

REPORT ON BOILERS.

No. 745

Received at London Office

8 OCT 1930

Date of survey Report 16th Sep. 30 When handed in at Local Office 16th Sep. 30 Port of NAGASAKI.

No. in Survey held at NAGASAKI. Date, First Survey 16th Sept. 1929 Last Survey 30th Aug. 1930.

39020. on the Steel Twin Screw Motor Ship "YASUKUNI MARU". See Machy. Rpt. (Number of Visits) Gross 11,929.52 Tons Net 7,157.70

Master / Built at Nagasaki. By whom built Mitsubishi Zosen Kaisha Card No. 468 When built 1930

Engines made at Nagasaki. By whom made Mitsubishi Zosen Kaisha, Ltd. Engine No. 468 When made 1930

Boilers made at " By whom made " " " Boiler No. 468 When made 1930

Nominal Horse Power 2492. Owners Nippon Yusen Kabushiki Kaisha. Port belonging to Tokio.

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel Mannesmann-Röhren-Werke Abt. Schulz-Knaudt, Hückingen. James Dunlop & Co., Lanarkshire Steel Co., Ltd. The Rivet, Bolt & Nut Co., Stewarts & Lloyds Ltd. (Letter for Record S.) Total Heating Surface of Boilers 1627.34 sq.ft. Is forced draught fitted No Coal or Oil fired Oil

No. and Description of Boilers Two single ended Multitubular Type. Working Pressure 100 lbs

Tested by hydraulic pressure to 200 lbs Date of test 25-2-30 No. of Certificate 137. Can each boiler be worked separately Yes

Area of Firegrate in each Boiler / No. and Description of safety valves to each boiler Two- Direct spring loaded.

Area of each set of valves per boiler (per Rule 10.61 sq.in. as fitted 10.94 Pressure to which they are adjusted 103 lbs. Are they fitted with easing gear Yes

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

Smallest distance between boilers or uptakes and bunkers or woodwork 22" Is oil fuel carried in the double bottom under boilers /

Smallest distance between shell of boiler and ~~bottom~~ flat plating 8 1/2" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 2750 m/m Length 2750 m/m Shell plates: Material Steel Tensile strength 28-35 tons sq.in.

Thickness 14 m/m Are the shell plates welded or flanged No Description of riveting: circ. seams D.R. lap.

Long, seams D.R.D.B.S. Diameter of rivet holes in circ. seams 23 m/m Pitch of rivets 74.8 m/m

Percentage of strength of circ. end seams plate 69.25 % rivets 54.59 % Percentage of strength of circ. intermediate seam plate / rivets /

Percentage of strength of longitudinal joint plate 74.45 % rivets 101.57 % Working pressure of shell by Rules 109.5 lbs sq.in.

Thickness of butt straps outer 12 m/m inner " No. and Description of Furnaces in each Boiler Two- Morrison's Suspension Bulb.

Material Steel Tensile strength 26 to 30 tons sq.in. Smallest outside diameter 832 m/m

Length of plain part top / Thickness of plates crown 11 m/m Description of longitudinal joint Welded.

Dimensions of stiffening rings on furnace or c.c. bottom / Working pressure of furnace by Rules 188.4 lbs sq.in.

End plates in steam space: Material Steel Tensile strength 26-30 tons sq.in. Thickness 18 m/m Pitch of stays 370x310 m/m

How are stays secured Double nuts and washers. Working pressure by Rules 124.9 lbs sq.in.

Tube plates: Material front Steel back Steel Tensile strength 26-30 tons sq.in. Thickness 18 m/m

Mean pitch of stay tubes in nests 203 m/m Pitch across wide water spaces 350 m/m Working pressure front 119 lbs sq.in. back 218 " "

Girders to combustion chamber tops: Material Steel Tensile strength 28-35 tons sq.in. Depth and thickness of girder at centre Two- 140x14 m/m Length as per Rule 530 m/m Distance apart 230 m/m No. and pitch of stays

in each Two- 160 m/m Working pressure by Rules 144.4 lbs sq.in. Combustion chamber plates: Material Steel

Tensile strength 26 to 30 tons sq.in. Thickness: Sides 14 m/m Back 14 m/m Top 14 m/m Bottom 14 m/m

Pitch of stays to ditto: Sides 240x205 m/m Back 215x230 m/m Top 160x230 m/m Are stays fitted with nuts or riveted over Nuts.

