

# REPORT ON MACHINERY.

SA No. 2590

Received at London Office

Date of writing Report 20<sup>th</sup> Aug 1919 When handed in at Local Office 19 Port of Kobe

No. in Survey held at Kobe Date, First Survey 25<sup>th</sup> Jan. 1919 Last Survey 19<sup>th</sup> July 1919  
 Reg. Book. on the Steel Single Screw Steamer "Sydney Maru" (Number of Visits 25) Tons { Gross 4105  
 Net 2523

Master K. Okada Built at Kobe By whom built The Kawasaki Dockyard Co. Ltd. When built 1919  
 Engines made at Kobe By whom made The Kawasaki Dockyard Co. Ltd. when made 1919  
 Boilers made at do By whom made do when made 1919  
 Registered Horse Power 356 Owners Kokusai Kisen Kaisha Ltd Port belonging to Kobe  
 Nom. Horse Power as per Section 28 356 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three  
 Dia. of Cylinders 23 1/2 + 39 + 65 Length of Stroke 48 Revs. per minute 84 Dia. of Screw shaft 15 Material of Forged 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  
 in the propeller boss ✓ 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 63 3/4  
 Dia. of Tunnel shaft 12.65 Dia. of Crank shaft journals 13.3 Dia. of Crank pin 13 7/8 Size of Crank webs 25 1/2 x 9 Dia. of thrust shaft under  
 collars 13 1/2 Dia. of screw 16-6 Pitch of Screw 17-0 to 19-0 No. of Blades 4 State whether moveable yes Total surface 85 sq. ft.  
 No. of Feed pumps One Diameter of ditto 4 1/2 Stroke 24 Can one be overhauled while the other is at work yes With Weir's Independent  
 No. of Bilge pumps Two Diameter of ditto 4 1/2 Stroke 24 Can one be overhauled while the other is at work yes Feed pumps  
 No. of Donkey Engines Three Sizes of Pumps Ballast 10 x 11 x 12 duplex. Genl. dky. 7 1/2 x 5 x 6 duplex. No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Three 3 1/2 In Holds, &c. No. 1 - two 3 1/2 No. 2 - two 3 1/2 No. 3 - two 3 1/2  
 In Boiler Room Two 3 1/2 No. 4 - two 3 1/2 Tunnel Well - One 3  
 No. of Bilge Injections 1 sizes 7 1/2 Connected to condenser, or to circulating pump no 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 both  
 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 Two 3 1/2 Bilge Suct. from Nos. 1 + 2 Holds How are they protected Wood covering  
 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 deck level

BOILERS, &c.—(Letter for record (S) Manufacturers of Steel Carnegie Steel Co., Illinois Steel Co., Ambr. Spiral Tube Co.

Total Heating Surface of Boilers 4610 Is Forced Draft fitted yes No. and Description of Boilers Two - Single Ended  
 Working Pressure 200 lbs Tested by hydraulic pressure to 4000 Date of test 1919 No. of Certificate 1919  
 Can each boiler be worked separately yes Area of fire grate in each boiler 60.5 No. and Description of Safety Valves to  
 each boiler Two spring loaded Area of each valve 3 3/4 dia. Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 18 Mean dia. of boilers 14-6 Length 12-0 Material of shell plates steel  
 Thickness 1 5/16 Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged Welded Descrip. of riveting: cir. seams double rivet  
 long. seams double rivet Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 8 3/4 + 4 3/8 Lap of plates or width of butt straps 9 3/8 + 1 1/4  
 Per centages of strength of longitudinal joint rivets 84.3 Working pressure of shell by rules 202 Size of manhole in shell 18 x 22  
 plate 27.3  
 Size of compensating ring 7 1/2 + flange x 1 3/8 No. and Description of Furnaces in each boiler Three Morrison's Suspension Material Steel Outside diameter 48 1/4  
 Length of plain part top 2 1/2 bottom 2 1/2 Thickness of plates 2 1/32 Description of longitudinal joint Welded No. of strengthening rings ✓  
 Working pressure of furnace by the rules 221 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1/16 Back 1/16 Top 1/16 Bottom 7/8  
 Pitch of stays to ditto: Sides 8 1/2 x 8 5/8 Back 8 1/2 x 9 Top 8 5/8 x 9 3/8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 202  
 Material of stays Steel Area at smallest part 2.10 Area supported by each stay 76.5 Working pressure by rules 24.7 End plates in steam space:  
 Material Steel Thickness 1 5/16 Pitch of stays 19 3/4 x 20 1/2 How are stays secured Dble nuts + small washers Working pressure by rules 202 Material of stays steel  
 Area at smallest part 10.12 Area supported by each stay 405 Working pressure by rules 260 Material of Front plates at bottom steel  
 Thickness 13/16 Material of Lower back plate Steel Thickness 3/4 Greatest pitch of stays 15 x 15 Working pressure of plate by rules 225  
 Diameter of tubes 3/4 Pitch of tubes 4 5/16 x 4 1/16 Material of tube plates Steel Thickness: Front 13/16 Back 13/16 Mean pitch of stays 8 3/4  
 Pitch across wide water spaces 3 3/4 + 3/4 Working pressures by rules 267 Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 10 3/4 x 13/16 (2) Length as per rule 34 1/2 Distance apart 9 3/8 Number and pitch of stays in each Three @ 8 1/2  
 Working pressure by rules 202 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 None Date of Approval of Plan 1919 Tested by Hydraulic Pressure to 2020  
 Date of Test 1919 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ✓  
 Diameter of Safety Valve 1 1/2 Pressure to which each is adjusted 202 Is Easing Gear fitted ✓



