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## REPORT ON ELECTRIC LIGHTING INSTALLATION.

WED. AUG. 4 1920  
No. 1807

Port of Montreal Date of First Survey Dec 18-1919 Date of Last Survey June 28 No. of Visits 8  
 No. in on the Iron or Steel S.S. "CANADIAN TRAPPER" Port belonging to Montreal  
 Reg. Book 31867 Built at Lanigan, Que. By whom Amie S.R. Co. Ltd. When built 1920  
 Owners Canadian Govt. Merchant Marine Owners' Address St James St. Montreal  
 Yard No. 459 Electric Light Installation fitted by Builders When fitted 1920

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

10 KW. General Electric dynamo continuous current shunt wound. Goldie McCulloch high speed enclosed engine  
 Capacity of Dynamo 91 Amperes at 110 Volts, whether continuous or alternating current continuous  
 Where is Dynamo fixed Upper deck in engine room Whether single or double wire system is used double  
 Position of Main Switch Board " " " having switches to groups 6 groups of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Distribution boards in dynamo room, crew space, chart room, bridge alleyway, saloon alleyway, & engine room.

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

Are the fuses of non-oxidisable metal Yes and constructed to fuse at an excess of 100 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 all cartridge fuses

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

Total number of lights provided for 198 arranged in the following groups:—

A Engines & Boilers	38	lights each of 24-60W. 14-40W	candle power requiring a total current of	16	Amperes
B Up Accom	29	lights each of 29-40W	candle power requiring a total current of	9	Amperes
C Bridge Accom	38	lights each of 30-40W 8-30	candle power requiring a total current of	18	Amperes
D Engine	30	lights each of 30-40W	candle power requiring a total current of	10	Amperes
E Deck & Hold circuits	36	lights each of 36-40W	candle power requiring a total current of	12	Amperes
F Masthead light	35	27-40W 8-32 cp.	candle power requiring a total current of	16	Amperes
2 Mast head light with	2	lamps each of 16-	candle power requiring a total current of	1	Amperes
2 Side light with	2	lamps each of 16-32 cp.	candle power requiring a total current of	3	Amperes
5 Cargo lights of	5	lamps each	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 In wheel house on bridge

## DESCRIPTION OF CABLES.

91 See above.  
 Main cable carrying 150 Amperes, comprised of 19 wires, each 12 B&S S.W.G. diameter, .097 square inches total sectional area  
 Branch cables carrying 46 Amperes, comprised of 7 wires, each 14 " S.W.G. diameter, .0221 square inches total sectional area  
 Branch cables carrying 33 Amperes, comprised of 7 wires, each 16 " S.W.G. diameter, .0134 square inches total sectional area  
 Leads to lamps carrying 12 Amperes, comprised of 7 wires, each 22 " S.W.G. diameter, .0035 square inches total sectional area  
 Cargo light cables carrying 8 Amperes, comprised of 26 wires, each 30 " S.W.G. diameter, .0023 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Armoured with steel tape over lead throughout except in cabins which are lead covered.

Joints in cables, how made, insulated, and protected No joints

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances no joints 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 no joints

Are there any joints in or branches from the cable leading from dynamo to main switch board none

How are the cables led through the ship, and how protected Carried through beams below deck with clips. Two screens in each



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 *Galv iron piping & lead covered and armoured*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Galv iron piping and steel sheathing*

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

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

How are cables carried through beams *Through fibre pencils* through bulkheads, &c. *W.T. glands*

How are cables carried through decks *Galv piping with W.T. glands*

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 *Armoured cable carried through hams steel sheathing in bunkers*

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 *Cast iron fittings with W.T. hinged doors over lights*

Where are the main switches and fuses for these lights fitted *In dynamo room*

If in the spaces, how are they specially protected *✓*

Are any switches or fuses fitted in bunkers *none*

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 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.

*J. Sinclair for Comstock Company*

Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *96 ft*

Distance between dynamo or electric motors and steering compass *93 ft*

The nearest cables to the compasses are as follows:—

A cable carrying *6.75* Amperes *12* feet from standard compass *5* 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.

*J. J. Davie for Davie Shiptbuilding & Rep'g Co.*

Builder's Signature.

Date

GENERAL REMARKS.

*This installation has been fitted on board and tried out under working conditions at full and varying loads. The materials and workmanship are good.*

*It is submitted that*

*this vessel is eligible for*

*THE RECORD. See Lt*

*Roll 9/8/90*

*R. J. Alderson*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI AUG 13 1900

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.