

REPORT ON BOILERS.

Received at London Office 13 JAN 1953

2 JAN 1953

of writing Report

22-1-1952

When handed in at Local Office

Port of

Kobe

25.4 in
Book.
5-19

Survey held at

Tamano, Japan

Date, First Survey

8th April 1952

Last Survey

12th Nov. 1952

on the

Motor Tanker "OTOWASAN MARU"

(Number of Visits... 21...)

Tons

Gross 12686.83

Net 7465.96

at

Tamano, Japan

By whom built

Mitsui Shipbuilding Engineering Co., Ltd

Yard No

569

When built

Nov. 1952

2-2

ines made at

Tamano, Japan

By whom made

Mitsui Shipbuilding Engineering Co., Ltd

Engine No

431

When made

Nov. 1952

ers made at

Tamano, Japan

By whom made

Mitsui Shipbuilding Engineering Co., Ltd

Boiler No

355, 356

When made

Nov. 1952

inal Horse Power

260.8 x 2 = 521.6

Owners

Mitsui Senpaku K. K.

Port belonging to

Tokyo

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Plate: Yawata Steel Iron Works

Tube: Sumitomo Metal Ind.

(Letter for Record

Total Heating Surface of Boilers

290 m²

Of Superheaters

for Register Book

Is forced draught fitted

yes

Coal or Oil fired

oil

and Description of Boilers

2 - Scotch Boiler

Working Pressure

12.7 kg/cm²

Tested by hydraulic pressure to

22.55 kg/cm²

Date of test

21-8-52

No. of Certificate

B402, B403

Can each boiler be worked separately

yes

No. of Firegrate in each Boiler

No. and Description of safety valves to each boiler

1 set of duplex spring loaded safety valves

No. of each set of valves per boiler

per Rule 144.36 cm²as fitted 157.07 cm²

Pressure to which they are adjusted

12.7 kg/cm²

Are they fitted with easing gear

yes

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

-

Least distance between boilers or uptakes and bunkers or woodwork

-

Is oil fuel carried in the double bottom under boilers

No

Least distance between shell of boiler and tank top plating

512 mm

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

4600 mm

Length

3750 mm

Shell plates: Material

O.H. Steel

Tensile strength 28.8 ~ 31.4 kg/cm²

Fusion welded, state name of welding Firm

Have all the requirements of the Rules for Class I vessels

Complied with

Thickenss 38 mm

Are the shell plates welded or flanged

Riveted

Description of riveting: circ. seams

end Double riveted lap joint

Circ. seams

Triple riveted butt joint

Diameter of rivet holes in

circ. seams 39.5 mm

Pitch of rivets

102.37 mm, 102.6 mm, 111.6 mm

Percentage of strength of circ. end seams

plate Front 61.5 Back 61.6

rivets Front 51.4 Back 51.3

Percentage of strength of circ. intermediate seam

plate 64.5

rivets 71.7

Percentage of strength of longitudinal joint

plate 84.2

rivets 98.2

combined 88.1

Working pressure of shell by Rules

15.3 kg/cm²

Thickness of butt straps

outer 35 mm

inner 35 mm

No. and Description of Furnaces in each Boiler

3, Morrison's type

Material

O.H. Steel

Tensile strength

30.0 ~ 32.3 kg/cm²

Smallest outside diameter

934 mm

Length of plain part

Front 180 mm

Back 175 mm

Thickness of plates

17 mm

Description of longitudinal joint

welding

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

-

Stays in steam space:

Material O.H. Steel

Tensile strength 27.6 ~ 28.2 kg/cm²

Thickness 32 mm

Pitch of stays 480 mm x 450 mm

Are stays secured

with nuts

Stays in water space:

Material O.H. Steel

Tensile strength

26.4 ~ 28.9 kg/cm²

Thickness

25 mm

Pitch of stays

24 mm

Pitch of stay tubes in nests

248.5 mm

Pitch across wide water spaces

Stays to combustion chamber tops:

