

## REPORT ON BOILERS.

No.

1142

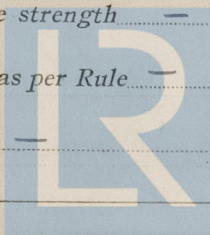
Received at London Office

13 JAN 1953

Date of writing Report 22-11-1952 When handed in at Local Office 2 JAN 1953 Port of Kobe  
 No. in Survey held at Tamano, Japan Date, First Survey 21st Aug. 1952 Last Survey 12th Nov. 1952  
 g. Book. on the Motor Tanker "OTOWASAN MARU" (Number of Visits 15)  
 Tons { Gross 12,686.83  
 Net 7,465.94  
 Built at Tamano, Japan By whom built Mitsui Shipbuilding & Engineering Co. Ltd No. 569 When built Nov. 1952  
 Engines made at Tamano, Japan By whom made Mitsui Shipbuilding & Engineering Co. Ltd Engine No. 431 When made Nov. 1952  
 Boilers made at Tamano, Japan By whom made Mitsui Shipbuilding & Engineering Co. Ltd Boiler No. 357 When made Nov. 1952  
 Owners Mitsui Senpaku K. K. Port belonging to Tokyo

## VERTICAL BOILER.

Made at Tamano By whom made Mitsui S.B. & E. Co., Ltd Boiler No. 357 When made Nov. 1952 Where fixed Upper deck  
 Manufacturers of Steel Plate: Yawata Steel & Iron Works; Tube: Sumitomo Metal Ind., Ltd., Amagasaki Tube Works  
 Total Heating Surface of Boiler 162 m<sup>2</sup> Is forced draught fitted No Coal or Oil fired Exhaust gas  
 and Description of Boilers 1 Vertical Tube type Working Pressure 12.7 kg/cm<sup>2</sup>  
 Tested by hydraulic pressure to 22.55 kg/cm<sup>2</sup> Date of test 2-9-1952 No. of Certificate B 406  
 Area of fire grate in each Boiler - No. and description of safety valves to each boiler 1 set duplex spring loaded safety valve  
 Area of each set of valves per boiler { per Rule 36.05 cm<sup>2</sup>  
 as fitted 66.36 cm<sup>2</sup> Pressure to which they are adjusted 13.0 kg/cm<sup>2</sup> 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 -  
 Woodwork - Is oil fuel carried in the double bottom under boiler - Smallest distance between base of boiler and tank top plating -  
 Is the base of the boiler insulated No Largest internal dia. of boiler 2250 mm Height 3150 mm  
 Shell plates: Material Open Hearth Steel Tensile strength 29.6 ~ 30.4 kg/cm<sup>2</sup> Thickness 19 mm  
 Are the shell plates welded or flanged Riveted If fusion welded, state name of welding firm -  
 Have all the requirements of the Rules for Class I vessels been complied with - Description of riveting: circ. seams { end Double riveted  
 Lap joint  
 inter Triple riveted  
 Lap joint  
 Long. seams Double riveted Dia. of rivet holes in { circ. seams 26.5 mm Pitch of rivets { 85.47 mm  
butt strap { long. seams 23 mm { 80.62 mm  
 { 84.86 mm  
 { 122 mm Percentage of strength of circ. seams { plate 69.2 : 70.3 : 68.6  
 rivets 66.2 : 70.2 : 55.8  
 Longitudinal joint { plate 81  
 rivets 83.4 Thickness of butt straps { outer 19 mm  
 combined 89.9 { inner 19 mm Shell Crown: Whether complete hemisphere, dished partial  
 hemispherical, or flat - Material - Tensile strength - Thickness -  
 Radius - Description of Furnace: Plain, spherical, or dished crown - Material -  
 Tensile strength - Thickness - External diameter { top - Length as per Rule -  
 bottom -  
 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 -  
 Thickness of Ogee Ring - Diameter as per Rule { D -  
 d -  
 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 -  
 Stay Plates: Material { Top A.H. steel Tensile strength { 29.2 kg/cm<sup>2</sup> Thickness { 25 mm Mean pitch of stay tubes in nests 220 mm  
 Bottom A.H. steel { 29.2 kg/cm<sup>2</sup> { 25 mm  
 comprising shell, dia. as per Rule { front - Pitch in outer vertical rows { 85 mm x 90 mm Dia. of tube holes TOP { stay 66 mm BACK { stay 60 mm  
 { back - { 85 mm x 90 mm { plain 63 mm { plain 60 mm  
 Each alternate tube in outer vertical rows a stay tube yes  
 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 *Open Hearth Steel* External diameter { plain *60 mm*  
stay *60 mm* Thickness { *3.5 mm*  
*8 mm x 6.8 mm*  
No. of threads per inch *9* Pitch of tubes *90 mm x 8.5 mm*

Manhole Compensation: Size of opening in shell plate *405 mm x 305 mm* Section of compensating ring *T-flange type* No. of rivets and diam  
of rivet holes *36, 26.5 mm* Outer row rivet pitch at ends *110 mm* Depth of flange if manhole flanged *75 mm*

Uptake: External diameter *1000 mm* Thickness of uptake plate *6 mm*

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

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

MITSUBISHI SHIPBUILDING CO., LTD. YAMANO YOKOSUKA  
The foregoing is a correct description,

*S. Tanaka*  
Senior Managing Director

Dates of Survey { During progress of work in shops -- 1952 { MAY 21, JUN 27 JUL 18.  
while building { During erection on board vessel --- 1952 { AUG 8, 15, 25, 26, 29, SEP 2, 9, 17 OCT 1, 11  
Is the approved plan of boiler forwarded herewith (If not state date of approval) *16-7-1952*  
Total No. of visits *15*

Is this Boiler a duplicate of a previous case *No* If so, state Vessel's name and Report No. —

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

*The Exhaust Gas Boiler of this vessel has been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.*

*The materials and workmanship are sound and good.*

*The Exhaust Gas Boiler has been examined under steam and the safety valves adjusted to 13.0 kg/cm<sup>2</sup> and found satisfactory.*

Survey Fee ... *See Rpt 5a* ... £ *42000* When applied for *2. JAN. 1953*

Travelling Expenses (if any) £ : : When received *19*

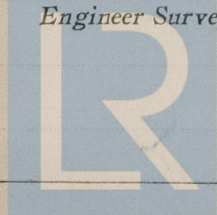
Date

*TUES. 27 JAN 1953*

Committee's Minute

*See Rpt. 4b.*

Engineer Surveyor to Lloyd's Register of Shipping



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