

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 561

Port of *Portland Ore* Date of First Survey *Apr. 23, 19* Date of Last Survey *May 16* No. of Visits *13*
 No. in on the Iron or Steel *SS WEST TOTANT* Port belonging to *Portland Oregon*
 Reg. Book *Portland Oregon* By whom *Columbia River S.B. Corp.* When built *1919*
 Owners *Emergency Fleet Corporation* Owners' Address *Portland Oregon*
 Yard No. *16* Electric Light Installation fitted by *Chas. Page McKenny Co.* When fitted *1919*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two 10 KW 115 Volt Generator sets by the Westinghouse Electric Co. coupled direct to two steam turbines

Capacity of Dynamo *10* 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 *Engine Room* having switches to groups *seven* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *Chart No. 6, Prop. Dr. No. 6, Crews Dr. 6, After Dr. No. 6, Fuel Dr. No. 6+8, Elldship Dr. No. 6, Engine Room 10*

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

Are the fuses of non-oxidisable 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*

Total number of lights provided for *300* arranged in the following groups:—

A	<i>9</i> lights each of <i>40 W</i>	<i>32</i> candle power requiring a total current of	<i>3</i> Amperes
B	<i>54</i> lights each of <i>40 W</i>	<i>32</i> candle power requiring a total current of	<i>16</i> Amperes
C	<i>51</i> lights each of <i>40 W</i>	<i>32</i> candle power requiring a total current of	<i>14</i> Amperes
D	<i>38</i> lights each of <i>40 W</i>	<i>32</i> candle power requiring a total current of	<i>13</i> Amperes
E	<i>46</i> lights each of <i>40 W</i>	<i>32</i> candle power requiring a total current of	<i>15</i> Amperes
1	Must head light with <i>1</i> lamps each of <i>40 W</i>	<i>32</i> candle power requiring a total current of	<i>32</i> Amperes
2	Side light with <i>1</i> lamps each of <i>40 W</i>	<i>32</i> candle power requiring a total current of	<i>64</i> Amperes
<i>80</i>	Cargo lights of <i>40 W</i>	<i>32</i> candle power, whether incandescent or arc lights <i>incandescent</i>	

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

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

DESCRIPTION OF CABLES.

Main cable carrying	<i>150</i> Amperes, comprised of <i>19</i> wires, each	<i>9</i> S.W.G. diameter, <i>21.600</i> square inches total sectional area
Branch cables carrying	<i>21</i> Amperes, comprised of <i>1</i> wires, each	<i>10</i> S.W.G. diameter, <i>10.380</i> square inches total sectional area
Branch cables carrying	<i>32</i> Amperes, comprised of <i>7</i> wires, each	<i>16</i> S.W.G. diameter, <i>16.510</i> square inches total sectional area
Leads to lamps carrying	<i>4</i> Amperes, comprised of <i>1</i> wires, each	<i>14</i> S.W.G. diameter, <i>4.107</i> square inches total sectional area
Cargo light cables carrying	<i>2</i> Amperes, comprised of <i>40</i> wires, each	<i>32</i> S.W.G. diameter, <i>4.106</i> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber-covered, double braided National Electric Code Standard.

Joints in cables, how made, insulated, and protected *Spliced, soldered and Taped. Splicing compound, friction tape and P.B. paint.*

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 *Metal conduits or wood casings*



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, joints and nuts

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

Where are the main switches and fuses for these lights fitted? In houses in bridge deck

If in the spaces, how are they specially protected? metal conduits

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 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 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.

Re Page. McKenny C.

Electrical Engineers

Date May 19, 1919

COMPASSES.

Re McKenny Mgr.

Distance between dynamo or electric motor's and standard compass? —

Distance between dynamo or electric motor's and steering compass? —

The nearest cables to the compasses are as follows:—

A cable carrying	<u>10</u> Amperes	<u>12</u> feet from standard compass	<u>20</u> feet from steering compass
A cable carrying	<u>25</u> Amperes	<u>25</u> feet from standard compass	<u>16</u> feet from steering compass
A cable carrying	<u>—</u> Amperes	<u>—</u> feet from standard compass	<u>—</u> 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.

for Columbia River Shipbuilding Co. Builder's Signature. Date May 19, 1919.

GENERAL REMARKS.

The above installation has been made in accordance with the Rules. The material and workmanship are good

It is submitted that

this vessel is eligible for

THE RECORD. Elec Light Recd.

20-6-19.

J. H. Yates
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Elec. Lt New York MAY 27 1919