

6 FEB 1953

LONDON

No. 1172

REPORT ON BOILERS.

Received at London Office.....

Writing Report When handed in at Local Office 19... Port of Kobe

Survey held at Nagasaki Date, First Survey 5th March Last Survey 28th August 1952

on the Twin Screw motor vessel "AWATA MARU" (Number of Visits 26) Tons Gross 7,401.48 Net 4,220.50

Built at Nagasaki By whom built Nagasaki Works, Mitsubishi Zosen K.K. Yard No. 1428 When built 1952.8 Mo.

By whom made Nagasaki Works, Mitsubishi Zosen K.K. Engine No. 245246 When made 1952.5 Mo.

By whom made Nagasaki Works, Mitsubishi Zosen K.K. Boiler No. 1368 When made 1952.5 Mo.

Owners Nippon Yusen Kaisha Port belonging to Tokyo

TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Yawata Iron and Steel Works (Letter for Record.....)

Heating Surface of Boilers 268.5 M² Is forced draught fitted Yes ✓ Coal or Oil fired Oil and Exh. gas ✓

Description of Boilers one off, Multitubular cylindrical dry combustion ✓ Working Pressure 7 kgs/cm² ✓

Tested by hydraulic pressure to 14 kgs/cm² Date of test 19 May 1952 No. of Certificate B-335 Can each boiler be worked separately..... ✓

No. and Description of safety valves to each boiler one set, 2 valves full lift type

Pressure to which they are adjusted 7 kgs/cm² Are they fitted with easing gear Yes ✓

Is oil fuel carried in the double bottom under boilers..... No

Is the bottom of the boiler insulated..... Yes

Shell plates: Material Boiler quality steel Tensile strength 28-35 T/A ✓

Description of riveting: circ. seams end Double riveted lap joint

inter..... 8.8 mm

circ. seams 26.5 mm ✓ Pitch of rivets 1.02 mm ✓

long. seams 26.5 mm ✓

Percentage of strength of circ. intermediate seam 69.9

Working pressure of shell by Rules 7.77 kgs/cm²

No. and Description of Furnaces in each Boiler one, Morrison corrugated ✓

Tensile strength 26-30 T/A ✓ Smallest outside diameter 874 mm ✓

Thickness of plates 14 mm ✓ Description of longitudinal joint Butt fusion weld from both sides

Working pressure of furnace by Rules 13.8 kgs/cm²

Material Boiler quality steel Tensile strength 26-30 T/A ✓ Thickness 22 mm ✓ Pitch of stays 400 mm ✓

Working pressure by Rules 8.1 kgs/cm²

Material Boiler quality steel Tensile strength 26-30 T/A ✓ Thickness 22 mm ✓

Working pressure 8.6 kgs/cm²

Material Boiler quality steel Tensile strength 26-30 T/A ✓ Thickness 22 mm ✓

Working pressure 7.8 kgs/cm²

Material..... Tensile strength..... Depth and thickness of girder.....

Length as per Rule..... Distance apart..... No. and pitch of stays.....

Working pressure by Rules..... Combustion chamber plates: Material.....

Thickness: Sides..... Back..... Top..... Bottom.....

Are stays fitted with nuts or riveted over.....

Front plate at bottom: Material Boiler quality steel Tensile strength 26-30 T/A ✓

Thickness 22 mm ✓

Working pressure by Rules.....

Lower back plate: Material Boiler quality steel Tensile strength 26-30 T/A ✓ Thickness 22 mm ✓

Working pressure.....

Main stays: Material Longitudinal stay Tensile strength 28-35 T/A ✓

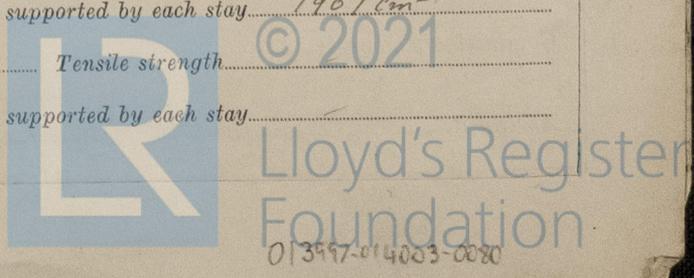
At body of stay 6.5 mm ✓ No. of threads per inch Si.x ✓ Area supported by each stay 190.7 cm² ✓

Over threads.....

