

REPORT ON WATER TUBE BOILERS.

No. 27116

Received at London Office

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Date of writing Report 19th Aug. 1958 When handed in at Local Office 19th Aug. 1958 Port of YOKOHAMA

No. in Survey held at Yokohama, Japan Date, First Survey 19th June, 1957 Last Survey 9th Aug. 1958

Boiler No. 742 (Number of Visits 64) Gross 26034.19 Tons Net 16070.87

Boiler on the S.S. "RIYADH MARU" By whom built Nippon Kokan K.K., Tsurumi Shipyard Yard No. 742 When built 8-1958

Boiler made at Yokohama, Japan By whom made Tsurumi Shipyard Engine No. IT 2262 When made 3-1958

Boiler made at Yokohama, Japan By whom made Nippon Kokan K.K., Tsurumi Shipyard Boiler No. B 289 (P) When made 8-1958

Boiler for Register Book Owners Nippon Yushutsu Sekiyu Co., Ltd. Port belonging to Tokyo

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Nippon Kokan KK & Japan Steel Works Ltd., Murooran Works.

Date of Approval of plan 1-5-57, 26-11-57 No. and Description or Type Boilers 2-Marine Water Tube Boiler of 2drum with Water Wall 700 Lbs. Tested by Hydraulic Pressure to 1100 Lbs. Date of Test 22-4-58

Working Pressure 700 Lbs. Total Heating Surface of Boilers 712x2=1424m² Superheaters 150x2=300m²

Can each boiler be worked separately Yes Area of Fire Grate (coal) in each Boiler 744 1488

Is forced draught fitted Yes No. and description of safety valves on each boiler 4-Mechanical Pressure Atomizing Type as fitted 2260.8 mm²

Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter donkey boiler Distilled Water Tank 1456mm Height of boiler 6816 mm

Smallest distance between boilers of 440kgs and 1220mm and 1189mm

Steam Drums: Number in each boiler 1 Inside diameter 503-49.4kg/mm² (S) 49.3-47.0kg/mm² (P) 49.3-47.0kg/mm²

Shell 31mm Tube 9mm Range of tensile strength Nippon Kokan K.K., Tsurumi Shipyard

Are drum shell plates welded Yes If fusion welded, state name of welding firm Nippon Steel Tube Co. (Tsurumi)

Have all the requirements of the Rules for Class I vessels been complied with Yes Description of riveting:—Circ. seams — long. seams —

Pitch of rivets — Thickness of straps — Percentage strength of long. joint:—Plate — Rivet — Diameter of tube holes in drum 32.45mm Pitch of tube holes 47.6mm

Steam Drum Heads or Ends:—Range of tensile strength (S) 44.8-46.2 (P) 44.8-46.2

Water Drums:—Number 1 Inside diameter 312mm & 792mm Thickness of plates 2.2mm Range of tensile strength 47.5-46.6kg/mm²

Are drum shell plates welded Yes If fusion welded, state name of welding firm Nippon Steel Tube Co. (Tsurumi)

Have all the requirements of the Rules for Class I vessels been complied with Yes Description of riveting:—Circ. seams — long. seams —

Pitch of rivets — Thickness of straps — Percentage strength of long. joint:—Plate — Rivet — Diameter of tube holes in drum 32.45mm Pitch of tube holes 47.6mm

Water Drum Heads or Ends:—Range of tensile strength (S) 45.7-44.6 (P) 45.7-44.6

Size of manhole or handhole 305mm x 105mm Thickness of plates 25mm

Tested by hydraulic pressure to 1100 lbs

Number 3 Material O.H. Steel Thickness 2.68mm

Steam Dome or Collector:—Description of plates:—Diameter 406mm Thickness 2.69mm

Range of tensile strength (S) 47.2-46.3 (P) 47.2-46.3

Thickness of shell plates — 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 —

Thickness of straps — Percentage strength of long. joint — plate — rivet —

Range of tensile strength — Thickness — Radius or how stayed —

SUPERHEATER, Drums or Headers:—Number in each boiler 2 Inside diameter 233 mm

Material O.H. Steel Range of tensile strength (S) 49.3-47.0 kg/mm² (P) 49.3-47.0 kg/mm²

Are drum shell plates welded Solid If fusion welded, state name of welding firm — Have all the requirements of the Rules

Class I vessels been complied with — Description of riveting:—Circ. seams — long. seams —

Pitch of rivets — Thickness of straps — Percentage strength of long. joint:—Plate — Rivet — Diameter of tube holes in drum 32.45mm

Pitch of tube holes 46mm Percentage strength of drum shell in way of tubes 0.2468 % Drum Heads or Ends:—Thickness 36mm Range of tensile strength 49.4 kg/mm²

Radius or how stayed Flat (welded) Size of manhole or handhole 70.6mm x 86.6mm Number, diameter, and thickness of tubes 225 each 11 B.W.G. (3.048mm)

Tested by hydraulic pressure to 1100 lbs. Date of test (S) 28-4-58 (P) 21-4-58

Is a safety valve fitted to each section of the superheater which can be shut off from the boiler No Dia. full lift safety valve with pilot valve and set to lift at 44.35kg/cm² Area of each set of valves 2072.4mm² Pressure to which they are adjusted 630 lbs. with steam temp. of 350°F. Is easing gear fitted Yes

Has the spare gear required by the Rules been supplied Yes

The foregoing is a correct description,

H. Tsunuma VICE DIRECTOR NKK TSURUMI SHIPYARD YOKOHAMA, JAPAN

1957: Jun. 19, Aug. 10, 19, 29, Sep. 21, 24, 28, Oct. 14, 17, 21, Nov. 2, 6, 8, 15, 16, 19, 20, 22, 25, 29, Dec. 2, 4, 6, 9, 11, 13, 18, 23, 26.

1958: Jan. 7, 10, 13, 14, 16, 18, 22, 24, 25, 27, 31, Feb. 10, 12, 14, 21, 24, Mar. 5, 7, 12, 14, 17, 28, Apr. 9, 11, 21, 22, 23, 28.

1958: May 14, Jul 22, 29, Aug 2, 5, 6, 9. Total No. of visits 64

Is 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, etc.) These Boilers have been constructed under the supervision of the Society's Surveyors in accordance with the Rules, approved plans and Secretary's letters. The quality of workmanship and materials have been found satisfactory. These Boilers have been satisfactorily installed in the vessel and examined under steam. The safety valves adjusted as stated. Accumulation Tests were carried out as per Rules. It is submitted that these boilers are eligible to be classed with this Society with the notation of LMC 8, 58.

Survey Fee ... ¥ 335,200. When applied for SEP. 22. 1958

Travelling Expenses (if any) £ : : When received 19

TUESDAY 11 NOV 1958

Engineer Surveyor to Lloyd's Register of Shipping.

Date See Rpt. 1.

Committee's minute