

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No.

Port of BUFFALO, N.Y. Date of First Survey OCT 7 1919 Date of Last Survey 10 JAN. 1920 No. of Visits 9  
 on the Steel SS. WAR VIXEN Port belonging to X  
 Built at BRIDGEBURG, ONT. CANADA. By whom CANADIAN ALLIS CHALMERS CO. When built 1919.  
 Owners IMPERIAL MUNITIONS BOARD Owners' Address ATTAWA, CANADA.  
 No. 300. Electric Light Installation fitted by CANADIAN COMSTOCK LTD. MONTREAL When fitted 1919 & 20

DESCRIPTION OF DYNAMO, ENGINE, ETC. DYNAMO MADE BY GENERAL ELECTRIC CO. SCHENECTADY N. Y. ENGINE MADE BY CANADIAN ALLIS CHALMERS, TORONTO, ONT.  
1-4 POLE DYANMO, DIRECT CONNECTED TO RECIPROCATING ENGINE, 525 REVOLUTIONS PER MINUTE. (TYPE OF DYNAMO B-FORM-C.) SER. NO 23375.

Capacity of Dynamo 80. Amperes at 120 Volts, whether continuous or alternating current CONTINUOUS.  
 Where is Dynamo fixed ENGINE ROOM BOTTOM PLATFORM Whether single or double wire system is used DOUBLE, DIRECT.

Location of Main Switch Board "BOTTOM PLATFORM, having switches to groups 11 of lights, &c., as below  
 Locations of auxiliary switch boards and numbers of switches on each NO AUXILIARY SWITCH BOARDS, ALL CIRCUITS, USED AND CONTROLLED FROM MAIN SWITCH BOARD, WITH CONTROLLING SWITCH AND FUSES FOR EACH CIRCUIT, DIRECT CIRCUIT LEADS.

Are fuses fitted on main switch board to the cables of main circuit YES. ALL CIRCUITS BRANCH FROM MAIN SWITCH BOARD 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.

Are fuses fitted 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 50 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.  
 Number of lights provided for 109 arranged in the following groups :-

BRIDGE SPACES <u>42.</u> lights each of <u>25 WATTS,</u> candle power requiring a total current of <u>9.</u> Amperes
COOP SPACES <u>14</u> lights each of <u>25 "</u> candle power requiring a total current of <u>3.</u> Amperes
ORCASTLE " <u>6</u> lights each of <u>25 "</u> candle power requiring a total current of <u>2.</u> Amperes
MACHINERY " <u>31.</u> lights each of <u>25 "</u> candle power requiring a total current of <u>6.5.</u> Amperes
PORTABLE " <u>16</u> lights each of <u>25 "</u> candle power requiring a total current of <u>3.5.</u> Amperes
Mast head light with <u>2.</u> lamps each of <u>60 WATTS,</u> candle power requiring a total current of <u>12.</u> Amperes
Side light with <u>2.</u> lamps each of <u>60 WATTS</u> candle power requiring a total current of <u>12.</u> Amperes
Cargo lights of <u>AS STATED</u> candle power, whether incandescent or arc lights <u>INCANDESCENT.</u>

Are lights, what protection is provided against fire, sparks, &c. NONE USED FOR CARGO.  
 Are all lights fitted in independent circuit. STERN LIGHT

Where are the switches controlling the masthead and side lights placed PILOT HOUSE, ON INDICATOR, EACH ON SEPARATE SWITCH AND FUSES "

DESCRIPTION OF CABLES. See above

Capacity of cable carrying <u>109</u> Amperes, comprised of <u>19.</u> wires, each <u>14</u> S.W.G. diameter, <u>77124</u> square inches total sectional area
Capacity of cables carrying <u>MAIN CABLE BRANCHED TO FOUR CIRCUITS ON MAIN SWITCH BOARD</u> Amperes, comprised of <u>19.</u> wires, each <u>14</u> S.W.G. diameter, <u>77124</u> square inches total sectional area
Capacity of cables carrying <u>26</u> Amperes, comprised of <u>2</u> wires, each <u>14</u> S.W.G. diameter, <u>9192</u> square inches total sectional area
Capacity of light cables carrying <u>345</u> Amperes, comprised of <u>8</u> wires, each <u>30</u> S.W.G. diameter, <u>27128</u> square inches total sectional area

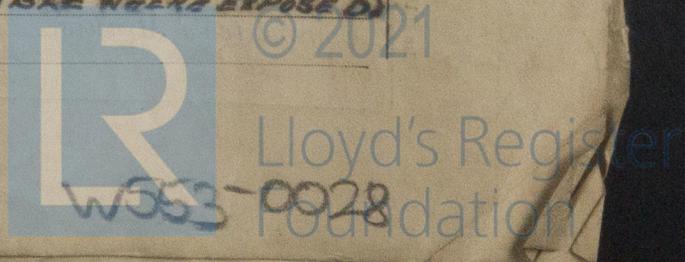
DESCRIPTION OF INSULATION, PROTECTION, ETC.  
RUBBER INSULATED UNDER LEAD SHEATING AND WIRE BRAID ARMOUR TO SPECIFICATION AND TESTS, OF THE NATIONAL BOARD OF FIRE UNDERWRITERS.

How are cables, how made, insulated, and protected SOLDERED RUBBERED AND TAPED.

Are 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

Are 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 WIRE BRAID ARMOURED CABLE WHERE EXPOSED ON DECK COVERED WIRE IN ACCOMADATIONS.



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 **ARMORED CABLES IN STEEL CONDUITS FOR MAST HEAD LIGHTS, TO INDICATOR IN PILLHOUSE, DITTO.**

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat **ARMORED CABLE USED.**

What special protection has been provided for the cables near boiler casings **ARMORED CABLE USED.**

What special protection has been provided for the cables in engine room **ARMORED CABLE USED.**

How are cables carried through beams **WITH LEAD BUSHINGS** through bulkheads, &c. **WATERTIGHT FITTINGS.**

How are cables carried through decks **WATER TIGHT FITTINGS.**

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 **ARMORED CABLE TO RUN UNDER DECK PLATES AND SEAMS for full Deck**

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 **PLUG BOXES.**

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 **SWITCH BOX**

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 50 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 warrant that it is at this date in good order and safe working condition.

*Canadian Construction Co* Electrical Engineers Date **15<sup>th</sup> Jan 1920**

COMPASSES.

*B. H. Foster* **ABOUT 70 FEET.**

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying <b>25.</b> Amperes <b>15.</b> feet from standard compass <b>10.</b> feet from steering compass
A cable carrying <b>✓</b> Amperes <b>✓</b> feet from standard compass <b>✓</b> feet from steering compass
A cable carrying <b>✓</b> Amperes <b>✓</b> feet from standard compass <b>✓</b> feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power **NOT YET ADJUSTED.**

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.

*Canadian Alloys, Chalmers Ltd* Builder's Signature. Date **Jan 15<sup>th</sup>**

GENERAL REMARKS. *The above electric light installation has been fitted on board to allow the above vessel to proceed to Montreal, Canada, as far as completed, the workman material is sound and good, as far as could be seen. To complete surveyor's cabin to be satisfactorily secured and protected, on deck bulkhead, bridge, open and underdeck beams, etc. The above recommendations have been completed in a satisfactory manner and the installation tried under working conditions and found satisfactory.*

*It is submitted that this vessel is eligible for the RECORD.* **ELEC: LIGHT. 2/3/20.**

*W. O. Scott Buffalo, N.Y.* Surveyor to Lloyd's Register of Shipping

1m. 11. 13.—Transfer.

Committee's Minute

*Elec L* New York FEB - 3 1920