Screw stays: Material..... Tensile strength.....

At turned off part..... No. of threads per inch..... Area supported by each stay.....

Over threads.....



Working pressure by Rules..... Are the stays drilled at the outer ends..... Margin stays: Diameter ^{At turned off part,} _{or} ^{Over threads}..... 4c.
 No. of threads per inch..... Area supported by each stay..... Working pressure by Rules.....
 Tubes: Material Boiler tube ✓ External diameter ^{Plain} 76.2 mm ✓ ^{Stay} 76.2 mm ✓ Thickness 4 mm ✓ No. of threads per inch 11.5 ✓
 Pitch of tubes ^{Vertical} 105 mm ✓ ^{Horizontal} 107 mm ✓ Working pressure by Rules 7 Kgs/cm² ✓ Manhole compensation: Size of 105 x 30.5 mm ✓
 shell plate 105 x 30.5 mm ✓ Section of compensating ring 19 x 160 x 160 mm ✓ No. of rivets and diameter of rivet holes 36 x 26.5 mm ✓
 Outer row rivet pitch at ends 122.7 mm ✓ Depth of flange if manhole flanged 85 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 ^{Plate} _{Rivets}.....
 Internal diameter..... Working pressure by Rules..... Thickness of crown..... No. and dia
 stays..... Inner radius of crown..... Working pressure by Rules.....
 How connected to shell..... Size of doubling plate under dome..... Diameter of rivet holes
 of rivets in outer row in dome connection to shell.....

Type of Superheater Name..... Manufacturers of ^{Tubes}..... ^{Steel forgings}..... ^{Steel castings}.....
 Number of elements..... Material of tubes..... Internal diameter and thickness of tubes.....
 Material of headers..... Tensile strength..... Thickness..... Can the superheater be shut
 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 casing gear..... Working pressu
 Rules..... Pressure to which the safety valves are adjusted..... Hydraulic test p
 tubes..... forgings and castings..... and after assembly in place..... Are drain
 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.....

The foregoing is a correct description,
 ✓ Leno..... Manu

NAGASAKI WORKS

MITSUBISHI SHIPBUILDING & ENGINEERING CO., LTD.
 (If not state date of approval.)

Dates of Survey while building ¹⁹⁵²
 During progress of work in shops - - March 5, 7, 14, 24, 28, 31, April 7, 8, 10, 22, 28, May 1, 2, 6, 7, 12, 19 Are the approved plans of boiler and superheater forwarded herewith 28 April
 During erection on board vessel - - - May 21, 22, June 26, 30, July 1, 12, 18, Aug 6, 13, 18, 28 Total No. of visits..... 26

Is this Boiler a duplicate of a previous case..... Yes..... If so, state Vessel's name and Report No. ASO MARU, ARI MARU, TAMA MARU, TOSI MARU

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

The Donkey Boiler of this vessel has been constructed under Special Survey in accordance with the Rules, Approved plans and Secretary's letter.
The material and workmanship are good.
The Donkey Boiler has been examined under steam, the Safety Valves were adjusted to 7 Kgs per sq. cm. and found satisfactory.

Survey Fee £ 75,000 } When applied for..... 27. JAN. 1953
~~57,336~~ }
 Travelling Expenses (if any) £ : : } When received..... **LOCALLY**

For D. Currie self
Y. Yamada
 Engineer Surveyor to Lloyd's Register of Shipping

TUES. 24 FEB 1953

Committee's Minute.....
 Assigned Su F.E. mchly rpt



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 Foundation