

REPORT ON BOILERS.

No. 6879.

24 APR 1930

Received at London Office

Writing Report 25 March 1930 When handed in at Local Office

192

Port of

Kobe.

Survey held at

Osaka

Date, First Survey 2nd August 1929 Last Survey 18th December 1929

Book.

(Number of Visits 17.)

Gross 9815.69.

on the Twin Screw Motor ship HEIYO MARU.

Tons

Net

Built at

Osaka

By whom built

Osaka Iron Works Yard No. 1127. When built 1929

Made at

Nagasaki

By whom made

Mitsubishi Zosen Kaisha

Engine No. 464

When made 1929.

Made at

Osaka

By whom made

Osaka Iron Works.

Boiler No. 1127

When made 1929.

Horse Power

Owners

Nippon Yusen Kabushiki Kaisha Port belonging to Tokyo.

TITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

James Dunlop & Co. Ltd.

(Letter for Record S.)

Heating Surface of Boilers

5843 sq

626 sq

Is forced draught fitted No.

Coal or Oil fired oil

Description of Boilers

One single ended

Working Pressure 100 lbs

by hydraulic pressure to

200

Date of test 14.10.29. No. of Certificate

Can each boiler be worked separately

of Firegrate in each Boiler

115.2 sq

No. and Description of safety valves to each boiler

Two Spring loaded.

of each set of valves per boiler

per Rule

8.78.

as fitted

9.81

Pressure to which they are adjusted

100 lbs

Are they fitted with easing gear

yes

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

Is oil fuel carried in the double bottom under boilers

distance between boilers or uptakes and bunkers or woodwork

distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

internal dia. of boilers

9'-0"

Length

8'-3"

Shell plates: Material

Steel

Tensile strength

28 to 32

ess

5/8"

Are the shell plates welded or flanged

Description of riveting: circ. seams

end

inter

D.R. D.B.S.

Diameter of rivet holes in

circ. seams

1 1/16"

long. seams

15/16"

Pitch of rivets

3/8"

3 3/4"

age of strength of circ. end seams

plate

66

rivets

74.5

Percentage of strength of circ. intermediate seam

plate

75

rivets

90.5

age of strength of longitudinal joint

plate

75

rivets

90.5

combined

95.3

Working pressure of shell by Rules 127.5.

ess of butt straps

outer

5/8"

inner

5/8"

No. and Description of Furnaces in each Boiler

Two. Deighton Type.

al Steel

Tensile strength

26 to 30

Smallest outside diameter

32 7/8"

of plain part

top

bottom

Thickness of plates

crown

7/16"

bottom

Description of longitudinal joint

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

Working pressure of furnace by Rules 189.5

lates in steam space: Material

Steel

Tensile strength

26 to 30

Thickness

3/4"

Pitch of stays 13 3/4 x 12"

re stays secured

Double nuts & washers.

Working pressure by Rules 170

lates: Material

front

Steel

back

Steel

Tensile strength

26 to 30

Thickness

5/8"

5/8"

pitch of stay tubes in nests

9.5625

Pitch across wide water spaces

13"

Working pressure

front

127 + 111

back

149.8

s to combustion chamber tops: Material

Steel

Tensile strength

28 to 32

Depth and thickness of girder

re 5 1/4 x 1 1/4"

Length as per Rule

25.1875

Distance apart

6 1/2 x 7

No. and pitch of stays

re 2 @ 8 1/4"

Working pressure by Rules

135

Combustion chamber plates: Material

Steel

strength

26 to 30

Thickness: Sides

1/2"

Back

9/16"

Top

1/2"

Bottom

9/16"

f stays to ditto: Sides

7 x 8 1/4"

Back

7 1/2 x 7 1/2"

Top

8 1/4 x 7"

Are stays fitted with nuts or riveted over

nuts

g pressure by Rules

144

Front plate at bottom: Material

Steel

Tensile strength

26 to 30

ess

5/8"

Lower back plate: Material

Steel

Tensile strength

26 to 30

Thickness

5/8"

stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

g Pressure

130.5

Main stays: Material

Steel

Tensile strength

28 to 32

At body of stay,

2 1/4"

No. of threads per inch

6

Area supported by each stay

133

Over threads

261

Screw stays: Material

Steel

Tensile strength

26 to 30

At turned off part,

1 3/8"

No. of threads per inch

9

Area supported by each stay

57.75

Over threads

1 3/8"

No. of threads per inch

9

Area supported by each stay

57.75

004711-004720-0132

Working pressure by Rules 175.8 Are the stays drilled at the outer ends ☒ Margin stays: Diameter ^{At turned off part} 1.45" or ^{Over threads} 1.58"
No. of threads per inch 9 Area supported by each stay 78.75 Working pressure by Rules 193.5
Tubes: Material Iron External diameter ^{Plain} 3" ^{Stay} 3" Thickness 104.56 No. of threads per inch 9
Pitch of tubes 8 1/4" x 9 1/6" Working pressure by Rules 347 Manhole compensation: Size of 1 1/4"
shell plate 12 x 16 Section of compensating ring 9.125 No. of rivets and diameter of rivet holes 42 @ 1 1/4"
Outer row rivet pitch at ends 8 1/2" Depth of flange if manhole flanged 3 1/2" 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 dia
stays ☒ Inner radius of crown ☒ Working pressure by Rules ☒
How connected to shell ☒ Size of doubling plate under dome ☒ Diameter of rivet holes ☒
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
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 ☒
Rules ☒ Pressure to which the safety valves are adjusted ☒ Hydraulic test pressure ☒
tubes ☒ castings ☒ and after assembly in place ☒ Are drain cocks or valves ☒
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, No.

Dates of Survey ^{During progress of} 1929 Aug. 2, 9, 27. Sept. 4, 11, 19, 20, 30 Are the approved plans of boiler and superheater forwarded herewith ☒
^{work in shops - -} Oct. 1, 5, 10, 15, 18. (If not state date of approval.)
^{During erection on} Nov. 7, 11, Dec. 3, 11, 18.
^{board vessel - -} Total No. of visits 17

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boiler has been constructed under special survey in accordance with the requirements of the Rules and approved plan; the workmanship and materials are good and on completion the boiler was tested by hydraulic pressure to 200 lbs per sq. inch found tight and sound and afterwards efficiently installed in the vessel and the safety valves adjusted under steam to 100 lbs per sq. inch and is eligible in our opinion for the record of T.O.B. 3.20. 100 lbs

Survey Fee £ 63 7 : When applied for, 26/3/ 1929
Travelling Expenses (if any) £ : : When received, 31/3/ 1929

H. J. Garnett Adm.
Engineer Surveyor to Lloyd's Register of Ships

Committee's Minute

TUE. 29 APR 1930

TUE. 13 MAY 1930

Assigned

See attached T.O.B. 3.20

TUE. 28 OCT 1930

WED. 8 APR 1931

FRI. 17 APR 1931

© 2020

Lloyd's Register
Foundation