

# REPORT ON BOILERS.

No. 8467.

Received at London Office -8 FEB 1934

of writing Report 6-1-34 19 When handed in at Local Office 13-1-34 19 Port of Kobe

Survey held at Tama Date, First Survey 23-6-33 Last Survey 20-12-33 19

on the Steel Screw Propeller Ship "AMAGISAN MARU" (Number of Visits 7) Gross 7624 Tons

at Tama By whom built Inoue Iron Works Kurashiki Yard No. 196 When built 1933

Engines made at Tama By whom made " " " " Engine No. 196 When made 1933

Boilers made at Tama By whom made " " " " Boiler No. 196 When made 1933

Boilers Inoue Iron Works Kurashiki Port belonging to Kobe

## VERTICAL DONKEY BOILER.

at Tama By whom made Inoue Iron Works Kurashiki Boiler No. 196 When made 1933 Where fixed E.R. Bottom Platform

Manufacturers of Steel Inoue Shipbuilding Iron Company Ltd. Sendai, Japan

Heating Surface of Boiler 710 sq ft Is forced draught fitted no Coal or Oil fired oil

Description of Boilers Vertical Scotch Type Working pressure 120 lbs.

Tested by hydraulic pressure to 230 lbs. Date of test 25-11-33 No. of Certificate 3859

No. of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler Two Spring Loaded 2 1/2 dia.

No. of each set of valves per boiler per rule 7.80 as fitted 9.80 Pressure to which they are adjusted 120 lbs. Are they fitted with easing gear yes

Whether steam from main boilers can enter the donkey boiler Smallest distance between boiler or uptake and bunkers

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

3'-2 1/2" Is the base of the boiler insulated yes Largest internal dia. of boiler 7'-6" Height 16'-3"

Shell plates: Material O.H. Steel Tensile strength 28-32 Tons Thickness 5/8"

Are the shell plates welded or flanged no Description of riveting: circ. seams D.R. Lap long. seams T.R. Lap

No. of rivet holes in circ. seams 15/16 Pitch of rivets 2 7/8 Percentage of strength of circ. seams plate 67.4 rivets 63.1 of Longitudinal joint plate 73.2 rivets 77.7 combined

Working pressure of shell by rules 145 lbs Thickness of butt straps outer inner

Crown: Whether complete hemisphere, dished partial spherical, or flat Dished Material Steel

Tensile strength 26-30 Tons Thickness 3/4" Radius 5'-6" Working pressure by rules 136 lbs.

Description of Furnace: Plain, spherical, or dished crown Spherical Material Steel Tensile strength 26-30 Tons

Thickness 3/4" External diameter top 6'-7" Length as per rule Working pressure by rules 160 lbs

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'-2 3/4" Working pressure by rule 160 lbs

Thickness of Ogee Ring 1" Diameter as per rule D 90" Working pressure by rule 136 lbs

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

Stay Plates: Material Steel Tensile strength 26-30 Tons Thickness 1" Mean pitch of stay tubes in nests 10.875"

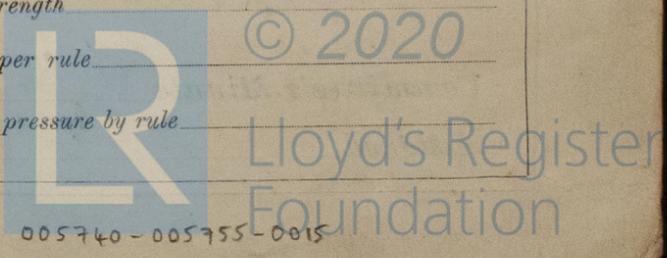
Comprising shell, Dia. as per rule front back Pitch in outer vertical rows 3.625" Dia. of tube holes FRONT stay 2 1/2" BACK stay 2 1/2" plain

Each alternate tube in outer vertical rows a stay tube yes Working pressure by rules front 164 lbs back 164 lbs

Stays 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 Wrought Iron External diameter { plain  $2\frac{1}{2}$ " stay  $2\frac{1}{2}$ " } Thickness {  $10\frac{1}{2}$  S.G.  $5\frac{1}{16}$ "  $1\frac{1}{4}$ " }

No. of threads per inch 9 Pitch of tubes  $3\frac{5}{8}$ " -  $3\frac{5}{8}$ " Working pressure by rules 128.3 lbs.

**Manhole Compensation:** Size of opening in shell plate  $11 \times 15$  Section of compensating ring  $15 \times .625$  No. of rivets and di \_\_\_\_\_

of rivet holes 48 @  $1\frac{5}{16}$ " Outer row rivet pitch at ends \_\_\_\_\_ Depth of flange if manhole flanged  $3\frac{1}{2}$ "

**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. P. K. A. I. Manufa

Dates of Survey while building 1933 June

During progress of work in shops - 23-30 Oct. 10-14-31

During erection on board vessel - 29-11-33 20-12-33

Is the approved plan of boiler forwarded herewith 4-10-31  
(If not state date of approval.)

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 plan: the materials and workmanship are good. The boiler was tested by hydraulic pressure to 230 lbs per square inch and found tight and sound and afterwards apparently installed in the vessel and the safety valves adjusted on steam to 120 lbs per sq. inch. The boiler is eligible, in my opinion, to have the record of D.B. 120 lbs.

Survey Fee ... .. £ 6 - 6 - 0 } When applied for, 8th Jan 1934

Travelling Expenses (if any) £ v : } When received, 12th Jan 1934

A. D. Morris

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute JUNE 13 FEB 1934

Assigned See other Rpt. Kob 8467

