

# REPORT ON BOILERS.

No. 7408

Received at London Office

10 AUG 1931

Date of writing Report 14-7-31 19 16-7-31 19 When handed in at Local Office Port of Kobe

No. in Survey held at Kobe Date, First Survey 23<sup>rd</sup> April Last Survey 29-6-31 19  
Reg. Book on the Steel screw driven ship "KIRISHIMA MARU" (Number of Visits 5)

Gross Tons Net Tons

Built at Kobe By whom built Kawasaki Dockyard Ltd. Yard No. 563 When built 1930/31

Engines made at Augsburg By whom made MAN Engine No. 330570 When made 1930/31

Boilers made at Lincoln By whom made Babcock & Wilcox Ltd. Boiler No. 734619 When made 1930

Owners Kokusan Kisen Kaisha Port belonging to Yokohama

## VERTICAL DONKEY BOILER.

Made at Lincoln By whom made Babcock & Wilcox Ltd. Boiler No. 734619 When made 1930 Where fixed after end C.R. Turbine deck

Manufacturers of Steel (See Grimsby Report N<sup>o</sup> 17199)

Total Heating Surface of Boiler Is forced draught fitted Coal or Oil fired Submerg gas

No. and Description of Boilers One Clarkson Patent Waste Heat Boiler Working pressure 100 lbs.

Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_

Area of Firegrate in each Boiler \_\_\_\_\_ No. and Description of safety valves to each boiler Double Spring 2 1/2" dia each.

Area of each set of valves per boiler { per rule 7.170" as fitted 9.810" Pressure to which they are adjusted 100 lbs Are they fitted with easing gear yes

State whether steam from main boilers can enter the donkey boiler Boiler fixed turbine deck aft end C.R. Smallest distance between boiler or uptake and bunkers or woodwork Is oil fuel carried in the double bottom under boiler Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated no Largest internal dia. of boiler \_\_\_\_\_ Height \_\_\_\_\_

Shell plates: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_

Are the shell plates welded or flanged \_\_\_\_\_ Description of riveting: circ. seams { end \_\_\_\_\_ inter \_\_\_\_\_ } long. seams \_\_\_\_\_

Dia. of rivet holes in { circ. seams \_\_\_\_\_ long. seams \_\_\_\_\_ } Pitch of rivets { \_\_\_\_\_ } Percentage of strength of circ. seams { plate \_\_\_\_\_ rivets \_\_\_\_\_ } of Longitudinal joint { plate \_\_\_\_\_ rivets \_\_\_\_\_ combined \_\_\_\_\_ }

Working pressure of shell by rules \_\_\_\_\_ Thickness of butt straps { outer \_\_\_\_\_ inner \_\_\_\_\_ }

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat \_\_\_\_\_ Material \_\_\_\_\_

Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_ Radius \_\_\_\_\_ Working pressure by rules \_\_\_\_\_

Description of Furnace: Plain, spherical, or dished crown \_\_\_\_\_ Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

Thickness \_\_\_\_\_ 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 \_\_\_\_\_ Working pressure by rule \_\_\_\_\_

Thickness of Ogee Ring \_\_\_\_\_ Diameter as per rule { D \_\_\_\_\_ d \_\_\_\_\_ } Working pressure by rule \_\_\_\_\_

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 \_\_\_\_\_

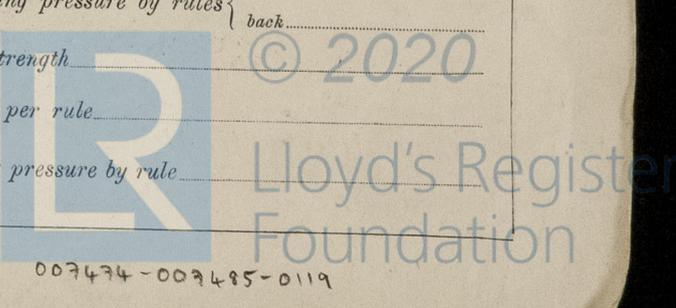
If comprising shell, Dia. as per rule { front \_\_\_\_\_ back \_\_\_\_\_ } Pitch in outer vertical rows { \_\_\_\_\_ } Dia. of tube holes FRONT { stay \_\_\_\_\_ plain \_\_\_\_\_ } BACK { stay \_\_\_\_\_ plain \_\_\_\_\_ }

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 \_\_\_\_\_



**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 ..... Thickness { .....  
 stay .....  
 No. of threads per inch \_\_\_\_\_ Pitch of tubes \_\_\_\_\_ Working pressure by rules \_\_\_\_\_  
**Manhole Compensation:** Size of opening in shell plate \_\_\_\_\_ Section of compensating ring \_\_\_\_\_ No. of rivets and diameter  
 of rivet holes \_\_\_\_\_ Outer row rivet pitch at ends \_\_\_\_\_ Depth of flange if manhole flanged \_\_\_\_\_  
**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,

Manufacturer: \_\_\_\_\_

Dates of Survey { During progress of work in shops - - -  
 while building { During erection on board vessel - - -  
 April 23<sup>rd</sup> May 6<sup>th</sup>, 15<sup>th</sup> June 15<sup>th</sup>, 29<sup>th</sup>

Is the approved plan of boiler forwarded herewith (If not state date of approval.) \_\_\_\_\_  
 Total No. of visits *5*

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

*This boiler has been efficiently installed in the vessel and the safety valves adjusted under steam to 100 lbs per sq. inch and eligible in my opinion to have read of 0-13-100 lbs. (See Gurnaby Report N° 17199)*

Survey Fee ... .. £ : : } When applied for, ..... 19 .....  
 Travelling Expenses (if any) £ : : } When received, ..... 19 .....

*A. J. Morrison*

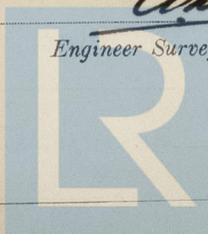
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_

Assigned \_\_\_\_\_

*See F.C. Rep.*

TUE. 18 AUG 1931



Lloyd's Register Foundation

Is a Report also sent on the Hull of the ship? 199