

## REPORT ON BOILERS.

No. 1955

Received at London Office

3 MAY 1934

Date of writing Report 9th Apr 1934 When handed in at Local Office 9th Apr 1934 Port of NAGASAKI.

No. in Survey held at NAGASAKI. Date, First Survey 2nd Aug. 1933 Last Survey 27th March 1934.

1 Kg/Reg. Book 40819 on the Steel Single Screw Motor Vessel "NICHIO MARU". See Machy. Rpt. (Number of Visits) Gross 7,508.86 Tons Net 5,521.88

Built at Nagasaki. By whom built Mitsubishi Zosen Kaisha, Ltd. Yard No. 551 When built 1934

Engines made at Nagasaki. By whom made Mitsubishi Zosen Kaisha, Ltd. Engine No. 551 When made 1934

Boilers made at Nagasaki. By whom made Mitsubishi Zosen Kaisha, Ltd. Boiler No. 551 When made 1934

Owners Toyo Kisen Kabushiki Kaisha. Port belonging to Tokyo.

## VERTICAL DONKEY BOILER.

Made at Nagasaki. By whom made Mitsubishi Zosen Kaisha Boiler No. 551 When made 1934 Where fixed Eng. Rm. floor. Port side

Manufacturers of Steel Kawasaki Dockyard Co. Ltd.,

Total Heating Surface of Boiler 25.63 sq. meters. Is forced draught fitted No Coal or Oil fired Oil

No. and Description of Boilers One Vertical Multitubular. Working pressure 120 lbs.

Tested by hydraulic pressure to 230 lbs/sq. in. Date of test 15th November 1933. No. of Certificate 156.

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Twin spring loaded.

Area of each set of valves per boiler { per rule 3.53 sq. in. as fitted 3.90 sq. in. Pressure to which they are adjusted 125 lbs/sq. in. Are they fitted with easing gear Yes

State whether steam from main boilers can enter the donkey boiler Smallest distance between boiler or uptake and bunkers

Is oil fuel carried in the double bottom under boiler No Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated Yes Largest internal dia. of boiler 1600 m/m Height 4115 m/m

Shell plates: Material Steel Tensile strength 28-32 tons/sq. in. Thickness 12 and 15 m/m

Are the shell plates welded or flanged No Description of riveting: circ. seams { end S.R.L. inter S.R.L. long. seams D.R.L.

Dia. of rivet holes in { circ. seams 23 m/m Pitch of rivets { 50.5 m/m Max. 60.1 m/m 66.2 m/m Percentage of strength of circ. seams { plate 58.6 rivets 47.1 of Longitudinal joint { plate 65.3 rivets 62.1 combined -

Working pressure of shell by rules 131. lbs/sq. in. Thickness of butt straps { outer inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished partial spherical Material Steel

Tensile strength 26-30 tons/sq. in. Thickness 15 m/m Radius 1000 m/m Working pressure by rules 138 lbs/sq. in.

Description of Furnace: Plain, spherical, or dished crown Spherical Material Steel Tensile strength 26-30 tons/sq. in.

Rules Thickness 13 m/m External diameter { top bottom Length as per rule Working pressure by rules

Pitch of support stays circumferentially and vertically Are stays fitted with nuts or riveted over

Diameter of stays over thread Radius of spherical or dished furnace crown 690 m/m Working pressure by rule 156 lbs

Thickness of Ogee Ring 19 m/m Diameter as per rule { 1600 m/m 1380 m/m Working pressure by rule 135 lbs/sq. in.

Combustion Chamber: Material Tensile strength Thickness of top plate

Radius if dished Working pressure by rule Thickness of back plate Diameter if circular

Length as per rule Pitch of stays Are stays fitted with nuts or riveted over

Diameter of stays over thread Working pressure of back plate by rules

Tube Plates: Material { front Steel back Steel Tensile strength { 26-30 tons sq. in. Thickness { 20 m/m 20 m/m Mean pitch of stay tubes in nests 220.4 m/m

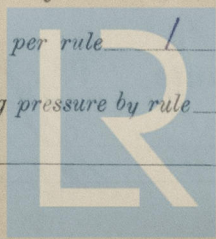
f comprising shell, Dia. as per rule { front 1288 m/m back 1448 m/m Pitch in outer vertical rows { 99 m/m 99 m/m Dia. of tube holes FRONT { stay 70 m/m plain 67 m/m BACK { stay 65 m/m plain 65 m/m

Is each alternate tube in outer vertical rows a stay tube Yes Working pressure by rules { front 126 lbs/sq. in. back 129 lbs/sq. in.

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 Working pressure by rule



© 2020

Lloyd's Register  
Foundation

007958-007965-0283



Crown stays: Material / Tensile strength / Diameter { at body of stay / or over threads /  
No. of threads per inch / Area supported by each stay / Working pressure by rules /  
Screw stays: Material / Tensile strength / Diameter { at turned off part / or over threads / No. of threads per inch /  
Area supported by each stay / Working pressure by rules / Are the stays drilled at the outer ends /  
Tubes: Material Mild steel External diameter { plain 65 m/m / stay 65 m/m / Thickness { 10 L.S.G. / 8 m/m /  
No. of threads per inch 9 Pitch of tubes 93 m/m x 99 m/m / Working pressure by rules 175 lbs/sq.in.  
Manhole Compensation: Size of opening in top end plate 305 x 405 m/m Section of compensating ring / No. of rivets and diameter of rivet holes / Outer row rivet pitch at ends / Depth of flange if manhole flanged 90 m/m /  
Uptake: External diameter / Thickness of uptake plate /  
Cross Tubes: No. / External diameters { / Thickness of plates /

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

NAGASAKI WORKS, MITSUBISHI

The foregoing is a correct description,

GENERAL MANAGER

J. T. Inagaki

Manufacture

Dates of Survey { During progress of work in shops - - / while building { During erection on board vessel - - /

See Machinery Report.

Is the approved plan of boiler forwarded herewith 8-4-33 (If not state date of approval.)

Total No. of visits

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "Uyo Maru" Nag.Rpt No.1916.

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

This boiler has been constructed under Special Survey in accordance with the Rules and Approved plans.  
The materials have been tested found efficient and the workmanship is good.  
The safety valves were adjusted under steam as stated on the 9th March 1934.  
This boiler has been efficiently installed on board, accumulation test carried out with satisfactory results and is eligible in our opinion to have the notation of DBS. 3-34, in the Register Book.  
Fitted for oil fuel F.P. above 150° F.

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

Committee's Minute

Assigned

TUE 8 MAY 1934

DBS. 3-34  
See + Lmb. 3-34

A. S. Buchanan & T. Kimishu  
Engineer Surveyors to Lloyd's Register of Shipping.



© 2020

Lloyd's Register Foundation