

REPORT ON BOILERS.

No.

Received at London Office. 2 OCT 1950

of writing Report 10-8-1950 When handed in at Local Office 19 Port of K O B E

To. in Survey held at Osaka Date, First Survey 16-7-50 Last Survey 30-6-1950

Book. on the STEEL SINGLE SCREW STEAMER "SHINWA MARU" (Number of Visits 4) Gross 1948.02 Tons Net 1074.90

ster Built at Nagasaki By whom built Koyakijima Shipyard Yard No. 148 When built 6-12-1941

ines made at Nagasaki By whom made Ditto Engine No. When made 30-10-1941

lers made at Nagasaki By whom made Ditto Boiler No. When made 30-10-1941

inal Horse Power 260 Owners Nitto Merchant Ship Co. Inc. Port belonging to Tokyo

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Yawata Iron & Steel Manufacturing Co. Ltd Yawata Wks. (Letter for Record)

50 tal Heating Surface of Boilers 4130.58 square feet. Is forced draught fitted yes Coal or Oil fired Coal

and Description of Boilers 2 cylindrical dry combustion chamber type. Working Pressure 200 lbs/sq" inch

ted by hydraulic pressure to 1.1 x W.P. Date of test 19-6-50 No. of Certificate Can each boiler be worked separately yes

ea of Firegrate in each Boiler 54.78 sq. ft. No. and Description of safety valves to each boiler 2 spring loaded

ea of each set of valves per boiler per Rule 10.0" 5 ton/h evaporating Capacity Pressure to which they are adjusted 206 lbs/sq" Are they fitted with casing gear yes

ase of donkey boilers, state whether steam from main boilers can enter the donkey boiler

allest distance between boilers or uptakes and bunkers or woodwork 18" Is oil fuel carried in the double bottom under boilers

allest distance between shell of boiler and tank top plating 20 1/4" Is the bottom of the boiler insulated

gest internal dia. of boilers 13'-4" Length 7'-1" 2160 Shell plates: Material M.S. (O.H.) Tensile strength 28-32 T/sq" inch

ckness 1 5/16" 34 Are the shell plates welded or flanged No Description of riveting: circ. seams end double rows inter 4 9/32" 109.5 long 1 13/32" 36.5 Pitch of rivets circ. seams 4 9/32" 109.5 long 1 1/4" 235

seams treble rivet Diameter of rivet holes in circ. seams 1 13/32" 36.5 long seams " Pitch of rivets

centage of strength of circ. end seams plate 68.1% rivets 43.6% Percentage of strength of circ. intermediate seam plate 50.5% rivets 60.2% combined 79% Working pressure of shell by Rules 206 lbs/sq" inch

centage of strength of longitudinal joint plate 50.5% rivets 60.2% combined 79% Working pressure of shell by Rules 206 lbs/sq" inch

ckness of butt straps outer 1 1/8" 27 inner 1 3/16" 30 No. and Description of Furnaces in each Boiler 3, Morrison type corrugated

erial M.S. Tensile strength 26~30 T/sq" inch Smallest outside diameter 3'-2 3/4" 984

gth of plain part top 5/8" 16 bottom 5/8" 16 Description of longitudinal joint E. welding

ensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 235 lbs/sq" inch

plates in steam space: Material M.S. Tensile strength 26~30 T/sq" inch Thickness 1 1/4" 32 Pitch of stays 14 15/16" 380x394

are stays secured fitted with nuts both in & out sides of end plate Working pressure by Rules 275 lbs/sq" inch

e plates: Material front M.S. back M.S. Tensile strength 26~30 T/sq" inch Thickness 7/8" 22

a pitch of stay tubes in nests 7 3/4" Pitch across wide water spaces 12" 304 Working pressure front 462 lbs/sq" inch back 462 lbs/sq" inch

lers to combustion chamber tops: Material Tensile strength Depth and thickness of girder

