

## REPORT ON BOILERS.

No. FE-10186

30 AUG 1962

Received at London Office

Date of writing Report 6th March, 1962 When handed in at Local Office 19 Port of KOBE

No. in Survey held at Innoshima & Osaka Date, First Survey 1st Nov., 1961 Last Survey 20th June, 1962

Reg. Book. on the m.v. "OKHOTSK" (Number of Visits 23) Gross 11,105 Tons Net

Built at Osaka, Japan By whom built Hitachi Shipbuilding & Eng. Co., Ltd., Sakurajima Shipyard Yard No. 3923 When built 7, 1962

Engines made at Sakurajima, Osaka By whom made do. Engine No. 2151 When made 7, 1962

Boilers made at Innoshima By whom made Hitachi Shipbuilding & Eng. Co., Ltd., Innoshima Shipyard Boiler No. 561 When made 2, 1962

Owners V/O "Sudoimport" Moscow, U.S.S.R. Port belonging to Vladivostok

## VERTICAL BOILER.

Made at Innoshima By whom made Hitachi Shipbuilding & Eng. Co., Ltd., Innoshima Shipyard Boiler No. 561 When made 2, 1962 Where fixed Osaka, Japan

Manufacturers of Steel Plate: Yawata Iron & Steel Co., Ltd., Yawata. Tube: Yawata Steel Tube Co., Ltd., Tokyo Works.

Total Heating Surface of each Boiler 61.6 sq. meter Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers Two (2) Vertical Cochran Type Boiler Working Pressure 7 kg/cm<sup>2</sup>

Tested by hydraulic pressure to 14 kg/cm<sup>2</sup> Date of test 28th February, 1962 No. of Certificate I- 77026

Area of fire grate in each Boiler No. and description of safety valves to each boiler One(1) set of Improved high lift duplex type

Area of each set of valves per boiler per Rule As approved. 5655 mm<sup>2</sup> Pressure to which they are adjusted 7.2 kg/cm<sup>2</sup> Are they fitted with easing gear Yes

State whether steam from main boilers can enter the donkey boiler - Smallest distance between boiler or uptake and bunkers or woodwork 450 mm Is oil fuel carried in the double bottom under boiler No Smallest distance between base of boiler and tank top plating 6500 mm Is the base of the boiler insulated No Largest internal dia. of boiler 2000 mm Height 4175 mm

Shell plates: Material Boiler Steel Tensile strength 45 - 47 kg/mm<sup>2</sup> Thickness 14 mm

Are the shell plates welded or flanged Welded If fusion welded, state name of welding firm Innoshima Shipyard, Hitachi S.B. & Eng. Co., Ltd.

Have all the requirements of the Rules for Class I vessels been complied with Yes Description of riveting: circ. seams end. Double Zigzag inter. -

long. seams - Dia. of rivet holes in circ. seams 23.2 mm Pitch of rivets 70 mm Thickness of butt straps outer - inner -

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished partial spherical Material Boiler Steel Tensile strength 44 kg/mm<sup>2</sup> Thickness 18 mm

Radius 1600 mm Description of Furnace: Plain, spherical, or dished crown Spherical Material Boiler Steel

Tensile strength 46 - 47 kg/mm<sup>2</sup> Thickness 15 mm External diameter top 1750 mm bottom 2000 mm Length as per Rule -

Pitch of support stays circumferentially - and vertically - Are stays fitted with nuts or riveted over -

Diameter of stays over thread - Radius of spherical or dished furnace crown 815 mm

Thickness of Ogee Ring 21 mm Diameter as per Rule D 2000 mm d 1760 mm

Combustion Chamber: Material - Tensile strength - Thickness of top plate -

Radius if dished - Thickness of back plate - Diameter if circular -

Length as per Rule - Pitch of stays -

Are stays fitted with nuts or riveted over - Diameter of stays over thread -

Tube Plates: Material front Boiler Steel Tensile strength 46 kg/mm<sup>2</sup> Thickness 25 mm Mean pitch of stay tubes in nests 308 mm

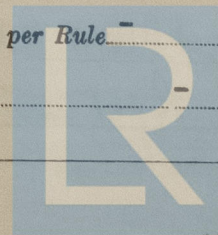
If comprising shell, dia. as per Rule front - Pitch in outer vertical rows 190 mm Dia. of tube holes FRONT stay 67.6 mm plain 67.6 mm BACK stay 65.6 mm plain 65.6 mm

Is each alternate tube in outer vertical rows a stay tube Yes

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 -



© 2021

Lloyd's Register  
Foundation

012796-012800-0108



Crown Stays: Material - Tensile strength - Diameter { at body of stay, - or over threads, -  
No. of threads per inch - Screw Stays: Material - Tensile strength -  
Diameter { at turned off part, - or over threads, - No. of threads per inch - Are the stays drilled at the outer ends -  
Tubes: Material O.H. Steel External diameter { plain 65mm ✓ stay 65mm ✓ Thickness { 3.5mm 8.0mm  
No. of threads per inch - Pitch of tubes 88mm x 95mm ✓  
Manhole Compensation: Size of opening in shell plate 455mm x 355mm Section of compensating ring 1941.36 mm<sup>2</sup> No. of rivets and diameter of rivet holes - Outer row rivet pitch at ends - Depth of flange if manhole flanged 56 mm  
Uptake: External diameter - Thickness of uptake plate -  
Cross Tubes: No. - External diameters { Thickness of plates -  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,

Hideo Fukuda Manufacturer.  
Director & Yard Manager

Dates of Survey while building { During progress of work in shops - - at Innoshima During erection on board vessel - - at Osaka  
1961: Nov. 1, Dec. 5, 8, 12, 22, 26, 27.  
1962: Jan. 9, 16, 19, 23, 25, 26, 31 Feb. 1, 2, 8, 13, 21, 28 May 22, 25, June 20  
Is the approved plan of boiler forwarded herewith 27-3-61 (If not state date of approval.)  
Total No. of visits 23

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Ship No. 3921, 3922.

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

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

The material and workmanship are sound and good.

These boilers were examined under hydraulic test & found satisfactory.

The safety valves were adjusted under steam to 7 kg/cm<sup>2</sup> and an accumulation test held with satisfactory results.

#### Description of Steel Plate:

Where Used	Inspection No.	Charge No.	Name of Makers
Shell crown	R 9365, R6243	S300, T66481	Yawata Iron & Steel Co., Ltd.
Upper & Lower Shell	R5934, R5937	T 66759	"
Front tube plate	R 1615	T 66363	"
Back tube plate	R 1616	T 66363	"
Middle Shell	R 1605, R6123	T 66363	"
Furnace	R 1603	T 66363	"
Ogee ring	R 5939, R5941	T 66759	"

Survey Fee ... £ 23,850.- When applied for 19  
Travelling Expenses (if any) £ : : When received 19

L.O. Christensen & M. Hayashibara  
Engineer Surveyor to Lloyd's Register of Shipping.

Date FRIDAY 21 SEP 1962  
Committee's Minute See Rpt 46