

SHIP'S NAME

*"Le-Anau" 25242Lm*

## LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

## ENGINES.

Rec 11/12/99

Description *Compound Inverted Direct Acting*  
 Made by *Messrs Denny & Co*  
 When *18 49* At *Dumbarton*  
 Diameter of cylinders *36 1/2 x 63* Length of stroke *42"*  
 No. of revolutions per minute *40*  
 Point of cut off *.65*  
 Diameter of screw shaft *11 1/2"*  
 Diameter of crank shaft journals *11 3/4" Int 10 3/4"*  
 Diameter of screw, ~~and paddle wheel~~ *13 1/2"*  
 Pitch of screw *17 1/2"*  
 No. of blades, *Four* Total surface *46 ft*  
 No. of bilge pumps *Two* and sizes *3 1/2 dia x 21 1/4" Hk*  
 Do they pump from each compartment *Yes*

Are all the bilge suction pipes fitted with roses *Yes*  
 No. of feed pumps *Two* and sizes *3" dia x 21 1/4" Hk*  
 What gauges are there attached to the engines and boilers ... *Three Steam One Vacuum & One Compound*  
 Description and size of Donkey Pumps *One Double Acting 8" x 4" x 9"*  
 Where do they pump from *From the Sea Bilge Hotwell & Tanks*  
 No. of bilge injections *One* and sizes *4 1/2"*  
 Are they connected to air, or circulating pumps *No Circulating*  
 Is there a hand pump in the engine room *Yes*  
 Can it be worked by the main engines *No*  
 Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*

## MAIN BOILERS.

Number *Two* Description *Round Horizontal*  
 Made by *Denny & Co*  
 When *18 49* At *Dumbarton*  
 Working pressure *40 lbs*  
 Tested by hydraulic pressure to *140 lbs* Date *26.8.99*  
 Description of super-heating apparatus *Round Vertical*  
 Can each boiler be worked separately *Yes*

Can the super-heater be shut off and the boilers worked separately *No*  
 Description and area of safety valves on each boiler *Two Direct Spring each 10.3" area*  
 No. of square feet of fire-grate surface in each boiler *42 ft*  
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *Yes*  
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times *Yes*

## DONKEY BOILER.

Description *Round Vertical*  
 Where fixed *In Storehold forward*  
 Working pressure *50 lbs*

Tested by hydraulic pressure to *100 lbs* Date *8.11.99*  
 Description and area of safety valves *Two Direct Spring each 10.3" area*  
 No. of square feet of fire grate *13 ft*

## PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *Yes*  
 Are they Kingston valves or common cocks ... *Screw down balance Cocks*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates *All fitted above the turn of the bilge*  
 Are the discharge pipes above or below the deep water line *Above*  
 Are they each fitted with a discharge valve on the plating of the vessel *Yes*

What pipes carried through the bunkers  
 How are they protected  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *On Slip previous to being launched*  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Yes*  
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *Yes*

*Denny & Co* Manufacturer.

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or Steel) Screw (or Paddle) Steam Vessel *"Le-Anau"* owned by *Union S.S. Co. of Glasgow* of the Port of *Dunedin* of *1028* Tons Register, and *200* Registered Horse Power, and that they have been carefully inspected and examined by me at *Dumbarton* and found to be at this date, viz., *Decr 5<sup>th</sup>* 18 *99* in good order and safe working condition.

Amount of Fee for Survey ... £10: " : " *paid*  
 (Travelling Expenses, if any, £2.2.0)

*James Morrison*  
 Engineer Surveyor to Lloyd's Register of Shipping.

*Clyde District*

IRON 489-0286

The engines and boilers of this vessel have  
been built and fitted in accordance  
with the Rules and to the satisfaction  
of the Society's local Engineer Surveyor.

It is submitted that she is  
eligible to be granted a  
Machinery Certificate and  
the notation of  
"Lloyd's M.B. 12,79"

12/12/79

M  
22.12.79



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