

REPORT ON MACHINERY.

No. 2186

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Date of writing Report 18 July 1917 When handed in at Local Office 19 Port of Kobe
 Date, First Survey 17 Mar. 1916 Last Survey 14 Decem. 1917 (Number of Visits 47)
 Name of vessel on the Single Screw Steamer "Oridono Maru"
 Built at Kobe By whom built The Mitsui Bishi Dockyard Co Ltd When built 1917
 Engines made at Kobe By whom made The Mitsui Bishi Dockyard Co Ltd when made 1917
 Boilers made at do By whom made do when made do
 Registered Horse Power Owners Tatsuumi Kisen K. Kaisha Port belonging to Nishinomiya
 Nom. Horse Power as per Section 28 510 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 26 1/2 : 43 : 72 Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft as per rule 15 1/2 Material of screw shaft as fitted 15 9/16 Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner Is the after end of the liner made water tight
 If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5" 7"
 Dia. of Tunnel shaft as per rule 13.16 Dia. of Crank shaft journals as per rule 13.82 Dia. of Crank pin 14" Size of Crank webs 9 1/2 x 26 Dia. of thrust shaft under rollers 13 7/8 Dia. of screw 18" 0" Pitch of Screw 18" 0" No. of Blades 4 State whether moveable Yes Total surface 100 sq ft
 No. of Feed pumps 2 Diam. of ditto 8" Stroke 21" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diam. of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps Gen. Service 8 1/2 x 6 x 9 Duplex No. and size of Suctions connected to both Bilge and Donkey pumps Weir fitted 10 1/2 x 8 x 21" Ballast 10, 12, 12 1/2 Holds, &c. Two 3 1/2 to each hold, Nos 1, 2, 3 + 4.
 No. of Bilge Injections 1 sizes 9 3/8 Connected to condenser, or to circulating pump Cir. p. Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible None
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Larger valves, smaller Cocks.
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line Above
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
 What pipes are carried through the bunkers Forward bilge suction How are they protected Strong wood casings
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper Grating in Eng. Rm.

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel David Colville & Son. Leeds Forge
 Total Heating Surface of Boilers 7618 sq ft Is Forced Draft fitted Yes No. and Description of Boilers Three Single Ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 27 7/11/17 No. of Certificate LLOYDS TEST 360 lbs R.O.B. 247/11/17
 Can each boiler be worked separately Yes Area of fire grate in each boiler 61.19 sq ft No. and Description of Safety Valves to each boiler Two Direct Spring Area of each valve 3 1/2" dia. Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 3 ft Mean dia. of boilers 15" 0" Length 11' 6" Material of shell plates Steel
 Thickness 1 7/32 Range of tensile strength 28/32 ton Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double riv. long. seams Double straps Diameter of rivet holes in long. seams 1 5/16 Pitch of rivets 9 3/16 x 4 19/32 Top of plates or width of butt straps 19 1/2 x 1 1/8 in
 Percentages of strength of longitudinal joint rivets 89.8 Working pressure of shell by rules 183 lbs Size of manhole in shell 16" x 12" out plate 85.7
 Size of compensating ring 4 1/2 x 1 3/32 + fl. No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 48 3/4"
 Length of plain part top Thickness of plates crown 19/32 Description of longitudinal joint Weld No. of strengthening rings bottom
 Working pressure of furnace by the rules 193 lbs Combustion chamber plates: Material Steel Thickness: Sides 11/32 Back 11/32 Top 11/32 Bottom 3/4"
 Pitch of stays to ditto: Sides 8 1/2 x 8 5/8 Back 8 1/2 x 9 Top 8 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 193 lbs
 Material of stays Steel Area at smallest part 1 1/2 Area supported by each stay 8 1/2 x 9 Working pressure by rules 180 lbs End plates in steam space: 188 Material Steel Thickness 1 3/16 Pitch of stays 20 3/8 x 18 How are stays secured Double nuts Working pressure by rules 180 lbs Material of stays Steel
 Area at smallest part 6.33 Area supported by each stay 20 3/8 x 18 Working pressure by rules 180 lbs Material of Front plates at bottom Steel
 Thickness 3/4 Material of Lower back plate Steel Thickness 11 1/8 Greatest pitch of stays 14 5/8 at ends with 1/2 doubling Working pressure of plate by rules 180 lbs
 Diameter of tubes 3" Pitch of tubes 4 1/2 x 4 1/8 Material of tube plates Steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 9 1/8
 Pitch across wide water spaces 13 1/2 with Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10.3 (12" out. pl. Length as per rule 35 3/8 Distance apart 8 1/2 Number and pitch of stays in each 3 @ 8 1/2
 Working pressure by rules 194 lbs Steam dome: description of joint to shell % of strength of joint
 Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
 Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
 Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
 Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

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