

REPORT ON BOILERS.

No. FE-3788

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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 3 Mo. 1956.

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

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

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

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 27.5 kgs/cm² 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 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 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 ~~440 m.m.~~ and bunkers ~~440 m.m.~~ 440 m.m. Is oil fuel carried in the double bottom under boilers -

Smallest distance between shell of boiler and ~~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 96.86 m.m. Pitch of rivets { 236 m.m.

Double Riveted Double Butt Straps Diameter of rivet holes in { circ. seams 35.5 m.m. long. seams 35.5 m.m. Pitch of rivets { 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 Tensile strength { 30 T/in² back Boiler quality steel 30 T/in² Thickness { 32 m.m. + 25 m.m. 32 m.m. + 11 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 or riveted over Yes

Main stays: Material Longitudinal stay Tensile strength 28 T/in² Diameter { At body of stay or Over threads 70 m.m. No. of threads per inch 6

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

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 **70 m.m.** Stay **70 m.m.** Thickness { **4 m.m.** **9.5 m.m.** No. of threads per inch **9**
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

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
Are 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 { During progress of work in shops -- } 1955. Oct. 5, 17, 28 Nov. 1, 7, 10, 12, 17, 22, 24, 25 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **Kob 29, Nov. 1954**
{ During erection on board vessel --- } 1956. Jan. 9, 20, 21, 26, 31 Feb. 7, 17, March 1, 7 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.

Committee's Minute

FRIDAY 12 OCT 1956

Assigned

See Rpt. 4.



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Foundation