

18949 *Iron* Rev 14-6-77

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

<p>Description <i>Compound Inverted</i> Made by <i>Palmer's Company</i> When <i>1870</i> At <i>Newcastle</i> Diameter of cylinders <i>25 1/4</i> Length of stroke <i>30</i> No. of revolutions per minute <i>65</i> Point of cut off <i>5/8 stroke</i> Diameter of screw shaft <i>8 inches</i> Diameter of crank shaft journals <i>7 3/4 inches</i> Diameter of screw, or of paddle wheel <i>11 feet</i> Pitch of screw <i>from 16 to 18 feet</i> No. of blades, <i>3</i> Total surface <i>43.09 feet</i> No. of bilge pumps <i>2</i> and sizes <i>3 3/4 dia</i> Do they pump from each compartment <i>Engine Room only</i></p>	<p>Are all the bilge suction pipes fitted with roses <i>yes</i> No. of feed pumps <i>2</i> and sizes <i>3 3/4 dia</i> What gauges are there attached to the engines and boilers ... <i>2 Steam + Eng Room, 1 in Strokehold 1 Vacuum +</i> Description and size of Donkey Pumps ... <i>1 Comp gauge 4 1/2 dia 8 stroke</i> Where do they pump from ... <i>Bilge + Sea</i> No. of bilge injections <i>one</i> and sizes <i>3"</i> Are they connected to air, or circulating pumps <i>Circulating</i> Is there a hand pump in the engine room <i>no</i> Can it be worked by the main engines _____ Is there a deck hose of sufficient length to reach to any part of the vessel <i>yes</i></p>
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MAIN BOILERS.

<p>Number <i>Two</i> Description <i>Cylindrical</i> Made by <i>Victor & Co Eng Works Co Ltd</i> When <i>1874</i> At <i>London</i> Working pressure <i>75 lbs</i> Tested by hydraulic pressure to <i>150 lbs</i>, Date <i>15/5/77</i> Description of super-heating apparatus <i>none</i> Can each boiler be worked separately <i>yes</i></p>	<p>Can the super-heater be shut off and the boilers worked separately _____ Description and area of safety valves on each boiler ... <i>2 Adams patent Cont. Area = 16.6 sq ins</i> No. of square feet of fire-grate surface in each boiler <i>25.09 feet</i> Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin <i>yes</i> Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times. <i>yes</i></p>
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DONKEY BOILER.

<p>Description <i>Vertical, 2 cross tubes</i> Where fixed <i>On Deck</i> Working pressure <i>40 lbs</i></p>	<p>Tested by hydraulic pressure to <i>not ascertained</i> Date _____ Description and area of safety valves <i>Dead weight 4.0 sq ins</i> No. of square feet of fire grate <i>7.89 sq feet</i></p>
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PIPES, COCKS, AND CONNECTIONS.

<p>Are all connections with the sea direct on the skin of the ship <i>yes</i> Are they Kingston valves or common cocks ... <i>Com Cocks and Screw brass valves</i> Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... <i>yes</i> Are the discharge pipes above or below the deep water line <i>below</i> Are they each fitted with a discharge valve on the plating of the vessel <i>yes</i></p>	<p>What pipes are carried through the bunkers <i>none</i> How are they protected _____ When were the stern tube, propeller, screw shaft, and all connections examined in dry dock <i>At this Survey</i> Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge <i>yes</i> Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead <i>no tunnel</i></p>
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Manufacturer.

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (~~or Wood~~) Screw (~~or Paddle~~) Steam Vessel *Europa* owned by *London Steamship Company* of the Port of *London* of *424* Tons Register, and *140* Registered Horse Power, and that they have been carefully inspected and examined by me at *London* and found to be at this date, viz., *June 11th* 18 *77* in good order and safe working condition.

Amount of Fee for Survey ... £ *7 : 0 : 0* *7/7/77*
 (Travelling Expenses, if any, £ _____)

James Melton
 Engineer Surveyor to Lloyd's Register of Shipping.