

REPORT ON BOILERS.

No. 5343.

Received at London Office

17 SEP 1934

Date of writing Report 12th August 1934 When handed in at Local Office 13/8/34 Port of Yokohama.No. in Survey held at
Reg. Book.

Uraga

Date, First Survey

1st Sept 1933

Last Survey

3rd August 1934

0264 on the Steel S.S. M. V. "KANO MARU"

(Number of Visits 24)

Gross 6940

Tons Net 3785

Master

Built at

Uraga

By whom built

Uraga Dock Co

Yard No.

386

When built

1934-8

Engines made at

Nagasaki

By whom made

Mitsubishi Zosen K. K.

Engine No.

555

When made

1934

Boilers made at

Uraga

By whom made

Uraga Dock Co

Boiler No.

✓

When made

1934

Nominal Horse Power

174.

Owners

Kokumai Kisen K. K.

Port belonging to

Tokyo

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Gütchhoffnungshütte Abt. Walzwerk, Oberhausen

(Letter for Record S ✓)

Total Heating Surface of Boilers

2608.1 sq m

Is forced draught fitted

Yes

Coal or Oil fired Oil & Exhaust Gas

No. and Description of Boilers

One Cylindrical combined oil fuel & exhaust gas

Working Pressure

7 Kg

Tested by hydraulic pressure to

14 Kg

Date of test

28/3/34

No. of Certificate

38

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 @ 110 mm

Area of each set of valves per boiler

per Rule 24.375

as fitted 29.460

Pressure to which they are adjusted

7 Kg

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

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

3800 mm

Length

3556 mm

Shell plates: Material

Steel

Tensile strength

28/35

Thickness

22 mm

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D. R. Jap

Long. seams

T. R. D. B. Strip

Diameter of rivet holes in

circ. seams 13/16"

long. seams 1 1/16"

Pitch of rivets

3 1/8"

Percentage of strength of circ. end seams

plate 61.9

rivets 66.0

Percentage of strength of circ. intermediate seam

plate 84.3

rivets 115.0

Percentage of strength of longitudinal joint

plate 84.3

rivets 115.0

Working pressure of shell by Rules

153.3 lbs.

Thickness of butt straps

outer 19 mm inner 22 mm

No. and Description of Furnaces in each Boiler

2 Morrison Corrugated

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3'-7 1/4"

Length of plain part

top ✓

bottom ✓

Thickness of plates

crown 5/8"

bottom 5/8"

Description of longitudinal joint

Weld

Dimensions of stiffening rings on furnace or c.c. bottom

Working pressure of furnace by Rules

210.9 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

28 mm

Pitch of stays

456 & 510 mm

How are stays secured

Nuts Inside, Washers and Nuts Outside

Working pressure by Rules

15 Kg.

Tube plates: Material

front Steel

back Steel

Tensile strength

26/30

Thickness

19 mm

Pitch of stay tubes in nests

270 x 285 mm

Pitch across wide water spaces

350 x 180 mm

Working pressure

front 10.85 Kg

back 7.8 Kg

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/35

Depth and thickness of girder

centre 2 @ 180 x 22 mm

Length as per Rule

731 mm

Distance apart

270 x 240 mm

No. and pitch of stays

each 2 @ 225 mm

Working pressure by Rules

12.3 Kg

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

16 mm

Back

14 mm

Top

16 mm

Bottom

19 mm

Pitch of stays to ditto: Sides

225 x 265 mm

Back

200 x 235 mm

Top

270 x 225 mm

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

9.9 Kg

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

22 mm

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

22 mm

Pitch of stays at wide water space

350 x 200 mm

Are stays fitted with nuts or riveted over

nuts

Working Pressure

17.1 Kg

Main stays: Material

Steel

Tensile strength

28/35

Diameter

At body of stay, 3"

Over threads, 3 1/4"

No. of threads per inch

6

Area supported by each stay

336 sq inches

Working pressure by Rules

234 lbs.

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part, 1 5/16"

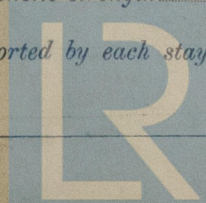
Over threads, 1 1/2"

No. of threads per inch

9

Area supported by each stay

72.8 sq inches

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W184-0140

Working pressure by Rules 160 lbs Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 9/16" Over threads 1 3/4"
No. of threads per inch 9 Area supported by each stay 90.8 sq/inches Working pressure by Rules 188 lbs
Tubes: Material Steel External diameter { Plain 2 1/2" Thickness 11 L. 5. 4 No. of threads per inch 9
Pitch of tubes 95 x 90 mm Working pressure by Rules 125 lbs Manhole compensation: Size of opening 36 x 1 5/16"
shell plate 445 x 546 mm Section of compensating ring 250 x 22 mm No. of rivets and diameter of rivet holes 36 x 1 5/16"
Outer row rivet pitch at ends 195 mm Depth of flange if manhole flanged ✓ 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 pitch
of rivets in outer row in dome connection to shell

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 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 as
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 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,

Uraga Dock Co. Manufacture

Dates of Survey { During progress of work in shops - - 1, 4, 6, 20, 28/10 4, 8, 16/11 13/12/1933
while building { During erection on board vessel - - 10, 23, 26/11 1, 12, 21/12 20, 28/3/1934
19/4 16, 24/5 8, 22/6 11/7 3/8/1934

Are the approved plans of boiler and superheater forwarded herewith Yes 15/3/
(If not state date of approval.)

Total No. of visits 24

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.) This Boiler has been built under Special Survey in accordance with the Rules and approved plan. Materials and Workmanship good. On completion of fitting on board the Boiler was examined under full working conditions, also accumulation trials were carried out with satisfactory results.

The Boiler of this Vessel is eligible in my opinion to be classed with the machinery + L. M. C. 8.34.

Survey Fee ... 26 2
Travelling Expenses (if any) See Rpt 4b

When applied for, 22-8-34
When received, ✓ 19

B. H. Macdonald

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

TUE. 10 OCT 1934

Assigned

See other Gka 7E 5343



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