

## REPORT ON BOILERS.

No. 6240

11 OCT 1928

Received at London Office

Date of writing Report 6-9-1928 When handed in at Local Office 19 Port of Kobe

No. in Survey held at Sama Date, First Survey 12-6-28 Last Survey 3-9-1928

Reg. Book

on the Steel Single Screw Motorship. "TAIHEI MARU"

(Number of Visits 11) Gross 6285 Tons Net 3835

Built at Sama By whom built Mitsui Bussan Kaisha Yard No. 146 When built 1928  
 Engines made at Copenhagen By whom made Bernmeister & Wain Engine No. 146 When made 1927-28  
 Boilers made at Sama By whom made Mitsui Bussan Kaisha Boiler No. 146 When made 1928  
 Owners Shumatsuni Kisen K. Kaisha Port belonging to Kobe

## VERTICAL DONKEY BOILER.

Made at Sama By whom made Mitsui Bussan Kaisha Boiler No. 146 When made 1928 Where fixed ON UPPER DECK. AFTER END OF ENG. ROOM CASING.

Manufacturers of Steel Bethlehem Steel Co, Coatesville, U.S.A.

Total Heating Surface of Boiler 114.6 sq. ft. Is forced draught fitted No. Coal or Oil fired Oil.

No. and Description of Boilers One, Vertical, wet uptake, cross tube Working pressure 100 lbs. sq. in.

Tested by hydraulic pressure to 200 lbs. sq. in. Date of test 20-7-28 No. of Certificate 1462.

Area of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler Two, Spring loaded.

Area of each set of valves per boiler { per rule 2.53 sq. ft. as fitted 4.8 sq. ft. Pressure to which they are adjusted 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 Yes Is oil fuel carried in the double bottom under boiler Yes Smallest distance between base of boiler and tank top plating

Boiler upon upper deck Is the base of the boiler insulated Yes Largest internal dia. of boiler 5'-1" Height 11'-5"

Shell plates: Material O.H.S.P. Tensile strength 28-32 T. sq. in. Thickness 1/2"

Are the shell plates welded or flanged No. Description of riveting: circ. seams { end Single lap inter Single long seams Double lapped.

Dia. of rivet holes in { circ. seams 15/16" Pitch of rivets { 2 1/8" 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 O.H.S.P.

Tensile strength 26-30 T. 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 O.H.S.P. Tensile strength 26-30 T. sq. in.

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

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" Working pressure by rule above 105 lbs. sq. in. d 4'-6"

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

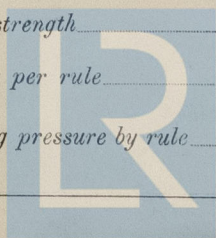
If comprising shell, Dia. as per rule { front back Pitch in outer vertical rows { Dia. of tube holes FRONT { stay plain BACK { stay plain

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



© 2020

Lloyd's Register Foundation

005909-005916-0044



**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  $11" \times 15"$  Section of compensating ring  $5\frac{1}{2}" \times 5\frac{5}{8}"$  No. of rivets and diameter  
 of rivet holes 48  $15\frac{1}{16}"$  Outer row rivet pitch at ends  $3\frac{1}{2}"$  Depth of flange if manhole flanged  $3\frac{1}{2}"$   
**Uptake:** External diameter  $1' - 3\frac{7}{8}"$  Thickness of uptake plate  $7\frac{1}{16}"$   
**Cross Tubes:** No. *Four* External diameters {  $10\frac{7}{8}"$  Thickness of plates  $7\frac{1}{16}"$   
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with YES.

The foregoing is a correct description,

*J. P. K. A. I.* Manufacturer.

Dates of Survey { During progress of work in shops - 1928, JUNE 12, 26, JULY 4, 5, 9, 13, 20, AUG. 21. Is the approved plan of boiler forwarded herewith 4-2-28.  
 while building { During erection on board vessel - 1928, AUG. 21, 29, SEPT. 3. (If not state date of approval.)  
 Total No. of visits 11.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) *The Donkey Boiler described above has been constructed under special survey of tested material. The workmanship is good & the scantlings agree with the approved plan. The boiler has been securely fitted aboard & the safety valves adjusted under steam. In my opinion, the vessel is now entitled to the record of D.B. (100 lbs) 9-28 in the Register Book.*

Survey Fee ... *YEN 67* : - : } When applied for, 19  
 Travelling Expenses (if any) *5-11* : - : } When received, 19  
*Included in Hull Report.*

Committee's Minute  
 Assigned

FRI. 26 OCT 1928

*See Sept. rpt. attached*

*W. R. K. A. I.*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 Lloyd's Register Foundation