

REPORT ON BOILERS.

No. 8656

Received at London Office

23 JUL 1934

Date of writing Report

192

When handed in at Local Office

192

Port of

No. in Survey held at

7. Book.

KOBE.

Date, First Survey

31-7-33

Last Survey

22-6-

1934.

on the

MOTOR VESSEL "TOR MARU"

(Number of Visits)

Gross 10052

Net 9038

ster

Built at

KOBE

By whom built

KAWASAKI DOCKYARD Co.

Yard No. 572

When built 1934

gines made at

KOBE

By whom made

KAWASAKI DOCKYARD Co.

Engine No. 205

When made 1934

ilers made at

KOBE

By whom made

KAWASAKI DOCKYARD Co.

Boiler No. 1

When made 1934

inal Horse Power

2115

Owners

IINO SHOJI KABUSHIKI KAISHA

Port belonging to NAKAMAIZURU

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel KAWASAKI DOCKYARD Co LTD FUKUI PLATE & SHEET MILLS.

(Letter for Record S.)

Heating Surface of Boilers OIL BURNING 57.2 M² WASTE GAS 286.8 M² Is forced draught fitted

Coal or Oil fired OIL & WASTE GAS

4-19-2 and Description of Boilers ONE:- WASTE GAS AND OIL FIRED SINGLE ENDED MULTITUBULAR

Working Pressure 12.5 kg/cm²

tested by hydraulic pressure to 22.5 kg/cm² Date of test 10-4-34 No. of Certificate 3988C Can each boiler be worked separately YES

Area of Firegrate in each Boiler OIL FUEL No. and Description of safety valves to each boiler 2 - SPRING LOADED

26-2 Area of each set of valves per boiler { per Rule 83.7 cm² as fitted 100.4 cm² Pressure to which they are adjusted 12.5 kg/cm² Are they fitted with easing gear YES

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

6-34 Smallest distance between boilers or uptakes and bunkers or woodwork IN VICINITY OF BOILERS Is oil fuel carried in the double bottom under boilers

6-34 Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated YES

3618 Largest internal dia. of boilers 4050 mm Length 3600 mm Shell plates: Material STEEL Tensile strength 28-32

376 Thickness 28 mm Are the shell plates welded or flanged NO Description of riveting: circ. seams DOUBLE RIVETED LAP

1752 7. seams TREBLE RIVETED DOUBLE BUTT STRAP Diameter of rivet holes in { circ. seams 30 mm Pitch of rivets 80 mm

Percentage of strength of circ. end seams { plate 62.5 rivets 51.5 Percentage of strength of circ. intermediate seam { plate 61 rivets 61

Percentage of strength of longitudinal joint { plate 85 rivets 97 Working pressure of shell by Rules 12.7 kg/cm²

Thickness of butt straps { outer 22 mm inner 26 mm No. and Description of Furnaces in each Boiler ONE MORRISON TYPE CORRUGATED

Material STEEL Tensile strength 26-30 Smallest outside diameter 942.38 mm

Length of plain part { top 220 mm Thickness of plates { crown 14 mm Description of longitudinal joint WELDED

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 15.1 kg/cm²

End plates in steam space: Material STEEL Tensile strength 28-32 Thickness 28 mm Pitch of stays 400 mm

How are stays secured DOUBLE NUTS & WASHERS Working pressure by Rules 14.27 kg/cm²

4. end plates: Material { front STEEL Tensile strength 28-32 Thickness 22 mm

back STEEL Tensile strength 28-32 Thickness 20 mm

in pitch of stay tubes in nests 250 mm Pitch across wide water spaces 340 mm Working pressure { front 17.2 kg/cm² back 16.15 kg/cm²

Ends to combustion chamber tops: Material STEEL Tensile strength 28-32 Depth and thickness of girder

centre 200 mm x 22 mm x 2 Length as per Rule 680 mm Distance apart 230 mm No. and pitch of stays

each 2 x 240 mm Working pressure by Rules 21.3 kg/cm² Combustion chamber plates: Material STEEL

Tensile strength 28-32 Thickness: Sides 20 mm Back 20 mm Top 20 mm Bottom 20 mm

Pitch of stays to ditto: Sides 280 x 240 mm Back 190 x 230 mm Top 240 x 230 mm Are stays fitted with nuts or riveted over NUTS

Working pressure by Rules 14.7 kg/cm² Front plate at bottom: Material STEEL Tensile strength 28-32

Thickness 25 mm Lower back plate: Material STEEL Tensile strength 28-32 Thickness 25 mm

Pitch of stays at wide water space 230 x 370 mm Are stays fitted with nuts or riveted over NUTS

Working Pressure 14.7 kg/cm² Main stays: Material STEEL Tensile strength 28-32

At body of stay, 80 mm No. of threads per inch 6 Area supported by each stay 2600 cm²

Over threads 40 x 46 mm No. of threads per inch 11 Area supported by each stay 437 x 672 cm²

Working pressure by Rules 13 kg/cm² Screw stays: Material STEEL Tensile strength 28-32

At turned off part, 40 x 46 mm No. of threads per inch 11 Area supported by each stay 437 x 672 cm²

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Working pressure by Rules 14.6 kg/cm² Are the stays drilled at the outer ends YES Margin stays: Diameter { At turned off part, 46 mm
or Over threads
No. of threads per inch 11 Area supported by each stay 672 cm² Working pressure by Rules 13.2 kg/cm²
Tubes; Material STEEL External diameter { Plain 69.85 mm Thickness { N° 9 L.S.G. No. of threads per inch 9
Stay 69.85 mm 7.94 x 6.35 mm
Pitch of tubes 100 x 100 mm Working pressure by Rules 12.5 kg/cm² Manhole compensation: Size of opening 30 mm
shell plate 500 x 600 mm Section of compensating ring 540 x 28 mm No. of rivets and diameter of rivet holes 42 30 mm
Outer row rivet pitch at ends 200 mm Depth of flange if manhole flanged 95 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 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
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
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,

Edmund Chief Designer Manufactured by

Dates of Survey { During progress of work in shops - - Jul/33. 2 Aug/33. 10-13. Nov/33. 6. Dec/33. 18
while building { During erection on board vessel - - Jan/34. 11. Feb/34. 7. 20. 27. Mar/34. 15. 27.
Are the approved plans of boiler and superheater forwarded herewith 28. 7. 3
(If not state date of approval.)
Total No. of visits 15.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler has been constructed under Special Survey in accordance with the Rules and approved plans.

The materials and workmanship are good.

The boiler was tested by hydraulic pressure to 22.5 kg/cm², and found sound and tight; afterwards efficiently installed in the vessel, and the safety valves adjusted under steam to 12.5 kg/cm² (178 lbs/sq in).

This boiler in my opinion is eligible to have the record of IB 178 lbs/sq in.

Survey Fee ... £ 37 : 1 : 0. When applied for, 192
Travelling Expenses (if any) £ : : - When received, 192

Committee's Minute TUE. 31 JUL 1934

Assigned

See other 7 E. Rpt
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TUE. 23 OCT 1934



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