

REPORT ON BOILERS.

No. 241.

Received at London Office 9 FEB 1951

Report 30-9-1950 When handed in at Local Office 19... Port of Kobe
 Survey held at Shimonoseki Date, First Survey 24-9-50 Last Survey 11-9-1950
 The Steel Single Screw Steam Ship "BUNYO MARU" (Number of Visits 4)
 Built at Nagasaki Japan By whom built Kayagishima Shipyard
 1st Hitachi Japan By whom made Hitachi Co. Ltd. Engine No. M110 When made Feb. 1949
 Kayagishima Nagasaki Japan By whom made Kayagishima Shipyard Kawaminami Industry Ltd. Boiler No. When made Jan. 1949
 Power 570 71155 Owners Toyo Kisen K.K. Port belonging to Toyo

ULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

of Steel Yakata Iron & Steel Manufacturing Co. Ltd. (Letter for Record)
 Surface of Boilers 7769.8 ft² (7221 m²) = 364 Is forced draught fitted yes Coal or Oil fired coal
 Option of Boilers 3 sets dry combustion cylindrical boiler Working Pressure 227.5 lbs/in² (16 kg/cm²)
 Working Pressure 227.5 lbs/in² (16 kg/cm²)
 Date of test 20.2 No. of Certificate 11155
 No. and Description of safety valves to each boiler 2 spring loaded valve
 Pressure to which they are adjusted 16.48 kg/cm² Are they fitted with casing gear yes
 between boilers or uptakes and bunkers or woodwork 2 ft 6 inch Is oil fuel carried in the double bottom under boilers
 between shell of boiler and tank top plating Is the bottom of the boiler insulated yes
 dia. of boilers 177.2 in (4500 mm) Length 102.4 in (2600 mm) Shell plates: Material steel plate Tensile strength 28 ton/in²
 Are the shell plates welded or flanged flanged Description of riveting: circ. seams DR. lap riveting joint
 Diameter of rivet holes in circ. seams 1.56 in (39.5 mm) Pitch of rivets 4.13 in (105 mm)
 Length of circ. end seams plate 62.37 % rivets 42.82 % Percentage of strength of circ. intermediate seam plate 85.3 % rivets 78.12 %
 Length of longitudinal joint plate 86.33 % rivets 78.12 % Working pressure of shell by Rules 227.5 lbs/in² (16 kg/cm²)
 No. and Description of Furnaces in each Boiler 3 sets Morrison corrugated furnace
 Tensile strength 28 ton/in² Smallest outside diameter 44.9 in (1136 mm)
 Thickness of plates crown 0.7 in (18 mm) Description of longitudinal joint welded joint
 bottom 0.7 in (18 mm) Working pressure of furnace by Rules 236.1 lbs/in² (16.6 kg/cm²)
 Material steel plate Tensile strength 28 ton/in² Thickness 1.26 in (32 mm) Pitch of stays 17.7 in (450 mm)
 Working pressure by Rules 272.9 lbs/in² (19.18 kg/cm²)
 Tensile strength 28 ton/in² Thickness 0.98 in (25 mm)
 Pitch across wide water spaces 12.8 in (325 mm) Working pressure front 261.5 lbs/in² (18.4 kg/cm²)
 back 261.5 lbs/in² (18.4 kg/cm²)
 Material steel plate Tensile strength 28 ton/in² Depth and thickness of girder
 Length as per Rule Distance apart No. and pitch of stays
 Working pressure by Rules 272.9 lbs/in² (19.18 kg/cm²)
 Combustion chamber plates: Material steel plate
 Thickness: Sides 0.32 in (8 mm) Back 0.32 in (8 mm) Top 0.32 in (8 mm) Bottom 0.32 in (8 mm)
 Are stays fitted with nuts or riveted over
 Front plate at bottom: Material steel plate Tensile strength 28 ton/in²
 Lower back plate: Material steel plate Tensile strength 28 ton/in² Thickness 0.98 in (25 mm)
 Main stays: Material steel bar Tensile strength 28 ton/in²
 No. of threads per inch 6 threads/inch Area supported by each stay 2.2 ft² (0.187 m²)
 Screw stays: Material Tensile strength
 No. of threads per inch Area supported by each stay

Working pressure by Rules _____ Are the stays drilled at the outer ends _____ Margin stays: Diameter _____ At turned off part, _____
 No. of threads per inch _____ Area supported by each stay _____ Working pressure by Rules _____
 Tubes: Material steel tube External diameter Plain 2.76 in (70 mm) Thickness 0.16 in (4 mm) No. of threads per inch _____
 Pitch of tubes 3.94 in (100 mm) X98 Working pressure by Rules 271.7 lbs/in² (19.1 kg/cm²) Manhole compensation: _____
 shell plate 2.0 x 16.1 in (305 x 410 mm) Section of compensating ring 0.11 in (2.8 mm) No. of rivets and diameter of rivet holes 40 sets
 Outer row rivet pitch at ends 4.72 in (120 mm) Depth of flange if manhole flanged 3.94 in (100 mm) Steam Dome: Material steel
 Tensile strength 29.7 ton/in² (46 kg/mm²) Thickness of shell 0.87 in (22 mm) Description of longitudinal joint riveted double butt
 Diameter of rivet holes 1.04 in (26.5 mm) Pitch of rivets 3.94 in (100 mm) Percentage of strength of joint 73%
 Internal diameter 37.4 in (950 mm) Working pressure by Rules 461.9 lbs/in² (32.49 kg/cm²) Thickness of crown 0.87 in (22 mm)
 stays _____ Inner radius of crown 35.4 in (900 mm) Working pressure by Rules 293.0 lbs/in² (20.8 kg/cm²)
 How connected to shell flanged & D.R. Size of doubling plate under dome _____ Diameter of rivet _____
 of rivets in outer row in dome connection to shell 1.04 in (26.5 mm) about 3.94 in (100 mm)
 Type of Superheater Idang type Manufacturers of _____
 Heating Surface 23.8 M² = 256.26 sq ft each T.H.S. = 768.8 cal ft
 Number of elements 19 sets Material of tubes steel pipe Internal diameter and thickness of tubes 0.98 in (25 mm)
 Material of headers steel plate Tensile strength 29 ton/in² Thickness 0.87 in (22 mm) Can the superheater _____
 the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____
 Area of each safety valve 0.06 ft² (0.0057 m²) Are the safety valves fitted with easing gear yes
 Rules _____ Pressure to which the safety valves are adjusted 236.26 lbs/in² (16.4 kg/cm²)
 tubes 454.4 lbs/in² (32 kg/cm²) forgings and castings _____ and after assembly in place _____
 valves fitted to free the superheater from water where necessary yes
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes

The foregoing is a correct description of the boiler and superheater.
Koyagishima Shipyard
Kawaminami Industry Co.

Dates of Survey while building _____ Are the approved plans of boiler and superheater forwarded hereto (If not state date of approval) _____
 During progress of work in shops - - -
 During erection on board vessel - - -
 Total No. of visits _____

Is this Boiler a duplicate of a previous case _____ If so, state Vessel's name and Report No. _____

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) _____

See Rpt 9 attached.

Survey Fee ... £ Included: _____ When applied for, _____
 Travelling Expenses (if any) £ _____ When received, _____

S. T. Williams & H. L. Laver
 Engineer Surveyor to Lloyd's Register

Committee's Minute TUES. 25 SEP 1951

Assigned See F.E. Rpt.



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