

# REPORT ON ELECTRIC LIGHTING INSTALLATION, No. 70

Port of CLEVELAND, OHIO Date of First Survey 7. 8. 16 Date of Last Survey 28. 9. 16 No. of Visits 7.  
 No. in on the Iron or Steel S. S. SEKSTANT Port belonging to Bryant  
 Reg. Book Built at Cincinnati Ohio By whom Grant Lake Eng. Works When built 1916  
 Owners Sekstant Joint Stock Co. Owners' Address Bryant  
 Yard No. 160 Electric Light Installation fitted by Gr. Lake Eng. Works When fitted 1916

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

One - 10 K.W. 4 pole. Compound wound dynamo, direct coupled to engine

Capacity of Dynamo 89 Amperes at 115 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 with having switches to groups 12 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each One 6' Circuit panel board in after Cabin

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 vessels are wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits 4

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 Yes

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 179 arranged in the following groups :-

A	<u>54</u> lights each of	<u>16</u> candle power requiring a total current of	<u>27</u> Amperes
B	<u>52</u> lights each of	<u>16</u> candle power requiring a total current of	<u>26</u> Amperes
C	<u>10</u> lights each of	<u>32</u> candle power requiring a total current of	<u>10</u> Amperes
D	<u>24</u> lights each of	<u>16</u> candle power requiring a total current of	<u>12</u> Amperes
E	<u>34</u> lights each of	<u>16</u> candle power requiring a total current of	<u>17</u> Amperes
	<u>2</u> Mast head light with <u>1</u> lamps each of	<u>32</u> candle power requiring a total current of	<u>1</u> Amperes
	<u>2</u> Side light with <u>1</u> lamps each of	<u>32</u> candle power requiring a total current of	<u>1</u> Amperes
	<u>12</u> Cargo lights of	<u>64</u> Total candle power, whether incandescent or arc lights	<u>Incandescent</u>

If arc lights, what protection is provided against fire, sparks, &c. None employed except four portable and one light for use on deck

Where are the switches controlling the masthead and side lights placed Pilot house

## DESCRIPTION OF CABLES.

Main cable carrying 107 Amperes, comprised of 85 wires, each 00 S.W.G. diameter, .1046 square inches total sectional area

Branch cables carrying 27 Amperes, comprised of 10 wires, each 10 S.W.G. diameter, .0091 square inches total sectional area

Branch cables carrying 26 Amperes, comprised of 8 wires, each 8 S.W.G. diameter, .0129 square inches total sectional area

Leads to lamps carrying 4 Amperes, comprised of 14 wires, each 14 S.W.G. diameter, .0032 square inches total sectional area

Cargo light cables carrying 2 Amperes, comprised of 14 wires, each 14 S.W.G. diameter, .0032 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Hardly rubbered and double braided wires carried in steel conduits, hard wood mouldings in Cabin only.

Joints in cables, how made, insulated, and protected Soldered, Taped & coated.

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*

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 *ditto*

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

How are cables carried through beams *Steel Conduits bridged through bulkheads, &c.*

How are cables carried through decks *Water tight 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 *—*

If so, how are they protected *Steel Conduits securely fastened to deck beams*

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 \_\_\_\_\_ 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 E. Tector*

Electrical Engineers

Date *9-29-16*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *About 60 feet*

Distance between dynamo or electric motors and steering compass *55*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>1/8</i> Amperes	<i>One</i> feet from standard compass	<i>One</i> feet from steering compass
A cable carrying	<i>5</i> Amperes	<i>sight</i> feet from standard compass	<i>Two</i> feet from steering compass
A cable carrying	<i>20</i> Amperes	<i>Thirty five</i> feet from standard compass	<i>Thirty</i> feet from steering compass

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

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

*Great Lakes Engineering Works,*

*W. L. ...*

Builder's Signature. Date

**GENERAL REMARKS.**

*This installation has been fitted in a satisfactory manner. The materials and workmanship being of good, above standard satisfactory or trial.*

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

*J.W.D. 11/11/16*

*W. Lane*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*Elec. Light* New York OCT. 19-1916

FRI. MAR. 26 1920

FRI. 2-AUG. 1918

FRI. 6-SEP. 1918

FRI. 30-MAY. 1919

FRI. 5-DEC. 1919

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

100,110—Transfer.

