

**REPORT ON ELECTRIC LIGHTING INSTALLATION.** No. **15717**

Port of **Greenock**. Date of First Survey **11<sup>th</sup> Dec. 1909** Date of Last Survey **7<sup>th</sup> Feb. 1910** No. of Visits **15**.  
 No. in on the **Iron or Steel** **St. Valdivia** Port belonging to **Glasgow**.  
 Reg. Book Built at **Port Glasgow**. By whom **Russell & Co** When built **1909**.  
 Owners **Gen Harrison & Co** Owners' Address **Glasgow**.  
 Yard No. **604** Electric Light Installation fitted by **James, Frier & McKay & Co** When fitted **1910**

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

**Bellevue forced lubrication motor driven**  
**Coupled to Lawrence Semi-portable D.C. Comp. Motor Dynamo**  
 Capacity of Dynamo **115** Amperes at **100** Volts, whether continuous or alternating current  
 Where is Dynamo fixed **On starting platform (starboard side)** Whether single or double wire system is used **Double**  
 Position of Main Switch Board **Beside dynamo** having switches to groups **as below** of lights, &c., as below  
 Positions of auxiliary switch boards and numbers of switches on each **None**

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

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 **164** arranged in the following groups:—

A Officers 20	lights each of 16 CP	candle power requiring a total current of 12	Amperes
B Navigation 8	lights each of 5032P 308 CP	candle power requiring a total current of 4.8	Amperes
C Saloon 27	lights each of 16 CP	candle power requiring a total current of 16.2	Amperes
D Crew 15	lights each of 16 CP	candle power requiring a total current of 9.0	Amperes
E Engines 27	lights each of 16 CP	candle power requiring a total current of 16.2	Amperes
Cargo 64	lights each of 16 CP & 2 arc lamps	candle power requiring a total current of Cargo 20	Amperes
2 Mast head light with 2 lamps each of 32 CP		candle power requiring a total current of Arc Lamp 10	Amperes
2 Side light with 2 lamps each of 32 CP		candle power, whether incandescent or arc lights <b>both</b>	
62 Cargo lights of 16 CP & 2 arcs			

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

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

**DESCRIPTION OF CABLES.**

Main cable carrying 100 Amperes, comprised of 19 wires, each 14 L.S.G. diameter, .09442 square inches total sectional area
Branch cables carrying 4.8 Amperes, comprised of 4 wires, each 20 L.S.G. diameter, .007052 square inches total sectional area
Branch cables carrying 6.2 Amperes, comprised of 7 wires, each 16 L.S.G. diameter, .02227 square inches total sectional area
Leads to lamps carrying 2 Amperes, comprised of 1 wires, each 16 L.S.G. diameter, .008217 square inches total sectional area
Cargo light cables carrying 3.5 Amperes, comprised of 108 wires, each .006 L.S.G. diameter, .003 square inches total sectional area

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

**In rooms lead covered in boards and copper sheathing around and raised**

Joints in cables, how made, insulated, and protected **None**

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 **None**

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 **Armoured & braided wire through cargo spaces and galvanized iron tube through deck & where exposed**



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 Lead covered wire

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat Armoured & braided wire

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

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

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

How are cables carried through decks Galvanized iron pipe

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 Armoured & braided wire

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, stores, or baggage Yes

If so, how are the lamp fittings and cable terminals specially protected Run direct to receptacle in fitting

Where are the main switches and cut outs for these lights fitted In Mess Room & in Saloon pantry

If in the spaces, how are they specially protected none

Are any switches or cut outs fitted in bunkers none

Cargo light cables, whether portable or permanently fixed Portable How fixed How fixed

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

How are the returns from the lamps connected to the hull How fixed

Are all the joints with the hull in accessible positions How fixed

The installation is yes supplied with a voltmeter and yes an amperemeter, fixed on board

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.

TELFORD, GRIFFIN & MACKAY, LTD.

K. M. M. Secretary

Electrical Engineers

Date 17/2/10

COMPASSES.

Distance between dynamo or electric motors and standard compass 102 feet

Distance between dynamo or electric motors and steering compass 98 feet

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
<u>2</u>	<u>10</u>	<u>10</u>	<u>10</u>
<u>25</u>	<u>1</u>	<u>1</u>	<u>1</u>
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 nil course in the case of the standard compass and nil degrees on nil course in the case of the steering compass.

J. Russell & Co. Builder's Signature. Date 23rd Feb 1910

GENERAL REMARKS. The materials and workmanship are good. When tested the installation worked satisfactorily.

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

Wm. Austin. Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute GLASGOW 1-MAR. 1910

Elec. Light



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REPORT FORM No. 13-2034

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