

MON. JAN. - 6. 1913

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 16

Port of Cleveland, O Date of First Survey Sept 14 Date of Last Survey Oct 16 No. of Visits 9
 No. in 5/5 on the Iron or Steel 'EDISON LIGHT' Port belonging to New York
 Reg. Book 42 Supp. Built at Ashtabula, O. By whom Great Lakes Engineering Works When built 1912
 Owners Boston Virginia Transportation Co. Owners' Address New York
 Yard No. 104 Electric Light Installation fitted by Great Lakes Engineering Works When fitted 1912

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 7½ K.W. Crocker Wheeler 4 pole compound wound continuous current generator direct driven by vertical engine of American Blower Co.
 Capacity of Dynamo 68 Amperes at 110 Volts, whether continuous or alternating current continuous ✓
 Where is Dynamo fixed engine room Whether single or double wire system is used double ✓
 Position of Main Switch Board engine room having switches to groups ABCDE etc (13 in all) of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each One in upper deck cabins with 4 switches, one in lower deck cabins with 4 switches, One tall table board in pilot house with 6 switches for navigation lights, one in forecabin with 2 single pole switches
 If fuses 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 none and to each lamp circuit no
 If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits all but lamp circuits
 Are the fuses of non-oxidizable metal yes and constructed to fuse at an excess of less than 100 per cent over the normal current
 Are all fuses fitted in easily accessible positions yes Are the fuses of standard dimensions enclosed type 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 on fuse cases
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes
 Total number of lights provided for 121 arranged in the following groups:— Also see attached statement

A	<u>28</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>14</u>	Amperes
B	<u>22</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>11</u>	Amperes
C	<u>9</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>4½</u>	Amperes
D	<u>2 with 10</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>5</u>	Amperes
E	<u>6 with 40</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>20</u>	Amperes
	<u>4 Mast head light with 4</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>4</u>	Amperes
	<u>2 Side light with 2</u>	lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
	<u>6</u>	Cargo lights of	<u>16</u>	candle power, whether incandescent or arc lights	<u>incandescent</u>	

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

Where are the switches controlling the masthead and side lights placed engine room & pilot house

DESCRIPTION OF CABLES.

Also see attached statement
 Main cable carrying 68 Amperes, comprised of 19 wires, each 13-2011 B+S S.W.G. diameter, .104 square inches total sectional area
 Branch cables carrying 14 Amperes, comprised of 7 wires, each 12-16 B+S S.W.G. diameter, .013 square inches total sectional area
 Branch cables carrying 11 Amperes, comprised of 7 wires, each 12-16 B+S S.W.G. diameter, .013 square inches total sectional area
 Leads to lamps carrying 5 Amperes, comprised of 1 wires, each 12-14 B+S S.W.G. diameter, .003 square inches total sectional area
 Cargo light cables carrying ½ Amperes, comprised of 32 wires, each 12-30 B+S S.W.G. diameter, .0025 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Heavy rubber insulation covered with braided waterproof fibre & carried in steel conduit throughout except in cabins In cabins 3/32 rubber insulation carried in wooden mouldings
 Joints in cables, how made, insulated, and protected Soldered heavily taped & made in metal junction boxes In cabins made in wooden mouldings

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances yes Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage yes
 Are there any joints in or branches from the cable leading from dynamo to main switch board no
 How are the cables led through the ship, and how protected steel conduits

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Yes. Cables can be drawn out of conduits

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

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

What special protection has been provided for the cables near boiler casings steel conduits

What special protection has been provided for the cables in engine room steel conduits

How are cables carried through beams steel conduits through bulkheads, &c. steel conduits

How are cables carried through decks steel conduits made watertight

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 steel conduits run high up under deck

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage no

If so, how are the lamp fittings and cable terminals specially protected ✓

Where are the main switches and fuses for these lights fitted ✓

If in the spaces, how are they specially protected ✓

Are any switches or fuses fitted in bunkers no

Cargo light cables, whether portable or permanently fixed portable How fixed metal plug boxes

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 ✓

Is the installation supplied with a voltmeter yes, and with an amperemeter yes, fixed on main switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

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

Are any switches, fuses, 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 not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

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.

Great Lakes Engineering Works,

Carl J. Linton

Electrical Engineers

Date 12/23/12

COMPASSES.

Distance between dynamo or electric motors and standard compass about 105 ft

Distance between dynamo or electric motors and steering compass about 100

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>1/8</u>	<u>close to</u>	<u>close to</u>	<u>close to</u>
<u>6</u>	<u>about 10</u>	<u>about 6</u>	<u>about 6</u>
<u>14</u>	<u>about 85</u>	<u>about 80</u>	<u>about 80</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.

Great Lakes Engineering Works,

W. S. S. S.

Builder's Signature.

Date

GENERAL REMARKS. This Electric Light Installation has been examined under Special Survey & has been satisfactorily tried under full load. The workmanship & material, as far as can be seen, are good & the vessel is eligible, in my opinion, to receive the notation 'ELEC. LIGHT' in the Register Book.

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

W. S. S. S.
7/1/13

John S. Heck

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

Committee's Minute



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