

REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1600

Port of Montreal Date of First Survey June 13 Date of Last Survey July 30, 1918 No. of Visits 7
 No. in on the Iron or Steel Saw Carrying "Canora" Port belonging to Quebec
 Reg. Book Built at Lewis. P. 2. By whom David Shipley & Rep. Co. Ltd. When built 1918
 Owners Canadian Northern R. R. Co. Owners' Address Toronto, Ont.
 Yard No. 307 Electric Light Installation fitted by Canadian Commercial Co. Ltd. When fitted 1918.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two sets composed of single enclosed engine direct coupled to continuous current dynamo

Capacity of Dynamos each 80 Amperes at 125 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed on platform 18" above E.R. floor plates Whether single or double wire system is used Double
 Position of Main Switch Board In E.R. on dynamo platform having switches to groups _____ of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Two - One 12 circuit panel board on bar deck.
One 8 circuit panel board on Steller Deck.

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

Total number of lights provided for 280 arranged in the following groups:—
 A Panels I 65 lights each of 40 W candle power requiring a total current of 39.6 Amperes
II 94 lights each of 25 W
 B Eng Room 14 lights each of 60 W 6-40 W candle power requiring a total current of 8.8 Amperes
 C Boiler Rooms P 12 lights each of 25 W candle power requiring a total current of 4.8 Amperes
S 12 lights each of 25 W
 D Navigating 12 lights each of 16 candle power requiring a total current of 5.8 Amperes
 E Marconi — lights each of — candle power requiring a total current of 10 Amperes
4 Mast head light with 2 lamps each of 16 candle power requiring a total current of 1.0 Amperes
4 Side light with 2 lamps each of 16 candle power requiring a total current of 1.0 Amperes
2 Cargo lights of 5-16 candle power, whether incandescent or arc lights incandescent.

If arc lights, what protection is provided against fire, sparks, &c. 2 Search lights. One on top of Pilot house 35 amps
one on Decking House 15 amps.

Where are the switches controlling the masthead and side lights placed On indicator boards in pilot house.

DESCRIPTION OF CABLES.

Main cable carrying 150 Amperes, comprised of 3 #2/6 wires, each 19 wires S.W.G. diameter, 133/100 cir. mils square inches total sectional area
 Branch cables carrying 50 Amperes, comprised of 2 #6 wires, each 7 " S.W.G. diameter, 26250 cir mils square inches total sectional area
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 Leads to lamps carrying 10 Amperes, comprised of 2 #14 wires, each 14 wires S.W.G. diameter, _____ square inches total sectional area
 Cargo light cables carrying _____ Amperes, comprised of _____ wires, each _____ S.W.G. diameter, _____ square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

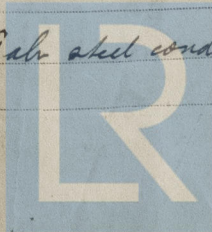
Butter insulated and covered wires run in steel conduit throughout

Joints in cables, how made, insulated, and protected No joints all cables & wires connected in terminal 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 leads throughout ship in Galv steel conduit



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 *Cable conduit and lamps in W.T. fittings*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Wire in Galv conduit*

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

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

How are cables carried through beams *All in iron conduit* through bulkheads, &c. ☒

How are cables carried through decks *Galv conduit & W.T. glands* ☒

Are any cables run through coal bunkers *No* or cargo spaces *No* or spaces which may be used for carrying cargo, stores, or baggage *No*

If so, how are they protected ☒

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 *Plugs in W.T. boxes on ship's side*

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 Main 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 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 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.

Ernest J. Goudal & Co. Ltd.
By A. J. Goudal

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *110 ft*

Distance between dynamo or electric motors and steering compass *102 ft*

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying	Amperes	feet from standard compass	feet from steering compass

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.

George D. Dawel
General Manager

Builder's Signature. Date

GENERAL REMARKS. *The compass is lighted by an electric lamp and wires are run as fed for same but are run & clipped together. The materials and workmanship of this installation are good. The whole has been fitted on board and tried under steam at full working conditions & found satisfactory.*

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

R. J. Alderson
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

MAR 1919
TUE 18 MAR 1919