

## REPORT ON BOILERS.

No. 1683a

Received at London Office.....

Date of writing Report 10th JUNE 1955 When handed in at Local Office JUN. 2 1955 Port of YOKOHAMA

No. in Reg. Book. Survey held at Yokosuka Date, First Survey 27-12-1954 Last Survey 6-6-1955

(Number of Visits 31) Tons { Gross 6573.45 Net 3746.51

on the M.V. "KENWA MARU"

Built at Yokosuka, Japan By whom built Uraga Shipbuilding Yard, The Uraga Dock Co. Ltd. Yard No. 673 When built 6-55

Engines made at Tamashima, Japan By whom made Uraga Tamashima Diesel Kogyo K.K. Engine No. 270 When made 3-55

Boilers made at Yokosuka, Japan By whom made Uraga Shipbuilding Yard, The Uraga Dock Co. Ltd. Boiler No. 10856 (YBC 62) When made 3-55

MN as per Rule Owners Nitto Shosen K.K. Port belonging to Tokyo

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Yawata Iron & Steel Co., Ltd., Yawata Works. Sumitomo Metal Industries, Ltd. Amagasaki.

Total Heating Surface of Boilers 336.5 m<sup>2</sup> { oil fired 214.6 m<sup>2</sup> (2308.5 ft<sup>2</sup>) } ex. gas 121.9 m<sup>2</sup> (1310.29 ft<sup>2</sup>) Of Superheaters

Total for Register Book Is forced draught fitted yes Coal or Oil fired oil fired

No. and Description of Boilers One (1) cylindrical Composite (single ended dry combustion) Working Pressure 10 kg/cm<sup>2</sup>

Tested by hydraulic pressure to 18.5 kg/cm<sup>2</sup> Date of test 25-3-55 No. of Certificate YBC 62 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two (2) full bore spring loaded type

Area of each set of valves per boiler { per Rule 38.1 cm<sup>2</sup> as fitted 49.0 " Pressure to which they are adjusted 10.2 kg/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 or uptakes and bunkers or woodwork 2000 mm Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 5200 mm Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 4600 mm Length Overall 3620 mm Shell plates: Material O.H. steel Tensile strength 44.1-45.9 kg/mm<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 28 mm Are the shell plates welded or flanged Riveted Description of riveting: circ. seams end Double riveted lap joint inter 83.52 mm

long. seams Triple riveted double butt joint Diameter of rivet holes in { circ. seams 31.5 mm long. seams 31.5 " Pitch of rivets 193 " plate rivets

Percentage of strength of circ. end seams { plate 62.3 % rivets 53.5 " Percentage of strength of circ. intermediate seam { plate 83.7 % rivets 108.2 % combined 89.05 %

Thickness of butt straps { outer 25 mm inner 28 " No. and Description of Furnaces in each Boiler Two (2) Morrison type

Material O.H. steel Tensile strength 45.3, 46.3 kg/mm<sup>2</sup> Smallest outside diameter 780 mm 980 mm

Length of plain part { top Thickness of plates 15 mm Description of longitudinal joint Welded bottom

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

End plates in steam space: Material O.H. steel Tensile strength 44.1-45.5 kg/mm<sup>2</sup> Thickness 26 mm Pitch of stays 400 mm

How are stays secured Braided on both ends secured with washers and nuts inside and outside

Tube plates: Material { front O.H. steel Tensile strength 44.8-45.9 kg/mm<sup>2</sup> Thickness 26 mm back O.H. steel 44.8-45.9 " 26 "

Mean pitch of stay tubes in nests 260 mm Pitch across wide water spaces 330 mm 370 mm

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 Tensile strength Thickness

Lower back plate: Material Tensile strength Thickness

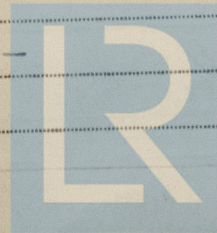
Pitch of stays at wide water space Are stays fitted with nuts or riveted over

Main stays: Material O.H. steel Tensile strength 48.1 kg/mm<sup>2</sup>

Diameter { At body of stay 72 mm No. of threads per inch 6 Over threads 70 " Tensile strength

Screw stays: Material Tensile strength

Diameter { At turned off part No. of threads per inch Over threads



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Are the stays drilled at the outer ends..... Margin stays: Diameter { At turned off part..... or Over threads.....  
No. of threads per inch.....  
Tubes: Material O.H. steel External diameter { Plain 70 mm Stay 70 " Thickness { 4 mm 9.5 " No. of threads per inch 9  
Pitch of tubes 100 x 98 Manhole compensation: Size of opening in shell plate 570 x 470 Section of compensating ring 150 cm<sup>2</sup> No. of rivets and diameter of rivet holes 44 x 31.5 mm φ  
Outer row rivet pitch at ends 130 & 90 Depth of flange if manhole flanged 95 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..... 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 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 yes

The foregoing is a correct description,

Manufacturer.....

Dates of Survey while building { During progress of work in shops - - 1954: DEC. 27 1955: JAN. 12, 17, 19, 21, 24, 26, 28 FEB. 2, 4, 14, 16, 18, 28 MAR. 9, 11, 25, 29 Are the approved plans of boiler and superheater forwarded herewith 7-12-54 (If not state date of approval.)  
During erection on board vessel - - - 1955: APR. 4, 11, 16, 17, 18 MAY. 11, 26, 28, 30 JUN. 1, 3, 4, 6 Total No. of visits 31

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. M.V. "TAZAI" MARU No. 9 YOKOHAMA No. 943

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The Boiler has been constructed under the supervision of the Society's Surveyors in accordance with approved plans, the Secretary's letters and the Society's Rules. The workmanship and materials are good. The Boiler has been satisfactorily installed in the vessel and examined under steam and the safety valves adjusted as stated. It is submitted that the Boiler is eligible to be classed with this Society with the notation of DBS 6.55.

Survey Fee ... £94500.-  
Travelling Expenses (if any) £ : : }

When applied for JUN. 21, 1955  
When received.....

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute.....

Assigned.....

FRIDAY - 5 AUG 1955

See Rpt 46



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