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

ch Working pressure by Rules Combustion chamber plates: Material

ile strength Thickness: Sides Back Top Bottom

of stays to ditto: Sides Back Top Are stays fitted with nuts or riveted over

king pressure by Rules Front plate at bottom: Material M.S. Tensile strength 26~30 T/sq" inch Thickness 7/8" 22

ness 7/8" 22 Lower back plate: Material M.S. Tensile strength 26~30 T/sq" inch Thickness 7/8" 22

of stays at wide water space 11'-2" Are stays fitted with nuts or riveted over nut

pping. ing pressure 243 lbs/sq" inch Main stays: Material Rolled steel Tensile strength 28~32 T/sq" inch

eter At body of stay 3" 75 No. of threads per inch 6 Area supported by each stay 256 sq" inch

eter Over threads 255 lbs/sq" inch Screw stays: Material Tensile strength

ing pressure by Rules At turned off part 255 lbs/sq" inch No. of threads per inch Area supported by each stay

eter Over threads

Working pressure by Rules. ☒ Are the stays drilled at the outer ends. ☒ Margin stays: Diameter $2\frac{1}{8}"$ At turned off part, or Over threads. $245\text{ lbs}/\text{sq. in.}$

No. of threads per inch. $9\frac{1}{2}$ Area supported by each stay. $80.84"$ Working pressure by Rules. $245\text{ lbs}/\text{sq. in.}$

Tubes: Material. *Solid drawn M.S.* External diameter. $3\frac{1}{2}"$ Thickness. $\frac{3}{16}"$ and $\frac{3}{8}"$ No. of threads per inch. 9

Pitch of tubes. $3\frac{1}{2}"$ Working pressure by Rules. $318\text{ lbs}/\text{sq. in.}$ Manhole compensation: Size of opening. $34\frac{1}{2}"$

shell plate. $12" \times 16"$ Section of compensating ring. $1\frac{5}{16}" \times 7\frac{1}{16}"$ No. of rivets and diameter of rivet holes. $34\frac{1}{2}"$

Outer row rivet pitch at ends. $7\frac{7}{16}"$ Depth of flange if manhole flanged. $3\frac{7}{8}"$ Steam Dome: Material. *M.S.*

Tensile strength. $28-32\frac{1}{2}"$ Thickness of shell. $3\frac{3}{4}" + \frac{1}{32}"$ Description of longitudinal joint. *Single rivet lap joint.*

Diameter of rivet holes. $\frac{7}{8}" + \frac{1}{32}"$ Pitch of rivets. $2\frac{3}{4}"$ Percentage of strength of joint. *Plate. 66.4% Rivets. 45.9%*

Internal diameter. $2'-11\frac{13}{16}"$ Working pressure by Rules. $243\text{ lbs}/\text{sq. in.}$ Thickness of crown. $\frac{11}{16}"$ No. and diameter of stays. $2'-4"$ Working pressure by Rules. $284\text{ lbs}/\text{sq. in.}$

How connected to shell. *Lower end of steam dome shell plate is flanged + fitted to boiler shell plate by double rivetting.* Size of doubling plate under dome. $1\frac{5}{16}"$ thick out dia $30"$ int dia $12"$

of rivets in outer row in dome connection to shell. $\frac{7}{8}" + \frac{1}{32}"$, $2\frac{5}{8}"$

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 from the boiler? _____

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 pressure of safety valves. _____

Rules. _____ Pressure to which the safety valves are adjusted. _____ Hydraulic test pressure. _____

tubes. _____ forgings and castings. _____ and after assembly in place. _____ Are drain connections provided? _____

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, _____

Dates of Survey while building. *During progress of work in shops - - -* Are the approved plans of boiler and superheater forwarded herewith. $20-4$ (If not state date of approval.)

During erection on board vessel - - - $16, 19, 26, 30$ June 1950 Total No. of visits. 4

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

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

The Boilers of this vessel have been examined throughout in accordance with the Rules as set forth in Section 4 of the Rules for "Classification of Ships not built under Survey," approved plans and Secretary's Letters.

The workmanship and material are sound and good.

The Boilers have been examined under steam and safety valves adjusted to $204\text{ lbs}/\text{sq. in.}$ & found satisfactory.

Survey Fee ... £ : : Included in Machy Rpt. When applied for. 19.....

Travelling Expenses (if any) £ : : When received. 19.....

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned

See F.E. machy + p. 6



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