

Rpt. 13.

Received at London Office 19

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 8/3

Port of Vancouver, B.C. Date of First Survey Jan 5/20 Date of Last Survey 10 May No. of Visits not recorded  
 No. in Reg. Book on the Iron or Steel S.S. Canadian Inventor Port belonging to Montreal  
 Buil at Vancouver, B.C. By whom Loughland Sons L<sup>d</sup> When built 1920  
 Owners Canadian Government marine Department Owners' Address Ottawa Ont. Canada  
 Yard No. 13 Electric Light Installation fitted by Loughland Sons L<sup>d</sup> When fitted 1920

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

1-10 H.W. Continuous current compound 110-120 Volt. Canadian General Electric Co Dynamo Direct Coupled to a 7 1/2 Vertical Simple Engine

Capacity of Dynamo 90 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Room Starboard Whether single or double wire system is used Double Wire

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

Position of auxiliary switch boards and numbers of switches on each A Chart House 10 circuits, B, Wireless

1 1/2 H.W. Motor C Crew Messroom 10 circuits, D, Engine Room Casings, 8 Circuits

C. Cargo Clusters, F. Forward accommodation Starboard 10 circuits, Port, 10 circuits

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 209. arranged in the following groups:—

A	16	lights each of	16	candle power requiring a total current of	6	Amperes
B	Motor for Wireless	lights each of	1 1/2 H.W.	candle power requiring a total current of	14	Amperes
C	33	lights each of	32	candle power requiring a total current of	12.5	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	2	Mast head light with 2 lamps each of	32	candle power requiring a total current of	32	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 arc 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 90 Amperes, comprised of 19 wires, each 14 S.W.G. diameter, 0.09760 square inches total sectional area

Branch cables carrying 38, Amperes, comprised of 7 wires, each 17 S.W.G. diameter, 0.01758, square inches total sectional area

Branch cables carrying 28, Amperes, comprised of 7 wires, each 18, S.W.G. diameter, 0.01292 square inches total sectional area

Leads to lamps carrying 24 Amperes, comprised of 7 wires, each 20 S.W.G. diameter, 0.00727 square inches total sectional area

Cargo light cables carrying 6 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, 0.003217 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

All cables are Rubber Insulated Braided Lead Sheathed and armoured with Steel wire Braid.

Joints in cables, how made, insulated, and protected No Cables Spliced any joints that are made are in 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 Armoured Cable  
 What special protection has been provided for the cables near boiler casings Armoured Cable  
 What special protection has been provided for the cables in engine room Armoured Cable  
 How are cables carried through beams Lead Bushings through bulkheads, &c. Bulkhead Glands  
 How are cables carried through decks Deck Tubes  
 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 Cable  
 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  
 Are any switches or fuses fitted in bunkers No  
 Cargo light cables, whether portable or permanently fixed Permanent, How fixed Brass Straps  
 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 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 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.

John Coryklaus & Sons Ltd per Mr. [Signature] Electrical Engineers Date 24 July 1920

COMPASSES.

Distance between dynamo or electric motors and standard compass 30 ft  
 Distance between dynamo or electric motors and steering compass 35 ft  
 The nearest cables to the compasses are as follows:—  

A cable carrying	<u>10</u>	Amperes	<u>13</u>	feet from standard compass	<u>15</u>	feet from steering compass
A cable carrying	<u>28.5</u>	Amperes	<u>38</u>	feet from standard compass	<u>38</u>	feet from steering compass
A cable carrying	<u>18</u>	Amperes	<u>38</u>	feet from standard compass	<u>38</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 none degrees on any course in the case of the standard compass, and none degrees on any course in the case of the steering compass.

John Coryklaus & Sons Ltd per Mr. [Signature] Builder's Signature. Date 24 July 1920

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 in the Case of this Vessel.  
Ernest Edward

FRI 20 JUN 1924 Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 TUE. AUG. 17 1920  
 FRI. SEP. 28 1923  
 FRI. 9 MAR. 1923  
 FRI. JUL. 6 1923  
 FRI. SEP. 21 1923  
 FRI. 17 JUN. 1921  
 TUE. JUL. 12 1921  
 TUE. 3 JUN 1924  
 TUE. FEB. 27 1923  
 TUE. 29 MAY. 1923  
 WED. 23 APR 1924

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

