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YOKOHAMA NO. 4445

Rpt. 5b.

# REPORT ON BOILERS.

No. 16297

-8 JAN 1930

9-12-29.

9-12-29

Received at London Office

Date of writing Report

12-4 19 29

When handed in at Local Office

12-4 19 29

Port of

Grimby

No. in Reg. Book

Survey held at

Lincoln

Date, First Survey

5-2-29

Last Survey

20-11-29

on the Steel Screw M.V. "SYDNEY MARU"

(Number of Visits

9

Gross

5436

Net

3237

Built at

Yokohama

By whom built

Yokohama Dock Co.

Yard No. 173

When built 1929

Engines made at

Copenhagen

By whom made

Burmester & Wain

Engine No. 1590

When made 1929

Boilers made at

Lincoln

By whom made

Leacock & Wilson Ltd

Boiler No. 73/4594

When made

Owners

Osaka Shoen Kaisha,

Port belonging to

Osaka

## VERTICAL DONKEY BOILER.

Made at Lincoln By whom made Leacock & Wilson Ltd Boiler No. 73/4594 When made 1929 Where fixed Yokohama

Manufacturers of Steel Parkgate S.S. Co. Ltd

Total Heating Surface of Boiler

350 sq ft

Is forced draught fitted

Coal or Oil fired

Oil & Exhaust gas

No. and Description of Boilers

One Clarkson Waste Heat

Working pressure 100 lbs.

Tested by hydraulic pressure to

200 lbs.

Date of test

22nd March 1929

No. of Certificate

262

Area of Firegrate in each Boiler

no

No. and Description of safety valves to each boiler

Two spring loaded

Area of each set of valves per boiler

per rule 4.56  
as fitted 6.28

Pressure to which they are adjusted 100 lbs.

Are they fitted with easing gear

yes

State whether steam from main boilers can enter the donkey boiler

yes

Smallest distance between boiler or uptake and bunkers

or woodwork

yes

Is oil fuel carried in the double bottom under boiler

yes

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated

no

Largest internal dia. of boiler

5'-0"

Height 8'-3 7/8"

Shell plates: Material

S.M. Steel

Tensile strength

28/32 T.

Thickness

7/16"

Are the shell plates welded or flanged

D.R. Lap

Description of riveting: circ. seams

end S.R. & D.R. Lap  
inter. S.R. Lap

long. seams

D.R. Lap

Dia. of rivet holes in

circ. seams 13/16"  
long. seams 13/16"

Pitch of rivets

1 7/8" - 2 5/8"  
2 5/8" - 2 6/8"

Percentage of strength of circ. seams

plate 57+69  
rivets 52+74

of Longitudinal joint

plate 69  
rivets 74  
combined 75

Working pressure of shell by rules

133 lbs

Thickness of butt straps

outer

inner

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

Flat

Material

S.M. Steel

Tensile strength

26/30 T.

Thickness

5/8"

Radius

Working pressure by rules

230 lb.

Description of Furnace: Plain, spherical, or dished crown

dished

Material

S.M. Steel

Tensile strength

26/30 T

Thickness

13/16"

External diameter

top 4 - 1 5/8"  
bottom 4 - 1 3/8"

Length as per rule

5' - 2 1/2"

Working pressure by rules

112 lbs.

Pitch of support stays circumferentially

yes

and vertically

yes

Are stays fitted with nuts or riveted over

yes

Diameter of stays over thread

yes

Radius of spherical or dished furnace crown

3'-8"

Working pressure by rule

117 lbs.

Thickness of Ogee Ring

7/8"

Diameter as per rule

a 4 - 1 1/8"  
b 4 - 1 5/8"

Working pressure by rule

182 lbs.

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

Tensile strength

Thickness

Mean pitch of stay tubes in nests

If comprising shell, Dia. as per rule

front

Pitch in outer vertical rows

back

Dia. of tube holes FRONT

stay

BACK

stay

Is each alternate tube in outer vertical rows a stay tube

Working pressure by rules

front

back

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 S. M. Steel External diameter } plain 3 3/4" Thickness } 6 B.W.G.  
} stay \_\_\_\_\_  
No. of threads per inch \_\_\_\_\_ Pitch of tubes \_\_\_\_\_ Working pressure by rules \_\_\_\_\_

**Manhole Compensation:** Size of opening in shell plate \_\_\_\_\_ Section of compensating ring \_\_\_\_\_ No. of rivets and diameter \_\_\_\_\_  
of rivet holes \_\_\_\_\_ Outer row rivet pitch at ends \_\_\_\_\_ Depth of flange if manhole flanged \_\_\_\_\_

**Uptake:** External diameter \_\_\_\_\_ Thickness of uptake plate \_\_\_\_\_

**Cross Tubes:** No. \_\_\_\_\_ External diameters } \_\_\_\_\_ Thickness of plates \_\_\_\_\_

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with \_\_\_\_\_

The foregoing is a correct description,  
Babcock & Wilcox Ltd  
(Lincoln Branch) Manufacturer.  
(Signed) - Lewis

Annual Survey Request

Dates of Survey } During progress of } 1929 Feb. 5, 13, 22, 26 March 8, 15, 22 April 4 Is the approved plan of boiler forwarded herewith Yes.  
while building } work in shops - - }  
} During erection on } 27 Sept, Nov 15<sup>th</sup>, Nov 20<sup>th</sup>, 1929. Total No. of visits 9 + 3 = 12.  
} board vessel - - }

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) This boiler has been built under Special Survey and in accordance with the Rules and approved plan. The materials and workmanship are good.

This boiler has now been despatched to Yokohama.

Yokohama.  
This boiler has been now been fitted onboard and examined under steam. Safety valves adjusted to 100 lbs/sq and accumulation test carried out. all found in order.

J. Micholas.

Survey Fee ... .. £ : : } When applied for, ..... 19 .....

Travelling Expenses (if any) £ : : } When received, ..... 19 .....

Signed W. G. MacKenzie J. Micholas  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_ FRI. 17 JAN 1930  
Assigned See YMA 36 4445

