

REPORT ON BOILERS.

No. 7477

Received at London Office 25 SEP 1931

Date of writing Report 28 Aug 1931 When handed in at Local Office 1931

Port of Kobe

No. in Reg. Book. Survey held at

Harima

Date, First Survey 26 Dec. 1930 Last Survey 17 July 1931

on the

S.S. M.V. "FUJISAN MARU"

(Number of Visits 13)

Gross 9524.3
Net 5440.26

Master Built at Harima By whom built Harima S.B. Co Yard No. 179 When built 1931

Engines made at Augsburg By whom made Masch. Fabrik Augsburg-Munich Engine No. 330590 When made 1931

Boilers made at Harima By whom made Harima S.B. Co. Boiler No. 179 When made 1931

Nominal Horse Power Owners Eino Shoji K.K. Port belonging to Fuchu.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Guelchhoffnungshutte A.G. (Letter for Record 1045)

Total Heating Surface of Boilers 3375 sq ft Is forced draught fitted ✓ Coal or Oil fired oil & gas

No. and Description of Boilers 1 multitubular exhaust gas type Working Pressure 100

Tested by hydraulic pressure to 200 Date of test 23.4.31 No. of Certificate ✓ Can each boiler be worked separately yes

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler 2 spring loaded

Area of each set of valves per boiler {per Rule 22 as fitted 22.04 ✓ Pressure to which they are adjusted 100 Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓

Smallest distance between boilers or uptakes and bunkers or woodwork ✓ Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 11-7/8" Length 14-9 1/2' Shell plates: Material steel Tensile strength 28 to 32

Thickness 5/8" Are the shell plates welded or flanged ✓ Description of riveting: circ. seams {end double riveted inner double riveted

long. seams D.R. D.B.S. ✓ Diameter of rivet holes in {circ. seams 5/16" long. seams 5/16" Pitch of rivets 3 1/4

Percentage of strength of circ. end seams {plate 68.85 rivets 60.5 Percentage of strength of circ. intermediate seam {plate 68.85 rivets 60.5

Percentage of strength of longitudinal joint {plate 75 rivets 90.7 combined 95.1 Working pressure of shell by Rules 100.2

Thickness of butt straps {outer 5/8" inner 5/8" No. and Description of Furnaces in each Boiler ✓

Material ✓ Tensile strength ✓ Smallest outside diameter ✓

Length of plain part {top ✓ bottom ✓ Thickness of plates {crown ✓ bottom ✓ Description of longitudinal joint ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules ✓

End plates in steam space: Material ✓ Tensile strength ✓ Thickness ✓ Pitch of stays ✓

How are stays secured ✓ Working pressure by Rules ✓

Tube plates: Material {front steel back steel Tensile strength {26 to 30 Thickness {1"

Mean pitch of stay tubes in nests 14.531 Pitch across wide water spaces 14" Working pressure {front 173 back 173

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 Rules ✓ Combustion chamber plates: Material ✓

Tensile strength ✓ Thickness: Sides ✓ Back ✓ Top ✓ Bottom ✓

Pitch of stays to ditto: Sides ✓ Back ✓ Top ✓ Are stays fitted with nuts or riveted over ✓

Working pressure by Rules ✓ Front plate at bottom: Material ✓ Tensile strength ✓

Thickness ✓ Lower back plate: Material ✓ Tensile strength ✓ Thickness ✓

Pitch of stays at wide water space ✓ Are stays fitted with nuts or riveted over ✓

Working Pressure ✓ Main 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 ☒ Margin stays: Diameter ☒ At turned off part, or Over threads ☒

No. of threads per inch ☒ Area supported by each stay ☒ Working pressure by Rules ☒

Tubes: Material iron External diameter ☒ Plain 2 3/4 Stay 2 3/4 Thickness ☒ 11 45.4 No. of threads per inch 9

Pitch of tubes 3 7/8 x 3 7/8 Working pressure by Rules ☒ Manhole compensation: Size of opening in shell plate 12 x 16 Section of compensating ring 7.2° No. of rivets and diameter of rivet holes 42 2 1/16

Outer row rivet pitch at ends 4' 8" Depth of flange if manhole flanged ☒ Steam Dome: Material steel

Tensile strength 26 to 30 Thickness of shell 1/2 Description of longitudinal joint single riveted lap

Diameter of rivet holes 1 5/16 Pitch of rivets 2 1/8 Percentage of strength of joint ☒ Plate 85.9 Rivets 85.3

Internal diameter 3'-0" Working pressure by Rules 176 Thickness of crown 1/2 No. and diameter of stays ☒ Inner radius of crown 3'-0" Working pressure by Rules 162.5

How connected to shell flanged & riveted Size of doubling plate under dome 3'-0" x 5/8" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 5/16" x 3 1/2"

Type of Superheater ☒ Manufacturers of ☒ Tubes ☒ Steel castings ☒

Number of elements ☒ Material of tubes ☒ Internal diameter and thickness of tubes ☒

Material of headers ☒ Tensile strength ☒ Thickness ☒ Can the superheater be shut off and the boiler be worked separately ☒ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler ☒

Area of each safety valve ☒ Are the safety valves fitted with easing gear ☒ Working pressure as per Rules ☒ Pressure to which the safety valves are adjusted ☒ Hydraulic test pressure: ☒

tubes ☒ castings ☒ and after assembly in place ☒ Are drain cocks or valves fitted to free the superheater from water where necessary ☒

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

The foregoing is a correct description,

Murphy 31st Aug 1931 Manufacturer.

Dates of Survey ☒ During progress of work in shops -- Dec 1930 26, Jan 1931 14, Feb 5, 23, March 2, 13, 26, 31, April 20, 23, Are the approved plans of boiler and superheater forwarded herewith 5.8.30 (If not state date of approval.)

while building ☒ During erection on board vessel -- June 3, 11, July 1, 17. Total No. of visits 13.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boiler has been made under Special Survey in accordance with the requirements of the Rules and approved plan, the workmanship and materials are good and on completion was tested by hydraulic pressure to 200 lbs per sq. inch and found tight and sound and was efficiently fitted on board, examined under steam and safety valves adjusted to 100 lbs per sq inch. The boiler in my opinion, is eligible for classification with the notation 1 ex gas blr 100 lbs

Survey Fee ... £ 4 338⁰⁰ When applied for, 27/8/31

Travelling Expenses (if any) £ See Hull Rpt. When received, 1/9/31

M. F. Garnett
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI, 2 OCT 1931

Assigned See F.R. Rpt.



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