

REPORT ON BOILERS.

Received at London Office 21 JAN 1957

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

No. in Reg. Book Survey held at Osaka, Japan Date, First Survey 25th May, 1956 Last Survey 6th August, 1956.

(Number of Visits.....) Tons { Gross.....
Net.....

on the

Built at By whom built Yard No. 815 When built

Engines made at By whom made Engine No. When made

Boilers made at Osaka, Japan By whom made Hirano Iron Works Co., Ltd. Boiler No. 617 When made Aug., 1956.

MN as per Rule Owners Mitsubishi Kaiun, K. K. Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Plates; Tsurumi Iron Works Nippon Kokan, K.K. Tubes; Kawasaki Iron Works Nippon Kokan K.K.

Total Heating Surface of Boilers Gas 142.4 M² Oil 77.6 M² Of Superheaters

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

No. and Description of Boilers 1. Dry Combustion Multitubular boiler Working Pressure 10 kg/cm²

Tested by hydraulic pressure to 18.5 kg/cm² Date of test 6-8-56. No. of Certificate B-770 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler

Area of each set of valves per boiler { per Rule.....
as fitted..... Pressure to which they are adjusted Are they fitted with easing gear

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 boilers or uptakes and bunkers or woodwork Is the bottom of the boiler insulated

Largest internal dia. of boilers 3850 mm. Length 2246 mm. Shell plates: Material Boiler Steel Tensile strength 47.3-49.4 kg/mm²

If fusion welded, state name of welding Firm Have all the requirements of the Rules for Class I vessels

been complied with Thickness 24 mm. Are the shell plates welded or flanged Riveted Description of riveting: circ. seams { end Double Zigzag
inter.....

long. seams Double butt strap 33.5 mm.
Double zigzag 29.5 mm. Pitch of rivets { 89.5 mm.
180 mm.

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 19 mm.
inner 22 mm. No. and Description of Furnaces in each Boiler 1. Morison's Corrugated furnace.

Material Tensile strength 43.7 Kg/mm² Smallest outside diameter 1074 mm.

Length of plain part { top 100 mm.
bottom 100 mm. Thickness of plates 12 mm. Description of longitudinal joint welded

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

End plates in steam space: Material Boiler Steel Tensile strength 44.5-45.6 kg/mm² Thickness 24 mm. Pitch of stays 420 mm. x 350 mm.

How are stays secured Screwed and Nut.

Tube plates: Material { front Boiler Steel Tensile strength 44.4 - 46.6 kg/mm² Thickness Top 24 mm. Bottom 23 mm.
back " " 44.4 - 46.6 kg/mm² Top 24 mm. Bottom 23 mm.

Mean pitch of stay tubes in nests 300 mm. x 196 mm. Pitch across wide water spaces 350 mm. x 98 mm.

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 Steel Tensile strength 44.4 - 46.6 kg/mm²

Thickness 23 mm. Lower back plate: Material Boiler Steel Tensile strength 44.4 - 46.6 kg/mm² Thickness 23 mm.

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

Main stays: Material Boiler Steel Tensile strength 46.3 - 49.3 kg/mm²

Diameter { At body of stay 65 mm.
or 73 mm. No. of threads per inch 6

Screw stays: Material Tensile strength

Diameter { At turned off part
or No. of threads per inch

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 OH Steel External diameter { Plain 70mm. W.T. 60.3mm. Thickness { 4mm. W.T. 4mm. No. of threads per inch 9
Stay 70mm. 9.5 mm.
Pitch of tubes Plain Tube 100mm. x 98mm. Water Tube 110mm. Manhole compensation: Size of opening in
shell plate 480mm. x 580mm. Section of compensating ring 6770.4mm² x 2 No. of rivets and diameter of rivet holes 40; 35.5 mm.
Outer row rivet pitch at ends 154.3mm. 100mm. Depth of flange if manhole flanged 100 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..... 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..... 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 foregoing is a correct description,

Manufacturer.....

Dates of Survey { During progress of 1956: May, 25, June, 14, 19, 22, 25. Are the approved plans of boiler and superheater forwarded herewith 16-4-56.
work in shops - - - July, 11, 13, 19, 23. Aug. 6.
while building { During erection on board vessel - - - Total No. of visits 10
(If not state date of approval.)

Is this Boiler a duplicate of a previous case..... Yes..... If so, state Vessel's name and Report No..... Ship No. 807

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

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

The material and workmanship are sound and good.

The boiler has been examined under hydraulically and found satisfactory.

Survey Fee £ 48.00 :
Travelling Expenses (if any) £ 1.00 :
When applied for, SEP. 2.7. 1956.....19.....
When received.....19.....

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... TUESDAY 12 FEB 1957

Assigned.....



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Foundation