

REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of *Vancouver* Date of First Survey *Nov 24/10* Date of Last Survey *4th April 11* No. of Visits *5*
 No. in Reg. Book on the ~~Iron~~ *Steel* *double end* *San St North Vancouver* Port belonging to *Vancouver*
 Built at *North Vancouver* By whom *Wallace Shipyard Ltd* When built *1911*
 Owners *North Vancouver City Ferries Limited* Owners Address *North Vancouver, B.C.*
 Yard No. Electric Light Installation fitted by *Hinton Electric Co.* When fitted *Feb. 1911*
finished 4th April 1911

DESCRIPTION OF DYNAMO, ENGINE, ETC.

*15 K.W. Generator. Canadian Fairbanks Co.
 American Blower Co's Engine direct connected.*

Capacity of Dynamo *136* Amperes at *110* Volts, whether continuous or alternating current *Continuous*

Where is Dynamo fixed *in Engine Room*

Position of Main Switch Board *so so* having switches to groups *6* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *(10) switches in cabinet on main deck.
 (15) switches in cabinet on lower deck.*

If cut outs are fitted on main switch board to the cables of main circuit *Yes* and on each auxiliary switch boards 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits *Yes*

Are the cut outs of non-oxidizable metal *Yes* and constructed to fuse at an excess of *25* per cent over the normal current

Are all cut outs 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 cut-outs constructed of incombustible materials and fitted on incombustible bases *Yes*

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

A	<i>33</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>15</i>	Amperes
B	<i>106</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>48</i>	Amperes
C	<i>100</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>45</i>	Amperes
D	<i>68</i>	lights each of	<i>16</i>	candle power requiring a total current of	<i>41</i>	Amperes
E		lights each of		candle power requiring a total current of		Amperes
<i>2</i>	<i>Mast head light</i>	<i>with 1</i>	<i>lamps each of 16</i>	candle power requiring a total current of		Amperes
<i>4</i>	<i>Side light</i>	<i>with 1</i>	<i>lamps each of 16</i>	candle power requiring a total current of		Amperes
<i>no</i>	<i>Cargo lights</i>	<i>of</i>		candle power, whether incandescent or arc lights		

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

Where are the switches controlling the masthead and side lights placed *Pilot House Nos 1 & 2.*

DESCRIPTION OF CABLES.

Main cable carrying	<i>139</i>	Amperes, comprised of	<i>1-0</i>	wires, each	L.S.G. diameter, <i>.104229</i>	square inches total sectional area	<i>.129</i>
Branch cables carrying	<i>18</i>	Amperes, comprised of	<i># 12</i>	wires, each	L.S.G. diameter, <i>.105155</i>	square inches total sectional area	<i>.018</i>
Branch cables carrying	<i>50</i>	Amperes, comprised of	<i># 4</i>	wires, each	L.S.G. diameter, <i>.132688</i>	square inches total sectional area	<i>.050</i>
Leads to lamps carrying	<i>45</i>	Amperes, comprised of	<i># 4</i>	wires, each	L.S.G. diameter, <i>.132688</i>	square inches total sectional area	<i>.045</i>
Cargo light cables carrying	<i>31</i>	Amperes, comprised of	<i># 6</i>	wires, each	L.S.G. diameter,	square inches total sectional area	<i>.031</i>

DESCRIPTION OF INSULATION, PROTECTION, ETC.

*98% Copper, installed in wood moulding, and iron conduits
 Rubber covered wire, double braid, tinned*

Joints in cables, how made, insulated, and protected *Well spliced, soldered, and taped with rubber and friction tape, and compounded*

Are all the joints of cables thoroughly soldered, resin only having been used as a flux *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 *Laminated Conduits & Wood Mouldings*



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 in conduits*

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

What special protection has been provided for the cables near boiler casings *None near boilers*

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

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

How are cables carried through decks *Locknuts and washers, and packed with white lead.*

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

If so, how are they protected *In 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 cut outs for these lights fitted

If in the spaces, how are they specially protected

Are any switches or cut outs fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *None* 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

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas

Are any switches, cut outs, 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 installation is supplied with a voltmeter and an amperemeter, fixed

The copper used is guaranteed to have a conductivity of *98%* per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than *— 600 —* megohms per statute mile after 24 hours' immersion in seawater.

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.

THE HINTON ELECTRIC CO., Limited,

Electrical Engineers

Date *4th April, 1911*

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	<i>15</i>	Amperes	<i>5</i>	feet from standard compass	<i>5</i>	feet from steering compass
A cable carrying	<i>8</i>	Amperes	<i>5</i>	feet from standard compass	<i>6</i>	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 *No—boat used in harbour only*

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

WALLACE SHIPYARDS, LIMITED

Wallace Builder's Signature

Date *4th April, 1911*

GENERAL REMARKS.

This Electric Light installation has been Specially Surveyed whilst being fitted on board the vessel, and seen running under full load satisfactorily. The material and workmanship are of good quality and the vessel is eligible in my opinion to have the installation ELEC. Light
J.S. Mitchell
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

TUE. JUL. 25. 1911



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

REPORT FORM NO. 13.