

REPORT ON BOILERS.

No. 1693 A

5a. Received at London Office.....
 by Rule
 Actual. Writing Report 24-6 1955 When handed in at Local Office... 1955 Port of Yokohama
 by Rule
 Actual. Survey held at Yokohama Date, First Survey 13-1-1955 Last Survey 9-6-1955
 on the M.V. "VIRGINIA-MARU" (Number of Visits 22) Tons Gross 7633.48 Net 4371.82
 fuel tank at Yokohama By whom built Yokohama Shipyard & Engine Works Yard No. 802 When built 6-1955
 es made at Yokohama By whom made Yokohama Shipyard & Engine Works Engine No. 3701 When made 4-1955
 s made at Yokohama By whom made Yokohama Shipyard & Engine Works Boiler No. 41309 When made 6-1955
 is per Rule Owners Mitsubishi Kaisha K.K. Port belonging to Tokyo

SECTION
 TS
 CH
 T-1 **LITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.**

Manufacturers of Steel Nippon Kokan Kabushiki Kaisha, Kawasaki Iron Works & Tsurumi Iron Works
 Heating Surface of Boilers 1706.6 ft² (158.7 m²) Of Superheaters -
 for Register Book Is forced draught fitted Yes Coal or Oil fired Oil fired
 and Description of Boilers 1 - Howden Johnson Type Working Pressure 10 Kg/cm²
 d by hydraulic pressure to 18.5 Kg/cm² Date of test 29-3-1955 No. of Certificate YBC 64 Can each boiler be worked separately Yes
 of Firegrate in each Boiler - No. and Description of safety valves to each boiler Two - high lift type
 of each set of valves per boiler { per Rule 62.2 cm² as fitted 76.75 cm² Pressure to which they are adjusted 10.2 Kg/cm² Are they fitted with easing gear Yes
 se of donkey boilers, state whether steam from main boilers can enter the donkey boiler -
 test distance between boilers and F.O. Service tank for generator 1.1 m Is oil fuel carried in the double bottom under boilers -
 test distance between shell of boiler and Engine room middle platform 601 mm Is the bottom of the boiler insulated Yes
 test internal dia. of boilers 3850 mm Length 3250 mm Shell plates: Material Open hearth steel plate Tensile strength 50.8-51.1 Kg/mm²
 ion welded, state name of welding Firm - Have all the requirements of the Rules for Class I vessels
 complied with - Thickness 24 mm Are the shell plates welded or flanged No Description of riveting: circ. seams { end Double row lap joint inter none
 seams Triple row butt joint Diameter of rivet holes in { circ. seams 33.5 mm long. seams 29.5 mm Pitch of rivets { 89.5 mm 180 mm
 entage of strength of circ. end seams { plate 62.6 % rivets 55.8 % Percentage of strength of circ. intermediate seam { plate - rivets -
 entage of strength of longitudinal joint { plate 83.6 % rivets 112.8 % combined 89.9 %
 nness of butt straps { outer 19 mm inner 22 mm No. and Description of Furnaces in each Boiler 2 - Morison type
 rial Open hearth steel plate Tensile strength 46.7 46.3 Kg/mm² Smallest outside diameter 874 mm
 th of plain part { front 100 mm back 140 mm Thickness of plates Design 12 mm Actual 13 mm Description of longitudinal joint Fusion weld
 nsions of stiffening rings on furnace or c.c. bottom -
 plates in steam space: Material Open hearth steel plate Tensile strength 46.2-47.0 Kg/mm² Thickness 24 mm Pitch of stays 420 mm
 are stays secured Nuts from both sides
 plates: Material { front Open hearth steel plate back Open hearth steel plate Tensile strength { Upper 46.2-47.0 Kg/mm² Lower 44.5-46.3 Kg/mm² Thickness { Upper 24 mm Lower 23 mm
 fu pitch of stay tubes in nests 200 mm Pitch across wide water spaces 350
 of ers to combustion chamber tops: Material - Tensile strength - Depth and thickness of girder
 Length as per Rule - Distance apart - No. and pitch of stays
 Combustion chamber plates; Material -
 le strength Thickness: Sides - Back - Top - Bottom -
 of stays to ditto: Sides - Back - Top - Are stays fitted with nuts or riveted over -
 t plate at bottom: Material Open hearth steel plate Tensile strength 44.5-45.4 Kg/mm²
 nness 23 mm Lower back plate: Material Open hearth steel plate Tensile strength 45.3-46.3 Kg/mm² Thickness 23 mm
 of stays at wide water space One stay only bottom Are stays fitted with nuts or riveted over Nuts from both sides
 stays: Material Open hearth steel bar Tensile strength 45.9-51.6 Kg/mm²
 eter { At body of stay 165 mm or Over threads 73 mm No. of threads per inch 6 threads / inch
 v stays: Material - Tensile strength -
 eter { At turned off part - or Over threads - 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 *Open heart*

External diameter

Plain *70 mm*
Stay *70 mm*

Thickness

4.0 mm
9.5 mm

No. of threads per inch *9 threads*

Pitch of tubes *100 98 mm*

Manhole compensation: Size of opening

shell plate *405 mm x 305 mm*

Section of compensating ring

flat 200 x 24

No. of rivets and diameter of rivet holes

40-35.5 mm

Outer row rivet pitch at ends *100 mm*

Depth of flange if manhole flanged

Shell plate 100 mm
End plate 90 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 diam

stays

Inner radius of crown

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 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

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

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,

H. Kojima, Chief Engineer

Dates

of Survey { During progress of work in shops - - *1955 Jan. 13, 18, Feb. 13, 5, 8, 10, 15, 17, 22, 24, 26, Mar. 3, 8, 12, 17, 29.*

while

building { During erection on board vessel - - *Apr. 26, 30, May 12, 23, June 9*

Are the approved plans of boiler and superheater forwarded herewith *17-1*

(If not state date of approval.)

Total No. of visits *22*

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 Approved plans and Rules.

The quality of workmanship and materials have been found satisfactory.

The boiler has been satisfactorily installed in the vessel and examined under steam and the safety valve adjusted as stated and accumulation of water as per rule.

It is submitted that this boiler is eligible to be classed with the society with notation of DBS 6.55.

Survey Fee *£ 5,100.-*

Travelling Expenses (if any) £ : : :

When applied for *JUL 1 1955*

When received

FRIDAY 16 SEP 1955

Committee's Minute

Assigned

S. Rpt. 46.

Engineer Surveyor to Lloyd's Register of Shipping



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