

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 493

Port of Portland, Ore Date of First Survey April 29 Date of Last Survey May 29/1918 No. of Visits 6  
 on the ~~Iron or~~ Steel S.S. WEST INDIAN Port belonging to Portland, Oregon  
 Book Built at Portland, Oregon By whom Columbia River S.B. Co. When built 1917-18  
 Owners U.S. Emergency Fleet Corporation Owners' Address Portland, Oregon  
 No. 4 Electric Light Installation fitted by Che Page McKenney Co. When fitted 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 15 KW 115 Volt compound-wound Generators connected direct to single cylinder reciprocating engines  
 Capacity of Dynamo 136 Amperes at 115 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed in Engine Room Whether single or double wire system is used double  
 Location of Main Switch Board in Engine Room having switches to groups 9 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each One in Chart House 6 switches, one in Poop Deck Quarters 6 sw, one in After Deck House 6 sw. Two in Fore Deck House 6+8 sw. Two in Midship Deck House 6 sw. One in Crews' Quarters 6 sw. One in Engine Room 10 sw.  
 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  
 Fuse 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 10 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  
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes  
 Number of lights provided for 300 arranged in the following groups:—

<u>9</u> lights each of <u>40 W 32</u> candle power requiring a total current of	<u>3</u> Amperes
<u>54</u> lights each of <u>40 W 32</u> candle power requiring a total current of	<u>18</u> Amperes
<u>57</u> lights each of <u>40 W 32</u> candle power requiring a total current of	<u>19</u> Amperes
<u>38</u> lights each of <u>40 W 32</u> candle power requiring a total current of	<u>13</u> Amperes
<u>46</u> lights each of <u>40 W 32</u> candle power requiring a total current of	<u>15</u> Amperes
<u>1</u> Mast head light with <u>40 W 32</u> candle power requiring a total current of	<u>32</u> Amperes
<u>2</u> Side light with <u>40 W 32</u> candle power requiring a total current of	<u>64</u> Amperes
<u>50</u> Cargo lights of <u>40 W 32</u> candle power, whether incandescent or are lights <u>Incandescent.</u>	

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

Are the switches controlling the masthead and side lights placed in Chart House

## DESCRIPTION OF CABLES.

Cable carrying <u>150</u> Amperes, comprised of <u>19</u> wires, each <u>9</u> S.W.G. diameter, <u>21,600</u> square inches total sectional area
Cables carrying <u>21</u> Amperes, comprised of <u>1</u> wires, each <u>10</u> S.W.G. diameter, <u>10,380</u> square inches total sectional area
Cables carrying <u>30</u> Amperes, comprised of <u>7</u> wires, each <u>16</u> S.W.G. diameter, <u>16,570</u> square inches total sectional area
Lamps carrying <u>4</u> Amperes, comprised of <u>1</u> wires, each <u>14</u> S.W.G. diameter, <u>4104</u> square inches total sectional area
At cables carrying <u>2</u> Amperes, comprised of <u>40</u> wires, each <u>30</u> S.W.G. diameter, <u>4106</u> square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubbery covered, double braided, national electric code standard.

Cables, how made, insulated, and protected Soldered and taped, splicing compound, friction tape and P.B. electric paint.

Are 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 any joints in or branches from the cable leading from dynamo to main switch board No  
 Are cables led through the ship, and how protected Metal conduits or wood mouldings



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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 Metal conduits.

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

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

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

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

How are cables carried through decks Metal conduits with mits + jointing above and below.

Are any cables run through coal bunkers no or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes

If so, how are they protected Metal conduits.

Are any lamps fitted in coal bunkers or 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 Watertight fittings and receptacles.

Where are the main switches and fuses for these lights fitted in Houses on Bridge deck.

If in the spaces, how are they specially protected Watertight boxes and covers.

Are any switches or fuses 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 \_\_\_\_\_

Is the installation supplied with a voltmeter yes, and with an amperemeter yes, fixed in Engine 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 1000 megohms per 1000 feet 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.

McKenny & McKenny Co. R. McKenny, Mgr. Electrical Engineers Date June 4 1918

COMPASSES.

Distance between dynamo or electric motors and standard compass 45 ft.

Distance between dynamo or electric motors and steering compass 45 ft.

The nearest cables to the compasses are as follows:—

A cable carrying <u>12</u> Amperes	<u>12</u> feet from standard compass	<u>20</u> feet from steering compass
A cable carrying <u>35</u> Amperes	<u>25</u> feet from standard compass	<u>16</u> feet from steering compass
A cable carrying _____ Amperes	_____ feet from standard compass	_____ 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 \_\_\_\_\_ course in the case of the standard compass and nil degrees on \_\_\_\_\_ course in the case of the steering compass.

COLUMBIA RIVER SHIP BUILDING CORPORATION

By J. McKenlay General Manager

Builder's Signature. Date June 4 1918

GENERAL REMARKS.

The above Installation has been made in accordance with the Rules, the materials and workmanship are good and on trial all worked satisfactorily.

It is submitted that this vessel is eligible for THE RECORD. Elec. light. J.W.D. 17/7/18

J.A. Mates

Surveyor to Lloyd's Register of Shipping.

Committee's Minute Elec. Light New York JUN 18 1918