

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 494

Port of Newport News Date of First Survey Feb 6<sup>th</sup> Date of Last Survey Feb 19<sup>th</sup> 13 No. of Visits 14  
 No. in on the Steel SS "LORENZO" Port belonging to NEW YORK  
 Reg. Book Built at Newport News By whom Newport News S+DD Co When built 1913  
 Owners New York + Porto Rico S. Co Owners' Address New York  
 Yard No. 1631 Electric Light Installation fitted by Newport News S+DD Co When fitted 1913

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 7 KW sets: General Electric Co. generators Connected to Vertical 5" x 14 1/2" H.P. vertical engines

Capacity of Dynamos EACH 63.6 Amperes at 125 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Starting platform Whether single or double wire system is used double

Position of Main Switch Board Near dynamo having switches to groups ELEVEN of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Galley: 6 switches  
Officers lavatory: 6 switches

If cut outs are fitted on main switch board to the cables of main circuit yes and on each auxiliary switch board to the cables of auxiliary circuits yes and at each position where a cable is branched or reduced in size yes and to each lamp circuit yes

If vessel is wired on the double wire system are cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 100 per cent over the normal current

Are all cut outs fitted in easily accessible positions yes Are the fuses of standard dimensions yes If wire fuses are used are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit Standard fuses

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for 223 arranged in the following groups:

A <u>5</u>	lights each of	<u>32</u>	candle power requiring a total current of	<u>5.0</u>	Amperes
B <u>26</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>14.5</u>	Amperes
C <u>13</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>17.5</u>	Amperes
D <u>18</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>13.0</u>	Amperes
E <u>12</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>6.5</u>	Amperes
<u>39</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>11.5</u>	Amperes
<u>15</u>	lights each of	<u>"</u>	candle power requiring a total current of	<u>9.0</u>	Amperes
<u>2</u>	Mast head light with <u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>19.5</u>	Amperes
<u>2</u>	Side light with <u>2</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>7.5</u>	Amperes
	Cargo lights of		candle power, whether incandescent or arc lights	<u>4.0</u>	Amperes
				<u>1.0</u>	Amperes
				<u>2.0</u>	Amperes

If arc lights, what protection is provided against fire, sparks, &c. yes

Where are the switches controlling the masthead and side lights placed PILOT HOUSE

## DESCRIPTION OF CABLES.

Main cable carrying 63.6 Amperes, comprised of 61 wires, each #18 B.S.G. diameter, .0762 square inches total sectional area  
 Branch cables carrying 19.5 Amperes, comprised of 7 wires, each #14 B.S.G. diameter, .0706 square inches total sectional area  
 Branch cables carrying 6.5 Amperes, comprised of 8 wires, each #19 B.S.G. diameter, .0082 square inches total sectional area  
 Leads to lamps carrying 3 Amperes, comprised of 1 wires, each #14 B.S.G. diameter, .003 square inches total sectional area  
 Cargo light cables carrying 2 Amperes, comprised of 1 wires, each #14 L.S.G. diameter, .003 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Standard Marine, Rubber, Vulcanized Tape, Braid, all in iron conduit except in Cabin, where wood moulding is used

Joints in cables, how made, insulated, and protected soldered, insulated tape, braid etc; in W.T. iron boxes

Are all the joints of cables thoroughly soldered, resin only having been used as a flux yes Are all joints in accessible positions, none being made in bunkers, cargo spaces, or other places which may at any time be used for carrying cargo, stores, or baggage yes

Are there any joints in or branches of the cable leading from dynamo to main switch board no

How are the cables led through the ship, and how protected Galvanized iron conduit



**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible no

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture Iron Conduit

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Iron Conduit

What special protection has been provided for the cables near boiler casings Iron Conduit

What special protection has been provided for the cables in engine room Iron Conduit

How are cables carried through beams Iron Conduit through bulkheads, &c. Iron Conduit

How are cables carried through decks Iron Conduit, nuts, W.T. Boxes

Are any cables run through coal bunkers yes or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected Galvanised Iron Conduit

Are any lamps fitted in yes spaces which may at times be used for cargo, coals, or baggage yes

If so, how are the lamp fittings and cable terminals specially protected W.T. Globes, iron Caps, Ball directly across

Where are the main switches and cut outs for these lights fitted Main Switch Board Flame

If in the spaces, how are they specially protected ✓

Are any switches or cut outs fitted in bunkers no

Cargo light cables, whether portable or permanently fixed Portable How fixed ✓

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel ✓

How are the returns from the lamps connected to the hull ✓

Are all the joints with the hull in accessible positions ✓

The installation is supplied with a voltmeter and 2 amperemeters fixed Main Switchboard

**VESSELS BUILT FOR CARRYING PETROLEUM.**

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas ✓

Are any switches, cut outs, or joints of cables fitted in the pump room or companion ✓

How are the lamps specially protected in places liable to the accumulation of vapour or gas ✓

The copper used is guaranteed to have a conductivity of 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile after 24 hours' immersion in seawater.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

Newport News Shipbuilding & Dry Dock Co.,

By O. P. Poornia

Electrical Engineers

Date Feb 25<sup>th</sup> 1913

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 72 ft

Distance between dynamo or electric motors and steering compass 68 ft

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>3</u>	<u>12</u>	<u>11</u>	
<u>5</u>	<u>3</u>	<u>3</u>	
<u>✓</u>	<u>✓</u>	<u>✓</u>	

Have the compasses been adjusted with and without the electric installation at work at full power ✓

The maximum deviation due to electric currents, etc., was found to be ✓ degrees on ✓ course in the case of the standard compass and ✓ degrees on ✓ course in the case of the steering compass.

Newport News Shipbuilding & Dry Dock Co.,

By A. L. Ferguson

General Manager

Builder's Signature.

Date Feb 25<sup>th</sup> 1913

**GENERAL REMARKS.**

The installation has been fitted in accordance with the Rules; and the vessel is eligible in my opinion to have the record "Electric Light".

It is submitted that this vessel is eligible for THE RECORD Elec. light.

J. W. D. A. R. L.  
1073/13

John H. Marshall  
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

WED. MAR. 26. 1913

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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