

Rpt. 13.

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# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 841

Port of Vancouver BC Date of First Survey 27 July Date of Last Survey 25 Novem No. of Visits 12  
 No. in Reg. Book 2 on the Iron or Steel "Canadian Wimmer" Port belonging to Montreal  
 Built at Victoria BC. By whom Harbour Marine Ltd When built 1920  
 Owners Canadian Government Owners' Address Ottawa Canada  
 Yard No. 1 Electric Light Installation fitted by Harbour Marine Ltd When fitted 1920

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**

1-10 KW Continuous current compound 110-120 Volt (J.H. Holmes & Co)  
Dynamo direct coupled to a 6 1/2 x 6 Vertical single (Robey Engine)  
 Capacity of Dynamo 91 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine Room Starboard side Whether single or double wire system is used double wires  
 Position of Main Switch Board Engine Room Starboard having switches to groups A B C D E F of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each A Chart house 10 circuits, B Wireless 1 1/2 KW Motor, C crew mess room 10 circuits, D Engine Room casing 10 circuits, E Cargo clusters, F Forward accommodation 10 circuits, Starboard 10 circuits Port.  
 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 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 yes  
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases yes  
 Total number of lights provided for 211 arranged in the following groups:—  
 A 16 lights each of 16 candle power requiring a total current of 6 Amperes  
 B Motor & wireless lights each of 1 1/2 KW candle power requiring a total current of 14 Amperes  
 C 33 lights each of 32 candle power requiring a total current of 12.4 Amperes  
 D 42 lights each of 32 candle power requiring a total current of 19.5 Amperes  
 E 14 lights each of 32 candle power requiring a total current of 14 Amperes  
 F 67 lamps & two fans Mast head light with 1 lamps each of 32 candle power requiring a total current of 2 Amperes  
2 Side light with 1 lamps each of 32 candle power requiring a total current of 2 Amperes  
5 Cargo lights of 192 candle power, whether incandescent or are lights Incandescent  
 If arc lights, what protection is provided against fire, sparks, &c. ✓

Where are the switches controlling the masthead and side lights placed Chart house

**DESCRIPTION OF CABLES.**

Main cable carrying 91 Amperes, comprised of 19 wires, each #14 S.W.G. diameter, .09760 square inches total sectional area  
 Branch cables carrying 38 Amperes, comprised of 7 wires, each #17 S.W.G. diameter, .0758 square inches total sectional area  
 Branch cables carrying 28 Amperes, comprised of 7 wires, each #18 S.W.G. diameter, .07292 square inches total sectional area  
 Leads to lamps carrying 24 Amperes, comprised of 7 wires, each #20 S.W.G. diameter, .0527 square inches total sectional area  
 Cargo light cables carrying 6 Amperes, comprised of 7 wires, each #10 S.W.G. diameter, .003217 square inches total sectional area

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**

All cables are rubber insulated braided & lead sheathed and armoured with steel wire braided  
 Joints in cables, how made, insulated, and protected no cable splices any joints that are made armour watertight, junction boxes.  
 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 in armoured cable

**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 Lead sheathed and steel armour with watertight fittings

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Armour cable

What special protection has been provided for the cables near boiler casings Armour cables

What special protection has been provided for the cables in engine room Armour cable

How are cables carried through beams Lead bushings through bulkheads, &c. glands

How are cables carried through decks cut tabs

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 armoured cables

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 Approved cargo space fittings

Where are the main switches and fuses for these lights fitted Main switch board

If in the spaces, how are they specially protected Armoured cable

Are any switches or fuses fitted in bunkers no

Cargo light cables, whether portable or permanently fixed Portable How fixed Plug Box on deck

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 fruit cabinet

**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 2500 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.

Harbour Marine & Electrical Engineers Electrical Engineers Date Dec 26

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 30 feet and 150 feet

Distance between dynamo or electric motors and steering compass 35 feet and 155 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>10</u>	<u>13</u>	<u>15</u>	
<u>28.5</u>	<u>38</u>	<u>38</u>	
<u>18</u>	<u>38</u>	<u>38</u>	

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 no degrees on any course in the case of the standard compass and no degrees on any course in the case of the steering compass.

Builder's Signature. Date

**GENERAL REMARKS.**

The Electric Light installation is of good quality tested under working conditions and found satisfactory. Eligible in my opinion to be noted "Electric Light" in the Register Book.

Asstie & Fran Edward  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 7 APR. 1921

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.