

REPORT ON BOILERS.

No. 8857

21 JAN 1935

Received at London Office

Date of writing Report 1934 When handed in at Local Office 1934 Port of KOBE

No. in Survey held at KOBE Date, First Survey 24-11-33 Last Survey 3-12-1934

on the MOTOR VESSEL "KYOKUTO MARU" (Number of Visits 24) Tons { Gross 10052 Net 5821

Boiler made at KOBE By whom built KANASAKI DOCKYARD CO. Yard No. 584 When built 1934

Engines made at KOBE By whom made KANASAKI DOCKYARD CO. Engine No. 209 When made 1934

Boilers made at KOBE By whom made KANASAKI DOCKYARD CO. Boiler No. 1 When made 1934

Indicated Horse Power 2115 Owners IINO SHOJI KABUSHIKI KAISHA Port belonging to NAKAMAIZURU

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel KANASAKI DOCKYARD CO. LD. FUKUI PLATE & SHEET MILLS (Letter for Record S)

Total Heating Surface of Boilers 256.2 M² EACH Is forced draught fitted YES Coal or Oil fired OIL

No. and Description of Boilers TWO:- OIL FIRED SINGLE ENDED MULTITUBULAR Working Pressure 12.5 KG/CM²

Tested by hydraulic pressure to 22.5 kg/cm² Date of test 4.10.34 No. of Certificate 4238B Can each boiler be worked separately YES

Area of Firegrate in each Boiler OIL FUEL No. and Description of safety valves to each boiler 2- SPRING LOADED

Area of each set of valves per boiler { per Rule 63.6 cm² as fitted 78.5 cm² Pressure to which they are adjusted 12.5 kg/cm² Are they fitted with easing gear YES

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler YES

Smallest distance between boilers or uptakes and bunkers or woodwork NO BUNKERS OR WOODWORK IN VICINITY OF BOILERS Is oil fuel carried in the double bottom under boilers YES

Smallest distance between shell of boiler and tank top plating YES Is the bottom of the boiler insulated YES

Largest internal dia. of boilers 4200 mm Length 3854 mm Shell plates: Material STEEL Tensile strength 28-32

Thickness 30 mm Are the shell plates welded or flanged NO Description of riveting: circ. seams { end DOUBLE RIVETED LAP inter. DOUBLE RIVETED LAP

Long. seams TREBLE RIVETED DOUBLE BUTT STRAP Diameter of rivet holes in { circ. seams ENDS 34mm INTER 38mm Pitch of rivets { ends 95mm inter 100mm

Percentage of strength of circ. end seams { plate 64.2 rivets 52.2 Percentage of strength of circ. intermediate seam { plate 62 rivets 61.7

Percentage of strength of longitudinal joint { plate 84.6 rivets 105.5 combined 90.5 Working pressure of shell by Rules 13.1 kg/cm²

Thickness of butt straps { outer 23 mm inner 28 mm No. and Description of Furnaces in each Boiler TWO:- MORISON TYPE CORRUGATED

Material STEEL Tensile strength 28-32 Smallest outside diameter 1203.3 mm

Length of plain part { top 160 mm bottom 160 mm Thickness of plates { crown 17.46 mm bottom 17.46 mm Description of longitudinal joint WELDED

Dimensions of stiffening rings on furnace or c.c. bottom YES Working pressure of furnace by Rules 14.9 kg/cm²

End plates in steam space: Material STEEL Tensile strength 28-32 Thickness 28 mm Pitch of stays 400x500 mm

How are stays secured EXT:- NUTS & WASHERS INT:- NUTS Working pressure by Rules 14.9 kg/cm²

Tube plates: Material { front STEEL back STEEL Tensile strength { 28-32 Thickness { 23 mm 20 mm

Lean pitch of stay tubes in nests 210 mm Pitch across wide water spaces 350x210 mm Working pressure { front 17.6 kg/cm² back 14.4 kg/cm²

Girders to combustion chamber tops: Material STEEL Tensile strength 28-32 Depth and thickness of girder

at centre 275x22x2 mm Length as per Rule 960 mm Distance apart 270 mm No. and pitch of stays

at each 3x250 mm Working pressure by Rules 15.1 kg/cm² Combustion chamber plates: Material STEEL

