

No. 4786

Received at London Office 2 NOV 1931

Date of writing Report 15th Oct. 19 31. When handed in at Local Office

15/10/1931 Port of YOKOHAMA

No. in / Survey held at URAGA
Req. Book.

Date, First Survey 26th November 1931 Last Survey 1st October 1931.

Reg. Book, on the STEEL SC. M.V. "KATSURAGI MARU"

(Number of Visits 14.) Tons { Gross 5841
Net 3485

Built at	Uraga	By whom built	Uraga 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	Uraga	By whom made	Uraga Dock Co. Ltd	Boiler No.	374	When made	1931
Owners	Kokusai 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 Unboard. Uruga.

Manufacturers of Steel *Misser Gutschloffenzshutte A. G. of Oberhausen.*

Total Heating Surface of Boiler 600 sq. ft. Is forced draught fitted Coal or Oil fired Oil

Total heating surface _____		Working pressure 100 lbs.
No. and Description of Boilers	One vertical thimble tube boiler	

Tested by hydraulic pressure to 200 lbs/sq. in. 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 Firegrate in each Boiler _____

Area of each set of valves per boiler $\left\{ \begin{array}{l} \text{per rule} \dots 4.8 \square'' \\ \text{as fitted} \dots 9.62 \square'' \end{array} \right.$ 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 ☒ 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

Is the base of the boiler insulated ☒ Largest internal dia. of boiler 6'-0" Height 16'-5 1/2"

Shell plates: Material Steel Tensile strength 28-35 Tons/1" Thickness 1/2"

Are the shell plates welded or flanged flanged Description of riveting: circ. seams ^{end. S.R. DR. Lap.} _{inter. S.R. Lap.} long. seams D.R. Lap. (plate 68.1)

Dia. of rivet holes in { circ. seams $7/8"$
 long. seams $7/8"$ } Pitch of rivets { $2" 9 3/4"$
 Percentage of strength of circ. seams { plate $56.254681.7\%$
 rivets $49.2971.6\%$ } of Longitudinal joint { rivets 71.6%
 combined }

Working pressure of shell by rules 124.8 lbs. Thickness of butt straps $\left\{ \begin{array}{l} \text{outer} \checkmark \\ \text{inner} \checkmark \end{array} \right.$

Working pressure by rules 131 lbs.

Tensile strength 26-30 kg/cm² Thickness 116 Radius 5 Working pressure by rules 5
Tensile strength ✓

Description of Furnace: Plain, spherical, or dished crown *Included in tube plate* Material ☒ Tensile strength _____

Thickness ☒ External diameter $\left\{ \begin{array}{l} \text{top} \dots\dots\dots \\ \text{bottom} \dots\dots\dots \end{array} \right. \checkmark$ 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 92" Working pressure by rule 118.1 lbs.

Thickness of base ring _____

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

Combustion Chamber: *Material* _____

Bore if dished ✓ *Working pressure by rule* ✓ *Thickness of back plate* ✓ *Diameter if circular* ✓

Radius of dish ☒ Working pressure by test ☐
 Thickness of steel ☒ Pitch of stays ☒ Are stays fitted with nuts or riveted over ☒

Length as per rule ☒ Pitch of stage ☐
 Distance over thread ☒ Working pressure of back plate by rules ☒

Diameter of stays over thread ✓

Tensile strength { 91-30 lbs. Thickness { 1 1/16" Mean pitch of stay tubes in nests ✓

Tube Plates: Material { back Steel front _____ Tensile strength { 36-30 lb Thickness { 1/16 in

_____ Dig. of tube holes FRONT { stay _____ BACK { stay _____

If comprising shell, Dia. as per rule { front Pitch in outer vertical rows } ✓ Dia. of tube holes FRONT { plain 3/4 BACK { plain
back ✓

In each alternate tube in outer vertical rows a stay tube ✓ Working pressure by rules $\left\{ \begin{array}{l} \text{from} \\ \text{back} \end{array} \right. 117 \text{ lbs.}$

Is each alternate tube in outer vertical rows being

Sliders to combustion chamber tops: Material ☒ Tensile strength ☒

Girders to combustion chamber tops: Material _____ Length as per rule _____ ✓
Depth and thickness of girder at centre _____ ✓

Depth and thickness of girder at center _____
 Distance apart _____ No. and pitch of stays in each _____ Working pressure by rule _____

Distance apart _____

007-658-00706



REPORT ON BOILERS

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 6 LSG Thickness {

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 1/16" No. of rivets and diameter 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,

Ch. Ono Manufacturer
for Uraga Dock Co.

Dates of Survey { During progress of work in shops - 26/11/31, 29/12/31, 19/12/31, 15/1/32, 13/4/32, 2/4/32, 14/5/32, 10/6/32, 12/6/31 Is the approved plan of boiler forwarded herewith Kele 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
as LMC. 10-31, in the Register Book.

Survey Fee YEN 63.00 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.

J. Michalos
Engineer Surveyor to Lloyd's Register of Shipping.
Lloyd's Register Foundation