

REPORT ON ELECTRIC LIGHTING INSTALLATION.

No. 1020

Port of Seattle Wash USA Date of First Survey June 30 Date of Last Survey Aug 4 No. of Visits 8
 No. in 1 on the Steel S.S. "RED HOOK" Port belonging to Vacoma
 g. Book EST ENTRY Built at Vacoma Wash USA By whom Todd Dry Dock & Construction Corp When built 1920
 Owners Todd Dry Dock & Construction Corp Owners' Address _____
 ord No. 33 Electric Light Installation fitted by Todd Dry Dock & Construction Corp. When fitted 1920

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two Westinghouse Turbine driven generators of 75 KW each at 125 volts.
Speed 4000 RPM

Capacity of Dynamo 60 Amperes at 125 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Starboard side Engine room Whether single or double wire system is used Double

Position of Main Switch Board Starboard side Engine room having switches to groups A B C D E of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1-4 in panel in fore-castle. 1-4 in panel in forward deck house. 1-4 in panel in after deck house. 1-12 in panel in Engine room. 1-4 in panel in Steering Engine room for engine lights.

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 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 75 to 100 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 171 arranged in the following groups:—

<u>20</u>	lights each of <u>25 Watts</u>	candle power requiring a total current of <u>4</u>	Amperes
<u>32</u>	lights each of <u>16 - 40</u>	candle power requiring a total current of <u>9</u>	Amperes
<u>29</u>	lights each of <u>15 - 25</u>	candle power requiring a total current of <u>8</u>	Amperes
<u>60</u>	lights each of <u>3 - 40</u>	candle power requiring a total current of <u>30</u>	Amperes
	lights each of <u>10 - 15</u>	candle power requiring a total current of <u>—</u>	Amperes
<u>2</u>	Mast head light with <u>2</u> lamps each of <u>25 Watts</u>	candle power requiring a total current of <u>1.25</u>	Amperes
<u>2</u>	Side light with <u>2</u> lamps each of <u>80</u>	candle power requiring a total current of <u>1.25</u>	Amperes
<u>6</u>	Cargo lights of <u>Each</u>	candle power, whether incandescent or arc lights <u>Incandescent</u>	

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

Where are the switches controlling the masthead and side lights placed Wheel House

DESCRIPTION OF CABLES.

Main cable carrying <u>60</u> Amperes, comprised of <u>2</u> wires, each <u>4</u> S.W.G. diameter, <u>.03</u> square inches total sectional area
Branch cables carrying <u>20</u> Amperes, comprised of <u>2</u> wires, each <u>10</u> S.W.G. diameter, <u>.007</u> square inches total sectional area
Branch cables carrying <u>9</u> Amperes, comprised of <u>2</u> wires, each <u>12</u> S.W.G. diameter, <u>.005</u> square inches total sectional area
Leads to lamps carrying <u>2.5</u> Amperes, comprised of <u>2</u> wires, each <u>14</u> S.W.G. diameter, <u>.002</u> square inches total sectional area
Cargo light cables carrying <u>11</u> Amperes, comprised of <u>2</u> wires, each <u>10</u> S.W.G. diameter, <u>.002</u> square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Points in cables, how made, insulated, and protected Twisted, soldered, vulcanized rubber insulation.
Protected with friction tape

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

Shipping. How are the cables led through the ship, and how protected In galvanized iron conduits & armored cable



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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 *Water-tight fittings*

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

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

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

How are cables carried through beams *In conduits or armor* through bulkheads, &c. *WT Stuffing boxes*

How are cables carried through decks *WT hose tubes with stuffing boxes*

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 *Iron conduits*

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 *-*

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 *Main Switchboard*

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.

Todd Dry Dock & Const Corp J.A. Evers Electrical Engineers Date *9-14-1920*

COMPASSES.

Distance between dynamo or electric motors and standard compass *100 feet*

Distance between dynamo or electric motors and steering compass *100 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>0.8</i>	<i>10</i>	<i>1</i>	<i>10</i>
<i>0.8</i>	<i>1</i>	<i>10</i>	<i>10</i>
<i>3</i>	<i>5</i>	<i>5</i>	<i>5</i>

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

Todd Dry Dock & Const Corp J.A. Evers Builder's Signature. Date *9-14-1920*

GENERAL REMARKS.

The Electric Lighting Installation of good quality and workmanship, tested under working conditions and found satisfactory. Eligible in my opinion to be noted in the Register Book.

Elec Lt *15/10/20* *J. James Fowler*
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *New York* SEP 28 1920

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