

## REPORT ON WATER TUBE BOILERS.

No. 679-B

Received at London Office

20 OCT 1952

of writing Report 3-7- 1952 When handed in at Local Office 19 Port of YOKOHAMA

in Survey held at KOBE AND YOKOSUKA JAPAN Date, First Survey 29-8-51 Last Survey 28-3-1952

Book. S.S. "EIKEN MARU" (Number of Visits 21) Gross 6394.82

on the URAGA SHIPBUILDING YARD Tons Net 3674.29

at Yokosuka JAPAN By whom built THE Uruga Dockyard Dock Co. Ltd. Yard No. 637 When built 3.52

engines made at Tokyo JAPAN By whom made ISHIKAWAJIMA H.I. CO. LTD. Engine No. IT 2175 When made 1-52

boilers made at Maizuru Japan By whom made Iino Sangyo Maizuru Works Boiler No. B 111 When made 10.51

nominal Horse Power 960 Owners HACHIMA KISEN CO. LTD. Port belonging to NISHINO MIYA

**WATER TUBE BOILERS—MAIN, AUXILIARY OR DONKEY.** Manufacturers of Steel Japan Steel Works Ltd., Muroran  
Japan Iron & Steel Co., Ltd., Yawata

Date of Approval of plan 23-10-51 No. and Description or Type 2 sets of 3 drum Type Water tube Working Pressure 20 kg/cm<sup>2</sup> Tested by Hydraulic Pressure to 33.5 kg/cm<sup>2</sup> Date of Test 26.11.51

Boilers 2 sets of 3 drum Type Water tube Yes Total Heating Surface of Boilers 405 M<sup>2</sup> x 2

of Certificate B308.309 Can each boiler be worked separately Yes Area of Fire Grate (coal) in each Boiler 6.67 M<sup>2</sup>

forced draught fitted Yes 4 set Iino Maizuru Works, Type Pressure Burner (300 kg/h) No. and description of safety valves on each boiler 2-Full lift type Area of each set of valves per boiler 36.2 cm<sup>2</sup> Pressure to which they are fitted 103.4 cm<sup>2</sup>

adjusted 20.6 kg/cm<sup>2</sup> Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter donkey boiler - Smallest distance between boilers or uptakes and bunkers or woodwork 2 M Height of boiler 6090 mm

width and length 6240 mm Steam Drums:—Number in each boiler One Inside diameter 1350 mm

thickness of plates 60 mm, 24 mm Range of tensile strength 30.4-31.1 Ton/in<sup>2</sup> Are drum shell plates welded 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 lap joint long. seams Solid

diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps 81.35 mm Percentage strength of long. joint:—Plate - Rivet - Diameter of tube holes in drum 45.8 mm Pitch of tube holes 100mm, 75mm

percentage strength of shell in way of tubes 38.65 Steam Drum Heads or Ends:—Range of tensile strength 28.6 Ton/in<sup>2</sup>

thickness of plates 33 mm Radius or how stayed 1155 Size of manhole or handhole 405mm x 305mm Water Drums:—Number 28.2-29.4

each boiler Small One Inside diameter 800mm Thickness of plates Small 45mm x 18mm Range of tensile strength 28.2-29.4 Ton/in<sup>2</sup> 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 lap long. seams Double riveted, double straps butt

diameter of rivet holes in long. seams 23 mm Pitch of rivets 87 mm Thickness of straps Outside 14mm, Inside 16 mm

percentage strength of long. joint:—Plate 75.2 Rivet Small 70.8 Diameter of tube holes in drum 45.8 mm Pitch of tube holes 100mm, 75mm

percentage strength of drum shell in way of tubes 38.65 Water Drum Heads or Ends:—Range of tensile strength 28.9-29.4 Ton/in<sup>2</sup>

thickness of plates 19mm, 25mm Radius or how stayed 800mm, 600mm Size of manhole or handhole Small 400mm x 300mm

leaders or Sections:—Number - Material - Thickness - Tested by hydraulic pressure to -

tubes:—Diameter 60.3mm, 45.0mm Thickness 5.5mm, 4.5mm Number 214, 286 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 -

**UPERHEATER, Drums or Headers:**—Number in each boiler 2 Inside diameter 200 mm

thickness 30 mm Material Cast Steel Range of tensile strength 31.6-34.0 Ton/cm<sup>2</sup> Are drum shell plates welded or flanged No 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 29mm Pitch of tube holes 55 mm Percentage strength of drum shell in way of tubes 46.3 Drum Heads or Ends:—Plate - Thickness 32mm, 36mm Range of tensile strength 29.6 Ton/in<sup>2</sup>

radius or how stayed - Size of manhole or handhole - Number, diameter, and thickness of tubes 41x29mm x 2.9mm

tested by hydraulic pressure to 60kg/cm<sup>2</sup> Date of test 26-11-52 Is a safety valve fitted to each section of the superheater which can be shut off from the boiler Yes No. and description of safety valves 1 spring loaded Ordinary type (65 mm) Area of each set of valves 22.3 cm<sup>2</sup> Pressure to which they are adjusted 19.6 kg/cm<sup>2</sup> Is easing gear fitted Yes

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

The foregoing is a correct description,

Yamichiro Asaka Manufacturer.

Dates During progress of work in shops 1951: Aug. 29, Sept. 9, 13, 20, 26, Oct. 3, 13, 23, 29, Nov. 9, 15, 25, Dec. 3, 12, 27 Is the approved plan of boiler forwarded herewith No

while building During erection on board vessel 1952: MAR 7, 10, 20, 22, 26, 28 Total No. of visits 15 (Kobe) 6 (Yokohama) 21

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.) THE BOILER HAS BEEN CONSTRUCTED UNDER SUPERVISION OF THE SOCIETY'S SURVEYORS IN ACCORDANCE WITH THE RULES AND APPROVED PLANS. 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 VALVES ADJUSTED AS STATED. IT IS SUBMITTED THAT THIS BOILER IS ELIGIBLE TO BE CLASSED WITH THIS SOCIETY WITH THE NOTATION OF \* LMC 3.52

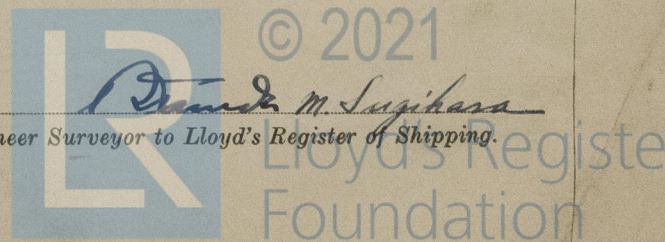
Survey Fee ... £ See Rpt. 4a When applied for 19

Travelling Expenses (if any) £ : When received 19

Date TUES. 11 NOV 1952

Signature of Surveyor See F.E. Moly. 4a

Engineer Surveyor to Lloyd's Register of Shipping.



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