

# REPORT ON MACHINERY.

No. 13625  
MON. SEP. 22. 1913

Received at London Office

Date of writing Report 19<sup>th</sup> Sept 13 When handed in at Local Office 10 Port of Hamburg  
 No. in Survey held at Kiel Date, First Survey 16.7.1912 Last Survey 17.9.1913  
 Reg. Book. Steel & L. Fr. "Mokican" (Number of Visits 24) Tons { Gross 5073  
 Net 3026  
 Master W. Jäger Built at Kiel By whom built Howaldtswerke When built 1913  
 Engines made at Kiel By whom made Howaldtswerke when made 1913  
 Boilers made at Kiel By whom made Howaldtswerke when made 1913  
 Registered Horse Power 320 Owners Deutsch-Amerika. Petroleum Ges Port belonging to Hamburg  
 Nom. Horse Power as per Section 28 320 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

**ENGINES, &c.**—Description of Engines Quad. Expansion No. of Cylinders 4 No. of Cranks 4  
 Dia. of Cylinders 19 1/2, 28, 41 & 59 Length of Stroke 4 1/8 Revs. per minute 80 Dia. of Screw shaft 12 1/2 Material of Steel  
 as per rule 12 1/2 as fitted 12 3/8 screw shaft)  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight  
 in the propeller boss yes If the liner is in more than one length are the joints burned no 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 no If two  
 liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 49.89  
 Dia. of Tunnel shaft 10 3/4 as per rule 10 3/4 Dia. of Crank shaft journals 11 1/16 as per rule 11 1/16 Dia. of Crank pin 11 3/16 Size of Crank webs 7 1/2 x 10 1/2 Dia. of thrust shaft under  
 collars 11 5/8 Dia. of screw 15 1/2 Pitch of Screw 15 1/2 No. of Blades 4 State whether moveable yes Total surface 77.5 sq. ft.  
 No. of Feed pumps 2 Diameter of ditto 4 Stroke 23 1/2 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 4 Stroke 23 1/2 Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 6 Sizes of Pumps See Specifications No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 7 off 3 1/2, 1 off 2 from bilge In Holds, &c. 14 off 8 from cargo tanks, 10 off 6 from  
summers, 2 off 5 from deep tank, 4 off 5 from coffee dunnage, 1 off 5 from after peak, 1 off 5 from forepeak  
 No. of Bilge Injections 1 sizes 8 Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room of 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 no  
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Cocks & Valves  
 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 none How are they protected no  
 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  
 Dates of examination of completion of fitting of Sea Connections 10/7 13 of Stern Tube 10/7 13 Screw shaft and Propeller 10/7 13  
 Is the Screw Shaft Tunnel watertight no Is it fitted with a watertight door no worked from no

**BOILERS, &c.**—(Letter for record S) Manufacturers of Steel The Glasgow Iron & Steel Co. Ltd.  
 Total Heating Surface of Boilers 4512 Is Forced Draft fitted yes No. and Description of Boilers 2 single ended multi-tubular  
 Working Pressure 213 lbs. Tested by hydraulic pressure to 426 lbs. Date of test 23/6 & 4/7 13 No. of Certificate 215 & 216  
 Can each boiler be worked separately yes Area of fire grate in each boiler 50 sq. ft. No. and Description of Safety Valves to  
 each boiler 2 spring load. Area of each valve 12 sq. in. Pressure to which they are adjusted 213 lbs. Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 16 Mean dia. of boilers 14 1/4 Length 11 6 3/8 Material of shell plates Steel  
 Thickness 1 3/4 Range of tensile strength 28-32 Tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams lap, dbl. riv.  
 long. seams dbl. butt, quad. riv. Diameter of rivet holes in long. seams 1.4 Pitch of rivets 18.43 Lap of plates or width of butt straps 27.56  
 Per centages of strength of longitudinal joint 119.8% Working pressure of shell by rules 227.6 lbs. Size of manhole in shell 11.8 x 15.7  
 plate 22.3% Size of compensating ring 26 x 30 x 1.31 No. and Description of Furnaces in each boiler 3 horizontal Material Steel Outside diameter 43.3  
 Length of plain part 6 Thickness of plates 1.68 Description of longitudinal joint welded No. of strengthening rings none  
 Working pressure of furnace by the rules 241.7 lbs. Combustion chamber plates: Material Steel Thickness: Sides .68 Back .68 Top .68 Bottom .99  
 Pitch of stays to ditto: Sides 7.87 x 7.5 Back 7.87 x 7.5 Top 7.87 x 7.5 If stays are fitted with nuts or riveted heads nut & riv. Leads Working pressure by rules 292.9 lbs.  
 Material of stays Steel Diameter at smallest part 1.45 Area supported by each stay 59 sq. in. Working pressure by rules 226.4 lbs. End plates in steam space:  
 Material Steel Thickness 1.14 Pitch of stays 16 x 16.5 How are stays secured nut & riv. Working pressure by rules 287.4 lbs. Material of stays Steel  
 Diameter at smallest part 3 Area supported by each stay 248 sq. in. Working pressure by rules 293.5 lbs. Material of Front plates at bottom Steel  
 Thickness 1.03 Material of Lower back plate Steel Thickness 1.2 Greatest pitch of stays 19.68 Working pressure of plate by rules 296.4 lbs.  
 Diameter of tubes 2.5 Pitch of tubes 375 x 7.5 Material of tube plates Steel Thickness: Front 1.03 Back .91 Mean pitch of stays 7.5  
 Pitch across wide water spaces 13.8 Working pressures by rules 215 lbs. Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 8.6 x 15 Length as per rule 31.5 Distance apart 7.8 Number and pitch of stays in each 3 - 7.5  
 Working pressure by rules 213 lbs. Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked  
 separately no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet  
 holes no Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no  
 If stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no  
 Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

If not, state whether, and when, one will be sent

