

Rpt. 5a.

REPORT ON BOILERS.

No. 1723a

Date of writing Report 30TH JUNE 1955 When handed in at Local Office 19 Port of YOKOHAMA
Received at London Office 17Z AUG 1955
No. in Reg. Book Survey held at YOKOHAMA AND SHIMIZU Date, First Survey 14TH JAN. 1955 Last Survey 23RD JULY 1955
on the M.V. "NISSHUN MARU" (Number of Visits 29) Tons { Gross 9998.74 Net 6235.42
Built at SHIMIZU JAPAN By whom built NIPPON KOKAN K.K. SHIMIZU SHIPYARD Yard No. 120 When built 7-55
Engines made at OSAKA JAPAN By whom made HITACHI SHIPBUILDING & ENGINEERING CO., LTD. SAKURAJIMA SHIPYARD Engine No. 2021 When made 4-55
Boilers made at YOKOHAMA JAPAN By whom made NIPPON KOKAN K.K. TSURUMI SHIPYARD Boiler No. B185 B186 When made 4-55
MN as per Rule Owners NISSAN KISEN K.K. Port belonging to TOKYO

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel NIPPON KOKAN K.K. TSURUMI IRON WORKS
Total Heating Surface of Boilers $162 \text{ m}^2 \times 2 = 324 \text{ m}^2$ (3490 ft^2) Of Superheaters -
Total for Register Book Is forced draught fitted YES Coal or Oil fired OIL FIRED
No. and Description of Boilers 2-CYLINDRICAL, SINGLE ENDED, DRY COMBUSTION (HAWDEN JOHNSON TYPE) Working Pressure 9.5 kg/cm^2
Tested by hydraulic pressure to 17.75 kg/cm^2 Date of test 20-4-55 No. of Certificate YBC-61 Can each boiler be worked separately YES
Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 2x85 mm LOW LIFT SPRING LOADED SAFETY VALVES
Area of each set of valves per boiler { per Rule 93.5 cm^2 as fitted 113.0 " Pressure to which they are adjusted 9.7 kg/cm^2 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 1.4 m Is oil fuel carried in the double bottom under boilers NO
Smallest distance between shell of boiler and tank top plating 4.9 m Is the bottom of the boiler insulated YES
Largest internal dia. of boilers 3850 mm Length 3260 mm Shell plates: Material O.H. STEEL Tensile strength 52.6-50.0 49.1-47.3 49.5-51.8 kg/mm^2
If fusion welded, state name of welding Firm - Have all the requirements of the Rules for Class I vessels been complied with - Thickness 22 mm Are the shell plates welded or flanged RIVETED Description of riveting: circ. seams { end PAIRLE RIVETED LAP JOINT inter 64.7 mm
long. seams TREBLE RIVETED DOUBLE BUTT JOINT Diameter of rivet holes in { circ. seams 26.5 mm long. seams 26.5 mm Pitch of rivets { plate 16.7 mm rivets 83.5 mm
Percentage of strength of circ. end seams { plate 59.04 % rivets 63.4 % Percentage of strength of circ. intermediate seam { plate - rivets -
Percentage of strength of longitudinal joint { plate 84.1 % rivets 115.2 % combined 91.34 %
Thickness of butt straps { outer 19 mm inner 22 mm
Material O.H. STEEL No. and Description of Furnaces in each Boiler 2-MORISON TYPE
Tensile strength 47.1-46.6 47.3-46.7 46.2-46.6 kg/mm^2 Smallest outside diameter 876 mm 1076 mm
Length of plain part { top Thickness of plates 13 mm Description of longitudinal joint WELDED
Dimensions of stiffening rings on furnace or c.c. bottom
End plates in steam space: Material O.H. STEEL Tensile strength 47.0-47.3 44.9-44.5 kg/mm^2 Thickness 27 mm Pitch of stays 350x420 mm
How are stays secured THREADED ON BOTH ENDS AND SCREWED WITH WASHERS AND NUTS INSIDE AND OUTSIDE
Tube plates: Material { front O.H. STEEL Tensile strength 47.0-47.3 44.9-44.5 kg/mm^2 Thickness { UPPER 27 LOWER 22
back O.H. STEEL Tensile strength 45.8-44.1 47.1-46.7 kg/mm^2 44.9-44.5 47.1-46.7 kg/mm^2 45.6-45.8 kg/mm^2 27 22
Mean pitch of stay tubes in nests 198 mm Pitch across wide water spaces -
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
Combustion chamber plates: Material
Tensile strength Thickness: Sides Back Top Bottom
Pitch of stays to ditto: Sides Back Top Bottom
Front plate at bottom: Material O.H. STEEL Are stays fitted with nuts or riveted over
Tensile strength 44.9-44.5 47.1-46.7 kg/mm^2
Thickness 22 mm Lower back plate: Material O.H. STEEL Tensile strength 47.1-46.7 45.6-45.8 kg/mm^2 Thickness 22 mm
Pitch of stays at wide water space 1 STAY ONLY Are stays fitted with nuts or riveted over NUTS AND WASHERS
Main stays: Material O.H. STEEL Tensile strength 33.7 T/G
Diameter { At body of stay 65 mm No. of threads per inch 6
Over threads 72 mm
Screw stays: Material O.H. STEEL Tensile strength 54.8-55 kg/mm^2
Diameter { At turned off part 50 mm No. of threads per inch 6
Over threads 60 mm

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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 C. H. STEEL External diameter { Plain..... 60 mm Stay..... 70 mm Thickness { 4.5 mm 4.2 mm 9.5 mm No. of threads per inch..... 9

Pitch of tubes..... 100 x 78 mm Manhole compensation: Size of opening in shell plate..... 565 x 465 mm Section of compensating ring..... 116 cm² No. of rivets and diameter of rivet holes..... 48 26.5 mm

Outer row rivet pitch at ends..... 17.6 mm 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

Y. Tzavri

The foregoing is a correct description,

Rouven Boyland

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - 1955: JAN. 14, 28, FEB. 9, 14, 17, 18, MAR. 3, 8, 12, 14, 16, 18, 22, 24, 30 APR. 2, 4, 7, 8, 11, 15, 20, 22, 25 Are the approved plans of boiler and superheater forwarded herewith No. 26-1-55 (If not state date of approval.)

{ During erection on board vessel - - - 1955: JUN. 4 JUL. 5, 14, 21, 23 Total No. of visits..... 29

Is this Boiler a duplicate of a previous case..... N/A If so, state Vessel's name and Report No.....

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

These Donkey Boilers have been constructed under the supervision of the Society's Surveyors in accordance with the Approved plans and the Rules.

The quality of workmanship and materials have been found satisfactory.

The Donkey Boilers have been satisfactorily installed in the vessel and examined under steam and the safety valves adjusted as stated.

It is submitted that these Donkey Boilers are eligible to be classed with this Society with the notation of DBS 7.55.

Survey Fee £ 108,000- : : When applied for..... 19

Travelling Expenses (if any) £ : : When received..... 19

Thomas

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... FRIDAY 30 SEP 1955

Assigned Sec Rep. &c.



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