

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1270

June 7 1920

Port of New Glasgow N.S. Date of First Survey March 12/20 Date of Last Survey May 5/20 No. of Visits 18  
 No. in 18 on the Canadian Steel Screw Steamer "Canadiaw Miner" Port belonging to Montreal  
 g. Book 18 Built at New Glasgow N.S. By whom Nova Scotia Steel & Coal Co. Ltd. When built 1919-1920  
 Owners Canadian Government Merch. Mar. Owners' Address Montreal  
 Ord No. 6 Electric Light Installation fitted by Nova Scotia Steel & Coal Co. Ltd. When fitted 1920.

**DESCRIPTION OF DYNAMO, ENGINE, ETC.** Dynamo: - 4 pole Compound wound: 10 K.W. 110 volts  
Engine: - Single Cylinder, Vertical, open type, direct connected to Dynamo.

Capacity of Dynamo 85 Amperes at 110 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Starboard side of Engine-room Whether single or double wire system is used Double wire

Position of Main Switch Board 4 feet aft of dynamo having switches to groups 4 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Eng. room 1-5 switches, Galley 1-3 switches  
Newards pantry 1-3 switches, Crew's quarters aft 4-3 switches, Crew's quarters fore 1-2 switches,  
Wheelhouse 1-4 switches.

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 3 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 no wire fuses  
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 125 arranged in the following groups: -

Group	Description	Watts	Candle Power	Current (Amperes)
A	18 lights each of	25 watts	3.5	3.5 Amperes
B	18 lights each of	25 "	3.5	3.5 Amperes
C	18 lights each of	25 "	3.5	3.5 Amperes
D	36 lights each of	15 "	5	5 Amperes
E	14 lights each of	25 "	3.5	3.5 Amperes
	2 Mast head light with 2 lamps each of	60	1	1 Amperes
	2 Side light with 2 lamps each of	60	2	2 Amperes
	12 Cargo lights of	110	2 incandescent	

If arc lights, what protection is provided against fire, sparks, &c. ✓  
 Where are the switches controlling the masthead and side lights placed On "Jell tale" switchboard in wheelhouse

**DESCRIPTION OF CABLES.**

Group	Amperes	Wires	S.W.G. diameter	Total sectional area
Main cable carrying	125	19	14	.094 square inches
Branch cables carrying	14	7	18	.0125 square inches
Branch cables carrying	10	7	18	.0125 square inches
Leads to lamps carrying	5	1	14	.005 square inches
Cargo light cables carrying	14	7	18	.0125 square inches

**DESCRIPTION OF INSULATION, PROTECTION, ETC.**  
All wire in machinery spaces, holds and other exposed places are lead covered and armoured with wire braided galvanised iron wire, cables have lead covered wire.  
 Joints in cables, how made, insulated, and protected Made in cast iron junction boxes insulated with two plies of rubber splicing tape and two plies of black 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  
 How are the cables led through the ship, and how protected clamped with double end clips and covered with wood where exposed and liable to injury.



**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 are lead-covered and protected with wood.*

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 *in lead bushings* through bulkheads, &c. *with water-tight glass*

How are cables carried through decks *with deck tubes, 18" long bushed with wood.*

Are any cables run through coal bunkers *yes* or cargo spaces *yes* or spaces which may be used for carrying cargo, stores, or baggage

If so, how are they protected *all have wood casings*

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 *with wood casings*

Where are the main switches and fuses for these lights fitted *in Engine room.*

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 *permanently* How fixed *with double end clips and cased with wood.*

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 *yes*

Is the installation supplied with a voltmeter *yes* and with an amperemeter *yes*, fixed *on switch-board*

**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 \_\_\_\_\_ 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.

*North Scotia Steel & Coal Co. Limited*

*W. McInnes* Electrical Engineers Date \_\_\_\_\_

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *80 feet*

Distance between dynamo or electric motors and steering compass *75 feet*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<i>1/2</i>	<i>1</i>	<i>1</i>	<i>1</i>
<i>1/2</i>	<i>7</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 \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the standard compass and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

*North Scotia Steel & Coal Co. Limited*

*W. McInnes* Builder's Signature. Date *May 26/20*

**GENERAL REMARKS.**

*The Electric-light installation has been satisfactorily fitted on board of this vessel, tried and found in good order and safe condition, the qualities of workmanship and material efficient.*

It is submitted that this vessel is eligible for THE RECORD, ELEC. LIGHT. *24/6/20*

*W. Jones*  
Surveyor to Lloyd's Register of Shipping.

Im. 11.18.—Transfer.

Committee's Minute TUE. JUN. 29 1920



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