

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 851

Report of *Seattle, W.* Date of First Survey *Sept 5<sup>th</sup> 18* Date of Last Survey *June 14<sup>th</sup> 19* No. of Visits *14*  
 on the *Iron or Steel* *Ward Ship "CLEANER"* Port belonging to *New York*  
 Built at *Seattle Wash* By whom *Anderson Ship Co* When built *1919*  
*Oleander Navigation Co* Owners' Address *New York City*  
 No. *7* Electric Light Installation fitted by *Anderson Shipbuilding Co* When fitted *1919*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

*7 1/2 KW. 125 Volts Gen Electric Co. Generator Type RC 29H. direct*  
*connected to a #12 Steam turbine built by Olsen Motors Co. of Springfield Mass. W.P. 1250"*  
 Capacity of Dynamo *7 1/2 KW. 60* Amperes at *125* Volts, whether continuous or alternating current *Continuous*  
 Where is Dynamo fixed *Engine Room Lower Platform No.* Whether single or double wire system is used *double*  
 Location of Main Switch Board *"* " " " having switches to groups *A, B, C, D, E* of lights, &c., as below  
 Locations of auxiliary switch boards and numbers of switches on each *"A" Engine Room - 4 switches, "B" Chart Room -*  
*switches, "C" Main Deck Passage way to main deck - 4 switches, "D" Main Deck galley,*  
*"E" Main Deck forward of Boiler Room - 5 switches*  
 Are fuses 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*  
 Is the vessel 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 *Yes*  
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes*

Number of lights provided for *133* arranged in the following groups:—  

<i>41</i>	lights each of	<i>20 Watt.</i>	candle power requiring a total current of	<i>9</i>	Amperes
<i>17</i>	lights each of	<i>20 Watt</i>	candle power requiring a total current of	<i>4</i>	Amperes
<i>12</i>	lights each of	<i>20 Watt</i>	candle power requiring a total current of	<i>3</i>	Amperes
<i>24</i>	lights each of	<i>20 Watt</i>	candle power requiring a total current of	<i>5</i>	Amperes
<i>26</i>	lights each of	<i>20 Watt</i>	candle power requiring a total current of	<i>6</i>	Amperes
<i>1</i>	Mast head light with	<i>1</i> lamp each of	<i>45 Watt</i>	candle power requiring a total current of	<i>5</i> Amperes
<i>2</i>	Side light with	<i>1</i> lamp each of	<i>45 Watt</i>	candle power requiring a total current of	<i>1</i> Amperes
<i>6</i>	Cargo lights of	<i>150. Watt.</i>	candle power, whether incandescent or arc lights	<i>Incandescent</i>	

Are lights, what protection is provided against fire, sparks, &c.

Where are the switches controlling the masthead and side lights placed *In Pilot House*

## DESCRIPTION OF CABLES.

<i>45</i>	Amperes, comprised of	<i>7</i>	wires, each	<i>#14</i>	S.W.G. diameter,	<i>.0357</i>	square inches total sectional area
<i>38</i>	Amperes, comprised of	<i>7</i>	wires, each	<i>#14</i>	S.W.G. diameter,	<i>.0357</i>	square inches total sectional area
<i>6</i>	Amperes, comprised of	<i>7</i>	wires, each	<i>#24</i>	S.W.G. diameter,	<i>.0026</i>	square inches total sectional area
<i>1 1/2</i>	Amperes, comprised of	<i>1</i>	wires, each	<i>#18</i>	S.W.G. diameter,	<i>.0018</i>	square inches total sectional area
<i>8</i>	Amperes, comprised of	<i>7</i>	wires, each	<i>24</i>	S.W.G. diameter,	<i>.0026</i>	square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

*all cables covered according to Standard*  
*requirements being rubber covered & double braided & run in metal*  
*conduit*

How are the cables, how made, insulated, and protected *Wires inter-woven, soldered & taped with Rubber*  
*Tape in accordance with the Marine Lubricators Rules.*

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 *Wires laid in Metal Conduit & Wood*  
*moulding is required.*



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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 *all lines below Main Deck & where exposed to weather are run in Metal Conduit*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Fittings protected with sockets*

What special protection has been provided for the cables near boiler casings *Fittings protected with sockets*

What special protection has been provided for the cables in engine room *Run in Metal Conduit*

How are cables carried through beams *Metal Conduit* through bulkheads, &c. *N.T. fittings & Packing Glands*

How are cables carried through decks *N.T. fittings with Packing glands*

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 *Protected with sockets where necessary & run in Metal Conduit*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, ~~cargo~~, or baggage *yes*

If so, how are the lamp fittings and cable terminals specially protected *Metal Conduit & Muller's Iron Fittings*

Where are the main switches and fuses for these lights fitted *In distribution Cabinet on Main Deck*

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 Connectors*

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 O. Board*

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 *X*

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.

COMPASSES.

Distance between dynamo or electric motors and standard compass *about 65 feet*

Distance between dynamo or electric motors and steering compass *75 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
6	40	30	
.4	attached	attached	
-	-	-	

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 *each* course in the case of the standard compass and *Nil* degrees on *each* course in the case of the steering compass.

GENERAL REMARKS.

*The Electric Lighting Installation is of Good quality & Workmanship. Tested under full working conditions & found satisfactory. Eligible in my opinion to be noted in the Register Book Electric Light 6-19 in the case of this vessel.*

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

*L. Norrath & Co. Surveyor to Lloyd's Register of Shipping.*

*12/8/19*

Committee's Minute *Elec Lt* New York JUL 15 1919

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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