

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 165

Port of CLEVELAND, OHIO. Date of First Survey 16.4.18 Date of Last Survey 30.5.18 No. of Visits 5  
 No. in on the ~~Iron or Steel~~ S. S. LAKE LOUISE Port belonging to Ashtabula  
 Reg. Book Built at Ashtabula Ohio By whom The S. T. Lake Eng. Wks. When built 1918  
 Owners U.S. Shipping Board Emergency Fleet Owners' Address Washington  
 Yard No. 181 Electric Light Installation fitted by The S. T. Lake Eng. Wks. When fitted 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Six pole Dynamo, direct connected to Reciprocating Engine at 450 R.P.M.  
 Capacity of Dynamo 80 Amperes at 125 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 at the having switches to groups of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each One in Ammunition Room 6 Circuits  
One in aft Cabin 4 Circuits, One in fore cabin 2 Circuits  
 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 Yes and to each lamp circuit Yes  
 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 Yes  
 Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 25 per cent over the normal current  
 Are all fuses 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 fuses constructed of incombustible materials and fitted on incombustible bases Yes  
 Total number of lights provided for 174 arranged in the following groups:—  
 A Midship Ammunition lights each of 46 6-30 Watt candle power requiring a total current of 9.4 Amperes  
 B Aft lights each of 16 25 Watt candle power requiring a total current of 3.2 Amperes  
 C Forward Open lights each of 8 25 candle power requiring a total current of 1.7 Amperes  
 D Deck lights each of 22 60 candle power requiring a total current of 10.7 Amperes  
 E E. B. Open lights each of 46 2-25 Watt candle power requiring a total current of 21.6 Amperes  
2 Mast head light with 1 lamps each of 100 Watt candle power requiring a total current of 1.6 Amperes  
2 Side light with 1 lamps each of 100 candle power requiring a total current of 1.6 Amperes  
8 Cluster Cargo lights of 4-25 Watt and candle power, whether incandescent or arc lights Incandescent  
 If arc lights, what protection is provided against fire, sparks, &c. One used for Cargo. One 35 amp. Search Light fitted on independent Circuit. Wires fitted with.  
 Where are the switches controlling the masthead and side lights placed Pilot House.

## DESCRIPTION OF CABLES.

Capacity 80 lbs above  
 Main cable carrying 50 Amperes, comprised of 19 wires, each 12 35 S.W.G. diameter, 133079 square inches total sectional area  
 Branch cables carrying 70 Amperes, comprised of 7 wires, each 12 S.W.G. diameter, 4763 square inches total sectional area  
 Branch cables carrying 50 Amperes, comprised of 7 wires, each 14 S.W.G. diameter, 26250 square inches total sectional area  
 Leads to lamps carrying 15 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, 4107 square inches total sectional area  
 Cargo light cables carrying 13 Amperes, comprised of 37 wires, each 30 S.W.G. diameter, 87158 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber covered and braided. To specifications and tests of National Board of Fire Underwriters

Joints in cables, how made, insulated, and protected Soldered, rubbered and Taped

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 conduit where exposed. Amused and Wood casings in Cabin



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes*

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

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

What special protection has been provided for the cables near boiler casings *ditto*

What special protection has been provided for the cables in engine room *ditto*

How are cables carried through beams *Steel Conduit* through bulkheads, &c. *W.T. fittings*

How are cables carried through decks *W.T. fittings*

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 Conduit, steel casing fitted where necessary*

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 *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 *Eng. Room*

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.

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *About 50 ft*

Distance between dynamo or electric motors and steering compass *ditto*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>25</i>	<i>Amperes</i>	<i>5</i>	<i>5</i>
<i>✓</i>	<i>Amperes</i>	<i>✓</i>	<i>✓</i>
<i>✓</i>	<i>Amperes</i>	<i>✓</i>	<i>✓</i>

Have the compasses been adjusted with and without the electric installation at work at full power *but not adjusted*

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 F.H. Foltz Builder's Signature. Date *June 15-1918*

GENERAL REMARKS.

*The above installation has been fitted in a satisfactory manner. The materials and workmanship employed, as far as can be seen, are sound and good.*

*It is submitted that this vessel is eligible for*

THE RECORD. Elec. light.

*AWD 19/7/18*

*M. Lane*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*Elec. Light*

*New York JUN 18 1918*



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