

t. 4. **REPORT ON MACHINERY.** No. 69862

Received at London Office
of writing Report 1st May 1917 When handed in at Local Office 1st May 1917 Port of Newcastle on Tyne

in Survey held at Garron Date First Survey 13th Jan 1917 Last Survey 30th April 1917
Book 4 on the SS Madrono (Number of Visits 5854)
Tons Gross 5854 Net 3719
Built at Newcastle By whom built Palmer & Co When built 1917

Lines made at Sunderland By whom made C Clark when made 1917
Machinery made at do By whom made do when made 1917
Registered Horse Power (A.M. Cochrane) Port belonging to London

Horse Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

FINES, &c.—Description of Engine 2 attached upst. 26/4/17 No. of Cylinders 2 No. of Cranks 2

of Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule Material of screw shaft
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight

Is 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

are fitted, is the shaft lapped or protected between the liners Length of stern bush
Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under

of screws Dia. of screw Pitch of Screw No. of Blades State whether moceable Total surface
of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work
of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room In Holds, &c.
of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
What pipes are carried through the bunkers How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Dates of examination of completion of fitting of Sea Connections 26/4/17 of Stern Tube 26/4/17 Screw shaft and Propeller 26/4/17
Is the Screw Shaft-Tunnel watertight Is it fitted with a watertight door worked from

ROLLERS, &c.—(Letter for record) Manufacturers of Steel

Working Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to
each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

Long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
Percentages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell

Material of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
Length of plain part Thickness of plates Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
Material of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

Thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
Working pressure by rules 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
Material Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

Are stays 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



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

See Report No 26964

The spare feed pump valves are now on board.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building

During progress of work in shops --- During erection on board vessel --- Total No. of visits	1917
	Jan 13, Feb 7, Apr 26 30
	4

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders	Shells	Covers	" donkey "	" "	" "
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft	Propeller
Stern tube	Steam pipes tested	Engine and boiler seatings	7/2/17	Engines holding down bolts	
Completion of pumping arrangements	Boilers fixed	Engines tried under steam			
Main boiler safety valves adjusted	Thickness of adjusting washers				
Material of Crank shaft	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.		
Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.		
Material of Steam Pipes		Test pressure			

Is an installation fitted for burning oil fuel

Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with.

Is this machinery duplicate of a previous case

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

This vessel is now fitted for coal burning for the outward voyage and the Survey is complete.

The report on electric installation will be forwarded when received from the contractors.

It is submitted that this vessel is eligible for THE RECORD. + LMC 4.17. F.D.

Fitted for oil fuel 4.17. F.P. above 150°F

The amount of Entry Fee ... £	:	:	When applied for,
Special £	:	:	10
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	10

George Murdoch
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

TUE 15 MAY 1917

Assigned

All Id fe rpt attached

Certification (if required) to be sent to the Registrar not to write on or below the space for Committee's Minute.



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