REPORT ON BOILERS. No. 1709

Received at London Office 28 DEC 1929

Writing Report 27th Nov. 1929 When handed in at Local Office 27th Nov. 1929 Port of NAGASAKI.

Survey held at NAGASAKI. Date, First Survey 25th March 29. Last Survey 31st October 1929.

on the Steel Twin Sc.Motor Vessel "BUENOS AIRES MARU". (Number of Visits 10.) Tons Gross 9,625:65 Net 5,854:27

/ Built at Nagasaki. By whom built Mitsubishi Zosen Kaisha Yard No. 456 When built 1929.

made at Nagasaki. By whom made Mitsubishi Zosen Kaisha, Ltd., Engine No. 456 When made 1929.

made at Nagasaki. By whom made Mitsubishi Zosen Kaisha, Ltd. Boiler No. 456 When made 1929.

Horse Power 1,503. Owners Osaka Shosen Kabushiki Kaisha. Port belonging to Osaka.

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

turers of Steel Mannesmannrohrenwerke, Huckingen., Calderbank Steel Works., Gutehoffnungshutte A.G. Oberhausen., (Letter for Record S.)

ating Surface of Boilers 464.5 sq.ft. Is forced draught fitted No Coal or Oil fired Oil

Description of Boilers One single ended Multitubular type. Working Pressure 120 lbs.

y hydraulic pressure to 230 lbs Date of test 15-4-29 No. of Certificate 133. Can each boiler be worked separately /

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

each set of valves per boiler {per Rule 5.16 sq.in. / as fitted 6.28 "} Pressure to which they are adjusted 123 lbs Are they fitted with easing gear Yes

f donkey boilers, state whether steam from main boilers can enter the donkey boiler Main boilers not fitted.

distance between boilers or uptakes and bunkers or woodwork 30" Is oil fuel carried in the double bottom under boilers Yes

distance between shell of boiler and tank top plating 6" Is the bottom of the boiler insulated Yes

Internal dia. of boilers 7'-9" Length 7'-6" Shell plates: Material Steel Tensile strength 28-35 tons

9/16" Are the shell plates welded or flanged No Description of riveting: circ. seams {end S.R.lap. / inter. /}

ns D.R.D.B.S. Diameter of rivet holes in {circ. seams 15/16" / long. seams "} Pitch of rivets {2.26" / 3 7/16"}

ge of strength of circ. end seams {plate 58.5 / rivets 44.6} Percentage of strength of circ. intermediate seam {plate / rivets /}

ge of strength of longitudinal joint {plate 72.7 / rivets 110.0 / combined 100.5} Working pressure of shell by Rules 127.3 lbs.

of butt straps {outer 1/2" / inner "} No. and Description of Furnaces in each Boiler One- Leeds forge bulb suspension furnace.

Steel Tensile strength 26-30 tons sq.in. Smallest outside diameter 38 7/8"

f plain part {top / bottom /} Thickness of plates {crown 7/16" / bottom "} Description of longitudinal joint Welded

ns of stiffening rings on furnace or c.c. bottom / Working pressure of furnace by Rules 170.5 lbs sq.in.

es in steam space: Material Steel Tensile strength 26-30 tons Thickness 25/32" Pitch of stays 13"

stays secured Double nuts and washers. Working pressure by Rules 143 lbs sq.in.

tes: Material {front Steel / back} Tensile strength {26-30 tons} Thickness {5/8" / 25/32"}

ch of stay tubes in nests 8.1875 Pitch across wide water spaces 10½" Working pressure {front 167.9 lbs sq.in. / back 204.6 "}

to combustion chamber tops: Material Steel Tensile strength 28-35 tons Depth and thickness of girder

5½" x 7/16"x 2 Length as per Rule 17 13/16" Distance apart 9¼" (max). No. and pitch of stays

2 @ 5¾" Working pressure by Rules 158.2 lbs sq.in. Combustion chamber plates: Material Steel.

trength 26-30 tons sq.in. Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16"

stays to ditto: Sides 9½"x7 7/8" Back 9"x 8¾" Top 5¾"x 9¼" Are stays fitted with nuts or riveted over Nuts

pressure by Rules Sides 142 lbs. Back 138.4 lbs. Top 182.7 lbs. Front plate at bottom: Material Steel Tensile strength 26-30 tons sq.in.