Material O.H. Steel

Tensile strength

32.2 ~ 29.6 kg/cm²

Depth and thickness of girder

entre 230 mm

19 mm x 2

Length as per Rule

896 mm

Distance apart

max. 230 mm

No. and pitch of stays

Combustion chamber plates:

Material O.H. Steel

Tensile strength

27.3 ~ 30.0 kg/cm²

Thickness: Sides

19 mm

Back

19 mm

Top

19 mm

Bottom

23 mm

Pitch of stays to ditto:

Sides 260 mm x 200 mm

Back 240 mm x 230 mm

Top 250 mm x 230 mm

Are stays fitted with nuts or riveted over

nuts

Bottom plate at bottom:

Material O.H. Steel

Tensile strength

28.1 ~ 28.7 kg/cm²

Thickness

25 mm

Lower back plate:

Material O.H. Steel

Tensile strength

26.4 ~ 28.2 kg/cm²

Thickness

25 mm

Pitch of stays at wide water space

180 mm x 200 mm

Are stays fitted with nuts or riveted over

nuts

Nuts in stays:

Material O.H. Steel

Tensile strength

32.3 ~ 34.7 kg/cm²

At body of stay

30 mm, 6.5 mm

Over threads

90 mm, 7.5 mm

No. of threads per inch

6

Nuts in stays:

Material O.H. Steel

Tensile strength

28.9 ~ 30.0 kg/cm²

At turned off part

2 1/8", 2", 1 1/8", 1 3/4"

Over threads

No. of threads per inch

9

Pitch of stays at wide water space

180 mm x 200 mm

Are stays fitted with nuts or riveted over

nuts

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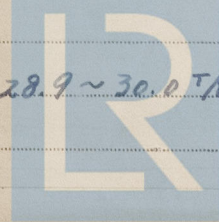
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Pitch of stays at wide water space

180 mm x 200 mm

Are stays fitted with nuts or riveted over

nuts



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Are the stays drilled at the outer ends. No Margin stays: Diameter { At turned off part 2 1/8" or 2" Over threads 1 3/4"

No. of threads per inch 9

Tubes: Material O.H. Steel External diameter { Plain 70 mm Stay 70 mm Thickness { 4 mm 8 mm No. of threads per inch 9

Pitch of tubes 100 mm x 98 mm Manhole compensation: Size of opening of w

shell plate 405 mm x 98 mm Section of compensating ring Flanged type No. of rivets and diameter of rivet holes 48, 39.5 mm

Outer row rivet pitch at ends 110 mm Depth of flange if manhole flanged 110 mm 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 - Thickness of crown - No. and diamet

stays - Inner radius of crown -

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 - Manufacturers of { Tubes - Steel forgings - 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 of

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 -

Pressure to which the safety valves are adjusted - Hydraulic test pre

tubes - forgings and castings - and after assembly in place - Are drain cot

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,

S. Tanaka Senior Managing Director.

Dates of Survey while building { During progress of work in shops - - 1952 - APR. 8, 16, MAY. 17, 24, 27, JUN. 13, JUL. 17, 24, AUG. 1, 8, 13, 15, 21, 29, SEP. 4, 9, 24, OCT. 9, Are the approved plans of boiler and superheater forwarded herewith. 18-7-19 (If not state date of approval.)

{ During erection on board vessel - - - 1952 - OCT. 17, 24, NOV. 12 Total No. of visits 21

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 Auxiliary Boilers of this vessel have been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.

The materials and workmanship are sound and good. The Auxiliary Boilers have been examined under steam and the safety valves adjusted to 12.7 kg/cm² and found satisfactory.

Survey Fee ... £ 338,000 } When applied for, 2. JAN. 1953

Travelling Expenses (if any) £ 109,800 } When received 19

L. J. Whitham Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUE 8. 27 JAN 1953

Assigned See Rpt 4b.



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