

## REPORT ON BOILERS.

No. 7323

Received at London Office 27 MAY 1931

Date of writing Report 23-4-1931 When handed in at Local Office 27-4-1931 Port of Kobe

No. in Survey held at Jama Date, First Survey 8-5-30 Last Survey 17-3-1931

Reg. Book on the Steel Single Screw Motor Vessel "SHOHEI MARU" (Number of Visits 7) Gross 7256. Tons Net

Built at Jama By whom built Mitsui Bussan Kaisha Yard No. 180 When built March '31  
 Engines made at Jama By whom made Mitsui Bussan Kaisha Engine No. 180 When made March '31  
 Boilers made at Jama By whom made Mitsui Bussan Kaisha Boiler No. 180 When made March '31  
 Owners Shimatani Kisen Kabushiki Kaisha Port belonging to Kobe

## VERTICAL DONKEY BOILER.

Made at Jama By whom made Mitsui Bussan K. Jama Works Boiler No. 180 When made Where fixed Jama

Manufacturers of Steel James Dunlop Co., England.

Total Heating Surface of Boiler 114.6  $\text{sq. ft.}$  Is forced draught fitted No. Coal or Oil fired Oil burning

No. and Description of Boilers One Vertical Cross Tube Boiler Working pressure 100 lbs/sq.in.

Tested by hydraulic pressure to 200 lbs/sq.inch. Date of test 6<sup>th</sup> September 1930 No. of CertificateArea of ~~Firegrate~~ in each Boiler Oil fired No. and Description of safety valves to each boiler 2 spring loaded, dia 1 1/4"

Area of each set of valves per boiler { per rule 2.53 sq.in. as fitted 4.8 sq.in. Pressure to which they are adjusted 103 lbs/sq.in. 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 bunkersor woodwork ☒ Is oil fuel carried in the double bottom under boiler No Smallest distance between base of boiler and tank top plating

2'-9" Is the base of the boiler insulated Yes Largest internal dia. of boiler 5'-1" Height 11'-5"

Shell plates: Material Open hearth steel. Tensile strength 28-32 tons/sq.in. Thickness 1/2"

Are the shell plates welded or flanged Flanged Description of riveting: circ. seams { end Single inter Single long. seams Double lapped.

Dia. of rivet holes in { circ. seams 15/16" long. seams 15/16" Pitch of rivets { 2 1/8" 2 7/8" Percentage of strength of circ. seams { plate 55.7% rivets 53.3% of Longitudinal joint { plate 67.3% rivets 78.9% combined ☒Working pressure of shell by rules 149 lbs/sq.in Thickness of butt straps { outer ☒ inner ☒

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished partial spherical Material Open hearth steel.

Tensile strength 26-30 tons/sq.in. Thickness 9/16" Radius 5'-0" Working pressure by rules 119 lbs/sq.in.

Description of Furnace: Plain, spherical, or dished crown Dished Material Open hearth steel Tensile strength 26-30 tons/sq.in.

Thickness 5/8" External diameter { top 4'-0" bottom 4'-6" Length as per rule 4'-2 13/16" Working pressure by rules 139 lbs/sq.in.

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 3'-6" Working pressure by rule 124.5 lbs/sq.in.

Thickness of Ogee Ring 5/8" Diameter as per rule { D 5'-0" d 4'-6" Working pressure by rule 105 lbs/sq.in.

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 { front ☒ back ☒ Tensile strength { ☒ Thickness { ☒ 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 ☒ BACK { stay ☒ plain ☒Is each alternate tube in outer vertical rows a stay tube ☒ Working pressure by rules { front ☒ back ☒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 ☒



**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 ☒ External diameter { plain ☒ stay ☒ Thickness { ☒   
 No. of threads per inch ☒ Pitch of tubes ☒ Working pressure by rules ☒   
**Manhole Compensation:** Size of opening in shell plate 11" x 15" Section of compensating ring 5 1/2" x 5/8" No. of rivets and diameter of rivet holes 48 - 15/16" Outer row rivet pitch at ends 3 1/2" Depth of flange if manhole flanged 3 1/2"   
**Uptake:** External diameter 1' - 3 3/8" Thickness of uptake plate 7/16"   
**Cross Tubes:** No. Four External diameters { 10 1/8" 10 7/8" Thickness of plates 7/16"

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes   
 The foregoing is a correct description,   
*A. Utas* Manufacturer.

Dates of Survey { During progress of work in shops - 1930. May 8, June 12, July 12, 15 Sept 6. Is the approved plan of boiler forwarded herewith 7-11-29. (If not state date of approval.)   
 while building { During erection on board vessel - 1931. Jan. 15, March 17 Total No. of visits 7.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under special survey in accordance with the Rules and approved plans; the workmanship and material are good and on completion was tested by hydraulic pressure to 200 lbs per square inch and found to be tight and sound. This boiler was afterwards efficiently installed in the vessel and the safety valves adjusted under steam to 100 lbs. per square inch and eligible in my opinion to have record of D.B. 100 lbs.

Survey Fee ... .. ¥ 63.00 : When applied for, 1/4/1931   
 Travelling Expenses (if any) £ : : When received, 1/5/1931

H.D. Buchanan & Self.   
*K. Kishigami*   
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 12 JUN 1931   
 Assigned *See F.C. Rpt.*

