

## REPORT ON BOILERS.

No. FE-22A

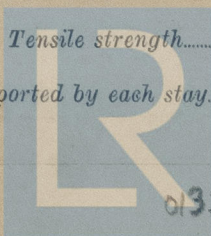
Received at London Office

E 9 JUL 1953

Date of writing Report 20-1-53 When handed in at Local Office 30 JUN 1953 Port of Yokohama + Kobe  
6-4-1953 (1008E) 29-7-52 (Yokohama) Last Survey 23-12-52 (Yokohama)  
No. in Reg. Book. Survey held at Yokosuka + Nagoya, Japan Date, First Survey 4-4-1953  
on the steel T.M.V. "NEW YORK MARU" (Number of Visits 35) Gross 7738.79 Tons Net 4429.84  
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 Yokosuka, Japan By whom made The Uraga Dock Co Ltd Boiler No. 10435 When made 12-52  
Nominal Horse Power Owners Toho Kaiun K.K. Port belonging to Tokyo

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

Manufacturers of Steel Yawata Iron and Steel Co. Ltd. Yawata Works.  
oil fire 82.49 m<sup>2</sup> (888 ft<sup>2</sup>) Kawasaki Iron and Steel Works  
gas 179 m<sup>2</sup> (1926 ft<sup>2</sup>) 261.49 m<sup>2</sup> (2814 ft<sup>2</sup>)  
Total Heating Surface of Boilers Is forced draught fitted No Coal or Oil fired oil fired + exhaust gas  
No. and Description of Boilers 1. Cylindrical, Composite type (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 20-12-52 No. of Certificate YBC-27 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 10.18 ft<sup>2</sup> as fitted 12.2 ft<sup>2</sup> x 2 = 24.4 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 Donkey Boilers 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 high twin platform Is the bottom of the boiler insulated Yes  
Largest internal dia. of boilers 4100 mm (inside) Length 2400 mm Shell plates: Material O.H. Steel Tensile strength 48.3 ~ 50.6 kg/mm<sup>2</sup>  
Thickness 26 mm Are the shell plates welded or flanged Flanged Description of riveting: circ. seams end double riveted lap joint inter. 83.0 mm  
long. seams Triple riveted double butt strap Diameter of rivet holes in circ. seams 29.5 mm Pitch of rivets 192 mm / 96 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 %  
Percentage of strength of longitudinal joint plate 88.2 % rivets 95.0 % Working pressure of shell by Rules 11.53 kg/cm<sup>2</sup>  
Thickness of butt straps outer 25 mm inner 25 mm No. and Description of Furnaces in each Boiler 1, Morrison type  
Material O.H. Steel Tensile strength 47.1 ~ 44.8 kg/mm<sup>2</sup> Smallest outside diameter 780 mm  
Length of plain part top 15 mm Thickness of plates bottom 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 O.H. Steel Tensile strength 44.4 ~ 45.6 kg/mm<sup>2</sup> Thickness 26 mm Pitch of stays 450 mm  
How are stays secured Front and back ends secured with washers and nuts inside and outside Working pressure by Rules 12.1 kg/cm<sup>2</sup>  
Tube plates: Material front O.H. Steel Tensile strength 44.4 ~ 48.7 kg/mm<sup>2</sup> Thickness upper 26 mm lower 24 mm  
back O.H. Steel Tensile strength 43.9 ~ 44.4 kg/mm<sup>2</sup> Thickness upper 26 mm lower 26 mm  
Mean pitch of stay tubes in nests 198 mm Pitch across wide water spaces 350 mm, 250 mm Working pressure front 12.7 kg/cm<sup>2</sup> back 13.3 kg/cm<sup>2</sup>  
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  
on each Working pressure by Rules 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  
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 O.H. Steel Tensile strength 41.0 kg/mm<sup>2</sup>  
Diameter At body of stay 7.0 mm No. of threads per inch 6 Area supported by each stay 176.0 cm<sup>2</sup>  
Over threads 7.0 mm  
Working pressure by Rules 14.3 kg/cm<sup>2</sup> Screw stays: Material Tensile strength  
Diameter At turned off part No. of threads per inch Area supported by each stay  
Over threads



© 2021

Lloyd's Register Foundation

013596-013603-0179



Working pressure by Rules. Are the stays drilled at the outer ends. Margin stays: Diameter At turned off part, or Over threads. No. of threads per inch. Area supported by each stay. Working pressure by Rules. Tubes: Material O.H. Steel External diameter Plain 70 mm Stay 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 i 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 Plate Rivets Internal diameter Working pressure by Rules Thickness of crown No. and diameter Engine 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 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 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 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. 6. 11. 20. 29 SEPT. 3. 5. 9. 12. 17. 19. 24. 29 OCT. 3. 9. 15. 17. 20. 25. 29 NOV. 4. 8. 15. 18. 25 DEC. 13. 17. 20. 23 Are the approved plans of boiler and superheater forwarded herewith 1-11-52 (Kobe) (If not state date of approval.) During erection on board vessel - - - 1953 FEB. 4. 5. MAR. 31 APR. 2. 3. 4 Total No. of visits 29 (Yokohama) + 6 (Kobe) Total 35

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

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 this 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 Kgs/cm<sup>2</sup>.

YOKOHAMA

Survey Fee ... 72,000 When applied for, 19... Travelling Expenses (if any) £ : : When received, 19...

H. Kanakura H. Tazawa Engineer Surveyor to Lloyd's Register of Shipping.

FRIDAY 28 AUG 1953

Committee's Minute

Assigned Sir F.E. Moly. apt.



© 2021

Lloyd's Register Foundation