

## REPORT ON BOILERS.

No. 527

Received at London Office

14 JAN 1951

Date of writing Report 21st October 1951 When handed in at Local Office 19 Port of KobeNo. in Survey held at Tamano, Japan Date, First Survey 9th June, 1951 Last Survey 23rd September 1951  
Reg. Book.on the Steel Single Screw Motor Ship "AKAGISAN MARU" (Number of Visits 9)  
Tons { Gross 6637.03  
Net 3735.62Built at Tamano, Japan By whom built Mitsui Shipbuilding & Engineering Co. Ltd Yard No. 563 When built 9. 1951Engines made at Tamano, Japan By whom made Mitsui Shipbuilding & Engineering Co. Ltd Engine No. 383 When made 9. 1951Boilers made at Tamano, Japan By whom made Mitsui Shipbuilding & Engineering Co. Ltd Boiler No. 341 When made 7. 1951Owners Mitsui Senpaku K. K. Port belonging to Tokyo

## VERTICAL BOILER.

Made at Tamano By whom made Mitsui Shipbuilding & Engineering Co. Ltd, Tamano Works Boiler No. 341 When made 7. 51 Where fixed Starb'd, engine roomManufacturers of Steel Plate: Yawata Iron & Steel Co., Ltd. Tube: Shin-Fuso Metal Industries, Ltd. Tube worksTotal Heating Surface of Boiler 22.0 sq. meter Is forced draught fitted NO Coal or Oil fired oilNo. and Description of Boilers 1, Cochran Type Vertical Boiler Working Pressure 7 kg/cm<sup>2</sup>Tested by hydraulic pressure to 14 kg/cm<sup>2</sup> Date of test 10-7-51 No. of Certificate B 186Area of fire grate in each Boiler — No. and description of safety valves to each boiler 1, Double spring loaded safety valvesArea of each set of valves per boiler { per Rule 14.06 cm<sup>2</sup>  
as fitted 66.34 cm<sup>2</sup> Pressure to which they are adjusted 7.21 kg/cm<sup>2</sup> Are they fitted with easing gear yesState whether steam from main boilers can enter the donkey boiler — Smallest distance between boiler or uptake and bunkersor woodwork — Is oil fuel carried in the double bottom under boiler NO Smallest distance between base of boiler and tank top plating950 mm Is the base of the boiler insulated NO Largest internal dia. of boiler 1.600 mm Height 4.100 mmShell plates: Material O.H. steel Tensile strength { Top 30.7 T/A  
Middle 31.4  
Bottom 29.7 Thickness 12 mmAre the shell plates welded or flanged NO 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 Single riveted lap joint  
inter "long. seams Double riveted lap joint Dia. of rivet holes in { circ. seams 23 mm  
long. seams 20 mm Pitch of rivets { 51.65 mm  
59.00 mm Percentage of strength of circ. seams { plate 55.23%  
rivets 55.36%of longitudinal joint { plate 65.9%  
rivets 73.8% Thickness of butt straps { outer —  
inner — combined — Shell Crown: Whether complete hemisphere, dished partialspherical, or flat Dished partial spherical Material O.H. steel Tensile strength 29.8 T/A Thickness 16 mmRadius 1.400 mm Description of Furnace: Plain, spherical, or dished crown Spherical crown Material O.H. steelTensile strength 30.0 T/A Thickness 12 mm External diameter { top —  
bottom 1.300 mm 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 638 mmThickness of Ogee Ring 22 mm Diameter as per Rule { D 16.00 mm  
d 13.00 mmCombustion 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 O.H. steel  
back O.H. steel Tensile strength { Front 30.0 T/A  
Back 29.6 T/A Thickness { 27 mm  
23 mm Mean pitch of stay tubes in nests 277.5 mmIf comprising shell, dia. as per Rule { front —  
back — Pitch in outer vertical rows { 180 mm  
180 mm Dia. of tube holes FRONT { stay 71 mm  
plain 68 mm BACK { stay 65 mm  
plain 65 mmIs each alternate tube in outer vertical rows a stay tube yesGirders 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 —



REPORT ON BOILERS

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 *6.5 mm* ✓ stay *6.5 mm* ✓ Thickness { *3.5 mm* ✓ *8 mm* x *6.5 mm* ✓  
No. of threads per inch *9* ✓ Pitch of tubes *9.5 mm* x *9.0 mm* ✓  
Manhole Compensation: Size of opening in shell plate *380 mm* x *480 mm* ✓ Section of compensating ring *540 mm* x *640 mm* ✓ No. of rivets and diameter of rivet holes *24*, *23 mm* Outer row rivet pitch at ends *67 mm* ✓ Depth of flange if manhole flanged *9.0 mm* ✓  
Uptake: External diameter *350 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*

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

*S. Tanaka* Manufacturer.  
Senior Managing Director.

Dates of Survey while building { During progress of work in shops --- } *1951 - JUN 9, 30, JUL 6, 10, 13, 17, 20, 27, 31* Is the approved plan of boiler forwarded herewith *23-3-51* (If not state date of approval.)  
{ During erection on board vessel --- } *1951 - SEP 23* Total No. of visits *9*

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 Donkey 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.*

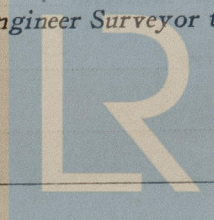
*The Donkey Boiler has been examined under steam and safety valves adjusted to  $7.21 \text{ kg/cm}^2$  and found satisfactory.*

Survey Fee ... £ *25,200* : : } When applied for 19  
Travelling Expenses (if any) £ : : } When received 19

FRI 18 APR 1952

Date  
Committee's Minute *Sir F. E. Mchly rpt*

*S. Burrie*  
Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register  
Foundation