

# REPORT ON BOILERS.

No. 7609.

Received at London Office

29 JAN 1932

Date of writing Report 11-12-31 19 When handed in at Local Office 13-1-32 19 Port of Kobe

No. in Reg. Book Survey held at Tama Date, First Survey 7-7-31 Last Survey 8-12-31 19  
on the M.V. NACHISAN MARU (Number of Visits 10) Tons { Gross Net

Built at Tama By whom built Mitsui Bussan Kaisha Yard No. 183 When built 1931  
Engines made at Tama By whom made Mitsui Bussan Kaisha Engine No. 183 When made 1931  
Boilers made at Tama By whom made Mitsui Bussan Kaisha Boiler No. 183 When made 1931  
Owners Mitsui Bussan Kaisha Port belonging to Kobe

## VERTICAL DONKEY BOILER.

Made at Tama By whom made Mitsui Bussan Kaisha Boiler No. 183 When made 1931 Where fixed Engine Room  
Manufacturers of Steel Aramo Shipbuilding Co. Lower platform

Total Heating Surface of Boiler 114.6 sq. Is forced draught fitted No Coal or Oil fired Oil

No. and Description of Boilers One vertical Pass Tube Working pressure 100 lbs.

Tested by hydraulic pressure to 200 lbs. Date of test 15-10-31 No. of Certificate -

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

Area of each set of valves per boiler { per rule as fitted 4.8 Pressure to which they are adjusted 100 lbs. Are they fitted with easing gear Yes

State whether steam from main boilers can enter the donkey boiler Yes 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

1'-5" Is the base of the boiler insulated Yes Largest internal dia. of boiler 5'-1" Height 11'-5"

Shell plates: Material Steel Tensile strength 28-32 Thickness 1/2"

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

Dia. of rivet holes in { circ. seams 15/16 Pitch of rivets { 2 1/8 2 7/8 Percentage of strength of circ. seams { plate 55.7 rivets 53.3 of Longitudinal joint { plate 67.3 rivets 78.9 combined

Working pressure of shell by rules 149 lbs. Thickness of butt straps { outer inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished, no stays Material Steel

Tensile strength 26-30 Thickness 9/16 Radius 60" Working pressure by rules 119 lbs.

Description of Furnace: Plain, spherical, or dished crown Plain, crown dished Material Steel Tensile strength 26-30

Thickness 5/8" External diameter { top 48" bottom 54" Length as per rule 50 13/16 Working pressure by rules 139 lbs.

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 42" Working pressure by rule 124.5 lbs.

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

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 back Tensile strength { Thickness { Mean pitch of stay tubes in nests

If comprising shell, Dia. as per rule { front back Pitch in outer vertical rows { Dia. of tube holes FRONT { stay plain BACK { stay plain

Is each alternate tube in outer vertical rows a stay tube Working pressure by rules { front 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 ☒ External diameter { plain ☒ stay ☒ Thickness { ☒  
 No. of threads per inch ☒ Pitch of tubes ☒ Working pressure by rules ☒  
**Manhole Compensation:** Size of opening in shell plate 15 x 11 Section of compensating ring 15 1/2 x 5/8 No. of rivets and diameter of rivet holes 48 @ 15/16 Outer row rivet pitch at ends 3 1/2 Depth of flange if manhole flanged 3  
**Uptake:** External diameter 15 7/8 Thickness of uptake plate 7/16  
**Cross Tubes:** No. 7mm External diameters { 10 7/8 Thickness of plates 7/16

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with yes

The foregoing is a correct description,

S. W. Tai Manufacture

19-8-31  
 Dates of Survey { During progress of work in shops - 7-7-31, 18-8-31, 24-8-31, 1-10-31, 15-10-31  
 while building { During erection on board vessel - 18-21-27 Dec-8  
 Is the approved plan of boiler forwarded herewith 12-3-31  
 (If not state date of approval.)  
 Total No. of visits 10

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 workmanship and materials are good. The boiler was tested by hydraulic pressure to 200 lbs per sq. inch and found tight & sound; afterwards apparently installed in the vessel and the safety valves adjusted under steam to 100 lbs and eligible, in an opinion, to have read of D.B 100 lbs.

Survey Fee ... .. \$63.00 : When applied for, 19-8-31  
 Travelling Expenses (if any) £ : : When received, See Rpt 463

G. Pickering & Self A. B. Harrison  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 5 FEB 1932  
 Assigned See F. B. Rpt.

