

# REPORT ON BOILERS.

No. 4787.

Received at London Office 8 APR 1925

Date of writing Report 3<sup>rd</sup> March 1925 When handed in at Local Office 19 Port of Kobe

No. in Survey held at Kobe Date, First Survey Oct 11<sup>th</sup> 1924 Last Survey Feb 19<sup>th</sup> 1925

on the Steel Motor Vessel "FLORIDA MARU" (Number of Visits 14) Gross 5832.87 Tons Net 3644.19

Built at Kobe By whom built Kawasaki Dockyard Co Ltd Yard No. 484 When built 1925-2.

Engines made at Glasgow (Clydebank) By whom made John Brown & Co Ltd Engine No. 502A. When made 1925-2.

Boilers made at Kobe By whom made Kawasaki Dockyard Co Ltd Boiler No. 484 When made 1925-2.

Owners Kawasaki Dockyard Co Ltd Port belonging to Kobe

## VERTICAL DONKEY BOILER.

Made at Kobe By whom made Kawasaki Dockyard Co Ltd Boiler No. 484 When made 1925 Where fixed Low in Eng. Room

Manufacturers of Steel Kawasaki Fukui Steel Works

Total Heating Surface of Boiler 369.62 sq ft Is forced draught fitted No Coal or Oil fired Oil fired

No. and Description of Boilers one Vertical Donkey Boiler (Cochran Type) Working pressure 120 lbs

Tested by hydraulic pressure to 230 lbs Date of test 6<sup>th</sup> November 1924 No. of Certificate 584

Area of Firegrate in each Boiler oil fired No. and Description of safety valves to each boiler one 2" dia Swin, Spring loaded.

Area of each set of valves per boiler per rule 4.102 sq as fitted 6.28 sq Pressure to which they are adjusted 125 lbs 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 bulkhead tankers 15"

Is oil fuel carried in the double bottom under boiler No Smallest distance between base of boiler and tank top plating 37"

Is the base of the boiler insulated Yes Largest internal dia. of boiler 72" Height 13'-10 1/4"

Shell plates: Material O.H. Steel Tensile strength 28 to 32 tons Thickness 5/8" & 9/16"

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

Dia. of rivet holes in circ. seams 1 1/2" Pitch of rivets 2 1/2" Percentage of strength of circ. seams plate 56 rivets 52.7 of Longitudinal joint plate 69.8 rivets 58.5 combined

Working pressure of shell by rules 125.45 lbs Thickness of butt straps outer inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Complete hemisphere Material O.H. Steel

Tensile strength 26 to 30 tons Thickness Top 13/16 SIDES 9/16 Radius 36" Working pressure by rules 185 lbs

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

Thickness 5/8" External diameter top bottom Length as per rule Working pressure by rules

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 31 1/8" Working pressure by rule 168 lbs

Thickness of Ogee Ring 1" Diameter as per rule D 72" Working pressure by rule 191.5 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

Tube Plates: Material front O.H. Steel back do Tensile strength 26 tons Thickness FRONT 1" BACK 13/16 Mean pitch of stay tubes in nests 10 29/32

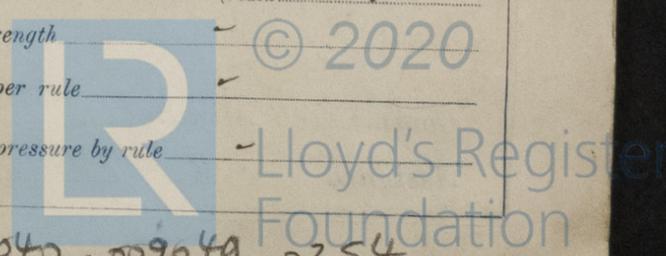
comprising shell, Dia. as per rule front back Pitch in outer vertical rows E=7 1/2" B=7 1/2" Dia. of tube holes FRONT stay 2 1/16" plain 2 9/16" BACK stay 2 9/16" plain 2 1/2"

each alternate tube in outer vertical rows a stay tube Yes Working pressure by rules front 124.5 lbs back 123.7 lbs

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



009040 . 009049 . 0254

**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 Lap welded steel  External diameter { plain 2 1/2"  stay 2 1/2"  Thickness { 11 LSG.  5/16"  No. of threads per inch 9  Pitch of tubes 3 3/4 (Vert) x 3 9/16 (Hor) Working pressure by rules 125 lbs

**Manhole Compensation:** Size of opening in shell plate 16 x 12" Section of compensating ring 6 5/8 x 5/8" No. of rivets and diameter of rivet holes 44 of 29/32 DIA:  Outer row rivet pitch at ends 3 1/4"  Depth of flange if manhole flanged

**Uptake:** External diameter 16 1/8 x 19 1/8"  Thickness of uptake plate 9/16"

**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,  
**Kawasaki Dockyard Co., Ltd.,**  
 Per. [Signature]  Manufacturer.  
**Director.**

Dates of Survey while building { During progress of work in shops - - 1924. Oct. 11-20-22. Nov 1-4-6-21. Dec 3-26-30 Is the approved plan of boiler forwarded herewith (If not state date of approval.) 24-5-24.  
 { During erection on board vessel - - 1925. Jan. 9. Feb. 7-10-19. Total No. of visits 14

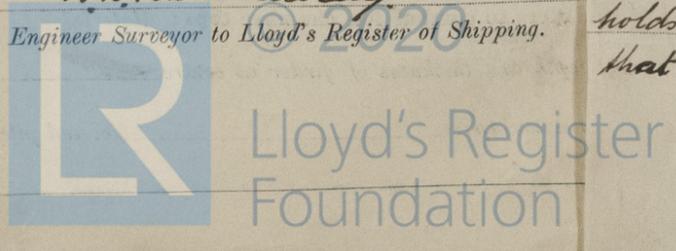
**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)

*This Boiler has been constructed under special survey, according to the Rules and approved plans, the materials have been tested found efficient and the workmanship is good. The Boiler has now been installed <sup>on board</sup> and tested under steam with satisfactory results, and eligible in my opinion to have the Record D.B. 120<sup>th</sup> in Register Book.*

Survey Fee ... SEE MACH<sup>Y</sup> RPT When applied for, 19  
 Travelling Expenses (if any) £ : : When received, 19

H.D. Buchanan  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 15 APR 1925  
 Assigned See other Rpt Kob. 4787



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