

## REPORT ON MACHINERY.

No. 2087

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Date of writing Report 22<sup>nd</sup> Sept 1917 When handed in at Local Office ✓ 10 Port of Roh  
 No. in Survey held at Roh Date, First Survey 28<sup>th</sup> July 1916 Last Survey 28<sup>th</sup> Sept 1917  
 Reg. Book. on the Steel Single Screw Steamer "War Lion" (Number of Vials)  
 Master J. Carter Built at Roh By whom built The Kawasaki Dockyard Co Ltd When built 1917-9  
 Engines made at Roh By whom made The Kawasaki Dockyard Co Ltd when made 1917-9  
 Boilers made at do By whom made do when made do  
 Registered Horse Power Owners Jurress, Withy & Co Ltd Port belonging to London  
 Nom. Horse Power as per Section 28 440 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 : 43½ : 42 Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft as per rule 15.41 Material of Steel  
 as fitted 16" screw shaft  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No 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 5' - 5½"  
 Dia. of Tunnel shaft as per rule 13.48 Dia. of Crank shaft journals as per rule 14.15 Dia. of Crank pin 14¾ Size of Crank webs 9½ x 20½ Dia. of thrust shaft under  
 as fitted 13¾ as fitted 14¾ Total surface 100 sq ft.  
 Collars 14¾ Dia. of screw 17" 6" Pitch of Screw 19.0 mean No. of Blades 4 State whether moveable Yes  
 No. of Feed pumps 1 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes (✓ Weir fed)  
 No. of Bilge pumps 2 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines Two Sizes of Pumps Bal. dup. 10-11-12 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Three 3½" Gen. brk. dup. 7½-5.6 in Holds, &c. No. 1, 3 + 1 holds: Two 3½"  
One 3" to tunnel well Small - 5½-3.9 No. 2 hold: two 4"  
 No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Cir. p. Is a separate Donkey Suction fitted in Engine room & size Yes 3½"  
 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 Now  
 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 Now How are they protected ✓  
 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 S. R. platform

OILERS, &c.—(Letter for record S) Manufacturers of Steel Colville; Stn Durham; Alan Wood; Carnegie;  
4609 + 1132 in aw bld John Spencer & Sons. Weymouth & Co.  
 Total Heating Surface of Boilers 5441 Is Forced Draft fitted Yes No. and Description of Boilers Two S. S. & one aw. S. E.  
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 10/3/14: 31/3/17 No. of Certificate 400 lbs hyd.  
10/3/17 + 31/3/17 A.S. R.  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 60½ No. and Description of Safety Valves to  
 each boiler Two direct spring Area of each valve 3¾ 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 12" Mean dia. of boilers 14" 6" Length 12" 0" Material of shell plates Steel  
 Thickness 1½" Range of tensile strength 29-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double riv.  
 long. seams Double riv. Diameter of rivet holes in long. seams 13/8" Pitch of rivets 8¾ x 4¾ Gap of plates or width of butt straps 1" 7/8"  
 Per centages of strength of longitudinal joint rivets 95.8 Working pressure of shell by rules 209 lbs Size of manhole in shell 16" x 12"  
 plate 84.3  
 Size of compensating ring (7½ + flange) x 1½" No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 48½"  
 Length of plain part top all round crown 5/8" Description of longitudinal joint Weld No. of strengthening rings ✓  
 bottom bottom bottom  
 Working pressure of furnace by the rules 208 lbs Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 7/8"  
 Pitch of stays to ditto: Sides 8½ x 8½ Back 9 x 8½ Top 9 x 8½ If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 203 lbs  
 Material of stays Steel Area at smallest part 2.1 Area supported by each stay 9¾ x 8½ Working pressure by rules 230 End plates in steam space:  
 Material Steel Thickness 1½" Pitch of stay 19¾ x 20½ How are stays secured Double nut Working pressure by rules 201 Material of stays Steel  
 Area at smallest part 10 Area supported by each stay 19¾ x 20½ 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 13½ Working pressure of plate by rules 200 lbs  
 Diameter of tubes 3¾" Pitch of tubes 47/16 x 45/16 Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 8¾"  
 Pitch across wide water spaces 13¾ Working pressures by rules 200 lbs Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 10½ x 13 (2) Length as per rule 34½ Distance apart 9¾ Number and pitch of stays in each 3 @ 8½  
 Working pressure by rules 230 Steam dome: description of joint to shell ✓ % of strength of joint ✓

UPPERHEATER. Type Schmidt Date of Approval of Plan ✓ Tested by Hydraulic Pressure to 200 lbs  
 Date of Test 26<sup>th</sup> June 1917 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes  
 Material of Safety Valve 3" Pressure to which each is adjusted 205 lbs Is Easing Gear fitted No



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