

REPORT ON WATER TUBE BOILERS.

No. 668-C

24 JUN 1952

Received at London Office.

Date of writing Report 10th Sept 1951 When handed in at Local Office 12th MARCH 1952 Port of YOKOHAMA
 No. in Survey held at MAIZURU - YOKOHAMA JAPAN Date, First Survey 4th April 1951 Last Survey 3rd August, 1951
 Reg. Book. on the S.S. "HIKOSAN MARU" (Number of Visits (10) 13) Gross 362.68 Tons
 Built at YOKOSUKA, JAPAN By whom built URAGA DOCKYARD DOCK CO., LTD. Yard No. 632 When built Nov. 1951
 Engines made at Tokyo, JAPAN By whom made ISHIKAWAJIMA HEAVY INDUSTRY CO., LTD., Tokyo Engine No. IT 2166 When made July, 1951
 Boilers made at Maizuru, Japan By whom made IINO SANGYO MAIZURU WORKS Boiler No. B109 When made Aug., 1951
 Nominal Horse Power 920 Owners NAKANO KISEN CO., LTD. Port belonging to Tokyo

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel JAPAN STEEL WORKS LTD MURORAN
 Date of Approval of plan 25.5.51. Revised superheater header 29.6.51 Kobe JAPAN IRON & STEEL CO LTD YAWATA
 of Boilers 2 sets of 3 drum type water tube boiler Working Pressure 20 Kg/cm² Tested by Hydraulic Pressure to 33.5 Kg/cm² No. and Description or Type 25.7.51
 No. of Certificate B169, 174 Can each boiler be worked separately Yes Total Heating Surface of Boilers 441 M² x 2 + 50 Econ
 Is forced draught fitted Yes Area of Fire Grate (coal) in each Boiler 4 sets Iino Maizuru Works Type press. burner (300KG/H)
 No. and type of burners (oil) in each boiler 2 full lift type No. and description of safety valves on each boiler 2 full lift type
 Area of each set of valves per boiler { per rule 36.2 cm² Pressure to which they are adjusted 20.6 Kg/cm² Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler
 Width and length 5540mm x 4112mm Steam Drums:—Number in each boiler one Inside diameter 1,350mm
 Thickness of plates 60mm, 24mm Range of tensile strength 29.0-30.4 T/In² Are drum shell plates welded or flanged If fusion welded, state name of welding firm Double riveted
 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 Percentage strength of long. joint:—Plate Rivet Diameter of tube holes in drum Pitch of tube holes
 Percentage strength of shell in way of tubes 38.65 Steam Drum Heads or Ends:—Range of tensile strength 28.9-31.6 T/In²
 Thickness of plates 33mm Radius or how stayed 1155 Size of manhole or handhole 405mm x 305mm Water Drums:—Number in each boiler large one Inside diameter 1000mm small one 600mm Thickness of plates 18mm Range of tensile strength 29.6-31.1 T/In²
 welded or flanged If fusion welded, state name of welding firm Double riveted Have all the requirements of the Rules for Class I vessels been complied with Description of riveting:—Circ. seams lap long. seams strap butts
 Diameter of rivet holes in long. seams 23mm Pitch of rivets 87mm Thickness of straps 16mm
 Percentage strength of long. joint:—Plate 75.2 Rivet small 70.8 Diameter of tube holes in drum 45.8mm Pitch of tube holes 75mm
 Percentage strength of drum shell in way of tubes 38.65 Water Drum Heads or Ends:—Range of tensile strength 30.6-30.7 T/In²
 Thickness of plates 19mm, 26mm Radius or how stayed 800mm 510mm Size of manhole or handhole Large 405mm x 305mm small 400mm x 300mm
Headers or Sections:—Number Material Thickness Tested by hydraulic pressure to
Tubes:—Diameter 45mm; 60.3mm Thickness 4.5mm 5.5mm Number 424; 178 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 2 Inside diameter 200 mm
 Thickness 30mm Material cast steel Range of tensile strength 28.4-32.4 T/In² 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 Pitch of tube holes Percentage strength of drum shell in way of tubes 46.3
 Drum Heads or Ends: flat steel plate Thickness 32mm 36mm Range of tensile strength 29.6 T/In²
 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/cm² Date of test 3. 8. 51. 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 (valve bore 65 mm) Area of each set of valves 22.3 cm² Pressure to which they are adjusted 20.4 Kg/cm² Is easing gear fitted Yes
Spare Gear. Has the spare gear required by the Rules been supplied Yes

The foregoing is a correct description,

K. Yamada

Manufacturer.

Dates of Survey During progress of work in shops Apr. 4, 20, 30 May 7 Jun. 25 Jul. 10, 25 Is the approved plan of boiler forwarded herewith No
 while building During erection on board vessel Oct. 19, 31 Nov. 16, 19, 21, 1951 Total No. of visits 13

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 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

Survey Fee ... £15,000.- When applied for 19
 Travelling Expenses (if any) £ : : When received 19

Date

Committee's Minute Su F. B. Maly, opt.

Engineer Surveyor to Lloyd's Register of Shipping.

© 2021

Lloyd's Register Foundation

7400-668800-566800

and the safety valve adjusted as stated.

It is submitted that this Boiler is eligible to be classed with this Society with notation of LMC 11.51, Fitted for oil fuel 11.51 P.F. over 150°F.



© 2021

Lloyd's Register
Foundation