

REPORT ON BOILERS.

No. 1536

Received at London Office 29 SEP 1953

Date of writing Report 19... When handed in at Local Office 27. AUG 1953 Port of K O B E

No. in Survey held at Aioi, Japan Date, First Survey 17-12-52 Last Survey 22-6-1953

Reg. Book. (Number of Visits 13) Gross 17808.11 Tons Net 13397.88

on the steel Single Screw S.T. "KOHO - MARU"

Master Built at Aioi, Japan By whom built Harima Shipbuilding Eng. Co., Ltd. Yard No. 477 When built July, 53

Engines made at Tokyo, Japan By whom made Ishikawajima Heavy Ind. Co., Ltd. Engine No. IT2192 When made July, 53

Boilers made at Aioi, Japan By whom made Harima Shipbuilding Eng. Co., Ltd. Boiler No. B 763 When made July, 53

Nominal Horse Power 47.361 Owners Iino kaiun K.K. Port belonging to Tokyo

MULTITUBULAR BOILERS ~~MAIN~~ ~~AUXILIARY~~ ~~XOX~~ DONKEY.

Manufacturers of Steel Plate; Yawata Iron & Steel Co., Ltd., Yawata Works. (Letter for Record...)

Tube; Sumitomo Metal Industries Co., Ltd., Wakayama Works

Total Heating Surface of Boilers 52.8 M² Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers 1 set Dry Combustion Multitubular Type Working Pressure 7kg/cm²

Tested by hydraulic pressure to 14kg/cm² Date of test 5-3-53 No. of Certificate B448 Can each boiler be worked separately -

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 1 x 60mm Duplex ordinary type

Area of each set of valves per boiler { per Rule 6.19 sq.in as fitted 8.769 sq.in Pressure to which they are adjusted 7.2kg/cm² Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Smallest distance between boilers or uptakes and bunkers ~~XXXXXX~~ 2.100mm Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and ~~XXXXXX~~ Boiler platform 2.000 mm Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 2.300 mm Length 3.040 mm Shell plates: Material O.H. Steel Tensile strength 29.0-29.1 T/in²

Thickness 16 mm Are the shell plates welded or flanged No Description of riveting: circ. seams { end Double Riveted inter Lap joint

long. seams Double Butt joint Diameter of rivet holes in { circ. seams 23 mm Pitch of rivets { 64.95 mm long. seams 23 mm 95 mm

Percentage of strength of circ. end seams { plate 64.6 rivets 65.7 Percentage of strength of circ. intermediate seam { plate - rivets -

Percentage of strength of longitudinal joint { plate 75.8 rivets 84.2 Working pressure of shell by Rules AS approved

Thickness of butt straps { outer 16.66 mm inner 16 mm No. and Description of Furnaces in each Boiler 1 x Holmes Type

Material O.H. Steel Tensile strength 28.6 T/in² Smallest outside diameter 774 mm 900

Length of plain part { top 859mm x 1.880mm x 2 Thickness of plates { crown 12mm Description of longitudinal joint Fusion Welded

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules AS approved

End plates in steam space: Material O.H. Steel Tensile strength 30.0-29.4 T/in² Thickness 22mm Pitch of stays 420mm

How are stays secured Double nuts with double washer both sides Working pressure by Rules AS approved

Tube plates: Material { front O.H. Steel Tensile strength 30.0-29.4 T/in² Thickness 22 mm back O.H. Steel Tensile strength 30.0-29.4 T/in² Thickness 22 mm

Mean pitch of stay tubes in nests 11.359 inch Pitch across wide water spaces 400 mm Working pressure { front 115.89 Lbs/in² back 115.89 Lbs/in²

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 Rules - 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 -

Working pressure by Rules - Front plate at bottom: Material O.H. Steel Tensile strength 30.0-29.4 T/in²

Thickness 22 mm Lower back plate: Material O.H. Steel Tensile strength 30.0-29.4 T/in² Thickness 22 mm

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

Working pressure 180.82 Lbs/in² Main stays: Material O.H. Steel Tensile strength 28.5 T/in²

Diameter { At body of stay 55 mm No. of threads per inch 6 Area supported by each stay 180.65 in² Over threads 55 mm

Working pressure by Rules AS approved Screw stays: Material O.H. Steel Tensile strength -

Diameter { At turned off part - No. of threads per inch - Area supported by each stay - Over threads -

Working pressure by Rules - Are the stays drilled at the outer ends - Margin stays: Diameter { At turned off part, - or Over threads, -
No. of threads per inch - Area supported by each stay - Working pressure by Rules -
Tubes: Material O.H. Hot Finished Plain 82.6 mm Thickness 3.5 mm No. of threads per inch 9
Seamless steel External diameter Stay 82.6 mm 8.0 mm
Pitch of tubes 108mm x 114mm Working pressure by Rules 120 lbs as approved Manhole compensation: Size of opening
shell plate 420mm x 520mm Section of compensating ring 2x16 (194-23x2) No. of rivets and diameter of rivet holes 44 x 23 mm
Outer row rivet pitch at ends 105 mm Depth of flange if manhole flanged 75mm 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 pit
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 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 - Working pressure as per
Rules - Pressure to which the safety valves are adjusted - Hydraulic test pressure
tubes - forgings and castings - and after assembly in place - Are drain cocks
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,

THE HARIMA SHIPBUILDING AND
ENGINEERING COMPANY, LTD.
Are the approved plans of boiler and superheater forwarded herewith -
(If not state date of approval.)

Dates of Survey while building { During progress of work in shops - 1952. Dec. 17. 24. 1953. Jan. 24. 26
Feb. 9. 15. 21. 25 March. 5
During erection on board vessel - 1953. June 1. 16. 19. 22
Total No. of visits 13

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. S.T. "YUHO-MARU"

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

This boiler has been constructed under Special Survey in accordance with the Rules,
Approved plans and Secretary's letters.

The materials and workmanship have been found sound and good.

This boiler has been examined under steam and the safety valve adjusted as stated above
and found satisfactory.

Survey Fee ... £20,000 When applied for, 27. AUG. 1953
Travelling Expenses (if any) £ : : When received 19.

FRIDAY 16 OCT 1953

Committee's Minute

Assigned See Rpt. 4a.



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