

## REPORT ON BOILERS.

No. 7879

Received at London Office 27. SEP. 1932

Date of writing Report 26.8.32. 1932 When handed in at Local Office 3rd Sept. 1932 Port of Kobe.

No. in Survey held at Harima Date, First Survey 10.12.31 Last Survey 5.7.31 1932

on the Single screw S/S. "JOHORE MARU." (Number of Visits 21) Tons {Gross 6181.44 Net 3733.66.

Master Built at Harima By whom built Harima S.B. &amp; F. Co. Yard No. 184 When built 1932

Engines made at Kobe By whom made Kobe Steel Works Ltd. Engine No. 184 When made 1932

Boilers made at Harima By whom made Harima S.B. &amp; F. Co. Boiler No. 184 When made 1932

Nominal Horse Power Owners Ishihara Gomei Kaisha Port belonging to Fukuoka.

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

Manufacturers of Steel Kawasaki Dockyard Ltd. &amp; Vereinigte Stahlwerke AG Germany (Letter for Record S. ✓)

Total Heating Surface of Boilers 9282 sq. Is forced draught fitted yes ✓ Coal or Oil fired Pulverised Fuel

No. and Description of Boilers 3. S.B. Working Pressure 225 lbs/sq. in.

Tested by hydraulic pressure to 388 Date of test 7.5.32 16.5.32 No. of Certificate ✓ Can each boiler be worked separately yes ✓

Area of Firegrate in each Boiler 415 sq. No. and Description of safety valves to each boiler 2 Spring loaded.

Area of each set of valves per boiler {per Rule 16.1 19.25 as fitted 19.24 Pressure to which they are adjusted 225 ✓ Are they fitted with easing gear yes ✓

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no ✓

Smallest distance between boilers or uptakes and bunkers or woodwork 1'-6" ✓ Is oil fuel carried in the double bottom under boilers no ✓

Smallest distance between shell of boiler and tank top plating 1'-7" ✓ Is the bottom of the boiler insulated no ✓

Largest internal dia. of boilers 15'-6" Length 12'-9" ✓ Shell plates: Material Steel ✓ Tensile strength 28 to 32 ✓

Thickness 40 Z. ✓ Are the shell plates welded or flanged ✓ Description of riveting: circ. seams {end Triple rivets inter. ✓

Long. seams D.B.S. T.R. ✓ Diameter of rivet holes in {circ. seams 40 Z. ✓ Pitch of rivets {124.72 Z. ✓ 275 Z. ✓

Percentage of strength of circ. end seams {plate 67.9 rivets 61.8. ✓ Percentage of strength of circ. intermediate seam {plate - rivets - ✓

Percentage of strength of longitudinal joint {plate 85.46 rivets 87.75 combined 88.45. ✓ Working pressure of shell by Rules 15.93 kg/cm<sup>2</sup>.

Thickness of butt straps {outer 36 inner 36 ✓ No. and Description of Furnaces in each Boiler 3 Bull Suspension ✓ cf.

Material Steel ✓ Tensile strength 26 to 30 ✓ Smallest outside diameter 1256 Z. ✓

Length of plain part {top - bottom - ✓ Thickness of plates {crown 18.5 Z. ✓ Description of longitudinal joint welded ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 16.2.

End plates in steam space: Material Steel ✓ Tensile strength 26 to 30 ✓ Thickness 36 ✓ Pitch of stays 450 x 485 ✓

How are stays secured Double nuts &amp; washers ✓ Working pressure by Rules 17.8.

Tube plates: Material {front Steel ✓ Tensile strength {26 to 30 ✓ Thickness {25. ✓ 22. ✓

Lean pitch of stay tubes in nests 220 ✓ Pitch across wide water spaces 355 ✓ Working pressure {front 25.6 back 25.4 ✓

Orders to combustion chamber tops: Material Steel ✓ Tensile strength 28 to 32 ✓ Depth and thickness of girder

centre 250 ✓ Length as per Rule 859. ✓ Distance apart 200. ✓ No. and pitch of stays

each 3 200 x 220 Working pressure by Rules 18.05. ✓ Combustion chamber plates: Material Steel ✓

