

REPORT ON BOILERS.

No. 799

Received at London Office.

23 JUL 1952

Date of writing Report. 1 March 1952 When handed in at Local Office. 19... Port of Kobe

No. in Survey held at Aioi Japan. Date, First Survey. 13. June 1951. Last Survey. 2. Feb. 1952. 6. Book.

(Number of Visits. 16....) Tons { Gross 11867.82 Net 8891.61

on the Steel single screw M/V "TAIEI - MARU"

The Harima Shipbuilding & Engineering Co., Ltd.

Yard No. 467 When built Feb. 1952.

By whom built Co., Ltd.

The Harima Shipbuilding & Engineering Co., Ltd.

Engine No. 107 When made Oct. 1951.

By whom made Co., Ltd.

The Harima Shipbuilding & Engineering Co., Ltd.

Boiler No. B 739 When made Nov. 1951.

By whom made Co., Ltd.

B 740

Port belonging to Kobe

Nominal Horse Power. 179.7 Owners KYOEI TANKER K.K.

MULTITUBULAR BOILERS MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel Plate; YAWATA, Tube; Fusio, Rivet; YAWATA Cast Steel; HARIMA (Letter for Record)

Total Heating Surface of Boilers 200.5 M² x 2 ✓ Of Superheaters -Total for Register Book 401 M² (4314.76 sq.ft) Is forced draught fitted. Yes ✓ Coal or Oil fired Oil fired ✓No. and Description of Boilers 2 Scotch Boilers (multitubular) ✓ Working Pressure 12 kg/cm²Tested by hydraulic pressure to 21.5 kg/cm² Date of test 20 Nov. 1951. No. of Certificate B 198 B 199 Can each boiler be worked separately. Yes ✓

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 2 (in One chest) Ordinary type. ✓

Area of each set of valves per boiler { per Rule 104 cm² ✓ as fitted 127.2 cm² Pressure to which they are adjusted 12.3 kg/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 or uptakes and bunkers or ~~woodwork~~ 1700 mm. Is oil fuel carried in the double bottom under boilers. No.

Smallest distance between shell of boiler and tank top plating 5880 mm. Is the bottom of the boiler insulated. Yes.

Largest internal dia. of boilers 4170 mm. ✓ Length 3350 mm. ✓ Shell plates: Material O. H. Steel ✓ Tensile strength 30.2 - 31.0 T/a ✓

If fusion welded, state name of welding firm - Have all the requirements of the Rules for Class I vessels

When complied with - Thickness 30 mm Are the shell plates welded or flanged. No. ✓ Description of riveting: circ. seams { end Lap joint Double Lap joint triple

K-Long seams Double Butt strapped joint Diameter of rivet holes in { circ. seams 33.5 mm. Pitch of rivets { 86.81 mm. (Front, Inter) 85.57 (Back) 215 mm. 61.433

Percentage of strength of circ. end seams { plate 60.837 rivets 55.562 Percentage of strength of circ. intermediate seam { plate 84.468 rivets 83.342

Percentage of strength of longitudinal joint { plate 105.224 rivets 89.881 combined

Thickness of butt straps { outer 28 mm. ✓ inner 28 mm. ✓ No. and Description of Furnaces in each Boiler 3, Morison's furnace

Material O. H. Steel ✓ Tensile strength 29.5 - 30.0 T/a ✓ Smallest outside diameter 728 mm.

Length of plain part { top - bottom - Thickness of plates 14 mm. ✓ Description of longitudinal joint Electric welding

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

End plates in steam space: Material O. H. Steel ✓ Tensile strength 27.2 - 27.8 T/a Thickness 32 mm. Pitch of stays 450x430 mm.

How are stays secured The stays pass through the plates not exposed to flame & are fitted with nuts inside & outside

Tube plates: Material { front O. H. Steel ✓ back " Tensile strength 27.2 - 27.5 T/a Thickness { Top 32 mm. Bottom 25 mm. 22 mm.

