

REPORT ON BOILERS.

No. FE-3856

Received at London Office

Date of writing Report 19... When handed in at Local Office AUG 29 1956 19... Port of K O B E

Survey held at Tamano, Japan Date, First Survey 2nd Dec., 1955 Last Survey 7th June, 1956

No. in Reg. Book. on the M.V. "MIKAGESAN MARU" (Number of Visits 18) Tons { Gross 7200.05 Net 4019.43

Built at Tamano, Japan By whom built Mitsui Shipbuilding & Eng., Co., Ltd. Yard No. 609 When built 1956-6

Engines made at Tamano, Japan By whom made Mitsui Shipbuilding & Eng., Co., Ltd. Engine No. 607 When made 1956-6

Boilers made at Tamano, Japan By whom made Mitsui Shipbuilding & Eng., Co., Ltd. Boiler No. 397 When made 1956-6

Owners Mitsui Steamship Co., Ltd. Port belonging to Tokyo.

VERTICAL BOILER.

Made at Tamano By whom made Mitsui Shipbuilding & Eng., Co., Ltd. Boiler No. 397 When made 1956-6 Where fixed in engine room Boiler room port side

Manufacturers of Steel. Plates: Yawata Iron & Steel Co., Ltd. Tube: Sumitomo Metal Ind. Ltd., Steel tube works,

Total Heating Surface of each Boiler 53.8 M² Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers 1 Vertical Cochran type Working Pressure 7 kg/cm²

Tested by hydraulic pressure to 14 kg/cm² Date of test 16-4-56 No. of Certificate I-32318

Area of fire grate in each Boiler - No. and description of safety valves to each boiler 1 Double spring ordinal type

Area of each set of valves per boiler { per Rule 50.9 mm x 2 as fitted 65 mm x 2 Pressure to which they are adjusted 72 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 No Smallest distance between base of boiler and tank top plating -

Is the base of the boiler insulated Yes Largest internal dia. of boiler 2,100mm Height 5,100mm

Shell plates: Material O.H. Steel Tensile strength 50.3-50.8 kg/mm² Thickness 12mm

Are the shell plates welded or flanged Welded If fusion welded, state name of welding firm Mitsui Shipbuilding & Eng., Co., Ltd.

Have all the requirements of the Rules for Class I vessels been complied with Yes Description of riveting: circ. seams { end... inter... }

long. seams - Dia. of rivet holes in { circ. seams... long. seams... } Pitch of rivets { } Thickness of butt straps { outer... inner... }

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat spherical Material O.H. Steel Tensile strength 43.8 kg/mm² Thickness 16mm

Radius 1,550mm Description of Furnace: Plain, spherical, or dished crown Spherical crown Material O.H. Steel

Tensile strength 42.4-42.5 kg/mm² Thickness 12mm External diameter { top... bottom... } 1800mm Length as per Rule -

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 888mm

Thickness of Ogee Ring 22mm Diameter as per Rule { D... d... } 2100mm 1800mm

Combustion Chamber: Material - Tensile strength - Thickness of top plate -

Radius if dished - 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 -

Tube Plates: Material { front... back... } O.H. Steel Tensile strength { front... after... } 43.6 kg/mm² 45.5 Thickness { } 32mm 27mm Mean pitch of stay tubes in nests 287.5mm

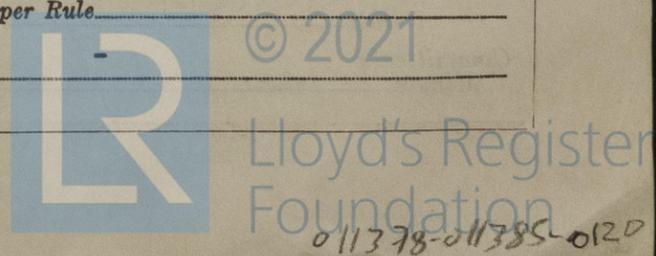
If comprising shell, dia. as per Rule { front... back... } Pitch in outer vertical rows { } 180mm Dia. of tube holes FRONT { stay... plain... } 71mm 68mm BACK { stay... plain... } 65mm 65mm

Is each alternate tube in outer vertical rows a stay tube -

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 -



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Crown Stays: Material - Tensile strength - Diameter { at body of stay, - or over threads, -

No. of threads per inch - **Screw Stays:** Material - Tensile strength -

Diameter { at turned off part, - or over threads, - No. of threads per inch - Are the stays drilled at the outer ends -

Tubes: Material O.H. Steel External diameter { plain, ✓ 65mm stay, ✓ 65mm Thickness { ✓ 3.5mm ✓ 8mm

No. of threads per inch ✓ 9 Pitch of tubes ✓ 90 x 95mm

Manhole Compensation: Size of opening in shell plate 390 x 515mm Section of compensating ring 4761.78mm² No. of rivets and diameter of rivet holes - Outer row rivet pitch at ends - Depth of flange if manhole flanged ✓ 80mm

Uptake: External diameter ✓ 550mm Thickness of uptake plate ✓ 4.5mm

Cross Tubes: No. - External diameters { - Thickness of plates -

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

MITSUBISHI SHIPBUILDING & ENGINEERING CO., LTD., TAMANO WORKS.

J. Asano for S. Tanaka
 Senior Managing Director, Manufacturer.

1955: Dec. 2
 Dates of Survey while building { During progress of work in shops - - 1956: Jan. 6, 23, Feb. 1, 13, 23, 24, 27, March 2, 19, 23, April, 9, 12, 16, 23
 During erection on board vessel - - - 1956: May 28, June 7
 Is the approved plan of boiler forwarded herewith 8 Dec., 1954.
 (If not state date of approval.)
 Total No. of visits 18

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. M.V. "HODAKASAN MARU" M.V. "MOGAMISAN"

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 The Donkey Boiler of this vessel has been constructed under Special Survey in accordance with the Rules approved plans and secretary's letters.
 The workmanship and materials are sound and good.
 ✓ The Donkey boiler has been examined under steam and the safety valves adjusted to 7.2 kg/cm² and found satisfactory.
 ✓ Accumulation tests were carried out in accordance with the Rules with satisfactory results.

Survey Fee £ 24,000.00 When applied for AUG. 21, 1956
 Travelling Expenses (if any) £ See Rpt. 1 When received 19

R. J. Sutewart - J. Nonokura
 Engineer Surveyor to Lloyd's Register of Shipping.

Date TUESDAY 16 OCT 1956

Committee's Minute See Rpt. 4 C.