

# REPORT ON BOILERS.

No. 6621

23 SEP 1929

Received at London Office

Date of writing Report 20<sup>th</sup> Aug. 1929 When handed in at Local Office 10 Port of Kobe

No. in Survey held at Kobe Date, First Survey 14<sup>th</sup> March Last Survey 15<sup>th</sup> August 1929

Reg. Book on the Steel Single Screw Motorship "HINO MARU" (Number of Visits 10) Gross 2666 Tons Net 1604

Built at Kobe By whom built Mitsubishi Zosen Kaisha Yard No. 188 When built 1929

Engines made at Kobe By whom made Mitsubishi Zosen Kaisha Engine No. 188 When made 1929

Boilers made at Kobe By whom made Mitsubishi Zosen Kaisha Boiler No. 188 When made 1929

Owners Nippon Shokuen Kaisha Kabushiki Kaisha Port belonging to Sarumi

## VERTICAL DONKEY BOILER.

Made at Kobe By whom made Mitsubishi Zosen Kaisha Boiler No. 188 When made 1929 Where fixed Engine Room

Manufacturers of Steel Asano Shipbuilding Co.

Total Heating Surface of Boiler 75 sq. ft. Is forced draught fitted No. Coal or Oil fired oil

No. and Description of Boilers One Cochran Type Vertical boiler. Working pressure 50 lbs. sq. in.

Tested by hydraulic pressure to 100 lbs. sq. in. Date of test 18<sup>th</sup> May 1929 No. of Certificate 2038

Area of Firegrate in each Boiler oil fired No. and Description of safety valves to each boiler One, spring loaded.

Area of each set of valves per boiler per rule 3.14 sq. in. Pressure to which they are adjusted 53 lbs. sq. in. Are they fitted with easing gear YES

State whether steam from main boilers can enter the donkey boiler YES Smallest distance between boiler or uptake and bunkers or woodwork 4'-0"

Is oil fuel carried in the double bottom under boiler YES Smallest distance between base of boiler and tank top plating 4'-0"

Is the base of the boiler insulated YES Largest internal dia. of boiler 3'-3" Height 9'-0"

Shell plates: Material OH. stl. Tensile strength 28-32 tons Thickness 3/8"

Are the shell plates welded or flanged No. Description of riveting: circ. seams Single long. seams Double

Dia. of rivet holes in circ. seams 13/16" Pitch of rivets 2" Percentage of strength of circ. seams plate 59 rivets 61 of Longitudinal joint plate 59 rivets 128 combined

Working pressure of shell by rules 147 lbs. sq. in. Thickness of butt straps outer inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat dished partial spherical. Material OH. stl.

Tensile strength 26-30 T. in. Thickness 1/2" Radius 3'-2" Working pressure by rules 110 lbs. sq. in.

Description of Furnace: Plain, spherical, or dished crown spherical. Material OH. stl. Tensile strength 26-30 T. in.

Thickness 3/8" External diameter top 2'-7 1/4" Length as per rule YES Working pressure by rules 192 lbs. sq. in.

Pitch of support stays circumferentially YES and vertically YES Are stays fitted with nuts or riveted over YES

Diameter of stays over thread YES Radius of spherical or dished furnace crown 1'-3 5/8" Working pressure by rule 192 lbs. sq. in.

Thickness of Ogee Ring 1/2" Diameter as per rule D 39" d 32 1/4" Working pressure by rule 120 lbs. sq. in.

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

Radius if dished YES Working pressure by rule YES Thickness of back plate YES Diameter if circular YES

Length as per rule YES Pitch of stays YES Are stays fitted with nuts or riveted over YES

Diameter of stays over thread YES Working pressure of back plate by rules YES

Tube Plates: Material front OH. stl. back OH. stl. Tensile strength 26-30 T. in. Thickness 1/16" Mean pitch of stay tubes in nests 7/4"

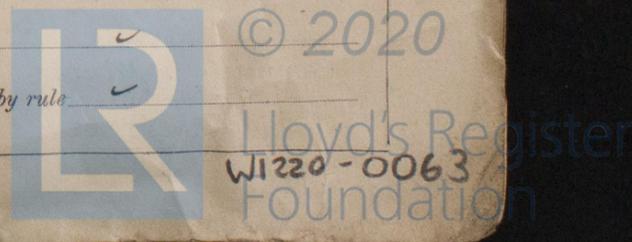
If comprising shell, Dia. as per rule front back Pitch in outer vertical rows YES Dia. of tube holes FRONT stay 2 1/2" plain 2 1/2" BACK stay 2 1/16" plain 2 9/16"

Is each alternate tube in outer vertical rows a stay tube YES Working pressure by rules front 195 lbs. sq. in. back 190 lbs. sq. in.

Girders to combustion chamber tops: Material YES Tensile strength YES

Depth and thickness of girder at centre YES Length as per rule YES

Distance apart YES No. and pitch of stays in each YES Working pressure by rule YES



**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 W.I. External diameter { plain 2 1/2 Thickness { 10 L.S.G. stay 2 1/2 5/16  
 No. of threads per inch 9 per in. Pitch of tubes 3 3/4" x 3 3/4" Working pressure by rules 265 lbs sq"  
**Manhole Compensation:** Size of opening in shell plate 11" x 15" Section of compensating ring  No. of rivets and diameter of rivet holes  Outer row rivet pitch at ends  Depth of flange if manhole flanged 2 5/8"  
**Uptake:** External diameter  Thickness of uptake plate   
**Cross Tubes:** No.  External diameters {  Thickness of plates

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

The foregoing is a correct description,

J. Sasani Manufacture

Dates of Survey { During progress of work in shops - - } 1929. MAR. 14. APRIL 1. 24. MAY. 6. 9. 15.  
 while building { During erection on board vessel - - } JUNE 10. 12. AUG. 10. 15.

Is the approved plan of boiler forwarded herewith Sept 14<sup>th</sup> 1929  
 (If not state date of approval.)  
 Total No. of visits 10.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)

The Donkey Boiler reported above has been constructed under special survey, it agrees with the approved plan & Rule requirements. The materials & workmanship employed in its manufacture are good.  
 In my opinion the vessel is now entitled to the notation D.B. 50 lbs. in the Register Book.

Survey Fee ... .. ₹ 65. - : } When applied for, 15<sup>th</sup> Aug. 1929.  
 Travelling Expenses (if any) £ See Hull Rpt. } When received, 28.10.29

H. K. Kimber  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 27 SEP 1929  
 Assigned See P. 6. rpt. attached