Working pressure by Rules Side 134.5 lbs sq.in. Back 135.2 " " Front plate at bottom: Material Steel Tensile strength 26-30 tons sq.in.

Thickness 18 m/m Lower back plate: Material Steel Tensile strength 26-30 tons sq.in. Thickness 18 m/m

Pitch of stays at wide water space 350 x 215 m/m Are stays fitted with nuts or riveted over Nuts

Working Pressure 154.5 lbs Main stays: Material Steel Tensile strength 28-35 tons sq.in.

Diameter At body of stay, 48 m/m No. of threads per inch 6 Area supported by each stay 156.24 sq.in.

Working pressure by Rules 146.2 lbs sq.in. Screw stays: Material Steel Tensile strength 26 - 30 tons sq.in.

Diameter At turned off part, 34 m/m No. of threads per inch 9 Area supported by each stay Back 76.65 sq.in. Side 62.6 "

Working pressure by Rules Back 123.6 lbs sq.in.
Side 151.3 Are the stays drilled at the outer ends No Margin stays: Diameter At turned off part
38 m/m
 No. of threads per inch 9 Area supported by each stay 96.7 sq.in. Working pressure by Rules 128.8 lbs sq.in.
 Tubes: Material Steel External diameter 76 m/m Thickness 10 L.S.G. No. of threads per inch 9
 Pitch of tubes 103 x 100 m/m Working pressure by Rules 140 lbs sq.in. Manhole compensation: Size of opening in
 shell plate 300 x 400 m/m Section of compensating ring 125 x 14 x 2 m/m No. of rivets and diameter of rivet holes 44 - 23 m/m
 Outer row rivet pitch at ends 92 m/m Depth of flange if manhole flanged 85 m/m 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 diameter of
 stays Inner radius of crown Working pressure by Rules
 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 Tubes
 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 Working pressure as per
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:
 tubes, 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 23 inclusive for boilers been complied with Yes
NABASAKI WORKS, MITSUBISHI ROSEN KAISHA, LTD.
J. Motora The foregoing is a correct description,
GENERAL MANAGER. Manufacturer.
 Dates of Survey During progress of 1930 Are the approved plans of boiler forwarded herewith Yes
while work in shops - - (If not state date of approval.)
building During erection on See Machinery Report. Total No. of visits /
board vessel - -

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

The materials and workmanship are good.

The boilers have been constructed under Special survey in accordance with the Rules and Approved plan, satisfactorily fitted in the vessel and safety valves adjusted under steam as above.

It is submitted that
 this vessel is eligible for
 THE RECORD. Elec Light.

9/10/30

See Elect
 Rpt.

Survey Fee ... See Machinery Report.
 Travelling Expenses (if any) See Machinery Report.

George Anderson & K. Kishigami
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 14 OCT 1930

Assigned See F. E. Rpt.

Rpt. 13
R
 Date of
 No. in
 Reg. Bo
89020
 Built at
 Owners
 Electric
 System o
 Pressure
 Direct or
 If alternat
 Has the A
 Generator
 are they ove
 Where more
 series with e
 Are all term
 short circuit
 Position o
 is the ventil
 if situated
 are their ax
Earthing, a
 their respecti
Main Switch
 a fuse on each
Switchboard
 are they prote
 woodwork or
 are they const
 permanently h
 with mica or m
 and is the fran
Yes
 bars **Yes**
Main Switch
 as per ru
 each of 4
 each of 8
 device or
Instruments
Earth Testing
Switches, Circ
Joint Boxes S