

REPORT ON WATER TUBE BOILERS.

No. 1236

Received at London Office - 9 SEP 1953

Date of writing Report 19 When handed in at Local Office 27. AUG 1953 Port of K O B E

No. in Survey held at Aioi, Japan Date, First Survey 15-10-52 Last Survey 22-6 19 53

Reg. Book. (Number of Visits 30) Gross 17808.22

on the Steel Single screw S.T. " KOHO - MARU " Tons Net 13397.88

Built at Aioi, Japan By whom built Harima Shipbuilding & Eng. Co., Ltd. 477 When built July, '53.

Engines made at Tokyo, Japan By whom made Ishikawajima Heavy Ind. Co. Engine No. IT2192 When made July, '53.

Boilers made at Aioi, Japan By whom made Harima Shipbuilding & Eng. Co. Boiler No. B 761 When made July, '53.

Nominal Horse Power 1727.785 Owners Iino Kaiun K.K. Port belonging to Tokyo

WATER TUBE BOILERS - MAIN, AUXILIARY, OR DONKEY. - Manufacturers of Steel plate; Murooran & Yawata Tube; Sumitomo

Date of Approval of plan 19-12-52 No. and Description or Type 2-3-53

of Boilers 2 sets 3 drum water tube boiler Working Pressure 45 kg/cm² Tested by Hydraulic Pressure to 71 kg/cm² Date of Test 11-3-53

No. of Certificate B 446, B 447 Can each boiler be worked separately Yes Total Heating Surface of Boilers 1926.2

Is forced draught fitted Yes Area of Fire Grate (coal) in each Boiler -

No. and type of burners (oil) in each boiler 7 x 500kg TODD Type No. and description of safety valves on

each boiler 70mm x 2 High lift Type Area of each set of valves per boiler { per rule 11.475 sq.in. as fitted 11.931 sq.in. Pressure to which they

are adjusted 46.2 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 - Smallest distance between boilers and bunkers 600 mm. Height of boiler 6055 mm

Width and length 6293 x 5498 mm Steam Drums: - Number in each boiler 1 (S) 29.7-33.4 (T) 30.2-30.8 T/sq.in² Inside diameter 1400 mm

Thickness of plates Shell 37mm Tube 7mm Range of tensile strength - Are drum shell plates welded

or flanged Welded If fusion welded, state name of welding firm Harima Shipbuilding & Eng. Co., 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 40.6, 51.4 Percentage strength of

long. joint: - Plate - Rivet - Diameter of tube holes in drum 102.2 mm. Pitch of tube holes 70, 90, 106 mm.

Percentage strength of shell in way of tubes 42.0, 42.9, 51.5 Steam Drum Heads or Ends: - Range of tensile strength 27.8-28.8 T/sq.in²

Thickness of plates 64 mm Radius 1150 mm Size of manhole or handhole 305 x 405 mm Water Drums: - Number

in each boiler 2 Inside diameter 900, 600 mm Thickness of plates 51, 35 mm Range of tensile strength 29.9-31.1, 29.3-30.4 Are drum shell plates

welded or flanged Welded If fusion welded, state name of welding firm Harima Shipbuilding & Eng. Co., 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 long. joint: - Plate 42.0, 42.9, 51.5 Rivet - Diameter of tube holes in drum 102.2 mm. Pitch of tube holes 70, 90, 106 mm.

Percentage strength of drum shell in way of tubes 55.6 Water Drum Heads or Ends: - Range of tensile strength 29.3-29.0 T/in²; 28.8 T/in²

Thickness of plates 46.34 mm. Radius or 800; 550 mm. Size of manhole or handhole 305 x 405; 275 x 375 mm.

Headers or Sections: - Number 2 Material Forged steel Thickness 26 mm. Tested by hydraulic pressure to 71 kg/cm²

Tubes: - Diameter 50.8 mm. Thickness 5.0 mm. Number 22 Steam Dome or Collector: - Description of

joint to shell 101.6 Inside diameter 7 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 or Headers: - Number in each boiler 4 Inside diameter 178 x 178 mm

Thickness 26 mm Material Cr-Mo steel Range of tensile strength 29.8-30.5 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 32.4 mm. Pitch of tube holes 57 mm. Percentage strength of

drum shell in way of tubes 43.1 Drum Heads or Ends: - Cr-Mo steel Thickness 30, 28 mm. Range of tensile strength 29.8-30.5 T/in²

Radius or how stayed T Square Size of manhole or handhole - Number, diameter, and thickness of tubes 102 x 32 mm x 3.5 mm.

Tested by hydraulic pressure to 90 kg/cm² Date of test 2-3-53; 12-3-53 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 1 x 70mm High lift type Area of each set

of valves 5.7375 sq.in. Pressure to which they are adjusted 42.2 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, M. Nakamura Manufacturer.

THE HARIMA SHIPBUILDING AND ENGINEERING COMPANY LTD.

Dates of Survey During progress of work in shops 1952 OCT. 15 Dec. 6, 10, 17, 22, 24, 29, 1953 Jan. 6, 10, 14, 17, 20, 26 FEB. 2, 9, 12, 25 MARCH 2, 4, 10, 11, 14, 19

while building During erection on board vessel 1953 March 21 April 22, 25 June 1, 16, 19, 22 Total No. of visits 30

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. S.T. "YUHO-MARU"

GENERAL 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.

The workmanship and materials are found sound and good. The main boilers have been examined under steam. The safety valves adjusted as stated above and accumulation test carried out and found

satisfactory. Survey Fee £409.200 When applied for 27. AUG 1953 Travelling Expenses (if any) £ : : When received 19

Date See Rpt. 45 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Lloyd's Register Foundation 012624 - 012630 - 0252