Mean pitch of stay tubes in nests 234 mm. ✓ Pitch across wide water spaces 350 x 190 mm.

Girders to combustion chamber tops: Material O. H. Steel ✓ Tensile strength 29.0 - 29.5 T/a Depth and thickness of girder

at centre 230 mm. ✓ 38 mm. ✓ Length as per Rule 749 mm. ✓ Distance apart 260 mm. No. and pitch of stays

in each 2 ; 240 mm. ✓ Combustion chamber plates: Material O. H. Steel

Tensile strength 28.3 - 29.8 T/a Thickness: Sides 19 mm. ✓ Back 19 mm. ✓ Top 19 mm. ✓ Bottom 22 mm. ✓

Pitch of stays to ditto: Sides 260x220 mm. Back 280x220 mm. Top 240 mm. ✓ Are stays fitted with nuts or riveted over. Yes ✓

Front plate at bottom: Material O. H. Steel Tensile strength 29.5 T/a

Thickness 25 mm. Lower back plate: Material O. H. Steel Tensile strength 29.2 - 29.9 T/a Thickness 25 mm. ✓

Pitch of stays at wide water space 280 x 220 mm. ✓ Are stays fitted with nuts or riveted over. Both ✓

Main stays: Material O. H. Steel Tensile strength 30.6 - 31.5 T/a

Diameter { At body of stay 75 mm. 65 mm. ✓ No. of threads per inch 6 TH/IN

Screw stays: Material O. H. Steel Tensile strength 26.7 - 28.0 T/a

Diameter { At turned off part 2 1/8" 2 1/8" 1 7/8" No. of threads per inch 9 TH/IN

Over threads 2 1/8" 2 1/8" 1 7/8"

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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 **Hot drawn seamless** **O.H. steel** Internal diameter { Plain..... 70 mm. Stay..... 70 mm. Thickness { 4 mm. 8 mm. No. of threads per inch **9 TH/D**

Pitch of tubes..... 105 x 95 mm. Manhole compensation: Size of opening.....

shell plate 560 x 460 mm. Section of compensating ring 30(278-33.5) x 2 mm² No. of rivets and diameter of rivet holes 40 : 335 mm

Outer row rivet pitch at ends 220 mm. Depth of flange if manhole flanged Top 100 mm. Bottom 90 mm. 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 stays..... Inner radius of crown.....

How connected to shell..... Size of doubling plate under dome..... Diameter of rivet holes and p.....

of rivets in outer row in dome connection to shell.....

Type of Superheater..... Manufacturers of { Tubes..... Steel forgings..... Steel castings.....

Number of elements..... Material of tubes..... Internal diameter and thickness of tubes.....

Material of headers..... Tensile strength..... Thickness..... Can the superheater be shut off 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 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,

THE HARIMA SHIPBUILDING AND
ENGINEERING COMPANY, LTD.

M. Yoshikawa

Manufacture

Dates of Survey { During progress of work in shops - - - 1951. June 13, July 7, 24 Aug., 4, 28, Sept. 4, 13, 15, 24, Oct. 4, 9, 25, Nov. 6, 20. Are the approved plans of boiler and superheater forwarded herewith..... Yes (If not state date of approval.)

while building { During erection on board vessel - - - 1952 Jan. 24, Feb. 2, Total No. of visits..... 16

Is this Boiler a duplicate of a previous case..... Yes If so, state Vessel's name and Report No. M/V "NISSYO - MARU"

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

The Donkey Boilers have been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.

The workmanship and materials are sound and good.

The Donkey Boilers have been examined under steam the safety valves adjusted to 12.3 Kgs/cm² and found satisfactory.

Survey Fee £ See 46 : } When applied for.....19.....

Travelling Expenses (if any) £ : : } When received.....19.....

Bunji Hoshikawa

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

TUES. 12 AUG 1952

Assigned

See F.E. mch. rpt.



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