

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 107.

Port of Toronto Date of First Survey Nov. 28, 1918 Date of Last Survey \_\_\_\_\_ No. of Visits \_\_\_\_\_  
 No. in \_\_\_\_\_ on the Iron or Steel S.S. "Le Ducony" Port belonging to Toronto  
 Reg. Book \_\_\_\_\_ Built at Toronto By whom Dominion Shipbuilding Co When built 1919  
 Owners Nova Scotia Transportation Co Ltd Owners' Address Toronto  
 Card No. 107 9 Electric Light Installation fitted by Dominion Shipbuilding Co When fitted 1919

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

7½ K. W. Entberg direct connected generating set Type M.P.

Capacity of Dynamo 65 Amperes at 115 Volts, whether continuous or alternating current direct

Where is Dynamo fixed Engine room - middle platform Whether single or double wire system is used double

Position of Main Switch Board on bulkhead - near dynamo having switches to groups Yes of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each one panel - wheel house for signals. 4 switches.

one panel - port cabin 6 switches one panel star cabin 6 switches.

one panel after cabin 6 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 no branches 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-oxidisable 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 no fuse rules

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes

Total number of lights provided for 151 arranged in the following groups:—

A Engine Room 33 lights each of 16 candle power requiring a total current of 16 Amperes

B Boiler 9 lights each of 16 candle power requiring a total current of 4 Amperes

C Cabins 85 lights each of 16 candle power requiring a total current of 40 Amperes

D Cargo 20 lights each of 16 candle power requiring a total current of 9 Amperes

E Signals 4 lights each of 32 candle power requiring a total current of 4 Amperes

2 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

4 clusters of 5 Cargo lights of 16 candle power, whether incandescent or arc lights incandescent

If arc lights, what protection is provided against fire, sparks, &c. no arcs

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

DESCRIPTION OF CABLES.

Main cable carrying 65 Amperes, comprised of 7 wires, each no. 12 S.W.G. diameter, 52630 square inches total sectional area

Branch cables carrying 10 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, 10380 square inches total sectional area

Branch cables carrying 5 Amperes, comprised of 1 wires, each 12 S.W.G. diameter, 6530 square inches total sectional area

Leads to lamps carrying 2 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, 4107 square inches total sectional area

Cargo light cables carrying 5 Amperes, comprised of 1 wires, each 14 S.W.G. diameter, 4107 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

all rubber covered cables protected in galvanized conduit pipes

fuse boxes mounted on asbestos bases.

Joints in cables, how made, insulated, and protected spliced, soldered, taped, varnished, and

enclosed in metal 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 all cables protected in conduit pipe.



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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 wires under cover and in conduit pipe

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

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

What special protection has been provided for the cables in engine room Conduit pipe

How are cables carried through beams Conduit pipe through bulkheads, &c. watertight boxes

How are cables carried through decks watertight screwed fittings

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 galvanized conduit clipped to 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

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 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 300 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.

*[Signature]*

DOMINION SHIPBUILDING CO. LTD.

Electrical Engineers

Date Apr 17-1919

COMPASSES.

Distance between dynamo or electric motors and standard compass 65 feet

Distance between dynamo or electric motors and steering compass 60 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
1	4	4	
4	6	5	
4	12	4	

Have the compasses been adjusted with and without the electric installation at work at full power

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.

*[Signature]*

DOMINION SHIPBUILDING CO. LTD.

Builder's Signature.

Date Apr. 17-1919

GENERAL REMARKS.

*This installation has been fitted according to the rules and tested under full and varying loads and found to be satisfactory*

*It is submitted that this vessel is eligible for THE RECORD. Elec. light.*

*[Signature]* 19/5/19

*[Signature]*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 8-JUL. 1919