

## REPORT ON BOILERS.

No. FE-22B

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Date of writing Report 20-1-53  
When handed in at Local Office 30 JUN 1953  
Port of Yokohama & Kobe  
No. in Survey held at Yokohama & Nagoya, Japan Date, First Survey 29-7-52 Last Survey 23-12-52 (Yokohama)  
Reg. Book. 4-4-1953  
on the steel T.M.V. "NEW YORK MARU" (Number of Visits 36) Tons Gross 773 Net 442  
Master Built at Nagoya By whom built Nagoya Shipbuilding Co. Ltd. Yard No. 104 When built April 1953  
Engines made at Tamashima By whom made Tamashima Diesel Works Ltd. Engine No. 237 When made Nov 1952  
Boilers made at Yokohama, Japan By whom made The Uraga Dock Co. Ltd. Boiler No. 10435-10436 When made 12-52  
Nominal Horse Power Owners Toho Kaisha K.K. Port belonging to Tokyo

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY. (OIL FUEL)

Manufacturers of Steel Yawata Iron & Steel Co. Ltd. Yawata Works  
Nippon Steel Tube Co. Ltd. Tsurumi Iron & Steel Works  
Kawasaki Iron & Steel Works  
Total Heating Surface of Boilers 190.7 m<sup>2</sup> (2082 ft<sup>2</sup>) Is forced draught fitted YES Coal or Oil fired oil fired  
No. and Description of Boilers 1 Howden Johnson type (single ended, dry combustion, cylindrical) Working Pressure 10 kg/cm<sup>2</sup>  
Tested by hydraulic pressure to 18.5 kg/cm<sup>2</sup> Date of test 23-12-52 No. of Certificate YBC 26 Can each boiler be worked separately Yes  
Area of Firegrate in each Boiler No. and Description of safety valves to each boiler One set of 2 valves, ordinary type  
Area of each set of valves per boiler per Rule 20.5 ft<sup>2</sup> Pressure to which they are adjusted 10 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 No main boiler fitted  
Smallest distance between boilers or uptakes and bunkers or woodwork 2 feet Is oil fuel carried in the double bottom under boilers  
Smallest distance between shell of boiler and tank top plating medium light-steel platform Is the bottom of the boiler insulated Yes  
Largest internal dia. of boilers 4100 mm (inside) Length 2400 mm Shell plates: Material D.H. steel Tensile strength 50.7 ~ 51.0 kg/cm<sup>2</sup>  
Thickness 26 mm Are the shell plates welded or flanged Flanged Description of riveting: circ. seams end double riveted lap joint  
long. seams triple riveted double butt strap Diameter of rivet holes in circ. seams 29.5 mm Pitch of rivets 83.05 mm  
Percentage of strength of circ. end seams plate 64.4% rivets 46.8% Percentage of strength of circ. intermediate seam plate 84.6% rivets 95.0% Working pressure of shell by Rules 11.53 kg/cm<sup>2</sup>  
Percentage of strength of longitudinal joint plate 88.2% rivets 95.0% combined 88.2%  
Thickness of butt straps outer 25 mm inner 25 mm No. and Description of Furnaces in each Boiler 3 - Morrison type  
Material D.H. steel Tensile strength 28.4 ~ 29.9 kg/cm<sup>2</sup> Smallest outside diameter 780 mm  
Length of plain part top bottom Thickness of plates outer 15 mm inner 15 mm Description of longitudinal joint welded  
Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 14.4 kg/cm<sup>2</sup>  
End plates in steam space: Material D.H. steel Tensile strength 29.3 ~ 29.4 kg/cm<sup>2</sup> Thickness 26 mm Pitch of stays 450 mm  
How are stays secured Threaded on both ends and secured with washers and nuts Working pressure by Rules 10.48 kg/cm<sup>2</sup>  
Tube plates: Material front D.H. steel back D.H. steel Tensile strength 43.5 ~ 46.3 kg/cm<sup>2</sup> Thickness Upper 26 mm lower 22 mm  
Lean pitch of stay tubes in nests 248 mm Pitch across wide water spaces 340 mm Working pressure front 10.48 kg/cm<sup>2</sup> back 12.1 kg/cm<sup>2</sup>  
Girders to combustion chamber tops: Material Tensile strength Depth and thickness of girder  
Length as per Rule Distance apart No. and pitch of stays  
Working pressure by Rules Combustion chamber plates: Material  
Thickness: Sides Back Top Bottom  
Pitch of stays to ditto: Sides Back Top Are stays fitted with nuts or riveted over  
Working pressure by Rules 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  
Working pressure Main stays: Material D.H. steel Tensile strength 47.2 kg/cm<sup>2</sup>  
At body of stay 70 mm No. of threads per inch 6 Area supported by each stay 1760 cm<sup>2</sup>  
Over threads 70 mm  
Working pressure by Rules 14.27 kg/cm<sup>2</sup> Screw stays: Material Tensile strength  
At turned off part No. of threads per inch Area supported by each stay  
Over threads

all  
23-7-53



Working pressure by Rules..... Are the stays drilled at the outer ends..... Margin stays: Diameter <sup>At turned off part,</sup> <sub>or</sub> <sup>Over threads.....</sup>  
No. of threads per inch..... Area supported by each stay..... Working pressure by Rules.....  
Tubes: Material O.H. Steel External diameter <sup>Plain.....</sup> 70 mm <sup>Stay.....</sup> 70 mm Thickness 4 mm No. of threads per inch 9  
Pitch of tubes 100 x 98 mm Working pressure by Rules 20 kg/cm<sup>2</sup> Manhole compensation: Size of opening in  
shell plate 470 x 570 mm Section of compensating ring 144 cm<sup>2</sup> No. of rivets and diameter of rivet holes 44 - 29.5 mm  
Outer row rivet pitch at ends 110 mm Depth of flange if manhole flanged 95 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 <sup>Plate.....</sup> <sub>Rivets.....</sub>  
Internal diameter..... Working pressure by Rules..... Thickness of crown..... No. and diameter of  
stays..... Inner radius of crown..... Working pressure by Rules.....  
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.....

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..... Working pressure as per  
Rules..... 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,

H. Tazawa

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1952 { JUL. 29. AUG. 29. SEPT. 9. 12. 17. 26. 29.  
OCT. 3. 6. 9. 10. 13. 15. 17. 20. 25. 27. 29.  
NOV. 8. 13. 15. 22. 25.  
DEC. 4. 6. 9. 11. 13. 20. 23.  
During erection on board vessel - - 1953 FEB 4. 5. MAR 31. APR 2. 3. 4. Are the approved plans of boiler and superheater forwarded herewith 1-11-52 (Kobe)  
(If not state date of approval.)  
Total No. of visits 30 (Yokohama) + 6 (Kobe) Total 36

Is this Boiler a duplicate of a previous case yes

If so, state Vessel's name and Report No. T.M.V. "YOKOHAMA MARU" No 1278  
m.v. "EISHIN MARU"

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

This Boiler has been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.  
The materials and workmanship are good.  
It is submitted that this Boiler is eligible for classification with the Society with the notation of DBS with date when satisfactorily installed in the vessel and the safety valves adjusted under steam.  
This boiler has now been installed on board the T.M.V. "New York Maru" in accordance with the Rules and examined under full working condition and the Safety valves adjusted under steam to 10 kg/cm<sup>2</sup>.

Survey Fee ... ¥ 52,800.00  
Travelling Expenses (if any) £ : :  
When applied for.....19.....  
When received.....19.....

M. Yamakura T. Hashimoto  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... FRIDAY 28 AUG 1953

Assigned Sir F.E. Mchey. spk.



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