

REPORT ON ELECTRIC LIGHTING INSTALLATION. No 33284.

Port of Glasgow Date of First Survey 22.9.13 Date of Last Survey 29.10.13 No. of Visits 9
 No. in on the Iron or Steel J. J. Strabo Port belonging to Liverpool
 Reg. Book 57 Sup. Built at Dumbarton By whom A. J. Millan & Co When built 1913
 Owners Lampart & Holt Ltd Owners' Address _____
 Yard No. 451 Electric Light Installation fitted by Haddow & Co When fitted 1913

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One Compound Wound Dynamo coupled direct on same bed-plate to one double acting open framed Steam Engine
 Capacity of Dynamo 118 Amperes at 110 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed Engine Room Whether single or double wire system is used Double
 Position of Main Switch Board Alongside Dynamo having switches to groups A. B. C. D. E. of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each Pantry & Wheel House - 10 circuits,
Forward - 3 circuits, Engineers' Quarters - 5 circuits, Engine Room - 8 circuits,
Engine Room - 4 circuits
 If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits Yes
 Are the cut outs of non-oxidizable metal Yes and constructed to fuse at an excess of 25 per cent over the normal current
 Are all cut outs 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
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes
 Total number of lights provided for 114 arranged in the following groups:—

A	<u>31</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>16</u>	Amperes
B	<u>12</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>6.6</u>	Amperes
C	<u>24</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>14</u>	Amperes
D	<u>22</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>12</u>	Amperes
E	<u>24</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>14</u>	Amperes
<u>2</u>	Mast head light with <u>2</u> lamps each of <u>32</u>			candle power requiring a total current of	<u>2.2</u>	Amperes
<u>2</u>	Side light with <u>2</u> lamps each of <u>32</u>			candle power requiring a total current of	<u>2.2</u>	Amperes
<u>4</u>	Cargo lights of <u>6 lamps of 16</u>			candle power, whether incandescent or arc lights	<u>Included in above</u>	

 If arc lights, what protection is provided against fire, sparks, &c. Two Arc Lamps, semi enclosed, having hexagonal lanterns
 Where are the switches controlling the masthead and side lights placed Wheel House

DESCRIPTION OF CABLES.

Main cable carrying 64 Amperes, comprised of 19 wires, each 16 L.S.G. diameter, .04586 square inches total sectional area
 Branch cables carrying 16 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .01695 square inches total sectional area
 Branch cables carrying 14 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, .01695 square inches total sectional area
 Leads to lamps carrying 25 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, .001810 square inches total sectional area
 Cargo light cables carrying 3.3 Amperes, comprised of 3 wires, each 19 L.S.G. diameter, .005325 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Pure Rubber, Vulcanized Rubber, Taped, Braided & Compounded overall
 Joints in cables, how made, insulated, and protected Soldered & Insulated with Pure Para Rubber, Vulcanized Rubber Tape & Rubber Solution
 Are all the joints of cables thoroughly soldered, resin only having been used as a flux 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 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 Lead Covered



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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. Iron Tubes

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Answered

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

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

How are cables carried through beams Lead Liners through bulkheads, &c. Stuffing Glands

How are cables carried through decks Iron Pipes flanged to deck

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

If so, how are they protected Answered

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 cut outs for these lights fitted

If in the spaces, how are they specially protected

Are any switches or cut outs fitted in bunkers No

Cargo light cables, whether portable or permanently fixed Portable How fixed Brass sockets & Plugs

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

The installation is _____ supplied with a voltmeter and _____ an amperemeter, fixed on Main Switchboard

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas

Are any switches, cut outs, 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 99 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile after 24 hours' immersion in seawater.

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.

Hadden & Co., Glasgow, Electrical Engineers Date 10th Nov. 1913

COMPASSES.

Distance between dynamo or electric motors and standard compass 104 ft.

Distance between dynamo or electric motors and steering compass 96 ft.

The nearest cables to the compasses are as follows:—

A cable carrying	<u>16</u>	Amperes	<u>28</u>	feet from standard compass	<u>20</u>	feet from steering compass
A cable carrying	<u>6-6</u>	Amperes	<u>35</u>	feet from standard compass	<u>30</u>	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 Yes

The maximum deviation due to electric currents, etc., was found to be Nil degrees on _____ course in the case of the standard compass and Nil degrees on _____ course in the case of the steering compass.

ARCHD McMILLAN & SON, LTD. Builder's Signature. Date 12th Nov. 1913

GENERAL REMARKS.

The Electric Lighting of this vessel has been satisfactorily carried out.

It is submitted that this vessel WILL BE eligible for the record. Elec. light. J.W.D. 30/11/13. Hartner-Smith. Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute GLASGOW 18 NOV. 1913
Elec. light



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

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15/11/13