

# REPORT ON BOILERS.

21 JAN 1957

Received at London Office

5a.

of writing Report.....19..... When handed in at Local Office.....19..... Port of KOBE

Survey held at Osaka, Japan Date, First Survey 25th May, 1956 Last Survey 6th August, 1956

on the (Number of Visits 14) Tons { Gross..... Net.....

By whom built..... Yard No. 815 When built.....

By whom made..... Engine No..... When made.....

Boilers made at Osaka, Japan By whom made Hirano Iron Works Co., Ltd. Boiler No. 616 When made Aug., 1956

Owners Mitsubishi Kaiun K. K. Port belonging to.....

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Plates; Tsurumi Iron Works, Nippon Kokan, K.K. Tubes; Kawasaki Iron Works Nippon Kokan, K.K.

Total Heating Surface of Boilers 158.7 M<sup>2</sup> Of Superheaters.....

Is forced draught fitted..... Coal or Oil fired.....

and Description of Boilers 1. Dry Combustion Multitubular boiler Working Pressure 10 kg/cm<sup>2</sup>

tested by hydraulic pressure to 18.5 kg/cm<sup>2</sup> Date of test 6th Aug. '56 No. of Certificate B-769 Can each boiler be worked separately.....

No. and Description of safety valves to each boiler.....

Pressure to which they are adjusted..... Are they fitted with easing gear.....

Is oil fuel carried in the double bottom under boilers.....

Shell plates: Material Boiler Steel Tensile strength 47.3-49.4 kg/mm<sup>2</sup>

Thickness 24 mm. Are the shell plates welded or flanged Riveted Description of riveting: circ. seams { end..... inter..... long. seams.....

Pitch of rivets { 180 mm.

Percentage of strength of circ. end seams { plate..... rivets.....

Percentage of strength of longitudinal joint { plate..... rivets..... combined.....

No. and Description of Furnaces in each Boiler 2. Morison's type corrugated furnace.

Material Boiler Steel Tensile strength 43.7-47.2 kg/mm<sup>2</sup> Smallest outside diameter 1074 mm.

Thickness of plates 12 mm. Description of longitudinal joint welded

Material Boiler Steel Tensile strength 43.5-45.6 kg/mm<sup>2</sup> Thickness 24 mm. Pitch of stays 420 x 350mm.

are stays secured Screwed and Nut

Material { front..... back..... } Tensile strength { Top..... Bot..... } Thickness { Top..... Bot..... }

Material Boiler Steel Tensile strength 45.4 kg/mm<sup>2</sup> Thickness 23 mm.

Material Boiler Steel Tensile strength 46.3 - 49.3 kg/mm<sup>2</sup>

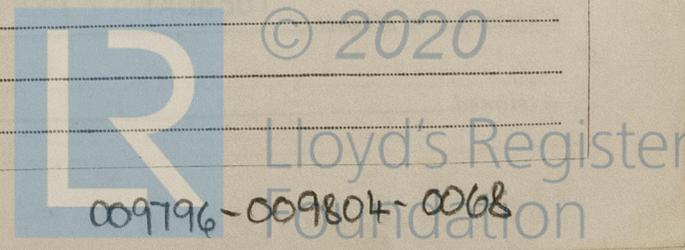
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Are the stays drilled at the outer ends..... Margin stays: Diameter <sup>At turned off part,</sup> <sub>or</sub> <sup>Over threads,</sup>.....  
 No. of threads per inch.....  
 Tubes: Material OH Steel External diameter <sup>Plain</sup> 70mm. W.T. 60.3mm. <sup>Stay</sup> 70mm. Thickness 4 mm. WT. 4mm. No. of threads per inch 9  
 Pitch of tubes Plain tube 100mm x 98mm. Water tube 110mm. Manhole compensation: Size of opening in shell plate 480mm. x 580mm. Section of compensating ring 6770.4mm<sup>2</sup> x 2 No. of rivets and diameter of rivet holes 40; 35.5mm.  
 Outer row rivet pitch at ends 100 mm. 154.3 mm. Depth of flange if manhole flanged 100 mm. Steam Dome: Material.....  
 Tensile strength..... Thickness of shell..... Description of longitudinal joint.....  
 Diameter of rivet holes..... Pitch of rivets..... Percentage of strength of joint <sup>Plate</sup> <sub>Rivets</sub>.....  
 Internal diameter..... Thickness of crown..... No. and diameter of stays.....  
 Inner radius of crown.....  
 How connected to shell..... Size of doubling plate under dome..... Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell.....

Type of Superheater..... Manufacturers of <sup>Tubes</sup> <sub>Steel forgings</sub> <sub>Steel castings</sub>.....  
 Number of elements..... Material of tubes..... Internal diameter and thickness of tubes.....  
 Material of headers..... Tensile strength..... Thickness..... Can the superheater be shut off and the boiler be worked separately..... Is a safety valve fitted to every part of the superheater which can be shut off from the boiler.....  
 Area of each safety valve..... Are the safety valves fitted with easing gear.....  
 Pressure to which the safety valves are adjusted..... Hydraulic test pressure.....  
 tubes..... forgings and castings..... and after assembly in place..... Are drain cocks or valves fitted to free the superheater from water where necessary.....

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with..... **Yes**  
 The foregoing is a correct description,.....  
 Manufacturer.....

Dates of Survey while building <sup>During progress of work in shops - -</sup> 1956: May, 25. June, 14, 19, 22, 25. <sup>During erection on board vessel - - -</sup> July, 9, 10, 11, 13, 16, 21, 23, 28. Aug., 6. Are the approved plans of boiler and superheater forwarded herewith 16-4-56. (If not state date of approval.)  
 Total No. of visits 14

Is this Boiler a duplicate of a previous case..... **Yes** If so, state Vessel's name and Report No. Ship No. 807

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)  
 The boiler has been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.  
 The Material and workmanship are sound and good.  
 The boiler has been examined under hydraulically and found satisfactory.

Survey Fee ... .. £ 54.00.00 } When applied for SEP. 27. 1956 ..... 19.....  
 Travelling Expenses (if any) £ 1.50.00 } When received..... 19.....

*[Signature]*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUESDAY 12 FEB 1957  
 Assigned.....

