

REPORT ON BOILERS.

No. 6546

2 JUL 1929

Received at London Office

Date of writing Report 11 June 19 29 When handed in at Local Office 19 Port of Kobe

No. in Survey held at Yama Date, First Survey 12 June 1928 Last Survey 30 May 19 29

Reg. Book on the Steel twin screw motorship "HAKONESAN MARU" (Number of Visits 13) Gross 6674 Tons Net 4086

Built at Yama By whom built Mitsui Bussan Kaisha Yard No. 151 When built 1929

Engines made at Yama By whom made Mitsui Bussan Kaisha Engine No. 151 When made 1929

Boilers made at Yama By whom made Mitsui Bussan Kaisha Boiler No. 151 When made 1929

Owners Mitsui Bussan Kaisha Port belonging to Yokio

VERTICAL DONKEY BOILER.

Made at Yama By whom made Mitsui Bussan Kaisha Boiler No. 151 When made 1929 Where fixed Fore end E.R. Platform port side

Manufacturers of Steel Bethlehem Steel Co. 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 lb/sq. in.

Tested by hydraulic pressure to 200 lb/sq. in. Date of test 14 March 1929 No. of Certificate 1840

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 4.81 sq. ft. Pressure to which they are adjusted 102 lb/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 bunkers 3' - 6"

Is oil fuel carried in the double bottom under boiler ✓ Smallest distance between base of boiler and tank top plating 5' - 1"

Is the base of the boiler insulated Yes Largest internal dia. of boiler 5' - 1" Height 77' - 5"

Shell plates: Material O.H. Steel Tensile strength 28-32 tons/sq. in. Thickness 1/2"

Are the shell plates welded or flanged No Description of riveting: circ. seams { end Single 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 64.3 rivets 78.9 combined ✓

Working pressure of shell by rules 149 lb/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/sq. in. Thickness 9/16" Radius 5' - 0" Working pressure by rules 119 lb/sq. in.

Description of Furnace: Plain, spherical, or dished crown dished Material O.H. 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 lb/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 13' - 6" Working pressure by rule 124.5 lb/sq. in.

Thickness of Ogee Ring 5/8" Diameter as per rule { D 5' - 0" d 4' - 6" Working pressure by rule above 105 lb/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 ✓

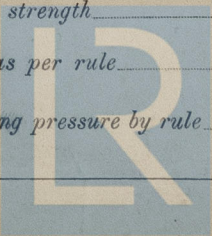
comprising shell, Dia. as per rule { front ✓ back ✓ Pitch in outer vertical rows { ✓ Dia. of tube holes FRONT { stay ✓ plain ✓ BACK { stay ✓ plain ✓

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 ✓



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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 - 3 7/8" Outer row rivet pitch at ends 3 1/2" Depth of flange if manhole flanged 3 1/2"
Uptake: External diameter 1' - 3 7/8" Thickness of uptake plate 7/16"
Cross Tubes: No. Four External diameters { 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,

J. V. Kar Manufacture

Dates of Survey { During progress of work in shops - 1928 June 12 Aug 13.22 1929 Jan 15.22 Is the approved plan of boiler forwarded herewith 4-2-28
 while building { During erection on board vessel - Feb 7.13.25 Mar 14 (If not state date of approval.)
Mar 26 APRIL 11 May 2, 30 Total No. of visits 13

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under special survey + complies with the Rule requirements + approved plan. The material + workmanship employed are good.
The boiler has been securely installed on board + examined under working conditions. The safety valves have been adjusted under steam.
In our opinion the vessel referred to herein is eligible for the record of D.B. (100 lbs) in the Register Book

Survey Fee ... £ 40 : - : }
 Travelling Expenses (if any) See Hull Rpt.

When applied for 27 June 1929
 When received, 28.10.19

W. Kimber. + Clive Bell
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI. 5 JUL 1929

Assigned see minute on Kobe Rpt 6.2.28

FRI. 4 OCT 1929



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