

REPORT ON BOILERS.

No. 1845

Received at London Office 27 SEP 1932

Date of writing Report 25th Aug 1932 When handed in at Local Office 25th Aug 1932 Port of NAGASAKI.

No. in Survey held at NAGASAKI.

Date, First Survey 24th Feb. 1932 Last Survey 6th August 1932.

68128 on the Steel Screw Steamer "NAG OYA MARU".

(Number of Visits) See Machy. Report Gross 6049.31 Tons Net 3729.01

Built at Nagasaki.

By whom built Mitsubishi Zosen Kaisha, Ltd.

Yard No. 503

When built 1932

Engines made at Nagasaki (Exhaust turbine & gearing, Kobe).

By whom made Mitsubishi Zosen Kaisha, Ltd.

Engine No. 503

When made 1932

Boilers made at Nagasaki.

By whom made Mitsubishi Zosen Kaisha, Ltd.

Boiler No. 503

When made 1932

Owners Ishihara Gomei Kaisha.

Port belonging to Fuchu.

VERTICAL DONKEY BOILER.

Made at Nagasaki By whom made Mitsubishi Zosen Kaisha, Ltd.

Boiler No. 503

When made 1932

Where fixed Nagasaki.

Manufacturers of Steel The Imperial Steel Works, Yawata. Japan.

Total Heating Surface of Boiler 510 sq.ft.

Is forced draught fitted No

Coal or Oil fired Coal.

No. and Description of Boilers One- Vertical.

Tested by hydraulic pressure to 200 lbs/sq.in.

Date of test 6-5-32.

Working pressure 100 lbs/sq.in.

Area of Firegrate in each Boiler 22.5 sq.ft.

No. and Description of safety valves to each boiler Two- direct spring loaded.

No. of Certificate 148.

Area of each set of valves per boiler { per rule 5.54 sq.in. as fitted 6.28 " }

Pressure to which they are adjusted 104 lbs

Are they fitted with easing gear Yes

State whether steam from main boilers can enter the donkey boiler No

Smallest distance between boiler or uptake and bunkers

or woodwork 14 1/2"

Is oil fuel carried in the double bottom under boiler No

Smallest distance between base of boiler and tank top plating

2'-3"

Is the base of the boiler insulated Yes

Largest internal dia. of boiler 6'-6"

Height 15'-0"

Shell plates: Material Steel

Tensile strength 28-35 tons/sq.in.

Thickness 1/2" & 5/8"

Are the shell plates welded or flanged No

Description of riveting: circ. seams

end S.R.L.

inter. S.R.L. & D.R.L. long seams D.R.L.

Dia. of rivet holes in { circ. seams 7/8" long seams " }

Pitch of rivets

1.696

2.229

2.625

2.723

Percentage of strength of circ. seams { plate 48.4 rivets 44.8 }

of Longitudinal joint { plate 66.7 rivets 72.5 combined }

Working pressure of shell by rules 115.6 lbs/sq.in.

Thickness of butt straps { outer / inner / }

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Complete hemisphere

Material Steel

Tensile strength 26-30 tons/sq.in.

Thickness 7/16" & 7/8"

Radius 39"

Working pressure by rules 141.5 lbs/sq.in.

Description of Furnace: Plain, spherical, or dished crown Spherical

Material Steel

Tensile strength 26-30 tons/sq.in.

Thickness 1/2"

External diameter { top / bottom / }

Length as per rule /

Working pressure by rules /

Pitch of support stays circumferentially /

and vertically /

Are stays fitted with nuts or riveted over /

Diameter of stays over thread /

Radius of spherical or dished furnace crown 34"

Working pressure by rule 121.3 lbs/sq.in.

Thickness of Ogee Ring 7/8"

Diameter as per rule { D 78" d 68" }

Working pressure by rule 130.8 lbs/sq.in.

Combustion Chamber: Material /

Tensile strength /

Thickness of top plate /

Radius if dished /

Working pressure by rule /

Thickness of back plate /

Diameter if circular /

Length as per rule /

Pitch of stays /

Are stays fitted with nuts or riveted over /

Diameter of stays over thread /

Working pressure of back plate by rules /

Tube Plates: Material { front Steel back " }

Tensile strength { 26-30 T/sq.in. " " }

Thickness { 7/8" 3/4" }

Mean pitch of stay tubes in nests 11.911"

If comprising shell, Dia. as per rule { front 71.8" back 65.05" }

Pitch in outer vertical rows { 8" " }

Dia. of tube holes FRONT { stay 2 11/16" plain 2 9/16" }

BACK { stay 2 1/2" plain " }

Is each alternate tube in outer vertical rows a stay tube Yes

Working pressure by rules { front 111.6 lbs/sq.in. back 113.7 " }

Girders to combustion chamber tops: Material /

Tensile strength /

Depth and thickness of girder at centre /

Length as per rule /

Distance apart /

No. and pitch of stays in each /

Working pressure by rule /

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Crown stays: Material / Tensile strength / Diameter { at body of stay / or / over threads /

No. of threads per inch / Area supported by each stay / Working pressure by rules /

Screw stays: Material / Tensile strength / Diameter { at turned off part / or / over threads / No. of threads per inch /

Area supported by each stay / Working pressure by rules / Are the stays drilled at the outer ends /

Tubes: Material Mild steel. External diameter { plain 2 1/2" / stay " Thickness { No. 11 L.S.G. / 5/16"

No. of threads per inch 9 Pitch of tubes 4 1/2" x 4" (Centre) Working pressure by rules 125 lbs/sq/in.

Manhole Compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 2" x 6" x 7/8" No. of rivets and diameter of rivet holes 32 @ 7/8" dia. Outer row rivet pitch at ends 4.75" Depth of flange if manhole flanged /

Uptake: External diameter 16" x 24" Thickness of uptake plate 1/2"

Cross Tubes: No. / External diameters { / Thickness of plates /

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,
 MASAKI WORKS, LTD. YOKOHAMA, JAPAN
S. Furutera Manufacturer.
 GENERAL MANAGER.

Dates of Survey { During progress of work in shops - - } Is the approved plan of boiler forwarded herewith Yes
 while building { During erection on board vessel - - } (If not state date of approval.)
See Machinery Report. 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 Approved plan, satisfactorily fitted in the vessel and safety valves adjusted under steam as above.

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

Geoff Anderson & T. Kumishiro
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 4 OCT 1932
 Assigned See other Rpt. Ref. 1845