

Rpt. 5a.

REPORT ON BOILERS.

No. 3023

Received at London Office 14 OCT 1955

Date of writing Report 19 When handed in at Local Office SEP. 27 1955 Port of KOBE

No. in Reg. Book Survey held at Kobe & Nagoya Date, First Survey 1st February 1955 Last Survey 22nd April 1955 (Kobe)

on the M.V. "TEN-ET MARU" (Number of Visits 3) Gross 7628.61 Tons Net 4408.30

Built at Nagoya By whom built Nagoya Shipbuilding Co., Ltd. Yard No. 120 When built 1955 7mo.

Engines made at Aioi By whom made Harima Shipbuilding & Eng., Co. Ltd. Engine No. 133 When made 1955 4mo.

Boilers made at Kobe By whom made Kawasaki Dockyard Co., Ltd. Boiler No. 1201 When made 1955 4mo.

MN as per Rule Owners Kyoei Tanker Co., Ltd. Port belonging to Kobe

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Plate:- Yawata Iron & Steel Co., Ltd.
Manufacturers of Steel Tubes:- Sumitomo Metal Industries Ltd., Steel Tube Works, Amagasaki & Wakayama W., Wakayama

Total Heating Surface of Boilers 2252.6 ft² (2093 M²) Of Superheaters -

Total for Register Book - Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers One (1) Dry combustion cylindrical multitubular boiler Working Pressure 10 kgs/cm²

Tested by hydraulic pressure to 18.5 kgs/cm² Date of test 22-4-55 No. of Certificate B617 Can each boiler be worked separately -

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 2 x ordinary type

Area of each set of valves per boiler per Rule 179.4 cm² (28.7 in²) as fitted 226 cm² Pressure to which they are adjusted 10.2 kgs/cm² 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 including back end Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 4,248mm Length 3,292mm (2352 shell length) Shell plates: Material boiler plate Tensile strength 50.3-51.3 kgs/cm²

If fusion welded, state name of welding Firm Kawasaki Dockyard Co., Ltd. Have all the requirements of the Rules for Class I vessels been complied with Yes Thickness 26mm Are the shell plates welded or flanged welded

Description of riveting: circ. seams end inter

long. seams - Diameter of rivet holes in circ. seams long. seams Pitch of rivets -

Percentage of strength of circ. end seams plate rivets Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate rivets combined

Thickness of butt straps outer inner No. and Description of Furnaces in each Boiler 3 x Morison corrugated type

Material boiler plate Tensile strength 43.5-46.3 kgs/mm² Smallest outside diameter 828mm (with nut)

Length of plain part top bottom Thickness of plates 14mm Description of longitudinal joint welded

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

End plates in steam space: Material boiler plate Tensile strength 46.6-46.8 kgs/mm² Thickness 26mm Pitch of stays 450mm x 400

How are stays secured Nuts and washers from both of the plates

Tube plates: Material front boiler plate Tensile strength 42.3-46.8 kgs/mm² Thickness 26mm

Mean pitch of stay tubes in nests 196x200mm Pitch across wide water spaces 320mm

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 - Combustion chamber plates: Material -

Tensile strength - Thickness: Sides - Back - Top - Bottom -

Pitch of stays to ditto: Sides - Back - Top - Are stays fitted with nuts or riveted over -

Front plate at bottom: Material Boiler plate Tensile strength 42.3-42.4 kgs/mm²

Thickness 26mm Lower back plate: Material boiler plate Tensile strength 42.3-42.4 kgs/mm² Thickness 26mm

Pitch of stays at wide water space - Are stays fitted with nuts or riveted over -

Main stays: Material Mild steel (Open hearths) Tensile strength 46.8-49.0 kgs/mm²

Diameter At body of stay 65mm Over threads 65mm No. of threads per inch 6

Screw stays: Material - Tensile strength -

Diameter At turned off part Over threads No. of threads per inch -

358
13312
120
120
112

Are the stays drilled at the outer ends..... Margin stays: Diameter { At turned off part, or Over threads.....

No. of threads per inch.....

Tubes: Material Open hearth External diameter { Plain..... 70mm Water tube 3.5mm W.T. 3.5mm Stay..... 70mm Thickness { 6.5mm No. of threads per inch..... 9

Pitch of tubes 98 x 100mm, Water tube 110mm Manhole compensation: Size of opening in shell plate 480 x 580mm Section of compensating ring 13,312mm² No. of rivets and diameter of rivet holes.....

Outer row rivet pitch at ends..... Depth of flange if manhole flanged 100mm 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 diameter of stays..... Inner radius of crown.....

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..... NONE 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 off and 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 pressure: tubes..... forgings and 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 forging is a correct description,

The foregoing is a correct description,

Managing Director of Kawasaki Dockyard, Kobe, Japan

Manufacturer: NAGOYA SHIPBUILDING CO., LTD.

Dates of Survey while building { During progress of work in shops - - 1955 Feb.: 1, 11, 14, 16, 17, 21, 28 March, 16, 28 April, 11, 13, 24 Are the approved plans of boiler and superheater forwarded herewith 4-2-55 (If not state date of approval)
During erection on board vessel - - 1955 July, 7, 23, 25 Total No. of visits Kobe 12, Nagoya - 3 Total: 15

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 constructed under the supervision of the Society's Surveyors in accordance with the Rules, and approved Plans.

The materials and workmanship have been found satisfactory.

It is submitted that this Boiler is eligible for classification with this Society with the notation of D.B.S. with date when satisfactory installed in the vessel and the safety valves adjusted under steam.

The Boiler has been satisfactory installed on board the ship and examined under steam, the safety valves adjusted to 10kgs/cm² and accumulation test carried out and found satisfactory.

Survey Fee £ 69,000
Travelling Expenses (if any) £ See Rpt. 1.

When applied for..... AUG 31 1955
When received..... 19.....

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute.....

FRIDAY 16 DEC 1955

Assigned.....

See Rpt. 4 c.



Lloyd's Register Foundation