

Rpt. 5c.

REPORT ON WATER TUBE BOILERS.

No. FE-11838

Date of writing Report 9th Nov., 1963 When handed in at Local Office NOV 27 1963 Received at London Office DEC 1963
No. in Survey held at Aioi, Japan Port of KOBE
Reg. Book. Date, First Survey 17th Nov., 1962 Last Survey 7th Sept., 1963.
on the m.s. "LOZOVAYA" (Number of Visits 51) Gross 23,138 Tons
Built at Aioi, Japan By whom built Ishikawajima-Harima Heavy Ind. Co., Ltd., Yard No. 615 When built 1963-9
Engines made at do. By whom made do. Engine No. 1D225 When made 1963-4
Boilers made at do. By whom made do. Boiler No. TB 805 806 When made 1963-3
HS for Register Book 2 x 307 M² Owners Vseso juzno je Exportno-Importno je Port belonging to Odessa
Objedinenije "Sudoimport"

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Tubes—Nippon Kokan K.K. Kawasaki Iron Works
Date of Approval of plan 4-12-62 Design Pressure 17 kg/cm² No. and Description or Type
of Boilers Two Drum 'D' Water Tube Working Pressure 16 kg/cm² tested by Hydraulic Pressure to 29 kg/cm² Date of Test 4-3-63
No. of Certificate B3034 Can each boiler be worked separately Yes Total Heating Surface of Boilers 2x307M² Superheaters None
Half Economisers None Is forced draught fitted Yes Area of Fire Grate (coal) in each Boiler
No. and type of burners (oil) in each boiler 3x Ishikawajima-Harima P-All Pressure Type Heavy Oil Burner and description of safety valves on
each boiler 2 x 90A High life Single Type Area of each set of valves per boiler } per rule As approved
are adjusted 16 kg/cm² Are they fitted with easing gear Yes } as fitted 2 x 6351.74 mm² Pressure to which they
the donkey boiler - Smallest distance between boilers or uptakes and bunkers or woodwork Height of boiler 5625 mms
Width and length 4933.7mm x 4110mm Steam Drums:—Number in each boiler 1 Inside diameter 1290mm
Thickness of plates Wrapper 16mm, Tube 36mm Range of tensile strength 44 to 50 kg/mm² Are drum shell plates welded
or flanged Welded If fusion welded, state name of welding firm Ishikawajima-Harima Heavy Industries Co., Ltd., Have all the requirements of the Rules
for Class I vessels been complied with Yes Description of riveting:—Circ. seams - long seams -
Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of Pc²=114.8
long. joint:—Plate - Rivet - Diameter of tube holes in drum 38.8, 51.5, 76.9 P. 60mm Pd=64.7
Percentage strength of shell in way of tube 35.15% & 42% Steam Drum Heads or Ends:—Range of tensile strength 41 to 47 kg/mm² P. 115 Pd=85.3
Thickness of plates 22 & 30 mms Radius or how stayed Radius Size of manhole or handhole 406 x 305 mms Water Drums:—Number
in each boiler 1 Inside diameter 809.5mms Thickness of plate Tube 25mms Range of tensile strength 44 to 50 kg/mm² Are drum shell plates
welded or flanged Welded If fusion welded, state name of welding firm Ishikawajima-Harima Heavy Industries Co., Ltd., Have all the requirements of the Rules
for Class I vessels been complied with Yes Description of riveting:—Circ. seams - long seams -
Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps - P=60 Pd=62.1 Pc=108.6
Percentage strength of long. joint:—Plate - Rivet - Diameter of tube holes in drum 38.8, 51.5, 76.9 Pitch of tube holes SP=115 Pd=81.6
Percentage strength of drum shell in way of tubes 35.15% & 41.2% Water Drum Heads or Ends:—Range of tensile strength 41 to 47 kg/mm² Pc=115.8
Thickness of plates 19 mms Radius or how stayed Radius Size of manhole or handhole 406mm x 305mm
Headers or Sections:—Number 3 off Material Steel Forging Thickness 25 mm Tested by hydraulic pressure to 29 kg/cm²
Tubes:—Diameter 38.1, 50.8, 76.3 Thickness 2.9, 3.5 & 4.2mm Number 664, 86 & 10 Steam Dome or Collector:—Description of
joint to shell - Inside diameter - Thickness of shell plates - Range of tensile
strength - Description of longitudinal joint - If fusion welded, state name of welding
firm - Have all the requirements for the Rules for Class I vessels been complied with - Diameter of rivet holes -
Pitch of rivets - Thickness of straps - Percentage strength of long. joint - plate - rivet -
Crown or End Plates:—Range of tensile strength - Thickness - Radius or how stayed -
SUPERHEATER, Drums or Headers:—Number in each boiler - Inside diameter -
Thickness - Material - Range of tensile strength - Are drum shell plates welded
or flanged - If fusion welded, state name of welding firm - Have all the requirements of the Rules
for Class I vessels been complied with - Description of riveting:—Circ. seams - long seams -
Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of
long. joint:—Plate - Rivet - Diameter of tube holes in drum - Pitch of tube holes - Percentage strength of
drum shell in way of tubes - Drum Heads or Ends:—Thickness - Range of tensile strength -
Radius or how stayed - Size of manhole or handhole - Number, diameter, and thickness of tubes -
Tested by hydraulic pressure to - Date of test - Is a safety valve fitted to each section of the superheater which
can be shut off from the boiler - No. and description of safety valves - Area of each set
of valves - Pressure to which they are adjusted - Is easing gear fitted -

Spare Gear. Has the spare gear required by the Rules been supplied Yes

Ishikawajima-Harima Heavy Industries Co., Ltd. Aioi No.2 Works.

The foregoing is a correct description,

Manager of Inspection Department
Dates of Survey During progress of Nov. 17, 1962 to March 25th, 1963 - 40 visits
while building During erection on 1963 Apr. 12, May 23, 27, June 5, 6, Aug. 6, 13, 17, Total No. of visits 51
board vessel - 23, Sept. 2 & 7
Is the approved plan of boiler forwarded herewith No

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report Nom.s. "LJUBOTIN" FE Rpt. No. 10628

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The auxiliary boilers have been constructed and installed under special survey in accordance with the Rules, approved plans and the Secretary's letters. The materials and workmanship were good. The boilers were tested to 29 kg/cm² and the safety valves adjusted under steam. Accumulation tests were also carried out in accordance with the Rules and with satisfactory results.

Survey Fee ... 235,200.00 When applied for 19
Travelling Expenses (if any) £ - : - When received 19

Date FRIDAY 24 JAN 1964

Committee's Minute

Supt

Engineer Surveyor to Lloyd's Register of Shipping
E.G. White

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List of Materials (Copies of Mill Sheets attached)

Location	Charge No. & Plate No.	Quantity	Maker
Steam Drums Wrapper Plate	37E1957 1/1 9-10	2	The Japan Steel Works, Ltd
Tube Plate	37K588 2/11 3-4	2	Muroran Plant.
End Plate	37K530 2/2 2 5-6	2	do.
" "	" " " 7-8	2	do.
Water Drums Wrapper Plate	37E1957 1/1 7-8	2	do.
Tube Plate	37K588 2/11 1-2	2	do.
End Plate	37K530 2/2 2 1-2	2	do.
" "	" " " 3-4	2	do.
Headers	4553, 33	3	Kawasaki Iron Works, Nippon Kokan K.K.
Tubes	Size in millimetres		
	38.1 x 2.9 5537		do.
	50.8 x 3.5 5537, 4215, 5212, 4009		do.
	76.3 x 4.5 1273		do.

John W.