

REPORT ON BOILERS.

No. 6143

Received at London Office 11/11/1928

Date of writing Report 9-6-1928 When handed in at Local Office 10 Port of Kobe

No. in Reg. Book Survey held at Sama Date, First Survey 26-9-27 Last Survey 7-6-1928

on the Single Screw Motorship "TAKAMISAN MARU" (Number of Visits 17) Tons Gross 1992 Net 1099

Built at Sama By whom built Mitsui Bussan Kaisha Yard No. 133 When built 1928.
Engines made at Sama By whom made Mitsui Bussan Kaisha Engine No. 133 When made 1928.
Boilers made at Sama By whom made Mitsui Bussan Kaisha Boiler No. 133 When made 1928.
Owners Mitsui Bussan Kaisha Port belonging to Tokyo.

VERTICAL DONKEY BOILER.

Made at Sama By whom made Mitsui Bussan Kaisha Boiler No. 133 When made 1928. Where fixed Bottom eng. room plat. aft.
Manufacturers of Steel D. Corville & Sons Ltd. Motherwell.

Total Heating Surface of Boiler 68 sq. ft. Is forced draught fitted No. Coal or Oil fired Oil

No. and Description of Boilers One, vertical wet uptake donkey boiler. Working pressure 80 lbs sq. in.

Tested by hydraulic pressure to 160 lbs sq. in. Date of test 8-12-27. No. of Certificate 1231.

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

Area of ~~shell~~ of valves per boiler } per rule 3.14 sq. in. Pressure to which they are adjusted 80 lbs sq. in. Are they fitted with easing gear Yes.
as fitted 3.97 sq. in.

State whether steam from main boilers can enter the donkey boiler Yes. Smallest distance between boiler or uptake and bunkers

Is oil fuel carried in the double bottom under boiler No. Smallest distance between base of boiler and tank top plating

3'-6" Is the base of the boiler insulated Yes. Largest internal dia. of boiler 4'-6" Height 10'-6"

Shell plates: Material O.H. Steel. Tensile strength 28-32 tons. Thickness 9/16"

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

Dia. of rivet holes in { circ. seams 15/16" Pitch of rivets { 2 1/8" Percentage of strength of circ. seams { plate 56 rivets 47.2 of Longitudinal joint { plate 67.3 rivets 70.0 combined.

Working pressure of shell by rules 192 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. Steel.

Tensile strength 26-30 tons. Thickness 9/16" Radius 4'-0" Working pressure by rules 138 lbs sq. in.

Description of Furnace: Plain, spherical, or dished crown Dished crown. Material O.H. Steel. Tensile strength 26-30 tons.

Thickness Crown 9/16" shell 1/4" External diameter { top 3'-6" Length as per rule 39 9/16" Working pressure by rules 195 lbs sq. in.
bottom 3'-10"

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'-3" Working pressure by rule 120 lbs sq. in.

Thickness of Ogee Ring 1/4" Diameter as per rule { D 4'-4 7/8" Working pressure by rule 170 lbs sq. in.
d 3'-10"

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

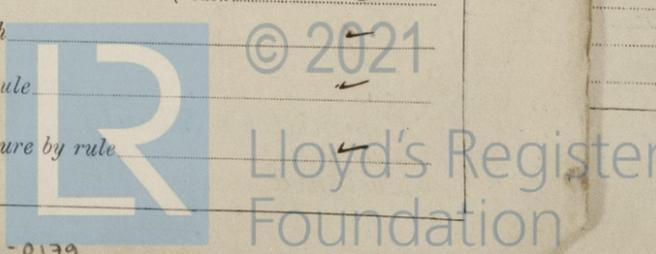
Comprising shell, Dia. as per rule { front back Pitch in outer vertical rows { Dia. of tube holes FRONT { stay plain BACK { stay plain

Each alternate tube in outer vertical rows a stay tube Working pressure by rules { front back

Orders 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 $11" \times 15" \sqrt{16 \times 30}$ Section of compensating ring $7\frac{1}{4}" \times 9\frac{1}{6}"$ No. of rivets and diam. of rivet holes $46, 1\frac{5}{16}" \sqrt{}$ Outer row rivet pitch at ends $7"$ Depth of flange if manhole flanged $3"$
Uptake: External diameter $1' - 3\frac{7}{8}" \sqrt{}$ Thickness of uptake plate $7\frac{1}{16}" \sqrt{}$
Cross Tubes: No. Two External diameters { $9\frac{7}{8}" \sqrt{}$ Thickness of plates $7\frac{1}{16}" \sqrt{}$

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

The foregoing is a correct description,
S. McKay Manufacturer

Dates of Survey while building { During progress of work in shops - - } 1927 SEPT. 26, OCT. 14, 19, 22, 26, NOV. 8, 14, 29, DEC. 8.
 { During erection on board vessel - - } 1927 DEC. 14, 1928, JAN. 13, 31, FEB. 28, MAR. 1, 15, MAY 8, JUNE 7. Total No. of visits 17.
 Is the approved plan of boiler forwarded herewith 19-9-27. (If not state date of approval.)

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

The boiler described above has been constructed under special survey, of tested material, the workmanship being good & the scantlings agree with the approved plan.
 The boiler has been securely installed aboard & tested under steam with satisfactory results. In my opinion the vessel is entitled to the record of D.B. 80 lbs 6-28 in The Register Book.

Survey Fee 7EN 66 - :) When applied for, JUNE 21st 1928
 Travelling Expenses (if any) £ - : - :) When received, 27th MAR 28
 included with expenses of Hull.

L. Kember
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 13 JUL 1928
 Assigned See P. 4 attached

