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REPORT ON BOILERS.

No. 1514

Received at London Office

22 FEB 1926

Date of writing Report 18th Jan. 26 When handed in at Local Office 18th Jan. 19 26 Port of NAGASAKI.

No. in Reg. Book. Survey held at NAGASAKI. Date, First Survey 7th April 1925 Last Survey 22nd October 19 25 (Number of Visits 14.)

on the Steel Twin Screw Motor Vessel "SANTOS MARU". Tons { Gross 7267 Net 4387

built at Nagasaki. By whom built Mitsubishi Zosen Kaisha, Ltd. Yard No. 410. When built 1925.

engines made at Winterthur, Switzerland. By whom made Sulzer Brothers. Engine No. 5465 & 5471. When made 1925.

boilers made at / By whom made / Boiler No. / When made /

owners Osaka Shosen Kabushiki Kaisha. Port belonging to Osaka.

VERTICAL DONKEY BOILER.

Made at Nagasaki. By whom made Mitsubishi Zosen Kaisha. Boiler No. 410. When made 1925. Where fixed Ford. End of Engine Casing Uppermost Dk.

Manufacturers of Steel Imperial Steel Works. Yawata. Japan.

Total Heating Surface of Boiler 300.3 sq. feet. Is forced draught fitted No. Coal or Oil fired Oil

No. and Description of Boilers One, Vertical Type Multitubular Boiler. Working pressure 100 lbs.

Tested by hydraulic pressure to 200 lbs per sq.in. Date of test 11th September, 1925. No. of Certificate 119.

Area of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler 2 Spring loaded.

Area of each set of valves per boiler { per rule 3.5344 sq.ins. as fitted 6.2832 sq.ins. Pressure to which they are adjusted 100 lbs Are they fitted with easing gear Yes

State whether steam from main boilers can enter the donkey boiler No. Smallest distance between boiler or uptake and bunkers

Woodwork 6'-0" Is oil fuel carried in the double bottom under boiler No Smallest distance between base of boiler and tank top plating

Boiler fitted at Uppermost deck. Is the base of the boiler insulated Yes Largest internal dia. of boiler 5'-6" Height 13'-6"

Shell plates: Material Mild Steel Tensile strength 28.6 Thickness 1/2"

Are the shell plates welded or flanged Furnace bottom plate, furnace mouth & smoke flue tube (Flanged & Welded) Description of riveting: circ. seams { end Sing. riv. inter. Sing. riv. long. seams Doub. riveted

Dia. of rivet holes in { circ. seams 15/16 long. seams 15/16 Pitch of rivets { 2 1/4" 2 7/8" Percentage of strength of circ. seams { plate 58.4% rivets 50.5% of Longitudinal joint { plate 67.5% rivets 78.7% combined

Working pressure of shell by rules 138 per sq.in. Thickness of butt straps { outer inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished partial spherical Material Mild Steel

Tensile strength 28.8 Thickness 5/8" Radius 4'-9" Working pressure by rules 102.5 lbs sq.in.

Description of Furnace: Plain, spherical, or dished crown Spherical. Material Mild Steel Tensile strength 26.1

Thickness 9/16" External diameter { top bottom Length as per rule Working pressure by rules 167 lbs

Pitch of support stays circumferentially and vertically Are stays fitted with nuts or riveted over

Diameter of stays over thread Radius of spherical or dished furnace crown 2'-3 1/2" Working pressure by rule

Thickness of Ogee Ring 9/16" Diameter as per rule { D 66" d 62" Working pressure by rule 150 lbs

Combustion Chamber: Material Tensile strength Thickness of top plate

Radius if dished Working pressure by rule Thickness of back plate Diameter if circular

Length as per rule Pitch of stays Are stays fitted with nuts or riveted over

Diameter of stays over thread Working pressure of back plate by rules

Tube Plates: Material { front M.S. back M.S. Tensile strength { 26.3 26.3 Thickness { 13/16 13/16 Mean pitch of stay tubes in nests 9.4875"

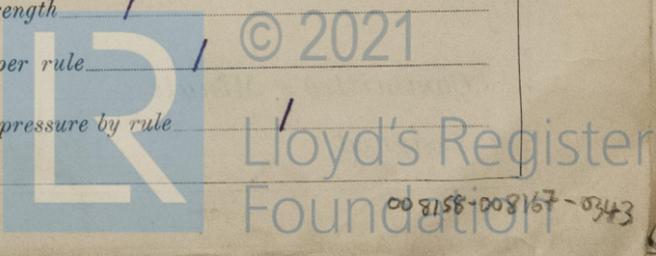
of comprising shell, Dia. as per rule { front 100.3 lbs back 124 lbs Pitch in outer vertical rows { 3 5/8" 3 5/8" Dia. of tube holes FRONT { stay 2 11/16 plain 2 5/8 BACK { stay 2 17/32 plain 2 1/2

Is each alternate tube in outer vertical rows a stay tube Yes Working pressure by rules { front 224 lbs sq.in. back 224 lbs sq.in.

Girders to combustion chamber tops: Material Tensile strength

Depth and thickness of girder at centre Length as per rule

Distance apart No. and pitch of stays in each Working pressure by rule



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