25/32" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 25/32"

stays a~~xxxxxxxxxxx~~ 8¾" x 9" Are stays fitted with nuts or riveted over Nuts

Pressure Back 316.3 lbs sq.in. Front 320. " Main stays: Material Steel Tensile strength 28-35 tons sq.in.

At body of stay, / Over threads 2" No. of threads per inch 6 Area supported by each stay 175.5 sq.in.

pressure by Rules 149.2 lbs sq.in. Screw stays: Material Steel Tensile strength 26-30 tons sq.in.

At turned off part, / Over threads 1 3/8" No. of threads per inch 9 Area supported by each stay Back 78.75 sq.in. Sides 52.0 sq.in.

Working pressure by Rules Back 128.5 lbs. Sides 194.6 lbs. *Are the stays drilled at the outer ends* No *Margin stays: Diameter* {*At turned off part*, / *or Over threads* 1 1/2"

No. of threads per inch 9 *Area supported by each stay* 74.4 *Working pressure by Rules* 168.6 lbs

Tubes: *Material* Steel *External diameter* {*Plain* 3" / *Stay* 3" / *Thickness* {10 L.S.G. / 5/16 / *No. of threads per inch* 9

Pitch of tubes 4 1/4" x 4 1/8" *Working pressure by Rules* 140 lbs (plain) **Manhole compensation:** *Size of*

shell plate 19 1/2" x 15 1/2" / 11" under dome. *Section of compensating ring* 2 x 5 x 5/8 (flanged) / 2 x 5 x 25/32 (under dome) *No. of rivets and diameter of rivet holes* 44 @ 7/8"

Outer row rivet pitch at ends / *Depth of flange if manhole flanged* / **Steam Dome:** *Material* Steel

Tensile strength 26-30 tons *Thickness of shell* 7/16" *Description of longitudinal joint* Gas welded & single b

Diameter of rivet holes 7/8" *Pitch of rivets* 2 1/8" *Percentage of strength of joint* {*Plate* 58.8 / *Rivets* 57.2

Internal diameter 24" *Working pressure by Rules* 225.5 lbs sq.in. *Thickness of crown* 7/16" / *No. and d*

stays / *Inner radius of crown* 24" / *Working pressure by Rules* 211.2 lbs

How connected to shell Double riveted *Size of doubling plate under dome* / *Diameter of rivet holes*

of rivets in outer row in dome connection to shell 7/8" @ 3.56" pitch. /

Type of Superheater / *Manufacturers of* {*Tubes* / / *Steel castings* /

Number of elements / *Material of tubes* / *Internal diameter and thickness of tubes* /

Material of headers / *Tensile strength* / *Thickness* / *Can the superheater be s*

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 pres*

Rules / *Pressure to which the safety valves are adjusted* / *Hydraulic tes*

tubes /, *castings* / *and after assembly in place* / *Are drain cocks or*

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.

M

J. Anstone for

Dates of Survey while building {*During progress of work in shops* - -} / {*During erection on board vessel* - - -} See Machinery Report.

Are the approved plans of boiler ~~and superheater~~ forwarded herewith
(If not state date of approval.)

Total No. of visits

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

The materials and workmanship are good.

The boiler has been constructed under special survey in accordance with the Rules and appr
plan, satisfactorily fitted in the vessel and safety valves adjusted under steam as above.

Survey Fee ... ... £ : : See Machy. Rpt. *When applied for,* 192

Travelling Expenses (if any) £ : : *When received,* 192

George E Anderson for K. K.

Engineer Surveyor to Lloyd's Register

Committee's Minute TUE. 7 JAN 1930

Assigned See Mchy. Rpt. attached