

## REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 12621.

Port of Greenock Date of First Survey 14th February Date of Last Survey 19th March 1900 No. of Visits 18  
 No. in Reg. Book 100 on the Iron or Steel S.S. Strius 10451 Port belonging to Marseilles  
 Built at Port Glasgow By whom Russell & Co. When built 1900  
 Owners Compagnie des Epaves de Charge Francaise Owners' Address Marseilles  
 Yard No. 457 Electric Light Installation fitted by M. Ewan Clark 760 When fitted 1900

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

1. 8x6" Vertical Engine open type with governor No 11545 80lb steam pressure coupled to 10 H. Dynamometer 2200 to give 140 amps 70 volts @ 350 revs.  
 Capacity of Dynamo 140 Amperes at 70 Volts, whether continuous or alternating current Continuous  
 Where is Dynamo fixed Engine Room on main deck  
 Position of Main Switch Board Engine Room having switches to groups 5 of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each Auxiliary distribution boxes (fuses only)  
6 - Way in Wheelhouse 4 - Way in Stewards Pantry 3 way in Engineers Accommodation  
2 - 4 Ways in Engine-room 1 - 7 way on Fore-end of Deck-house  
 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 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 100 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 111 arranged in the following groups :-  

A	<u>30</u>	lights each of	<u>16</u>	candle power requiring a total current of	<u>24</u>	Amperes
B	<u>24</u>	lights each of	"	candle power requiring a total current of	<u>23</u>	Amperes
C	<u>19</u>	lights each of	"	candle power requiring a total current of	<u>18</u>	Amperes
D	<u>24</u>	lights each of	"	candle power requiring a total current of	<u>22</u>	Amperes
E	<u>5</u>	lights each of	"	candle power requiring a total current of	<u>5</u>	Amperes
1	Mast head light with <u>2</u> lamps each of	<u>16</u>	candle power requiring a total current of	<u>2</u>	Amperes	
2	Side light with <u>2</u> lamps each of	"	candle power requiring a total current of	<u>4</u>	Amperes	
4	Cargo lights of <u>5-16 CP each</u>		candle power, whether incandescent or arc lights	<u>Incandescent</u>		

  
 If arc lights, what protection is provided against fire, sparks, &c. None

Where are the switches controlling the masthead and side lights placed Wheelhouse

## DESCRIPTION OF CABLES.

Main cable carrying	<u>128</u>	Amperes, comprised of	<u>19</u>	wires, each	<u>13</u>	L.S.G. diameter, <u>.126</u> square inches total sectional area
Branch cables carrying	<u>28</u>	Amperes, comprised of	<u>4</u>	wires, each	<u>13</u>	L.S.G. diameter, <u>.0285</u> square inches total sectional area
Branch cables carrying	<u>22</u>	Amperes, comprised of	<u>4</u>	wires, each	<u>16</u>	L.S.G. diameter, <u>.0225</u> square inches total sectional area
Leads to lamps carrying	<u>3.2</u>	Amperes, comprised of	<u>3</u>	wires, each	<u>20</u>	L.S.G. diameter, <u>.0030</u> square inches total sectional area
Cargo light cables carrying	<u>5</u>	Amperes, comprised of	<u>4</u>	wires, each	<u>21</u>	L.S.G. diameter, <u>.0056</u> square inches total sectional area

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

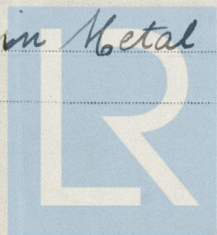
Wires insulated 1<sup>st</sup> with pure rubber 2<sup>nd</sup> Vulcanized rubber then India-Rubber coated tape. The whole vulcanized together & covered with a preservative compound. Wires protected by wood casing & Metal tubes.

Joints in cables, how made, insulated, and protected No joints in cables. In branches Spliced Soldered & insulated with rubber tape & India-Rubber coated Water-proof tape All joints in wood casing.

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 Yes

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 Led through holds in Metal tubes 2020 Through Alloway in Wood casing.



Lloyd's Register  
Foundation



**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 Strong wood casing & Metal tubes

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

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

What special protection has been provided for the cables in engine room Iron tubes

How are cables carried through beams Vulcanized fibre through bulkheads, &c. brass water-tight glands

How are cables carried through decks Metal tubes lined with Vulcanized fibre large tubes above deck lead lined

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 Metal tubes

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage None in Bunkers

If so, how are the lamp fittings and cable terminals specially protected Iron boxes

Where are the main switches and cut outs for these lights fitted Engine Room

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 & fixed How fixed Socket in Iron Box

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 ---

**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 installation is --- supplied with a voltmeter and --- an amperemeter, fixed ---

The copper used is guaranteed to have a conductivity of 98 per cent. that of pure copper.

Insulation of cables is guaranteed to have a resistance of not less than 1000 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.

W. Ewan Clark

Electrical Engineers

Date 22<sup>nd</sup> March 1900

**COMPASSES.**

Distance between dynamo or electric motors and standard compass 70 feet

Distance between dynamo or electric motors and steering compass " "

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>28</u>	<u>18</u>	<u>18</u>	<u>18</u>
<u>22</u>	<u>18</u>	<u>18</u>	<u>18</u>
<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>

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 --- degrees on --- course in the case of the steering compass.

Russell

Builder's Signature.

Date 3<sup>rd</sup> April 1900

**GENERAL REMARKS.**

The Electric light installation is fitted in this vessel as herein described & to our satisfaction.

A. L. Heron & R. Elliott

Surveyors to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

Already posted

It is submitted that this installation appears to meet the requirements of the Rules.

Lloyd's Register  
Foundation

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.