

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Received at London Office

24 AUG 1929

No. 3089

3089

Port of Montreal

Date of First Survey

Date of Last Survey

No. of Visits

No. in Reg. Book

on the ~~Iron~~ or Steel Trip screw "Fleurdelis"

Port belonging to

Built at Montreal

By whom Canadian Vickers Lt.

When built 1929

Owners Canadian Government

Owners' Address Ottawa

Yard No. 108

Electric Light Installation fitted by

Canadian Vickers Lt.

When fitted 1929

DESCRIPTION OF DYNAMO, ENGINE, ETC.

2. Main Generators, Westinghouse Electric Pittsburgh 600 P.P.M. Compound Style 83

1. Turbo Generator for emergency purposes 7 1/2 H.P. Style National 6" Type 17

Capacity of Dynamos 167 Amperes at 120

Volts, whether continuous or alternating current Direct current

Where is Dynamo fixed 1 Post 4 1 Star side of Eng. Room Whether single or double wire system is used Double

Position of Main Switch Board Port side of Engine Room having switches to groups 9 of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each 1 Distribution box in Engine Room 22 lights and

6 plugs, 1 Distribution box in aft accommodation, 17 lights + 3 plugs, 1 Distribution box in

Wheel house 13 lights + 7 plugs, 1 Dist. box For Acc. 27 lights + 2 plugs, 1 Dist. box Night lights 11 lights

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 Yes

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

Total number of lights provided for 90 420 Plug outlets arranged in the following groups:-

A	6 Plugs	19 lights each of 40 Watts	candle power requiring a total current of	7	Amperes
B	3 "	13 lights each of 25 "	candle power requiring a total current of	6	Amperes
C	7 "	10 lights each of 16 c.p.	candle power requiring a total current of	6	Amperes
D	2 "	21 lights each of 25 Watts	candle power requiring a total current of	9	Amperes
E	2 "	11 lights each of 40 "	candle power requiring a total current of	5	Amperes
1	Mast head light with 2 lamps each of	16	candle power requiring a total current of		Amperes
2	Side light with 2 lamps each of	16	candle power requiring a total current of		Amperes
✓	Cargo lights of	✓	candle power, whether incandescent or arc lights		

If arc lights, what protection is provided against fire, sparks, &c. Search light is grounded to steel deck frame

Where are the switches controlling the masthead and side lights placed in Wheel house on bell-tale Indicator.

DESCRIPTION OF CABLES.

Main cable carrying 167 Amperes, comprised of 19 wires, each 105.5 S.W.G. diameter, .16619 square inches total sectional area

Branch cables carrying 50 Amperes, comprised of 7 wires, each .62 S.W.G. diameter, .020618 square inches total sectional area

Branch cables carrying 10 Amperes, comprised of 7 wires, each 38.5 S.W.G. diameter, .0081548 square inches total sectional area

Leads to lamps carrying 5 Amperes, comprised of 7 wires, each 24.2 S.W.G. diameter, .0032254 square inches total sectional area

Cargo light cables carrying 3 Amperes, comprised of 7 wires, each 24.2 S.W.G. diameter, .0032254 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

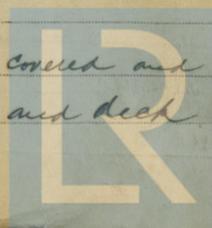
Rubber insulated lead covered, also rubber moulded lead covered and armoured

Joints in cables, how made, insulated, and protected all on loop in system, 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

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 on sheet metal runways lead covered and armoured wires used, lead bushings through beams, bulkhead glands and deck



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

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Protected by asbestos*

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

What special protection has been provided for the cables in engine room *Armoured cables and conduits*

How are cables carried through beams *through lead bushings* through bulkheads, &c. *bulkhead glands*

How are cables carried through decks *deck tubes*

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

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

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

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *on ships casing*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *2 wire system*

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 - 2*, fixed on 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 *N.E. standard* 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.

Electrical Engineers Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *50 feet*

Distance between dynamo or electric motors and steering compass *55 "*

The nearest cables to the compasses are as follows:—

A cable carrying <i>1/4</i>	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.

M. Wardle Builder's Signature. Date *Aug 2nd 29.*

GENERAL REMARKS.

This vessel has been fitted with an electric light installation as above and the workmanship is good. On completion it was tested out under full working conditions and found satisfactory.

It is submitted that this vessel is eligible for THE RECORD. Elec. Light gear 6/9/29. Fee \$90.00 24-10-29 R.P.D.

G. Allan Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 6 SEP 1925*

Elec light



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

Im. 11, 18.—Treasurer.