

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Montreal Date of First Survey _____ Date of Last Survey _____ No. of Visits _____
 No. in Reg. Book on the Iron or Steel S. S. "CANADIAN SETTLER" Port belonging to Montreal
 Built at Three Rivers, Que. By whom Tidewater Shipbuilders Ltd. When built 1919
 Owners Canadian Government. Owners' Address Ottawa.
 Yard No. 5 Electric Light Installation fitted by Builders When fitted 1919

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One 10KW. Canadian General Electric shunt wound dynamo. Enclosed Goldie McCulloch engine
 Capacity of Dynamo 91 Amperes at 110 Volts, whether continuous or alternating current continuous
 Where is Dynamo fixed Upper deck level in E.R. Whether single or double wire system is used Double
 Position of Main Switch Board adjacent to dynamo having switches to groups 6 of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each distribution boxes used.

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 50% 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 198 arranged in the following groups :-
 A Eng. & St. Room 38 lights each of 24-60W 14-40W candle power requiring a total current of 16 Amperes
 B Up Account 29 lights each of 29-40W candle power requiring a total current of 9 Amperes
 C Crew Quarters 38 lights each of 30-40W. 8-32 candle power requiring a total current of 18 Amperes
 D Deck Lights 36 lights each of 36-40W candle power requiring a total current of 10 Amperes
 E Bridge Account 30 lights each of 30-40W candle power requiring a total current of 12 Amperes
 F Navigation & Aid 35 lights each of 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 candle power requiring a total current of 3 Amperes
 5 Cargo lights of 5 lamp each 16 cp. 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 all side.

DESCRIPTION OF CABLES.

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, .0226 square inches total sectional area
 Branch cables carrying 33 Amperes, comprised of 7 wires, each 16 S.W.G. diameter, .014 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, .00234 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Armoured with steel tape over lead throughout. Lead covered in cabins. Rubber insulated.
 Joints in cables, how made, insulated, and protected No joints. Junction boxes used.
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances ✓ 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 ✓
 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 clipped in bulkheads & under decks. Steel tubes in exposed places

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 covered & armoured*

Some piping used

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered & armoured steel clad glands where passing over boiler.*

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 *Lead covered & armoured*

How are cables carried through beams *Fibre ferrules* through bulkheads, &c. *W. T. glands*

How are cables carried through decks *Galv iron deck bates with screened 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 cables carried through beams*

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 fitting with hinged covers over lights.*

Where are the main switches and fuses for these lights fitted *On main switch board.*

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.

Sidewater Shipbuilders Ltd Electrical Engineers Date _____
per R. D. G. M. G.

COMPASSES.

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

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

The nearest cables to the compasses are as follows:— *No single wire is run within 12 feet of compasses.*

| | | |
|--------------------------------------|--------------------------------------|-------------------------------------|
| A cable carrying <i>6.75</i> Amperes | <i>12</i> feet from standard compass | <i>5</i> 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.

Sidewater shipbuilders Ltd Builder's Signature. Date _____
per R. D. G. M. G.

GENERAL REMARKS.

This installation has been fitted on board and tried under steam at varying loads with satisfactory results. The material and workmanship are good.

It is submitted that this vessel is eligible for _____
ELEC. LIGHT. 9/1/20
R. J. Alderson Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____ FRI. JAN. 16. 1920 _____ FRI. JUL. 2 1920 _____
 _____ TUE. APR. 27 1920 _____
 _____ TUE. SEP. 27 1921 _____

