

REPORT ON BOILERS.

No. 341

Received at London Office 21 MAY 1951

of writing Report 25-3-51 When handed in at Local Office 19..... Port of KOBE

o. in Survey held at INNOSHIMA Date, First Survey 2-16-51 Last Survey 3-6-1951

Book. on the STEEL SINGLE SCREW STEAMER "FUKUEI MARU" (Number of Visits.....) Gross 1843.20
Tons Net 1094.18

ter. Built at Osaka By whom built OSAKA ZOSSEN K.K. Yard No. 57 When built 12-1938

ines made at OSAKA By whom made KUBOTA IRON WORKS. Engine No. 1424 When made 6-1938

ers made at OSAKA By whom made HIRANO IRON WORKS Boiler No. When made 6-1938

inal Horse Power 144 Owners NITTOKISEN CO. LTD. Port belonging to TOKYO

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel YAWATA STEEL & IRON MFG. CO. YAWATA WORKS (Letter for Record.....)

al Heating Surface of Boilers 24 2166.3 SQ. FT. Is forced draught fitted YES Coal or Oil fired COAL

and Description of Boilers 2 CYLINDRICAL SINGLE ENDED BOILER Working Pressure 200 LBS/SQ. IN.

ted by hydraulic pressure to 205.0 LBS/SQ. IN. Date of test 3-1-1951 No. of Certificate..... Can each boiler be worked separately YES

a of Firegrate in each Boiler 54.312 SQ. FT. No. and Description of safety valves to each boiler 2 SPRING LOADED TYPE

a of each set of valves per boiler per Rule 12.6 sq. inch as fitted 14.65 " " Pressure to which they are adjusted 205 LBS/SQ. IN. Are they fitted with easing gear YES

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

allest distance between boilers or uptakes and bunkers or woodwork 1'-0" Is oil fuel carried in the double bottom under boilers NO

allest distance between shell of boiler and tank top plating 2'-0" Is the bottom of the boiler insulated YES

gest internal dia. of boilers 14'-0" Length 11'-6" Shell plates: Material OPEN HEARTH STEEL Plate Tensile strength 29 T/SQ. IN.

Thickness 1 1/16" Are the shell plates welded or flanged RIVETED Description of riveting: circ. seams end Double rivet ✓
inter Triple rivet ✓
Pitch of rivets 3 7/8" x 4 3/4" 4 3/4" x 9 5/8"

Percentage of strength of circ. end seams plate 64.5 rivets 49.7 Percentage of strength of circ. intermediate seam plate 69.7 rivets 66.1

Percentage of strength of longitudinal joint plate 85.5 rivets 94.9 combined 90.0 Working pressure of shell by Rules 271 LBS/SQ. IN.

Thickness of butt straps outer 1 1/8" inner 1 1/4" No. and Description of Furnaces in each Boiler 3 MORISON TYPE

erial OPEN HEARTH STEEL PLATE Tensile strength..... Smallest outside diameter 3'-5 5/8" ✓

th of plain part top..... Thickness of plates crown 3/8" bottom..... Description of longitudinal joint ELECTRIC WELDING

ensions of stiffening rings on furnace or c.c. bottom NONE Working pressure of furnace by Rules 239.8 LBS/SQ. IN.

plates in steam space: Material O.H. STEEL Tensile strength..... Thickness 1 1/4" + 1/32" Pitch of stays 1'-8" x 1'-6" ✓

are stays secured WASHERS & NUTS INNER & OUTER SIDES Working pressure by Rules 205 LBS/SQ. IN.

e plates: Material front O.H. STEEL Tensile strength..... Thickness 3/4" back O.H. STEEL 1 1/16" + 1/32" ✓

pitch of stay tubes in nests 4 3/8" x 9 1/2" Pitch across wide water spaces 12 1/4" in plan Working pressure front..... back.....

ers to combustion chamber tops: Material O.H. STEEL Tensile strength 28 T/SQ. IN. Depth and thickness of girder

entre 11" x (2 3/8" x 2) Length as per Rule 31 1/2" in plan Distance apart 9 3/4" (1 3/4") No. and pitch of stays

ch 7" (12" x 9 3/4") Working pressure by Rules 332 LBS/SQ. IN. Combustion chamber plates: Material O.H. STEEL

le strength..... Thickness: Sides 3/4" ✓ Back 3/4" ✓ Top 3/4" ✓ Bottom 1 1/16" ✓

of stays to ditto: Sides 7" x 11" Back 9" x 10 1/8" Top 9 3/4" x 14" Are stays fitted with nuts or riveted over NUTS

ing pressure by Rules..... Front plate at bottom: Material O.H. STEEL Tensile strength.....

ness 3/4" ✓ Lower back plate: Material O.H. STEEL Tensile strength..... Thickness 3/4" ✓

of stays at wide water space..... Are stays fitted with nuts or riveted over NUTS

hipping ing pressure..... Main stays: Material ROLLED BAR Tensile strength.....

ter At body of stay 3 3/8" ✓ No. of threads per inch 6 Area supported by each stay 309~360 SQ. IN.

ter Over threads 3 3/8" ✓ Screw stays: Material SOLID DRAWN STEEL Tensile strength 28 T/SQ. IN.

ing pressure by Rules 375 LBS/SQ. IN. No. of threads per inch 9 Area supported by each stay 76.5 SQ. IN.

ter At turned off part 3 3/4" ✓

ter Over threads 3 3/4" ✓

1 1/4", 1 7/8", 2", 2 1/4"

15 1/2
2 3/4
12 3/4 x 1 7/16 =
8 x 1 7/16
17 x 1 7/16 = 22.3

Working pressure by Rules 234 LBS/4" Are the stays drilled at the outer ends. YES ✓ Margin stays: Diameter At turned off part
No. of threads per inch 12 Area supported by each stay 3 7/8" ✓ Working pressure by Rules 280 LBS/4" ✓
Tubes: Material STEEL External diameter 3 7/8" ✓ Thickness 3/16" ✓ No. of threads per inch 9 ✓
Pitch of tubes 4 3/8" x 4 1/2" Working pressure by Rules 280 LBS/4" Manhole compensation: Size of opening 32 x 1 3/8"
shell plate 1'-9 1/2" x 1'-5" ✓ Section of compensating ring ELLIPSE No. of rivets and diameter of rivet holes 32 x 1 3/8"
Outer row rivet pitch at ends 6 1/8" Depth of flange if manhole flanged 5' 4" ✓ 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 _____
stays _____ Inner radius of crown _____ Working pressure by Rules _____
How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and _____
of rivets in outer row in dome connection to shell _____

Type of Superheater

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 _____
Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____
tubes _____ forgings and castings _____ and after assembly in place _____ Are drain cocks _____
valves fitted to free the superheater from water where necessary _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied MITSUBISHI SHIPBUILDING & ENGINEERING CO., LTD., TAMANO WORKS.

The foregoing is a correct description,

K. Sakamaki
Director.

Dates of Survey { During progress of work in shops - - - } Are the approved plans of boiler and superheater forwarded herewith. 1/2
while building { During erection on board vessel - - - } Total No. of visits. 3

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.)

SEE REPORT 9.

Survey Fee ... £ : : } When applied for, ... 19...
Travelling Expenses (if any) £ : : } When received ... 19...

K. Sakamaki
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUES. 24 JUL 1951

Assigned See F.E. Miley report



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Foundation