Tensile strength 26 to 30 ✓ Thickness: Sides 19. ✓ Back 19. ✓ Top 19. ✓ Bottom 25. ✓

Pitch of stays to ditto: Sides 220 x 200 Back 220 x 200 Top 220 x 200 Are stays fitted with nuts or riveted over nuts ✓

Working pressure by Rules 20.2. ✓ Front plate at bottom: Material Steel ✓ Tensile strength 26 to 30 ✓

Thickness 25. ✓ Lower back plate: Material Steel ✓ Tensile strength 26 to 30 ✓ Thickness 25. ✓

Pitch of stays at wide water space 375 x 200 ✓ Are stays fitted with nuts or riveted over nuts ✓

Working Pressure 20.1. ✓ Main stays: Material Steel ✓ Tensile strength 28 to 32. ✓

Diameter {At body of stay, 85 ✓ No. of threads per inch 6 ✓ Area supported by each stay 417.5 x 450. ✓

Over threads Working pressure by Rules 20.8. ✓ Screw stays: Material Steel ✓ Tensile strength 26 to 30. ✓

Diameter {At turned off part, 1 3/4, 2, 2 1/4 No. of threads per inch 9 ✓ Area supported by each stay 220 x 200 ✓

Over threads 297 x 200 ✓

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Working pressure by Rules 20.2 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" & 2 1/4"  
or Over threads  
No. of threads per inch 9 Area supported by each stay 297.5 x 200 Working pressure by Rules 18.87  
Tubes; Material S.D.S. External diameter { Plain 3 1/4 Thickness { 3/8" & 5/16" No. of threads per inch 9  
Stay 3 1/4  
Pitch of tubes 220 x 220 Working pressure by Rules 19.5 Manhole compensation: Size of opening in  
shell plate 500 x 600 Section of compensating ring 40 x 500 No. of rivets and diameter of rivet holes 38" & 40 dia.  
Outer row rivet pitch at ends 275 Depth of flange if manhole flanged 120 Steam Dome: Material -  
Tensile strength ✓ Thickness of shell ✓ Description of longitudinal joint ✓  
Diameter of rivet holes ✓ Pitch of rivets ✓ Percentage of strength of joint { Plate ✓  
Rivets ✓  
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 ✓  
See Cert N° C 4418  
Type of Superheater Ferguson Manufacturers of { Tubes Chatterfield Luke Co Ltd. & Telford Steel Tube  
Steel castings  
Number of elements 6 Material of tubes S.D.S. Internal diameter and thickness of tubes 1 1/4" x 10 L.S.C.  
Material of headers mild steel Tensile strength 28.5" & 29.2 Thickness 770 & 760 Can the superheater be shut off and  
the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes  
Area of each safety valve 10.996 sq. in. Are the safety valves fitted with easing gear yes Working pressure as per  
Rules affirma. Pressure to which the safety valves are adjusted 225 Hydraulic test pressure: Tested  
tubes ✓, castings ✓ and after assembly in place 675 lbs Are drain cocks or valves fitted  
to free the superheater from water where necessary yes  
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with yes  
The foregoing is a correct description,  
M. Nakagaki Manufacturer.  
Superintendent 4.1.32, LON.  
Dates of Survey { During progress of 1931 Dec. 10. 16; 1932 Jan. 19. 25. 27 Feb. 10. 16. 22. Are the approved plans of boiler and superheater forwarded herewith 24.12.31  
work in shops - - - March 6. 11. 16. 24 April 1. 20. 26 May 9. 11. 16. (If not state date of approval.)  
while building { During erection on May 25 June 7 July 5 board vessel - - - Total No. of visits 21

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boiler have been constructed under special survey in accordance with the requirements of the Rules and approved plans; the workmanship and materials are good & on completion the boiler were tested by hydraulic pressure to 388 lbs  
and found to be tight & sound & afterwards efficiently installed in the vessel & safety valves adjusted under steam to 225 lbs  
& are eligible in my opinion to have the record of 3.S.B. 225 lbs.

Survey Fee ... See Mach. Rpt. N° 4 When applied for, 192  
Travelling Expenses (if any) £ : : When received, 192

For H.A. Garnett. A.D. Buchanan.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 4 OCT 1932

Assigned See other Kob.  
Rpt. 7879



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Foundation