

REPORT ON WATER TUBE BOILERS.

No. 548

Received at London Office

12 MAR 1952

12 MAR 1952

Report 30-10-1951 When handed in at Local Office 19 Port of Aioi Japan
 Date, First Survey 10-2-51 Last Survey 10-10-1951
 (Number of Visits 36) Gross 1932.28 Tons
 Net 1321.40
 Steel Twin Steam Ship "TONAN MARU"
 Osaka Japan By whom built Osaka Iron Works Ltd. Yard No. 17-2168 When built 1938-10-10
 Tokyo Japan By whom made Ishikawajima Heavy Ind. Co. Ltd. Engine No. 17-2169 When made 1951-6
 Aioi Japan By whom made Harima Shipbuilding Eng. Co. Ltd. Boiler No. 8733 8734 When made 1951-6
 Power 583.62 x 4 = 2334.48 Owners Nippon Suisan K. K. Port belonging to Tokyo

TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Plate:—Yawata S.W. Tube:—Shin Fuso Metal T.W.

Approval of plan 15-5-51 No. and Description or Type 1B1r
 4. Harima 3 Drum A Type Working Pressure 20 kg/cm² Tested by Hydraulic Pressure to 33.5 kg/cm² Date of Test 3/5/51 7/6/51 16/25/51 47835
 Can each boiler be worked separately 20 kg/cm² Total Heating Surface of Boilers 700.35 sq. meter x 4 5123.00
 650.85 x 4 2603.40
 Area of Fire Grate (coal) in each Boiler
 1. 90 mm Duplex full bore type Area of each set of valves per boiler
 20.5 kg/cm² Are they fitted with easing gear yes In case of donkey boilers state whether steam from main boilers can enter
 Smallest distance between boilers or uptakes and bunkers or woodwork 700 mm Height of boiler 4585 mm
 Length 6132 mm 4270 mm Steam Drums: Number in each boiler 1 Inside diameter 1400 mm
 Plates Shell 19 mm Tube 48 mm Range of tensile strength 28.1-29.9 kg/cm² 29.7-32.4 kg/cm² Are drum shell plates welded
 Riveted If fusion welded, state name of welding firm Have all the requirements of the Rules
 Description of riveting: Circ. seams Double riveted long. seams Double riveted butt joint
 rivet holes in long. seams 26.5 mm Pitch of rivets 12.5 mm Thickness of straps 16 mm 14 mm Percentage strength of
 Plate 74.7 Rivet 91.6 Diameter of tube holes in drum 50.6 mm Pitch of tube holes 115 mm 85 mm 65 mm
 Strength of shell in way of tubes 47, 40.4, 37.5 Steam Drum Heads or Ends: Range of tensile strength 29.1 kg/cm² ~ 29.9 kg/cm²
 Radius or how stayed 1150 mm Size of manhole or handhole 305 mm x 405 mm Water Drums: Number
 Inside diameter 900 mm Thickness of plates 16 mm 38 mm Range of tensile strength 29.9-32.9 kg/cm² Are drum shell plates
 Riveted If fusion welded, state name of welding firm Have all the requirements of the Rules
 Description of riveting: Circ. seams Double riveted long. seams Double riveted butt joint
 rivet holes in long. seams 20 mm Pitch of rivets 73 mm Thickness of straps 14 mm 12 mm
 Strength of long. joint: Plate 72.7 Rivet 89.2 Diameter of tube holes in drum 60.9 mm 40.6 mm Pitch of tube holes 115 mm 85 mm 65 mm
 Strength of drum shell in way of tubes 47, 40.4, 37.5 Water Drum Heads or Ends: Range of tensile strength 29.5-29.8 kg/cm²
 Radius or how stayed 800 mm Size of manhole or handhole 305 mm x 405 mm
 Sections: Number 4 Material Cast Steel Thickness 25 mm Tested by hydraulic pressure to 33.5 kg/cm²
 Diameter 60.3 mm 50 mm 82.6 mm Thickness 5.0 mm 4.0 mm 3.5 mm 6.0 mm Number 112, 202, 648, 4 Steam Dome or Collector: Description of
 Inside diameter Thickness of shell plates Range of tensile
 Description of longitudinal joint If fusion welded, state name of welding
 Have all the requirements for the Rules for Class I vessels been complied with Diameter of rivet holes
 Thickness of straps Percentage strength of long. joint plate rivet
 End Plates: Range of tensile strength Thickness Radius or how stayed
 HEATER, Drums or Headers: Number in each boiler 4 Inside diameter 140 mm x 140 mm (sq.)
 Material Cast steel Range of tensile strength 31.6 kg/cm² ~ 34.4 kg/cm² Are drum shell plates welded
 If fusion welded, state name of welding firm Have all the requirements of the Rules
 Description of riveting: Circ. seams long. seams
 rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of
 Plate Rivet Diameter of tube holes in drum 32.4 mm Pitch of tube holes 57 mm Percentage strength of
 in way of tubes 43.2 Drum Heads or Ends: Cast steel Thickness 25 mm Range of tensile strength 31.6-34.4 kg/cm²
 Size of manhole or handhole 90 mm diam. Number, diameter, and thickness of tubes 74, 32 mm 2.9 mm
 hydraulic pressure to 40 kg/cm² Date of test 11-5-51, 15-5-51, 19-5-51 Is a safety valve fitted to each section of the superheater which
 off from the boiler yes No. and description of safety valves 1, 60 mm Simplex full bore type Area of each set
 4.4 sq. in. Pressure to which they are adjusted 19.5 kg/cm² Is easing gear fitted yes
 Has the spare gear required by the Rules been supplied yes

The foregoing is a correct description,

M. Yoshikawa

Manufacturer.

During progress of 1951 - Feb. 10 Mar. 8, 14, 22, 26, Apr. 5, 12, 19, 26, May 2, 7, 11, 15, 17, 19, 24, 28, 31, Jun. 7, 14, 16, 18, 19, 21, 23, 25 Is the approved plan of boiler forwarded herewith No

work in shops - Sub. 3, 4, 7, 10, 12, 17, 24. Total No. of visits 36
 During erection on 1251 - Jul. 31, Sep. 29, Oct. 10
 board vessel -

Is a duplicate of a previous case No If so, state vessel's name and report No.

AL REMARKS (State quality of workmanship, opinions as to class, &c.) The Main Boilers of this vessel have been
 constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.
 Workmanship and materials are sound and good. The Main Boilers have been examined
 under steam, the safety valves adjusted to 20.5 kg/cm² and found satisfactory.

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

Shunne

Engineer Surveyor to Lloyd's Register of Shipping.

© 2021

Lloyd's Register
 010652-010661-0213