Tensile strength 28-32 Thickness: Sides 20 mm Back 20 mm Top 20 mm Bottom 22 mm

Pitch of stays to ditto: Sides 250x240 mm Back 230x210 mm Top 250x270 mm Are stays fitted with nuts or riveted over NUTS

Working pressure by Rules 14.7 kg/cm² Front plate at bottom: Material STEEL Tensile strength 28-32

Thickness 23 mm Lower back plate: Material STEEL Tensile strength 28-32 Thickness 23 mm

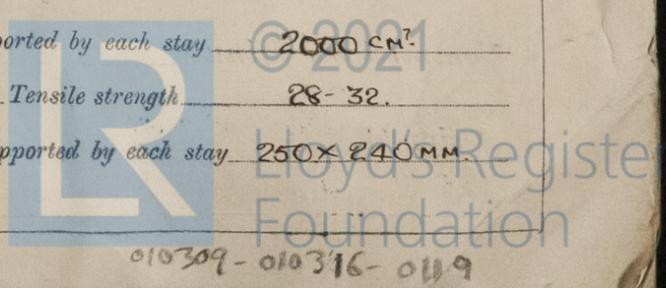
Pitch of stays at wide water space 360x210 mm Are stays fitted with nuts or riveted over NUTS

Working Pressure 17.6 kg/cm² Main stays: Material STEEL Tensile strength 28-32

Diameter { At body of stay 75 mm No. of threads per inch 6 Area supported by each stay 2000 cm²

Working pressure by Rules 14.7 kg/cm² Screw stays: Material STEEL Tensile strength 28-32

Diameter { At turned off part 42 & 46 mm No. of threads per inch 11 Area supported by each stay 250x240 mm



Working pressure by Rules 14.8 kg/cm² Are the stays drilled at the outer ends YES Margin stays: Diameter 46mm
 No. of threads per inch 11 Area supported by each stay 619.5 cm² Working pressure by Rules 14.1 kg/cm²
 Tubes; Material STEEL External diameter 76.2 mm Thickness 7.94 mm No. of threads per inch 9
 Pitch of tubes 105 x 105 mm Working pressure by Rules 15.25 kg/cm² Manhole compensation: Size of opening 34 mm
 shell plate 600 x 500 mm Section of compensating ring 500 x 30 mm No. of rivets and diameter of rivet holes 42 - 34 mm
 Outer row rivet pitch at ends 220 mm Depth of flange if manhole flanged 95 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 ✓
 Internal diameter ✓ Working pressure by Rules ✓ Thickness of crown ✓ No. and diameter of stays ✓
 How connected to shell ✓ Inner radius of crown ✓ Working pressure by Rules ✓
 Size of doubling plate under dome ✓ Diameter of rivet holes and of rivets in outer row in dome connection to shell ✓

Type of Superheater ✓ Manufacturers of ✓
 Number of elements ✓ Material of tubes ✓ Internal diameter and thickness of tubes ✓
 Material of headers ✓ Tensile strength ✓ Thickness ✓ Can the superheater be shut off 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 ✓ Working pressure as Rules ✓
 Pressure to which the safety valves are adjusted ✓ Hydraulic test pressure tubes ✓
 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 23 inclusive for boilers been complied with YES.

The foregoing is a correct description,
Toshiko Ono Kawasaki *Rockford* Manufacture

Dates of Survey while building { During progress of work in shops - - - } Nov/33.24. JAN/34.11.26. JUL/34.3.20.26. AUG/34.7.9. 15.23. Are the approved plans of boiler and superheater forwarded herewith 14.2.3
 { During erection on board vessel - - - } SEP/34.8.18.25.27.28.29. OCT/34.4.9. DEC/34.16.22.25. NOV/34.6.14. DEC/34.3. Total No. of visits 24

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 These boilers have been constructed under Special Survey in accordance with the Rules and approved plans.
 The materials and workmanship are good.
 The boilers were tested by hydraulic pressure to 22.5 kg/cm², and found sound and tight, afterwards efficiently installed in the vessel, and the safety valves adjusted under steam to 12.5 kg/cm² (178 lbs/sq")
 These boilers in my opinion are eligible to have the record of I.B. 178 lbs/sq"

Survey Fee £ 54 : 18 : 0 } When applied for, Dec. 17th 1934
 Travelling Expenses (if any) £ - : - : - } When received, Dec. 19th 1934

A.E. Munro
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 25 JAN 1935
 Assigned See Kob. 76, 8857

