

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 33026

Port of Glasgow Date of First Survey 2.7.13 Date of Last Survey 16.8.13 No. of Visits 11  
 No. in Reg. Book 13 Sup. on the Iron or Steel Iron J. J. Cuyton Port belonging to Rotterdam  
 Built at Dumbarton By whom A. G. Millan & Son L<sup>d</sup> When built 1913  
 Owners Rotterdamische Lloyd Owners' Address \_\_\_\_\_  
 Yard No. \_\_\_\_\_ Electric Light Installation fitted by Haddow & Co When fitted 1913

**DESCRIPTION OF DYNAMO, ENGINE, ETC.**

One Compound Wound Dynamo coupled direct on same bed -  
slate to one double acting, open fronted Steam Engine  
 Capacity of Dynamo 150 Amperes at 65 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.F.G.H. of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Forecastle - 4 circuits, Pantry - 8 circuits  
Chart Room - 8 circuits, Aft - 4 circuits, Steering Engine Space -  
4 circuits, Pantry - 4 circuits, Engine Room - 8 circuits, Mast Room - 6 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 cessel 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 Yes  
 Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases Yes  
 Total number of lights provided for 192 arranged in the following groups:—  

A	<u>14</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>13</u>	Amperes
B	<u>26</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>24</u>	Amperes
C	<u>10</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>10</u>	Amperes
D	<u>28</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>26</u>	Amperes
E, F, G, H.	<u>110</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>107</u>	Amperes
<u>2</u>	Mast head light with	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
<u>2</u>	Side light with	<u>1</u> lamps each of	<u>32</u>	candle power requiring a total current of	<u>2</u>	Amperes
<u>10</u>	Cargo lights of	<u>7</u> Lamps of	<u>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. \_\_\_\_\_

Where are the switches controlling the masthead and side lights placed Chart Room

**DESCRIPTION OF CABLES.**

Main cable carrying 150 Amperes, comprised of 37 wires, each 15 L.S.G. diameter, 15000 square inches total sectional area  
 Branch cables carrying 24 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, 02803 square inches total sectional area  
 Branch cables carrying 26 Amperes, comprised of 7 wires, each 15 L.S.G. diameter, 02803 square inches total sectional area  
 Leads to lamps carrying 1 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 001810 square inches total sectional area  
 Cargo light cables carrying 6.3 Amperes, comprised of 7 wires, each 18 L.S.G. diameter, 01246 square inches total sectional area

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

Pure Rubber, Vulcanized Rubber,  
tape, braided & compounded overall  
 Joints in cables, how made, insulated, and protected Soldered & insulated with Pure Para Rubber  
vulcanized 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, Armoured

8300 - 440100 - 240700



**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 *In 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 *Vulcanized fibre* through bulkheads, &c. *Stuffing Glands*

How are cables carried through decks *Iron tubes flanged to deck*

Are any cables run through coal bunkers *No* or cargo spaces *Yes* 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 *Connections in cast-iron boxes*

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 Switchbd.*

**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 *100* 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.

*Haddon & Co, Glasgow* Electrical Engineers Date *Aug. 25<sup>th</sup> 1913.*

**COMPASSES.**

Distance between dynamo or electric motors and standard compass *100 feet*

Distance between dynamo or electric motors and steering compass *105'*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>17</i>	Amperes	<i>12</i>	feet from standard compass	<i>12</i>	feet from steering compass
A cable carrying	<i>24</i>	Amperes	<i>25'</i>	feet from standard compass	<i>25'</i>	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 *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.*  
*W. W. M. Millan* Builder's Signature. Date *27<sup>th</sup> Aug 1913.*  
DIRECTOR

**GENERAL REMARKS.** *The electric lighting of this vessel has been satisfactorily carried out.*

*It is submitted that this vessel is eligible for THE RECORD. Elec. light.* *J.W.D. 4/9/13.* *H. Gardner-Smith.*  
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute *GLASGOW 2-SEP-1913*  
*elec. light.*

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

