

REPORT ON BOILERS.

No. FE-3799

Received at London Office **11 AUG 1956**

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 **28th Sep. 1955** Last Survey **30th March 1956**

on the **Steel Single Screw Steamer "JAGOCHA"** (Number of Visits **17**) Tons ^{Gross} **197.21** _{Net}

Built at **Mukaishima, Japan** By whom built **Hitachi S.B. & E. Co., Ltd., Mukaishima Shipyard** Yard No. **3757** When built **4Mo.1956.**

Engines made at **Innoshima, Japan** By whom made **Hitachi S.B. & E. Co., Ltd., Innoshima Shipyard** Engine No. **2** When made **12Mo.1955.**

Boilers made at **Innoshima, Japan** By whom made **Hitachi S.B. & E. Co., Ltd., Innoshima Shipyard** Boiler No. **207** When made **12Mo.1955.**

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

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers **151.05 m²** ¹⁶²⁶ 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/cm²**

Tested by hydraulic pressure to **27.5 kgs/cm²** Date of test **9-12-55** No. of Certificate **I-27617** Can each boiler be worked separately **-**

Area of Firegrate in each Boiler **3.6 m²** 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 mm²** Pressure to which they are adjusted **16 kgs/cm²** 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 ~~XXXXX~~ and bunkers ~~XXXXX~~ **440 m.m.** Is oil fuel carried in the double bottom under boilers **-**

Smallest distance between shell of boiler and ~~XXXXX~~ ^{bottom shell} 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/in²**

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 **Treble Riveted Double Butt Straps** Diameter of rivet holes in ^{circ. seams} **35.5 m.m.** _{long. seams} **35.5 m.m.** Pitch of rivets ^{end} **96.86 m.m.** _{inter} **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/in²** 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 ^{front} **30 T/in²** _{back} **30 T/in²** Thickness ^{front} **32 m.m. + 25 m.m.** _{back} **32 m.m. + 25 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/in²**

Thickness **25 m.m.** Lower back plate: Material **B.q. steel** Tensile strength **30 T/in²** Thickness **25 m.m.**

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

Main stays: Material **Longitudinal stay** Tensile strength **28 T/in²**

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.
 No. of threads per inch - or -
 Tubes: Material Boiler tube External diameter Plain 70 m.m. Thickness 4 m.m. No. of threads per inch 9
Stay 70 m.m. 9.5 m.m.
 Pitch of tubes Hori. 100 m.m. Vert. 98 m.m. Manhole compensation: Size of opening in
 shell plate 480 mm x 580 mm Section of compensating ring 35 mm x 504 mm No. of rivets and diameter of rivet holes 44, 35.5 m.m.
 Outer row rivet pitch at ends 240 m.m. Depth of flange if manhole flanged 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 Manufacturers of Tubes
Steel forgings
Steel castings
 Number of elements 28 Material of tubes Boiler tube Internal diameter and thickness of tubes 51 m.m. 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 _____

T. Yuba The foregoing is a correct description,
T. Yuba, Director Yard Manager Mukaishima Shipyard. S. Akamatsu, Director Yard Manager Innoshima Shipyard. Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1955. Sep. 28 Oct. 5, 17, 28, Nov. 1, 7, 12, 14, 25 Dec. 7 Are the approved plans of boiler and superheater forwarded herewith Kob 29 Nov. 1955
 { During erection on board vessel --- } 1956. Jan. 18, 20, 30, 16 Feb. 25 March 28, 30. (If not state date of approval.)
 Total No. of visits 17

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. S.S. "KONDOR" Kobe

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
 Travelling Expenses (if any) ¥ 51,200.00 } When received _____

S. Akamatsu
Hamada
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRIDAY 12 OCT 1956

Assigned Su Rpt. 4