

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 1612

Port of Montreal Date of First Survey Aug. 26 Date of Last Survey Oct. 15 No. of Visits 9  
 No. in Reg. Book on the Iron or Steel S.S. "War Faith" Port belonging to Montreal  
 Built at Montreal By whom Canadian Vickers Ltd. When built 1918  
 Owners Imperial Munitions Board Owners' Address Ottawa, Ont.  
 Yard No. 64 Electric Light Installation fitted by Canadian Vickers Ltd. When fitted 1918

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

1- 10 H.P. direct coupled generating set of Vickers-Goldie McCulloch manufacture. Enclosed forced lubrication engine.

Capacity of Dynamo 91 Amperes at 110 Volts, whether continuous or alternating current Continuous

Where is Dynamo fixed Engine Room bottom platform Whether single or double wire system is used Double

Position of Main Switch Board " " " " having switches to groups A, B, C & D of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each No auxiliary switch boards. Fixed distribution boxes. One in Eng. Room. 10 way double feeder. One in Officers' Pantry. One in Engineers' Pantry. One in Chart House. One in Crew's quarters aft. All 10 way.

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-oxidizable 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 Cartridge fuses.

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

Total number of lights provided for 157 arranged in the following groups:—

A Eng. & Boiler Rooms 40 lights each of 5-16 cp. 2-32 cp. 33-40 Watt candle power requiring a total current of 16.75 Amperes

B Forward Accom. 45 lights each of 3-15 watt 8-25 watt 34 Watt candle power requiring a total current of 14.9 Amperes

C Navigating 20 lights each of 6-2 1/2 cp. 2-5 cp. 6-8 cp. 4-10 Watt. 2-40 Watt Watt candle power requiring a total current of 3.5 Amperes

D Aft Accom. 21 lights each of 1-16 cp. 5-25 watt 15-40 Watt candle power requiring a total current of 7.13 Amperes

E Cargo spaces & bunks 31 lights each of 32 candle power requiring a total current of 32.4 Amperes

1 Mast head light with 1 lamp each of 2 1/2 candle power requiring a total current of .08 Amperes

2 Side light with 1 lamp each of 5 candle power requiring a total current of .35 Amperes

5 Cargo lights of 5-32 candle power, whether incandescent or arc lights Incandescent

If arc lights, what protection is provided against fire, sparks, &c. Yes

Where are the switches controlling the masthead and side lights placed Inside Chart House on Navigating Tell Tale.

## DESCRIPTION OF CABLES.

Main cable carrying 90-100 Amperes, comprised of 19 wires, each #00 B&S S.W.G. diameter, .1044 square inches total sectional area

Branch cables carrying Amperes, comprised of 7 wires, each #10 S.W.G. diameter, .0081 square inches total sectional area

Branch cables carrying Amperes, comprised of 7 wires, each #8 S.W.G. diameter, .0129 square inches total sectional area

Leads to lamps carrying Amperes, comprised of 7 wires, each #14 S.W.G. diameter, .0032 square inches total sectional area

Cargo light cables carrying 35 Amperes, comprised of 7 wires, each #6 S.W.G. diameter, .0206 square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

Rubber insulated, lead covered in Accommodation spaces. Rubber insulated, lead covered and steel wire braided in Machinery spaces.

Joints in cables, how made, insulated, and protected No joints. All connections in make light boxes & special terminal Hooks.

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances No acid flux used. 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 None.

How are the cables led through the ship, and how protected Securely clipped to bulkheads or metal casing & grounds.



**DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.**

Are they in places always accessible *Yes with exception of a short length under the bridge deck*  
 What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *All lead covered*  
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered and armoured*  
 What special protection has been provided for the cables near boiler casings *Lead covered*  
 What special protection has been provided for the cables in engine room *Lead covered and armoured*  
 How are cables carried through beams *Through lead bushes* through bulkheads, &c. *W.T. glands*  
 How are cables carried through decks *Through W.T. deck tubes*  
 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 *Lead covered and armoured and steel steel casings*  
 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 *Special fixtures with cast guards*  
 Where are the main switches and fuses for these lights fitted *On main switch board in Engine Room*  
 If in the spaces, how are they specially protected *✓*  
 Are any switches or fuses fitted in bunkers *Yes. Two W.T. switches*  
 Cargo light cables, whether portable or permanently fixed *Loose permanently fixed* How fixed *W.T. switch for portable leads below*  
 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 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 *350* 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.

*A. H. Miller* Electrical Engineers Date \_\_\_\_\_  
 General Manager.

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *120 feet*  
 Distance between dynamo or electric motors and steering compass *100 feet*  
 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  
 standard compass and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

*A. H. Miller* Builder's Signature. Date \_\_\_\_\_  
 General Manager.

**GENERAL REMARKS.**

*The compass is lighted by an electric lamp. Feed wires are run and clipped together. The materials & workmanship of this installation are good. The whole has been fitted on board and tried out under full working conditions with satisfactory results.*

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

*HUR* 3/2/18.

*W. J. Alderson* Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 6 DEC. 1918

*implanter*

**VESS**

These particulars

Original Letters (if any)

Official Number.

*142734*

Date, and Port of Pro

Whether British or Foreign Built. ✓

*British*

Number of Decks

Number of Masts

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Number of Bulkheads

Number of water ballast

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Description of Engin

*Triple*

*Expansion*

Particulars of Bolt

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Iron or Steel

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