

REPORT ON BOILERS.

No. 2018

25 MAR 1935

Received at London Office

Date of writing Report 20th Feb. 1935 When handed in at Local Office 20th Feb. 1935 Port of NAGASAKI.

No. in Reg. Book 90519 on the Steel Screw Motor Vessel "NOJIMA MARU" Survey held at NAGASAKI. Date, First Survey 20th March 34 Last Survey 13th Feb. 1935 (Number of Visits) See Machy. Rpt. Gross 7183.63 Tons Net 4317.93

Built at Nagasaki By whom built Mitsubishi Jukogyo Kaisha, Ltd. Yard No. 582 When built 1935
Engines made at Nagasaki By whom made Mitsubishi Jukogyo Kaisha, Ltd. Engine No. 582 When made 1935
Boilers made at Nagasaki By whom made Mitsubishi Jukogyo Kaisha, Ltd. Boiler No. 582 When made 1935
Owners Nippon Yusen Kabushiki Ksisha. Port belonging to Tokio.

VERTICAL DONKEY BOILER.

Made at Nagasaki By whom made Mitsubishi Jukogyo K.K. Boiler No. 582 When made 1935 Where fixed E.R. Upper.
Manufacturers of Steel Nippon Seitetsu Kaisha, Ltd., Yawata.

Total Heating Surface of Boiler 58.310 sq.M. Is forced draught fitted No Coal or Oil fired Exhaust gas or Oil.

No. and Description of Boilers One, - Vertical Waste Heat Boiler. (Clarkson Type). Working pressure 7 Kg/cm² = 100 lb.

Tested by hydraulic pressure to 14 Kg/cm² Date of test 24th November 1934. No. of Certificate 164

Area of Firegrate in each Boiler / No. and Description of safety valves to each boiler Spring loaded twin safety valves.

Area of each set of valves per boiler { per rule 2268 sq.m/m. 5360 as fitted 5655 " Pressure to which they are adjusted 7 Kg/cm² 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 or woodwork / Is oil fuel carried in the double bottom under boiler / Smallest distance between base of boiler and tank top plating

Boiler flat near 2nd DK aft E.R. Is the base of the boiler insulated Yes Largest internal dia. of boiler 2250 m/m Height 6110 m/m

Shell plates: Material Steel Tensile strength 44 to 50 Kg/mm² Thickness 12 m/m

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

Dia. of rivet holes in { circ. seams 20 m/m Pitch of rivets 46 & 46.5 m/m Percentage of strength of circ. seams { plate 56.5% rivets 46% of Longitudinal joint { plate 75% rivets 100% combined

Working pressure of shell by rules 7.94 Kg/cm² Thickness of butt straps { outer 8 m/m inner 11 m/m

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

Tensile strength 41 to 47 Kg/mm² Thickness 21 m/m Radius 1900 m/m Working pressure by rules 7.9 Kg/cm²

Description of Furnace: Plain, spherical, or dished crown / Material / Tensile strength /

Thickness / 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 / Working pressure by rule /

Thickness of Ogee Ring / Diameter as per rule { D / d / Working pressure by rule /

Uptake Ogee Ring: Material Steel Tensile strength 41 to 47 Kg/mm² Thickness of top plate 16 m/m

Radius if dished 1041 m/m Working pressure by rule 9.1 Kg/cm² 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 Steel Tensile strength 41 to 47 Kg/mm² Thickness 30 m/m Thimble pitch of tubes 177.9 x 191 m/m

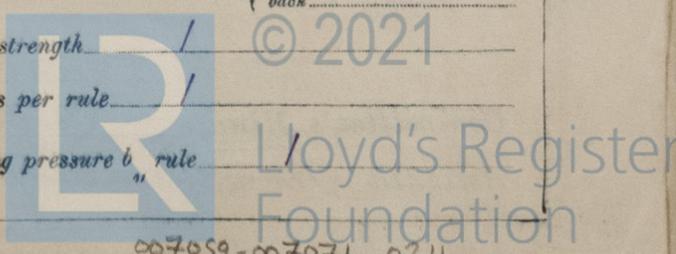
If comprising shell, Dia. as per rule { front / back / Pitch in outer vertical rows { (thimble) 83.4 m/m BACK { stay / plain /

Is each alternate tube in outer vertical rows a stay tube / Working pressure by rules { front 9.5 Kg/cm² back /

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 /



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 M.S. tube tapered & O.A. welded at end External diameter { ~~83~~ 83 m/m Thickness { No. 5 B.W.G.
 No. of threads per inch / Pitch of tubes / Working pressure by rules 27.5 Kg/cm²

Manhole Compensation: Size of opening in shell plate 455 x 355 m/m Section of compensating ring 16m/m Thk. No. No. of rivets and diameter
 of rivet holes 44 x 25 m/m Outer row rivet pitch at ends 100 m/m Depth of flange 80 m/m
 of compensating ring:- 80 m/m

Uptake: External diameter 1032 m/m Thickness of uptake plate 16 m/m

Cross Tubes: No. / External diameters / Thickness of plates /

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

The foregoing is a correct description,
 NAGASAKI WORKS, MITSUBISHI JUKOGYO KABUSHIKI KAISHA.
 General Manager.

Dates of Survey { During progress of work in shops - - } See Machinery Report. Is the approved plan of boiler forwarded herewith 20-11-33
 while building { During erection on board vessel - - } Total No. of visits

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "Noto Maru" Nag.Rpt No.1999.
"Noshiro Maru" Nag.Rpt No.2005

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 plan
 The materials have been tested found efficient and the workmanship throughout is good.
 The safety valves were adjusted under steam as stated, on the 28th January 1935.
 This Boiler has been efficiently installed on board, accumulation test carried out with satisfactory results and eligible in our opinion to have the notation of **DBS. 2-35** in the Register Book.
 Fitted for oil fuel F.P. above 150° F.
 All thimble tubes tested by Hydraulic pressure of 1000 lbs/sq.in. before fitting in boiler.
 Note:- A pressure feed water heater, has been installed, built in accordance with plan approved, 15th February 1934 and tested by hydraulic pressure of 17 Kg/cm² and found satisfactory.
 This Heater employs exhaust gases from the Diesel generator engine only, and it has a relief valve fitted and adjusted to safe working load.

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

Committee's Minute FRI. 29 MAR 1935
 Assigned See other Ref. 36. 2018

T. Kumishu
 Engineer Surveyor to Lloyd's Register of Shipping.
 Lloyd's Register Foundation