

## REPORT ON BOILERS.

55 DEC 1963

Received at London Office

Date of writing Report 10th Sep. 1963 When handed in at Local Office 15th Sep. 1963 Port of Hiroshima

No. in Survey held at Hiroshima Japan Date, First Survey 10th Dec. 1962 Last Survey 5th Oct. 1963  
Reg. Book. (Number of Visits 46) Gross 22371.10  
on the Motor Tanker "LIKHOSLAVL" Tons Net 15746.77

Built at Hiroshima Japan By whom built Mitsubishi Shipbuilding & Engrg. Co., Ltd., Hiroshima Works Yard No. 161 When built Oct. 1963

Engines made at Hiroshima Japan By whom made Mitsubishi Shipbuilding & Engrg. Co., Ltd., Hiroshima Works Engine No. 27 When made July 1963

Boilers made at Hiroshima Japan By whom made Mitsubishi Shipbuilding & Engrg. Co., Ltd., Hiroshima Works Boiler No. 93 & 94 When made June 1963

Owners V/O Sudoimport U.S.S.R. Port belonging to Odessa

## VERTICAL BOILER.

Made at Hiroshima Japan By whom made Mitsubishi S.B. & Eng. Co., Ltd., Hiroshima Works Boiler No. 93 & 94 When made June 1963 Where fixed Hiroshima

Manufacturers of Steel Plates; Fuji Iron & Steel Works, Hiroshima Works  
Tubes; Sumimoto Metal Ind., Ltd., Steel Tube Works, Amagasaki, Japan

Total Heating Surface of each Boiler 66.8m<sup>2</sup> (719 sq. ft) Is forced draught fitted No Heated by Coal or Oil fired primary steam

No. and Description of Boilers 2 Boilers, Double evaporation water tube boiler Working Pressure 18kg/cm<sup>2</sup>g

Tested by hydraulic pressure to 30.5kg/cm<sup>2</sup>g Date of test Tube 23rd May 1963 Drum 6th June 1963 SG-15116  
Drum 8th June '62 No. of Certificate SG-15118

Area of fire grate in each Boiler - No. and description of safety valves to each boiler 2 Sets High lift type

Area of each set of valves per boiler { per Rule 10290mm<sup>2</sup> Pressure to which they are adjusted 18kg/cm<sup>2</sup>g Are they fitted with easing gear Yes  
as fitted 12617mm<sup>2</sup>

State whether steam from ~~main boiler~~ primary can enter the donkey boiler No Smallest distance between boiler or uptake and bunkers or woodwork - Is oil fuel carried in the double bottom under boiler No Smallest distance between base of boiler and tank top plating - Is the base of the boiler insulated No Largest internal dia. of boiler 1590mm Height 2,013mm

Shell plates: Material Boiler plate grade 4 Tensile strength 47kg/mm<sup>2</sup> Thickness 18mm

Are the shell plates welded or flanged welded If fusion welded, state name of welding firm Mitsubishi S.B. & Eng. Co., Ltd., Hiroshima Works

Have all the requirements of the Rules for Class I vessels been complied with Yes Description of riveting: circ. seams { end -  
inter -  
long. seams - Dia. of rivet holes in { circ. seams - Pitch of rivets { Thickness of butt straps { outer -  
long. seams - inner -

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat dished partial spherical Boiler plate Material grad 4 Tensile strength 47kg/mm<sup>2</sup> Thickness 24mm

Radius 1300mm Description of Furnace: Plain, spherical, or dished crown - Material -

Tensile strength - Thickness - External diameter { top - Length as per Rule -  
bottom -

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 -

Thickness of Ogee Ring - Diameter as per Rule { D -  
d -

Steam Chest Material Carbon steel Tensile strength 51.7kg/mm<sup>2</sup> Thickness of top plate 30mm

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 Carbon steel forging Tensile strength { 55-63kg/mm<sup>2</sup> Thickness { 120mm Mean pitch of stay tubes in nests 35mm  
back -

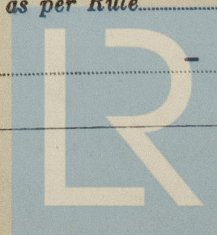
If comprising shell, dia. as per Rule { front - Pitch in outer vertical rows { Dia. of tube holes FRONT { stay -  
back - plain 25.1mm BACK { stay -  
plain -

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

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 -



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Foundation

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Crown Stays: Material - Tensile strength - Diameter { at body of stay, - or over threads, -

No. of threads per inch Heating Tube 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 Heating Tube carbon steel boiler tube External diameter { plain 25.4 mm Thickness { 2.6mm stay -

No. of threads per inch 3.000mm square section Pitch of tubes 3.5mm

Manhole Compensation Size of opening in shell plate Oval 405mm x 305mm Section of compensating ring None No. of rivets and diameter

of rivet holes - Outer row rivet pitch at ends - Depth of flange if manhole flanged 80mm

Uptake: External diameter 2,000mm square section Thickness of uptake plate 4.5mm

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,

*Y. Kaneda* Manufacturer.  
Y. Kaneda, General Manager  
Hiroshima Works, Mitsubishi Shipbuilding & Engineering Co., Ltd.

Hiroshima Works, Mitsubishi Shipbuilding & Engineering Co., Ltd.				
Dates of Survey while building	During progress of work in shops - -	1962	1963	Is the approved plan of boiler forwarded herewith..... (If not state date of approval.)
		Dec. 10, 14, 26	Jan. 8, 11, 18, 24, 25, 28	
		1963 Feb. 4, 6, 11	May 8, 11, 18, 25 April 1, 2, 3, 4, 9, 10, 12,	
		April 15, 17, 20, 23, 24, 27	May 6, 8, 11, 13, 15, 16, 17, 22, 23, 24, 27 June 4, 6,	
		During erection on board vessel - -	Total No. of visits.....46	
		1963 Aug. 14, 25, 27, Sept. 5.		

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "LEBEDIN" Cert.No.FE-2024

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The auxiliary boilers of this vessel have been constructed and installed under Special Survey in accordance with the Rules, Approved plans and Secretary's letters. The workmanship and material are sound and good. The auxiliary boilers have been examined under steam and the safety valves adjusted to 256 lb/in<sup>2</sup> on board the ship. Accumulation tests have been carried out in accordance with the Rules with satisfactory results.

Advice note attached

#-RMG  
20.12.63  
Survey Fee ... £ 42,000 : : When applied for 19  
Travelling Expenses (if any) £ : : When received 19

*K. Okada*  
K. Okada Engineer Surveyor to Lloyd's Register of Shipping.

Date FRIDAY 14 FEB 1964  
Committee's Minute See Rpt. 1

Aux. boiler Steel Plate  
Boiler No. 93 (Double Evaporation, Water Tube Boiler: Port Side Boiler)  
LR NO. B-15115 & SC-15116

S. NO. H-161