

Rpt. 5a.

## REPORT ON BOILERS.

No. 6498

Received at London Office 21 MAY 1929

Date of writing Report 16 April 1929 When handed in at Local Office 1929

Port of Kobe

No. in Reg. Book. Survey held at

Osaka

Date, First Survey 3 Nov: 28 Last Survey 18 April 1929

on the Steel single screw steamer "KANSEISHI MARU"

(Number of Visits)

Gross 4804.78  
Net 2730.56

Master Built at Osaka By whom built Osaka Iron Works Ltd Yard No. 1125 When built 1929  
Engines made at Osaka By whom made Osaka Iron Works Ltd Engine No. 1125 When made 1929  
Boilers made at do By whom made do Boiler No. 1125 When made 1929  
Nominal Horse Power 346 Owners Dairen Kisen Kaishiki Kaisha Port belonging to Dairen

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR ~~DONKEY~~.

Manufacturers of Steel Inuen Vermingte Stahlwerke &amp; Co. Haerde Verin/Boende Letter for Record S.

Total Heating Surface of Boilers 5002 sq ft Is forced draught fitted yes Coal or Oil fired coal.

No. and Description of Boilers Two S.B. Working Pressure 200.

Tested by hydraulic pressure to 350 Date of test 7.3.29. No. of Certificate Can each boiler be worked separately yes

Area of Firegrate in each Boiler 57.75 sq ft No. and Description of safety valves to each boiler 2 spring loaded

Area of each set of valves per boiler {per Rule 13.75. 14.5  
as fitted 16.58 Pressure to which they are adjusted 200 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 14" 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 no.

Largest internal dia. of boilers 15'-0" Length 11'-6" Shell plates: Material steel Tensile strength 28 to 32

Thickness 1 7/16" Are the shell plates welded or flanged flanged Description of riveting: circ. seams {end double riveted lap  
inter. 4 7/8" 10"long. seams D.B.S.T.R. Diameter of rivet holes in {circ. seams 1 9/16"  
long. seams 1 7/16" Pitch of rivets 10"Percentage of strength of circ. end seams {plate 62.2  
rivets 53.4 Percentage of strength of circ. intermediate seam {plate  
rivets 85.625Percentage of strength of longitudinal joint {plate 87.2  
rivets 88.65 Working pressure of shell by Rules 212.Thickness of butt straps {outer 1 1/8" C  
inner 1 1/4" No. and Description of Furnaces in each Boiler 3 Turison Type. 3 C.F.

Material steel Tensile strength 26 to 30 Smallest outside diameter 3'-9 5/16"

Length of plain part {top  
bottom Thickness of plates {crown 2 1/32"  
bottom 1/32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 212.

End plates in steam space: Material steel Tensile strength 26 to 30 Thickness 1 5/8" Pitch of stays 20" x 18"

How are stays secured nuts &amp; washers Working pressure by Rules 234.

Tube plates: Material {front steel  
back steel Tensile strength {26 to 30  
26 to 30 Thickness {7/8"  
1 3/16"Mean pitch of stay tubes in nests 9.43" Pitch across wide water spaces 13 3/4" Working pressure {front 221.5  
back 238.

Girders to combustion chamber tops: Material steel Tensile strength 28 to 32 Depth and thickness of girder

at centre 9 1/2" x 7/8" Length as per Rule 33" Distance apart 9" No. and pitch of stays

in each 3 @ 8" Working pressure by Rules 258 Combustion chamber plates: Material steel

Tensile strength 26 to 30 Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 7/8"

Pitch of stays to ditto: Sides 8 1/2" x 8" / Back 8 1/2" x 8 1/2" Top 8" x 9" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 225 Front plate at bottom: Material steel Tensile strength 26 to 30

Thickness 7/8" Lower back plate: Material steel Tensile strength 26 to 30 Thickness 7/8"

Pitch of stays at wide water space 13 3/4" x 8 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 263 Main stays: Material steel Tensile strength 28 to 32.

Diameter {At body of stay, 3 1/2"  
or  
Over threads No. of threads per inch 6 Area supported by each stay 360"

Working pressure by Rules 263 Screw stays: Material steel Tensile strength 26 to 30

Diameter {At turned off part, 1 3/4" x 1 7/8"  
or  
Over threads No. of threads per inch 9 Area supported by each stay 77.25"



Working pressure by Rules 251 Are the stays drilled at the outer ends ☒ Margin stays: Diameter <sup>At turned off part</sup> 1 7/8"  
 No. of threads per inch 9 Area supported by each stay 102" Working pressure by Rules 204.5  
 Tubes; Material steel External diameter <sup>Plain</sup> 3" Thickness <sup>8 L.S.S.</sup> 3/8" x 5/16" No. of threads per inch 9  
 Pitch of tubes 4 1/4" x 4 1/8" Working pressure by Rules 241.8 Manhole compensation: Size of opening in  
 shell plate 18" x 22" Section of compensating ring 22.25" x 1.4375" No. of rivets and diameter of rivet holes 38 @ 1 3/4"  
 Outer row rivet pitch at ends 9 5/8" Depth of flange if manhole flanged ☒ Steam Dome: Material -  
 Tensile strength ☒ Thickness of shell ☒ Description of longitudinal joint ☒  
 Diameter of rivet holes ☒ Pitch of rivets ☒ Percentage of strength of joint <sup>Plate</sup> ☒  
 Internal diameter ☒ Working pressure by Rules ☒ Thickness of crown ☒ No. and diameter of  
 stays ☒ Inner radius of crown ☒ Working pressure by Rules ☒  
 How connected to shell ☒ Size of doubling plate under dome ☒ Diameter of rivet holes and pitch  
 of rivets in outer row in dome connection to shell ☒

Type of Superheater ☒ Manufacturers of <sup>Tubes</sup> ☒  
 Number of elements ☒ Material of tubes ☒ Steel castings ☒  
 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 yes.

The foregoing is a correct description,

[Signature] Manufacturer.

Dates of Survey <sup>During progress of</sup> Nov. 28. 3. Dec 10. 27. Jan 14 22. 24  
<sup>work in shops - -</sup> Feb 24. 19. 25 March 7. 13. Are the approved plans of boiler and superheater forwarded herewith ☒  
<sup>while building</sup> <sup>During erection on</sup> March 25 April 2. 8. 10 18 (If not state date of approval.)  
<sup>board vessel - - -</sup> Total No. of visits 17.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) The boilers have been  
constructed under special survey in accordance with the requirements  
of the Rules and approved plans and on completion were tested  
by hydraulic pressure to 350 lbs per sq inch and found to be tight  
and sound. The workmanship and materials are good and after  
being efficiently installed in the vessel the safety valves were  
adjusted under steam to 200 lbs per sq inch

Survey Fee ... £ ☒ : When applied for 192  
 Travelling Expenses (if any) £ ☒ : When received 192

[Signature]  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRIL 24 MAY 1929

Assigned See 46 yft attached