

# REPORT ON BOILERS.

No. 4786

Received at London Office 2 NOV 1931

Date of writing Report 15th Oct. 1931. When handed in at Local Office 15/10/31 Port of YOKOHAMA

No. in Reg. Book. Survey held at URAGA Date, First Survey 26th November 1931 Last Survey 1st October 1931. (Number of Visits 14.) Gross 5841 Tons Net 3485

on the Steel sc. M.V. "KATSURAGI MARU" Built at Uruga By whom built Uruga Dock Co. Ltd Yard No. 374 When built 1931 Engines made at Yama By whom made Mitsui Bussan Kaisha Engine No. 4000 When made 4-31 Boilers made at Uruga By whom made Uruga Dock Co. Ltd Boiler No. 374 When made 1931 Owners Hokusai Kisen Kaisha Port belonging to Hashidate

## VERTICAL DONKEY BOILER.

Made at Uruga By whom made Uruga Dock Co. Ltd Boiler No. 374 When made 1931 Where fixed Onboard Uruga

Manufacturers of Steel Messrs Gutehoffnungshutte A.G. of Oberhausen. Total Heating Surface of Boiler 600 sq feet Is forced draught fitted Coal or Oil fired Oil

No. and Description of Boilers One vertical thimble tube boiler Working pressure 100 lbs. Tested by hydraulic pressure to 200 lbs/sq. Date of test 12-6-31 No. of Certificate 34

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 3 Spring loaded safety valves. Area of each set of valves per boiler per rule 7.8 sq. as fitted 9.62 sq. 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 or woodwork Is oil fuel carried in the double bottom under boiler Is the base of the boiler insulated

Smallest distance between boiler or uptake and bunkers 6'-0" Height 16'-5 1/2" Largest internal dia. of boiler 6'-0" Thickness 1/2"

Shell plates: Material Steel Tensile strength 28-35 Tons/sq. Description of riveting: circ. seams end S.R. DR. Lap. inter. S.R. Lap. long. seams D.R. Lap.

Are the shell plates welded or flanged Flanged Dia. of rivet holes in circ. seams 7/8" Pitch of rivets 3" 9 3/4" Percentage of strength of circ. seams plate 56.25 46.81% of Longitudinal joint rivets 49.29 71.6% combined 68.1% 71.6%

Working pressure of shell by rules 124.8 lbs. Thickness of butt straps outer inner Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Flat Material Steel

Tensile strength 26-30 Tons/sq. Thickness 1/16" Radius 3" Working pressure by rules 131 lbs. Description of Furnace: Plain, spherical, or dished crown Included in tubeplate Material Tensile strength

Thickness External diameter 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 7/8" Diameter as per rule D 42" a 60" Working pressure by rule 118.1 lbs

Combustion Chamber: Material Tensile strength Thickness of top plate Radius if dished Working pressure by rule Thickness of back plate Diameter if circular

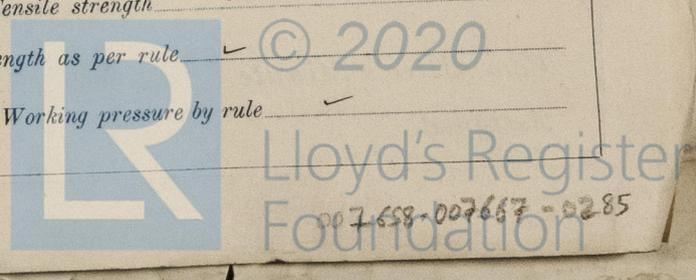
Length as per rule Pitch of stays Are stays fitted with nuts or riveted over Diameter of stays over thread Working pressure of back plate by rules

Tube Plates: Material Steel Tensile strength 26-30 T/sq. Thickness 1/16" 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 3/4" BACK stay plain

Working pressure by rules front back 117 lbs. 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 Working pressure by rule

If not, state whether, and Is a Report also sent on the Hull of the Ship?



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**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 Steel chimney tubes External diameter { plain 3 1/4" stay 3 1/4" Thickness { 6 L.S.G.

No. of threads per inch  Pitch of tubes 3 1/2" Working pressure by rules

**Manhole Compensation:** Size of opening in shell plate 12" x 16" Section of compensating ring 9 7/8" x 1 1/16" No. of rivets and diam.

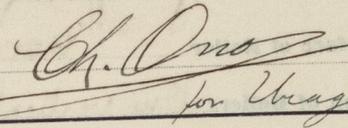
of rivet holes 28 - 1 1/16" Outer row rivet pitch at ends 5" Depth of flange if manhole flanged

**Uptake:** External diameter 2-9" 2-2" Thickness of uptake plate 1/2" W.P. 164 lbs.

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

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

The foregoing is a correct description,


 Manufacturer for Unaga Dock Co.

Dates of Survey { During progress of work in shops - 26/11/31, 29/12, 19/12/1930, 15/1, 19/3, 13/4, 2/4, 14/5, 10/6, 12/6/31 Is the approved plan of boiler forwarded herewith July 28/7/30 (If not state date of approval.)

while building { During erection on board vessel - 29/6, 26/9, 1/10/31 Total No. of visits 14

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

This boiler has been built under special survey, in accordance with the Rules, materials and workmanship good.

This boiler has been securely fitted onboard this vessel and examined under steam. Safety valves adjusted to 100 lbs. Accumulation tests satisfactory.

This boiler together with the machinery is eligible in my opinion to be classed L.M.C. 10-31, in the Register Book.

Survey Fee YEN 663.00 : When applied for, 6th Oct. 1931  
 Travelling Expenses (if any) £  : When received, 12th Oct. 1931

Committee's Minute  
 Assigned

FRI, 13 NOV 1931

*See F.C. Rpt.*

