

## REPORT ON MACHINERY.

No. 49382

Port of Newcastle

Received at London Office 18 SEP 1905

No. in Survey held at Newcastle Date, first Survey Mar 17 '03 Last Survey Sept 13 1904  
 Reg. Book. WIN 55 Maritzburg "MENDOZA" (Number of Visits 31)  
 Master V. J. J. J. J. Built at Newcastle By whom built Armstrong & Co. Newcastle Tons Gross 5874 Net 3687  
 Engines made at Wallsend By whom made Wallsend Shipyard Engle when made 1904  
 Boilers made at " By whom made " when made 1903 & 4  
 Registered Horse Power 851 Owners Lloyd Italiano Soc. de Navag. Port belonging to Genoa  
 Nom. Horse Power as per Section 28 851 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Iron In C.P.D. No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 25" 41" 68" Length of Stroke 48" Revs. per minute 65 Dia. of Screw shaft 13.91" Material of Steel  
 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 yes If two  
 liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 5' 3"  
 Dia. of Tunnel shaft 12.64" Dia. of Crank shaft journals 13.3" Dia. of Crank pin 14" Size of Crank webs 22x9 1/2" Dia. of thrust shaft under  
 collars 14 1/2" Dia. of screw 16 1/2" Pitch of screw 19 ft. No. of blades 3 State whether moveable M Total surface 70 sq  
 No. of Feed pumps 1 pair Diameter of ditto 4x10 1/2" Stroke 26" Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 3 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 4 Sizes of Pumps Ballast 10x10x10" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 5 1/2x4x6 3/4" In Holds, &c. No. 1, 2, 3 Holds 2 of 3 1/2"  
 No. of bilge injections 2 sizes 8" Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size 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 yes  
 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 Steam pipes How are they protected tunnel  
 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  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock 3.9.05 Is the screw shaft tunnel watertight yes  
 Is it fitted with a watertight door yes worked from top platforms

BOILERS, &c.—(Letter for record A) Total Heating Surface of Boilers 12250 sq. ft. Is forced draft fitted yes  
 No. and Description of Boilers 5 St. Marine type Working Pressure 180 lb. Tested by hydraulic pressure to 360  
 Date of test 31.7.03 Can each boiler be worked separately yes Area of fire grate in each boiler 52.3 sq. ft. No. and Description of safety valves to  
 each boiler 2 Spring Area of each valve 8.29 Pressure to which they are adjusted 185 Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 20" Mean dia. of boilers 15 ft. Length 11' 6" Material of shell plates S  
 Thickness 1 1/2" Range of tensile strength 32 Are they welded or flanged Ends Descrip. of riveting: cir. seams Lap 2. 1/2" long. seams 2 butt shape  
 Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 9 1/8" Lap of plates on width of butt straps 20 1/16"  
 Per centages of strength of longitudinal joint 91.8 Working pressure of shell by rules 206 lb. Size of manhole in shell 16x12"  
 Size of compensating ring M. Heil No. and Description of Furnaces in each boiler 3 Morrison's Material S Outside diameter 49 1/2"  
 Length of plain part top 7 1/2" Thickness of plates crown 7 1/2" Description of longitudinal joint weld No. of strengthening rings 1  
 Working pressure of furnace by the rules 212 Combustion chamber plates: Material S Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 1 1/2"  
 Pitch of stays to ditto: Sides 10x8 1/2" Back 9 1/2x8 1/2" Top 10x7" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 189  
 Material of stays iron Diameter at smallest part 1 1/2" Area supported by each stay 85" Working pressure by rules 213 End plates in steam space:  
 Material S Thickness 1 3/8" Pitch of stays 15x21 How are stays secured 8 nuts Working pressure by rules 254 Material of stays S  
 Diameter at smallest part 3.12 Area supported by each stay 25" Working pressure by rules 229 Material of Front plates at bottom S  
 Thickness 1" Material of Lower back plate S Thickness 1" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 191  
 Diameter of tubes 2 1/2" Pitch of tubes 3 1/4x3 1/8" Material of tube plates S Thickness: Front 1" Back 3/4" Mean pitch of stays 4 1/2"  
 Pitch across wide water spaces 13" Working pressures by rules 212 lb. Girders to Chamber tops: Material S Depth and  
 thickness of girder at centre 8 1/2x1 1/2" Length as per rule 30 1/2" Distance apart 10" Number and pitch of Stays in each 2-9 1/2"  
 Working pressure by rules 300 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked  
 separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet  
 holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness  
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed  
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

Lloyd's Register  
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**DONKEY BOILER—** No. Description

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves

No. of safety valves Area of each Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can enter the donkey boiler

Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength

Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets

Lap of plating Per centage of strength of joint Rivets Thickness of shell crown plates Radius of do. No. of Stays to do.

Dia. of stays Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint

Thickness of furnace crown plates Stayed by Working pressure of shell by rules

Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

**SPARE GEAR.** State the articles supplied:—1 set connecting rod bolts & nuts. 2 main bearing bolts and nuts. 1 set of coupling bolts & nuts. 1 set of feed & bilge pump valves. nuts bolts and assorted iron set of propeller blades and shaft.

The foregoing is a correct description,

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED. Manufacturer.

Dates of Survey while building

During progress of work in shops— 1903. Mar. 17, Apr. 28, May 26, June 5, 10, July 17, 21, Aug. 12, 13, Sep. 10, 29, Dec. 16, 1904, May 10, 1905

During erection on board vessel— 1903. June 8, 17, 27, July 7, 11, Aug. 26, Sep. 2, 9, Sep. 13

Total No. of visits 31

Is the approved plan of main boiler forwarded herewith 400

" " " donkey " " "

**General Remarks** (State quality of workmanship, opinions as to class, &c.) The Machinery and boilers have been built under Special Survey, materials and workmanship good and and efficient. Engines and boilers examined under full steam & found satisfactory. In my opinion this vessel is now eligible for the record of L.M.C. 11/04 Lewis launched May 1904.

It is submitted that this vessel is eligible for THE RECORD L.M.C. 11.04 F.D. ELECT LIGHT

18.9.05

The amount of Entry Fee... £ 3 : : When applied for, 16 SEP 1905

Special ... £ 62 11 : : When received, 18/9/05

Donkey Boiler Fee ... £ : : : 19

Travelling Expenses (if any) £ : : :

Committee's Minute TUES. 19 SEP 1905

Assigned + L.M.C. 11.04

J. J. Lindley  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.