** Description of longitudinal joint **Fusion welding**

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

End plates in steam space: Material **-** Tensile strength **-** Thickness **-** Pitch of stays **-**

How are stays secured **-**

Tube plates: Material { front **Boiler quality steel** back **Boiler quality steel** Tensile strength { **30 T/in<sup>2</sup>** Thickness { **32 m.m. + 25 m.m.** **32 m.m. + " "**

Mean pitch of stay tubes in nests **hori. 150 m.m.** **vert. 98 m.m.** Pitch across wide water spaces **350 m.m.**

Girders to combustion chamber tops: Material **-** Tensile strength **-** Depth and thickness of girder at centre **-** Length as per Rule **-** Distance apart **-** No. and pitch of stays in each **-**

Combustion chamber plates: Material **-** Tensile strength **-** Thickness: Sides **-** Back **-** Top **-** Bottom **-**

Pitch of stays to ditto: Sides **-** Back **-** Top **-** Are stays fitted with nuts or riveted over **-**

Front plate at bottom: Material **Boiler quality steel** Tensile strength **30 T/in<sup>2</sup>** Thickness **25 m.m.** Lower back plate: Material **B.q. steel** Tensile strength **30 T/in<sup>2</sup>** Thickness **25 m.m.**

Pitch of stays at wide water space **One stay** Are stays fitted with nuts ~~XXXXXX~~ **Yes**

Main stays: Material **Longitudinal stay** Tensile strength **28 T/in<sup>2</sup>** Diameter { At body of stay **70 m.m.** or **-** No. of threads per inch **6** Over threads **-**

Screw stays: Material **-** Tensile strength **-** Diameter { At turned off part **-** or **-** No. of threads per inch **-** Over threads **-**



Are the stays drilled at the outer ends **NO** Margin stays: Diameter { At turned off part, or Over threads -

No. of threads per inch -

Tubes: Material **Boiler tube** External diameter { Plain  $\checkmark$  70 m.m. Stay  $\checkmark$  70 m.m. Thickness {  $\checkmark$  4 m.m.  $\checkmark$  9.5 m.m. No. of threads per inch  $\checkmark$  9

Pitch of tubes **Hori. 100 m.m. Vert. 98 m.m.** Manhole compensation: Size of opening in shell plate  $\checkmark$  480 mm x 580 mm Section of compensating ring  $\checkmark$  35 mm x 504 mm No. of rivets and diameter of rivet holes  $\checkmark$  44, 35.5 m.m.

Outer row rivet pitch at ends  $\checkmark$  240 m.m. Depth of flange if manhole flanged  $\checkmark$  95 m.m. (bottom) 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 Thickness of crown No. and diameter of stays Inner radius of crown

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~~  
**Water Tube in Dry Combustion**

Number of elements **28** Material of tubes **Boiler tube** Manufacturers of { Tubes Steel forgings Steel castings Internal diameter and thickness of tubes  $\checkmark$  51 m.m.  $\checkmark$  4.5 m.m.

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

The foregoing is a correct description,

*T. Yuba*  
 T. Yuba, Director Yard Manager Mukaishima Shipyard.

*S. Akamatsu*  
 S. Akamatsu, Director Yard Manager Innoshima Shipyard.

Dates of Survey while building { During progress of work in shops -- } 1955. Oct. 5, 17, 28 Nov. 1, 7, 10, 12, 17, 22, 24, 25  
 { During erection on board vessel --- } 1956. Jan. 9, 20, 21, 26, 31 Feb. 7, 17, March 1, 7  
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **Kob 29, Nov. 1954**  
 Total No. of visits **20**

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.)

These Boilers of this ship have been constructed under Special Survey in accordance with the Rules, Approved plans and Secretary's Letters.

The material and workmanship are good.

These Boilers have been examined under steam, the safety valves were adjusted to 16 kgs per sq. cm. and the accumulation tests were satisfactorily carried out.

Survey Fee ... .. ¥ 40,800.00 } When applied for *5/6/56* 19...  
 Travelling Expenses (if any) ¥ 1,200.00 } When received 19...

*S. Akamatsu*  
 + *Kamada*  
 Engineer Surveyor to Lloyd's Register of Shipping.

FRIDAY 12 OCT 1956

Committee's Minute  
 Assigned *See Part 4.*

